

From: Warren Howard
To: [O'Connor, Kelley S - DNR](#)
Cc: [Steve Genisot](#); [Jonathan Sbar](#); [Gabriel Aschbacher](#); [Ken Keller](#)
Subject: FW: [WARNING: ATTACHMENT(S) MAY CONTAIN MALWARE]NLS Final Report: 299476 WWTP PFC-Investigation
Date: Tuesday, June 12, 2018 9:56:31 AM
Attachments: [Final299476_manual_05-JUN-18.pdf](#)
[Final_tmplt_537PPT2_manual_05-JUN-18.pdf](#)
[COC_OA_299476.pdf](#)

Hi Kelly,

Here are the results for the sampling that was done on May 14th, 2018 of the influent and Effluent at the City of Marinette Wastewater Treatment Plant. I had talked with James Zellmer and he had requested this information and had asked me to have you forward it to him. If you could sent it to him, along with anyone else you think it should go to ,that would be great. Let me know if you have any questions or concerns.

Thanks, Warren

Warren Howard
Marinette Water and Wastewater Utility
Operations Manager

501 Water Street
Marinette, WI 54143
Phone: 715-938-0811

From: Andrew Ostrowski [mailto:andyo@nslab.com]
Sent: Tuesday, June 05, 2018 2:10 PM
To: Warren Howard; Gabriel Aschbacher
Subject: [WARNING: ATTACHMENT(S) MAY CONTAIN MALWARE]NLS Final Report: 299476 WWTP PFC-Investigation

Attached is the final report from Northern Lake Service for completed project 299476 -- WWTP PFC-Investigation

If you have any questions regarding this project, please contact Sara Bach (sarab@nslab.com) at our Waukesha lab or Nicole Pruess (nicolep@nslab.com) at our Crandon lab via email or by phone at (715) 478-2777. Hard copy reports will still be mailed out.

DISCLAIMER: The information contained in this e-mail may be confidential and is intended solely for the use of the named addressee. Access, copying or re-use of the e-mail or any information contained therein by any other person is not authorized. If you are not the intended recipient please notify us immediately by returning the e-mail to the originator.

ANALYTICAL REPORT

Client: Marinette Wastewater Utility
 Attn: Warren Howard
 501 Water Street
 Marinette, WI 54143

NLS Project: 299476

NLS Customer: 20089

Fax: 715 732 5482 **Phone:** 715 732 5184

Project: WWTP PFC-Investigation

701 Influent NLS ID: 1055470

COC: 213506:1 Matrix: WW
 Collected: 05/14/18 14:30 Received: 05/15/18

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Perfluorinated Chemicals by EPA Method 537 Rev 1.1	see attached					05/25/18	EPA 537 Rev 1.1	721026460
Solid Phase Extraction by EPA Method 537	yes					05/24/18	EPA 537	721026460

Field Blank NLS ID: 1055471

COC: 213506:2 Matrix: FB
 Collected: 05/14/18 14:30 Received: 05/15/18

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Perfluorinated Chemicals by EPA Method 537 Rev 1.1	see attached					05/28/18	EPA 537 Rev 1.1	721026460
Solid Phase Extraction by EPA Method 537	yes					05/27/18	EPA 537	721026460

OF001 Effluent NLS ID: 1055472

COC: 213506:3 Matrix: WW
 Collected: 05/14/18 14:40 Received: 05/15/18

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Perfluorinated Chemicals by EPA Method 537 Rev 1.1	see attached					05/25/18	EPA 537 Rev 1.1	721026460
Solid Phase Extraction by EPA Method 537	yes					05/24/18	EPA 537	721026460

Field Blank 1 NLS ID: 1055473

COC: 213506:4 Matrix: WW
 Collected: 05/14/18 14:40 Received: 05/15/18

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Perfluorinated Chemicals by EPA Method 537 Rev 1.1	see attached					05/28/18	EPA 537 Rev 1.1	721026460
Solid Phase Extraction by EPA Method 537	yes					05/27/18	EPA 537	721026460

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and/or LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dilution and/or solids content.

