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Date: January 21, 2021  
 BRRTS Activity Number: 02-38-580694  
 Subject: Sample Results Notification, Tyco Fire Technology Center PFAS  
 2700 Industrial Parkway South, Marinette, Wisconsin

Dear Ms. Sellwood,

On behalf of Tyco Fire Products LP (Tyco), Arcadis is providing this *Sample Results Notification* for the Tyco Fire Technology Center PFAS site located at 2700 Industrial Parkway South in Marinette, Wisconsin (Site).

This *Sample Results Notification* is being provided to satisfy NR716.14(2) for surface water samples that were collected from five privately owned ponds near the Site in accordance with the *Fish Tissue and Surface Water Sampling Work Plan* submitted November 5, 2020.

On December 16, 2020, surface water samples were collected from five privately owned ponds near the Site. The locations of the sampled ponds were agreed upon in advance with WDNR and are shown in Figure 1. The samples were collected for analysis of per- and polyfluoroalkyl substances (PFAS) using Method 537 (modified; 36 analyte list).

Results were consistent with previous results and those expected based on the groundwater model. A summary of results is provided below. Table 1 includes all results and the full report from the laboratory is attached. The pond closest to the FTC has the highest concentration of PFAS compounds in surface water.

**Summary Results by Location**

Location	PFOA (ng/L)	PFOS (ng/L)
SW-14	170	10
SW-37	7.0 [6.0]	4.0 [3.0]
SW-38	36	Not detected
SW-41	23	7.0
SW-42	7.7	10

Notes:

Brackets designate a duplicate sample result [ ]

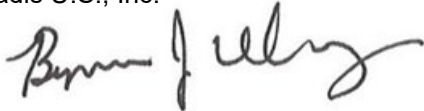
ng/L = nanograms per liter

These results will be evaluated comprehensively in a future submittal.

Alyssa Sellwood  
Wisconsin Department of Natural Resources  
January 21, 2021

Please do not hesitate to call us if you have any questions.

Sincerely,  
Arcadis U.S., Inc.

A handwritten signature in black ink, appearing to read "Benjamin J. Verburg". The signature is fluid and cursive, with the first name "Benjamin" and last name "Verburg" clearly distinguishable.

Benjamin J. Verburg, P.E.  
Principal Engineer

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Direct Line: 414 277 6231

CC.   Bridget Kelly  
      Jeff Danko  
      Scott Wahl

Enclosures:  
    Table 1 – Sampling Results Summary  
    Figure 1 – Sample Locations  
    Attachment 1 – Owner Notification Letters

