**From:** Danfield, Bill -FS <bill.danfield@usda.gov>
**Sent:** Wednesday, August 21, 2019 9:15 AM
**To:** Stoltz, Carrie R - DNR
**Cc:** DonnerWright, Deahn -FS
**Subject:** FW: NLS Project Completed: 327217 PFAS -- NORTHERN LAKE SERVICE, INC.
**Attachments:** Final327217.pdf; Final_tmplt_537PPT.pdf; COC_OA_327217.pdf

Carrie, we're working on our reply regarding our facility operations past and present as a possible source of PFAS compounds.

On August 2nd I took water samples and we received the analysis results for NLS this morning with ND's for the series of testing for PFAS compounds for our well here at the Lab.

We'll be sending you our response to the inquiry in the mail unless an electronic final version is acceptable.

Thought you'd appreciate receiving this information.

-----Original Message-----
From: Client Services at Northern Lake Service, Inc [mailto:clientservices@nlslab.com]
Sent: Wednesday, August 21, 2019 8:02 AM
To: Danfield, Bill -FS <bill.danfield@usda.gov>
Subject: NLS Project Completed: 327217 PFAS -- NORTHERN LAKE SERVICE, INC.

Attached is the final report from Northern Lake Service for completed project 327217 -- PFAS

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

# 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


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

NO. 238042

| | |
|---|---|
| CLIENT | FORESTRY SCIENCES LAB |
| ADDRESS | 5985 CTY HWY K |
| CITY / STATE / ZIP | RHINELANDER WI 54501 |
| PROJECT DESCRIPTION / NO. | QUOTATION NO. |
| DNR FID # | DNR LICENSE # |
| CONTACT | BILL DANFIELD |
| PHONE | 715-362-1133 |
| PURCHASE ORDER NO. | |
| FAX | 715-362-1166 |

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.

| ITEM NO. | NLS LAB. NO. | SAMPLE ID | COLLECTION DATE | COLLECTION TIME | MATRIX (See above) | ANALYZE PER ORDER OF ANALYSIS: PFAS | | | | | | | | | | | COLLECTION REMARKS (i.e. DNR Well ID #) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | G | G | | | | | | | | | |
| 1. | 113813 4 | 01 PFAS | 8.2.19 | 9:00AM | DW | X | | | | | | | | | | | WELL ENTRY POINT W1 PWS 74402042 |
| 2. | | 02 PFAS | 8.2.19 | 9:02AM | DW | X | | | | | | | | | | | |
| 3. | | | | | | | | | | | | | | | | | |
| 4. | | | | | | | | | | | | | | | | | |
| 5. | | | | | | | | | | | | | | | | | |
| 6. | | | | | | | | | | | | | | | | | |
| 7. | | | | | | | | | | | | | | | | | |
| 8. | | | | | | | | | | | | | | | | | |
| 9. | | | | | | | | | | | | | | | | | |
| 10. | | | | | | | | | | | | | | | | | |

ONE SAMPLE PER LINE

| | | |
|---|---|---|
| COLLECTED BY (signature) William Danfield | CUSTODY SEAL NO. (IF ANY) | DATE/TIME 8.2.2019 9:00AM |
| RELINQUISHED BY (signature) William Danfield | RECEIVED BY (signature) | DATE/TIME 8/2/19 10:55AM |
| DISPATCHED BY (signature) | METHOD OF TRANSPORT | DATE/TIME |

REPORT TO: SAME

INVOICE TO: SAME

| | | | |
|---|---|---|---|
| RECEIVED AT NLS BY (signature) Jackie Braun | DATE/TIME 8/2/19 1055 | CONDITION OK | TEMP. 5.1° C |
| COOLER # | REMARKS & OTHER INFORMATION #1 VSB | | |
| | WDNR FACILITY NUMBER | E-MAIL ADDRESS | |

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

**IMPORTANT:**

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.

Rev. 7/20/15

**NORTHERN LAKE SERVICE, INC.**
**Analytical Laboratory and Environmental Services**
**400 North Lake Avenue - Crandon, WI 54520**
**Ph: (715)-478-2777 Fax: (715)-478-3060**

# ANALYTICAL REPORT

**WDNR Laboratory ID No. 721026460**
**WDATCP Laboratory Certification No. 105-330**
**EPA Laboratory ID No. WI00034**



**NLS Project: 327217**
**NLS Customer: 35691**

**Client:** **USDA/Forestry Sciences Lab**
**Attn: Bill Danfield**
**5985 Highway K**
**Rhinelander, WI 54501**

**Fax: 715 362 1166 Phone: 715 362 1133**

**Project: PFAS**

01/02 PFAS NLS ID: 1138134
COC: 238042:1 Matrix: DW
Collected: 08/02/19 09:00 Received: 08/02/19

| Parameter | Result | Units | Dilution | LOD | LOQ/MCL | Analyzed | Method | Lab |
|---|---|---|---|---|---|---|---|---|
| Perfluorinated Chemicals by EPA Method 537.1 | see attached | | | | | 08/13/19 | EPA 537 Rev 1.1 | 721026460 |
| Solid Phase Extraction by EPA Method 537.1 | yes | | | | | 08/07/19 | 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: USDA/Forestry Sciences Lab** **NLS Project: 327217**

**Project Description: PFAS**

**Project Title:** **Template: 537PPT** **Printed: 08/21/2019 07:45**

Sample: 1138134 01/02 PFAS Collected: 08/02/19 Analyzed: 08/13/19 - Analytes: 12

| ANALYTE NAME | RESULT | UNITS | WWB | DIL | LOD | LOQ | MCL | Note |
|---|---|---|---|---|---|---|---|---|
| perfluorobutanesulfonic acid (PFBS) | ND | ppt | | 1 | 6.6 | 20.9 | | |
| perfluorohexanoic acid (PFHxA) | ND | ppt | | 1 | 1.3 | 4.0 | | |
| perfluoroheptanoic acid (PFHpA) | ND | ppt | | 1 | 0.80 | 2.6 | | |
| perfluorohexanesulfonic acid (PFHxS) | ND | ppt | | 1 | 2.8 | 8.8 | | |
| perfluorooctanoic acid (PFOA) | ND | ppt | | 1 | 1.2 | 3.9 | | |
| perfluorononanoic acid (PFNA) | ND | ppt | | 1 | 1.5 | 4.9 | | |
| perfluorooctanesulfonic acid (PFOS) | ND | ppt | | 1 | 1.7 | 5.3 | | |
| perfluorodecanoic acid (PFDA) | ND | ppt | | 1 | 0.90 | 2.7 | | |
| perfluoroundecanoic acid (PFUnA) | ND | ppt | | 1 | 1.0 | 3.0 | | |
| perfluorododecanoic acid (PFDoA) | ND | ppt | | 1 | 1.9 | 6.1 | | |
| perfluorotridecanoic acid (PFTrDA) | ND | ppt | | 1 | 3.2 | 10.3 | | |
| perfluorotetradecanoic acid (PFTA) | ND | ppt | | 1 | 2.8 | 8.9 | | |
| C13-PFHxA (SURR) | 70.954% | | | 1 | | | | S |
| C13-PFDA (SURR) | 90.64% | | | 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.