ND = Not Detected (< LOD) LOD = Limit of Detection LOQ = Limit of Quantitation NA = Not Applicable
 DWB = Dry Weight Basis %DWB = (mg/kg DWB) / 10000 1000 ug/L = 1 mg/L
 MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

Reviewed by:



Authorized by:
 R. T. Krueger
 President

ANALYTICAL RESULTS: Perfluorinated Chemicals by EPA 537 Rev 1.1 Safe Drinking Water Analysis

Customer: Marinette Wastewater Utility NLS Project: 299476

Project Description: WWTP PFC-Investigation

Project Title: Template: 537PPT2 Printed: 06/05/2018 14:09

Sample: 1055470 701 Influent Collected: 05/14/18 Analyzed: 05/25/18 - Analytes: 12

ANALYTE NAME	RESULT	UNITS WWB	DIL	LOD	LOQ	Note
perfluorobutanesulfonic acid (PFBS)	[5.78]	ppt	1	5.1	16	J
perfluorohexanoic acid (PFHxA)	318	ppt	1	0.81	2.6	
perfluoroheptanoic acid (PFHpA)	23.1	ppt	1	0.38	1.2	
perfluorohexanesulfonic acid (PFHxS)	7.36	ppt	1	1.1	3.4	
perfluorooctanoic acid (PFOA)	43.5	ppt	1	0.81	2.6	
perfluorononanoic acid (PFNA)	10.5	ppt	1	0.70	2.2	
perfluorooctanesulfonic acid (PFOS)	25.4	ppt	1	1.9	6.1	
perfluorodecanoic acid (PFDA)	2.88	ppt	1	0.89	2.8	
perfluoroundecanoic acid (PFUnA)	[2.5]	ppt	1	0.89	2.8	J
perfluorododecanoic acid (PFDoA)	ND	ppt	1	0.96	3.1	
perfluorotridecanoic acid (PFTrDA)	ND	ppt	1	0.76	2.4	
perfluorotetradecanoic acid (PFTA)	[1.42]	ppt	1	0.81	2.6	J
C13-PFHxA (SURR)	112.842%		1			S
C13-PFDA (SURR)	98.848%		1			S

NOTES APPLICABLE TO THIS ANALYSIS:

J = Result enclosed in brackets is between LOD and LOQ, a region of less certain quantitation.
 S = This compound is a surrogate used to evaluate the quality control of a method.

Sample: 1055471 Field Blank Collected: 05/14/18 Analyzed: 05/28/18 - Analytes: 12

ANALYTE NAME	RESULT	UNITS WWB	DIL	LOD	LOQ	Note
perfluorobutanesulfonic acid (PFBS)	ND	ppt	1	5.1	16	
perfluorohexanoic acid (PFHxA)	ND	ppt	1	0.81	2.6	
perfluoroheptanoic acid (PFHpA)	ND	ppt	1	0.38	1.2	
perfluorohexanesulfonic acid (PFHxS)	ND	ppt	1	1.1	3.4	
perfluorooctanoic acid (PFOA)	ND	ppt	1	0.81	2.6	
perfluorononanoic acid (PFNA)	ND	ppt	1	0.70	2.2	
perfluorooctanesulfonic acid (PFOS)	ND	ppt	1	1.9	6.1	
perfluorodecanoic acid (PFDA)	ND	ppt	1	0.89	2.8	
perfluoroundecanoic acid (PFUnA)	ND	ppt	1	0.89	2.8	
perfluorododecanoic acid (PFDoA)	ND	ppt	1	0.96	3.1	
perfluorotridecanoic acid (PFTrDA)	ND	ppt	1	0.76	2.4	
perfluorotetradecanoic acid (PFTA)	ND	ppt	1	0.81	2.6	
C13-PFHxA (SURR)	91.677%		1			S
C13-PFDA (SURR)	97.72%		1			S

NOTES APPLICABLE TO THIS ANALYSIS:

S = This compound is a surrogate used to evaluate the quality control of a method.

The PFOA branch isotope peak is included in the PFOA calculation per EPA directive.

ANALYTICAL RESULTS: Perfluorinated Chemicals by EPA 537 Rev 1.1 Safe Drinking Water Analysis
Customer: Marinette Wastewater Utility NLS Project: 299476
Project Description: WWTP PFC-Investigation
Project Title: Template: 537PPT2 Printed: 06/05/2018 14:09

Sample: 1055472 OF001 Effluent Collected: 05/14/18 Analyzed: 05/25/18 - Analytes: 12