Table 1  
Sampling Results Summary

Location		SW-14	SW-37	SW-37	SW-38	SW-41	SW-42
Sample ID	Sample Date	SW-14 (12162020)	SW-37 (12162020)	DUP-02 (12162020)	SW-38 (12162020)	SW-41 (12182020)	SW-42 (12162020)
Sample Type		12/16/2020	12/16/2020	12/16/2020	12/16/2020	12/18/2020	12/16/2020
Chemical Name	Units	N	N	FD	N	N	N
PFOA	ng/l	170	7.0	6.0	36	23	7.7
PFOS	ng/l	10	4.0 JN	3.0 JN	< 1.8 U	7.0	10
PFBS	ng/l	2.4	4.5 JN	3.8 JN	0.64 J	1.1 J	3.3
PFHpA	ng/l	77	4.7	4.8	4.1	27	11
PFHxS	ng/l	45	1.0 J	0.94 J	0.51 J	3.4	3.5
PFNA	ng/l	17	0.51 J	0.39 J	0.31 J	4.9	1.4 J
PFDA	ng/l	< 1.7 U	< 1.9 U	< 1.7 U	< 1.8 U	0.62 JN	< 1.8 U
PFDoA	ng/l	< 1.7 U	< 1.9 U	< 1.7 U	< 1.8 U	< 1.7 U	< 1.8 U
PFHxA	ng/l	110	5.1	4.8	5.2	28	10
PFTeA	ng/l	< 1.7 U	< 1.9 U	< 1.7 U	< 1.8 U	< 1.7 U	< 1.8 U
PFTriA	ng/l	< 1.7 U	< 1.9 U	< 1.7 U	< 1.8 U	< 1.7 U	< 1.8 U
PFUnA	ng/l	< 1.7 U	< 1.9 U	< 1.7 U	< 1.8 U	< 1.7 U	< 1.8 U
NEtFOSAA	ng/l	< 4.3 U	< 4.9 U	< 4.4 U	< 4.4 U	< 4.3 U	< 4.5 U
NMeFOSAA	ng/l	< 4.3 U	< 4.9 U	< 4.4 U	< 4.4 U	< 4.3 U	< 4.5 U
PFBA	ng/l	45	6.1	5.4	8.0	25	16
PFPeA	ng/l	150	6.8	5.2	5.5	38	11
PFHxDA	ng/l	< 1.7 U	< 1.9 U	< 1.7 U	< 1.8 U	< 1.7 U	< 1.8 U
PFODA	ng/l	< 1.7 U	< 1.9 U	< 1.7 U	< 1.8 U	< 1.7 U	< 1.8 U
PFPeS	ng/l	3.5	< 1.9 U	< 1.7 U	< 1.8 U	< 1.7 U	< 1.8 U
PFHpS	ng/l	0.54 J	< 1.9 U	< 1.7 U	< 1.8 U	< 1.7 U	0.23 J
PFNS	ng/l	< 1.7 U	< 1.9 U	< 1.7 U	< 1.8 U	< 1.7 U	< 1.8 U
PFDS	ng/l	< 1.7 U	< 1.9 U	< 1.7 U	< 1.8 U	< 1.7 U	< 1.8 U
PFDoS	ng/l	< 1.7 U	< 1.9 U	< 1.7 U	< 1.8 U	< 1.7 U	< 1.8 U
FOSA	ng/l	< 1.7 U	< 1.9 U	< 1.7 U	< 1.8 U	< 1.7 U	< 1.8 U
NEtFOSA	ng/l	< 1.7 U	< 1.9 U	< 1.7 U	< 1.8 U	< 1.7 U	< 1.8 U
NMeFOSA	ng/l	< 1.7 U	< 1.9 U	< 1.7 U	< 1.8 U	< 1.7 U	< 1.8 U
NMeFOSE	ng/l	< 3.4 U	< 3.9 U	< 3.5 U	< 3.5 U	< 3.4 U	< 3.6 U
NEtFOSE	ng/l	< 1.7 U	< 1.9 U	< 1.7 U	< 1.8 U	< 1.7 U	< 1.8 U
4:2 FTS	ng/l	0.31 J	< 1.9 U	< 1.7 U	< 1.8 U	< 1.7 U	< 1.8 U
6:2 FTS	ng/l	9.7	< 4.9 U	< 4.4 U	< 4.4 U	17 J-	< 4.5 U
8:2 FTS	ng/l	0.51 J	< 1.9 U	< 1.7 U	< 1.8 U	2.0	< 1.8 U
10:2 FTS	ng/l	< 1.7 U	< 1.9 U	< 1.7 U	< 1.8 U	< 1.7 U	< 1.8 U
DONA	ng/l	< 1.7 U	< 1.9 U	< 1.7 U	< 1.8 U	< 1.7 U	< 1.8 U
GenX	ng/l	< 3.4 U	< 3.9 U	< 3.5 U	< 3.5 U	< 3.4 U	< 3.6 U
F-53B Major	ng/l	< 1.7 U	< 1.9 U	< 1.7 U	< 1.8 U	< 1.7 U	< 1.8 U
F-53B Minor	ng/l	< 1.7 U	< 1.9 U	< 1.7 U	< 1.8 U	< 1.7 U	< 1.8 U

Table 1  
Sampling Results Summary

< RL  
ng/l = nanograms per liter

**Lab Flag:**

U = The compound was analyzed for but not detected. The associated value is the compound quantitation limit

**Validation Flag:**

< = Compound not detected at method detection limit

J = The compound was positively identified; however, the associated numerical value is an estimated concentration only

J- = The result is an estimated quantity. The associated numerical value is expected to have a negative or low bias.

JN = The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only

PFOA = Perfluorooctanoic acid (C8)

PFOS = Perfluorooctanesulfonic acid (C8)

PFBS = Perfluorobutanesulfonic acid (C4)

PFHpA = Perfluoroheptanoic acid (C7)

PFHxS = Perfluorohexanesulfonic acid (C6)

PFNA = Perfluorononanoic acid (C9)

PFDA = Perfluorodecanoic acid (C10)

PFDoA = Perfluorododecanoic acid (C12)

PFHxA = Perfluorohexanoic acid (C6)

PFTeA = Perfluorotetradecanoic acid (C14)

PFTriA = Perfluorotridecanoic acid (C13)

PFUnA = Perfluoroundecanoic acid (C11)

NEtFOSAA = N-ethylperfluorooctanesulfonamidoacetic acid (C12)

NMeFOSAA = N-methylperfluorooctanesulfonamidoacetic acid (C11)

PFBA = Perfluorobutanoic acid (C4)

PFPeA = Perfluoropentanoic acid (C5)

PFHxDA = Perfluoro-n-hexadecanoic acid (C16)

PFODA = Perfluoro-n-octadecanoic acid (C18)

PFPeS = Perfluoropentanesulfonic acid (C5)

PFHpS = Perfluoroheptanesulfonic acid (C7)

PFNS = Perfluorononanesulfonic acid (C9)