ANALYTE NAME	RESULT	UNITS WWB	DIL	LOD	LOQ	Note
perfluorobutanesulfonic acid (PFBS)	[6.73]	ppt	1	5.1	16	J
perfluorohexanoic acid (PFHxA)	431	ppt	2	1.6	5.2	
perfluoroheptanoic acid (PFHpA)	50	ppt	1	0.38	1.2	
perfluorohexanesulfonic acid (PFHxS)	[3.37]	ppt	1	1.1	3.4	J
perfluorooctanoic acid (PFOA)	50.3	ppt	1	0.81	2.6	
perfluorononanoic acid (PFNA)	5.71	ppt	1	0.70	2.2	
perfluorooctanesulfonic acid (PFOS)	13.3	ppt	1	1.9	6.1	
perfluorodecanoic acid (PFDA)	[2.46]	ppt	1	0.89	2.8	J
perfluoroundecanoic acid (PFUnA)	[1.43]	ppt	1	0.89	2.8	J
perfluorododecanoic acid (PFDoA)	ND	ppt	1	0.96	3.1	
perfluorotridecanoic acid (PFTrDA)	ND	ppt	1	0.76	2.4	
perfluorotetradecanoic acid (PFTA)	ND	ppt	1	0.81	2.6	
C13-PFHxA (SURR)	98.911%		1			S
C13-PFDA (SURR)	97.616%		1			S

NOTES APPLICABLE TO THIS ANALYSIS:

J = Result enclosed in brackets is between LOD and LOQ, a region of less certain quantitation.
 S = This compound is a surrogate used to evaluate the quality control of a method.

Sample: 1055473 Field Blank 1 Collected: 05/14/18 Analyzed: 05/28/18 - Analytes: 12

ANALYTE NAME	RESULT	UNITS WWB	DIL	LOD	LOQ	Note
perfluorobutanesulfonic acid (PFBS)	ND	ppt	1	5.1	16	
perfluorohexanoic acid (PFHxA)	[1.05]	ppt	1	0.81	2.6	J
perfluoroheptanoic acid (PFHpA)	ND	ppt	1	0.38	1.2	
perfluorohexanesulfonic acid (PFHxS)	ND	ppt	1	1.1	3.4	
perfluorooctanoic acid (PFOA)	ND	ppt	1	0.81	2.6	
perfluorononanoic acid (PFNA)	ND	ppt	1	0.70	2.2	
perfluorooctanesulfonic acid (PFOS)	ND	ppt	1	1.9	6.1	
perfluorodecanoic acid (PFDA)	ND	ppt	1	0.89	2.8	
perfluoroundecanoic acid (PFUnA)	ND	ppt	1	0.89	2.8	
perfluorododecanoic acid (PFDoA)	ND	ppt	1	0.96	3.1	
perfluorotridecanoic acid (PFTrDA)	ND	ppt	1	0.76	2.4	
perfluorotetradecanoic acid (PFTA)	ND	ppt	1	0.81	2.6	
C13-PFHxA (SURR)	94.21%		1			S
C13-PFDA (SURR)	111.579%		1			S

NOTES APPLICABLE TO THIS ANALYSIS:

J = Result enclosed in brackets is between LOD and LOQ, a region of less certain quantitation.
 S = This compound is a surrogate used to evaluate the quality control of a method.

SAMPLE COLLECTION AND CHAIN OF CUSTODY RECORD

NORTHERN LAKE SERVICE, INC.

Analytical Laboratory and Environmental Services

400 North Lake Avenue • Crandon, WI 54520-1298

Tel: (715) 478-2777 • Fax: (715) 478-3060

CLIENT <i>Marinette WWTP</i>		
ADDRESS <i>1603 Elm Street</i>		
CITY <i>Marinette</i>	STATE <i>WI</i>	ZIP <i>54143</i>
PROJECT DESCRIPTION / NO. <i>WWTP PFC Investigation</i>		QUOTATION NO.
DNR FID #	DNR LICENSE #	
CONTACT <i>Gabriel Aschbacher</i>		PHONE <i>715-923-0760</i>
PURCHASE ORDER NO.		FAX

Wisconsin DNR cert ID
721026460 (Cran) / 268533760 (Wauk)
Wisconsin DATCP ID
105-000330 (Cran) / 105-000479 (Wauk)

MATRIX:
SW = surface water
WW = waste water
GW = groundwater
DW = drinking water
TIS = tissue
AIR = air
SOIL = soil
SED = sediment
PROD = product
SL = sludge
OTHER

USE BOXES BELOW: Indicate Y or N if GW Sample is field filtered.
Indicate G or C if WW Sample is Grab or Composite.

ANALYZE PER ORDER OF ANALYSIS
*Method 537
Per-Halogenated Compounds*

PARAMETER



NO. 213506

ITEM NO.	NLS LAB. NO.	SAMPLE ID	COLLECTION		MATRIX (See above)	X	G	C	F	T	B	V	S	P	O	C	R	E	M	COLLECTION REMARKS (i.e. DNR Well ID #)	
			DATE	TIME																	
1.	<i>1055470</i>	<i>701 Influent</i>	<i>5-14-18</i>	<i>1430</i>	<i>WW</i>	<i>X</i>	<i>6</i>														
2.	<i>471</i>	<i>Field Blank</i>	<i>5-14-18</i>	<i>1430</i>	<i>FB</i>	<i>X</i>	<i>6</i>														
3.	<i>472</i>	<i>OF001 Effluent</i>	<i>5-14-18</i>	<i>1440</i>	<i>WW</i>	<i>X</i>	<i>6</i>														
4.	<i>473</i>	<i>Field Blank 1</i>	<i>5-14-18</i>	<i>1440</i>	<i>FB</i>	<i>X</i>	<i>6</i>														
5.																					
6.																					
7.																					
8.																					
9.																					
10.																					

COLLECTED BY (signature) <i>Gabriel Aschbacher</i>		CUSTODY SEAL NO. (IF ANY)		DATE/TIME <i>5-14-18 1440</i>	
RELINQUISHED BY (signature)		RECEIVED BY (signature)		DATE/TIME	
DISPATCHED BY (signature) <i>Gabriel Aschbacher</i>		METHOD OF TRANSPORT <i>UPS Ground</i>		DATE/TIME <i>5-14-18 1500</i>	
RECEIVED AT NLS BY (signature) <i>Narra Blume</i>		DATE/TIME <i>5/18-18 10:00</i>		CONDITION <i>on ice</i>	
COOLER #		REMARKS & OTHER INFORMATION <i># WJSB</i>		TEMP. <i>2.70c</i>	
PRESERVATIVE: NP = no preservative S = sulfuric acid		N = nitric acid Z = zinc acetate M = methanol		OH = sodium hydroxide HA = hydrochloric & ascorbic acid H = hydrochloric acid	
WDNR FACILITY NUMBER		E-MAIL ADDRESS			

REPORT TO
INVOICE TO

1. TO MEET REGULATORY REQUIREMENTS, THIS FORM **MUST** BE COMPLETED IN DETAIL AND INCLUDED IN THE COOLER CONTAINING THE SAMPLES DESCRIBED.
2. PLEASE USE ONE LINE PER SAMPLE, **NOT** PER BOTTLE.
3. RETURN THIS FORM WITH SAMPLES - CLIENT MAY KEEP YELLOW COPY.
4. PARTIES COLLECTING SAMPLE, LISTED AS **REPORT TO** AND LISTED AS **INVOICE TO** AGREE TO STANDARD TERMS & CONDITIONS ON REVERSE.

IMPORTANT:

NORTHERN LAKE SERVICE, INC.

400 NORTH LAKE AVENUE

CRANDON, WI 54520 (715) 478-2777

ORDER OF ANALYSIS

RESULTS ORDERED BY:	CHAIN OF CUSTODY RECORD NUMBER:
Gabriel Aschbacher	213506
Marinette WWTP LAB	QUOTATION NUMBER:
1603 Ely Street	
Marinette, WI 54143	ANALYZE FOR DISSOLVED OR TOTAL PARAMETERS?
SEND RESULTS TO:	SEND INVOICE TO:
Warren Howard	Marinette Wastewater Utility
Marinette WWTP LAB	501 Water Street
501 Water Street	Marinette, WI 54143
Marinette, WI 54143	

Samples on line(s) : 1 through 4 to be analyzed for the parameters below:

Perflourinated Compounds (Method 537)

Special Instructions: _____

CLIENT: Marinette Wastewater Utility
501 Water Street
Marinette, WI 54143
715-732-5184

SHIP TO: Gabe Aschbacher
1603 Ely Street
Marinette, WI 54143
--

Cust #: 20089
Order #: 63472
Ship Date: 05/11/2018
Type: DW

Investigative Samples-Run FB only if detects in samples

Sample ID: Influent

1 SET

EPA 537 -- 2 x 250mL 1.25g Trizma

Sample ID: Field Blank

1 SET

EPA 537 -- 2 x 250mL 1.25g Trizma

Sample ID: Effluent

1 SET

EPA 537 -- 2 x 250mL 1.25g Trizma

Sample ID: Field Blank

1 SET

EPA 537 -- 2 x 250mL 1.25g Trizma

A reminder to our public drinking water customers, NLS is fully certified for SDWA coliform testing. If you are interested in a quote for your regular bacteria testing please call our client service department at 715-478-2777

**PLEASE SUBMIT COMPLETED DNR FORMS WITH SAMPLES.
NLS IS REQUIRED TO SEND RESULTS DIRECTLY TO DNR PER NR809.80(4).**

Shipped and Completed by: _____