PFDS = Perfluorodecanesulfonic acid (C10)

PFDoS = Perfluorododecanesulfonic acid (C12)

FOSA = Perfluorooctanesulfonamide (C8)

NEtFOSA = N-ethylperfluorooctanesulfonamide (C10)

NMeFOSA = N-methylperfluorooctanesulfonamide (C9)

NMeFOSE = N-methylperfluorooctanesulfonamidoethanol (C11)

NEtFOSE = N-ethylperfluorooctanesulfonamidoethanol (C12)

4:2 FTS = 4:2 fluorotelomer sulfonate (C6)

6:2 FTS = 6:2 fluorotelomer sulfonate (C8)

8:2 FTS = 8:2 fluorotelomer sulfonate (C10)

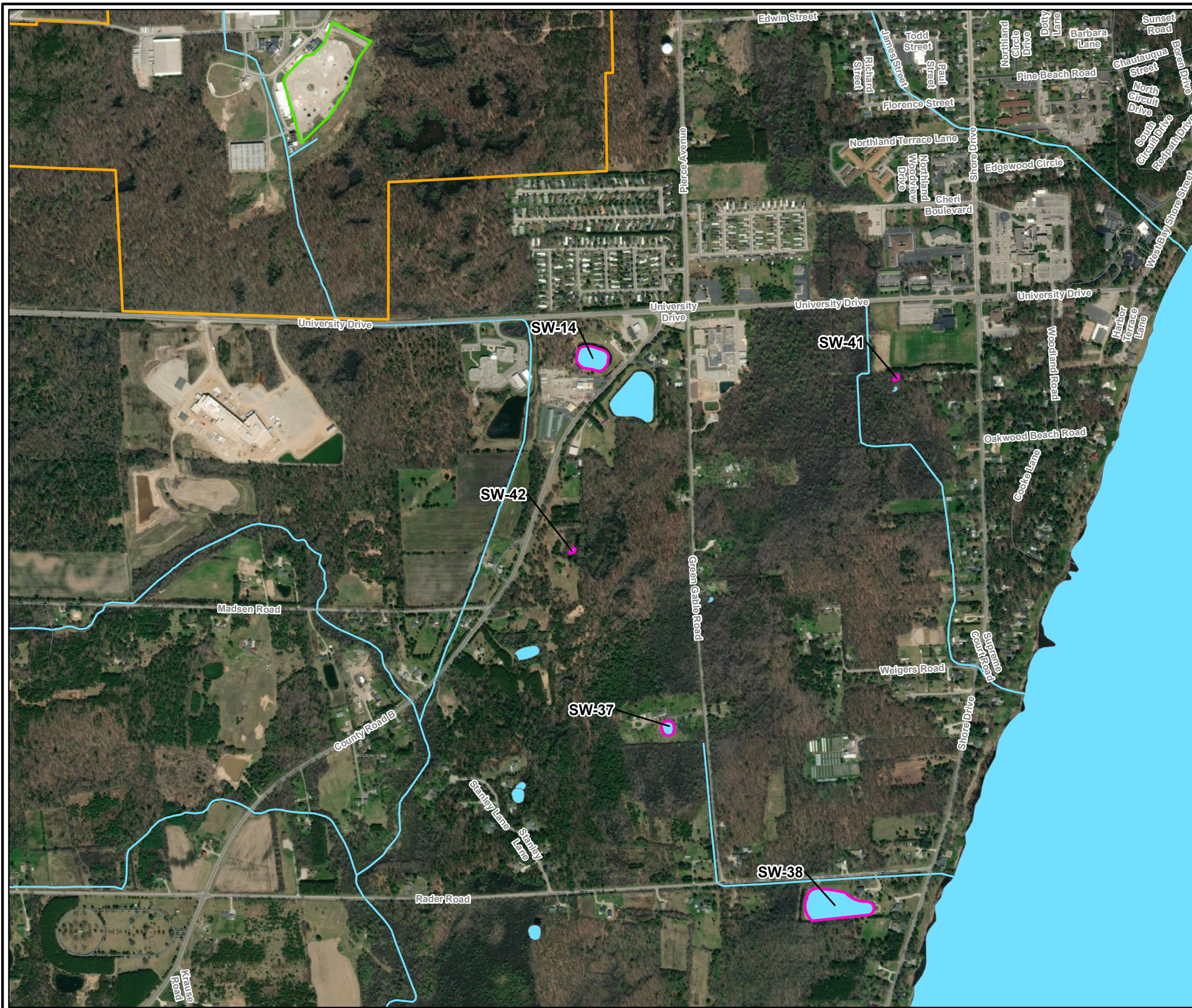
10:2 FTS = 10:2 fluorotelomer sulfonate (C12)

DONA = 4,8-Dioxo-3H-perfluorononanoic acid (C7)

GenX = Hexafluoropropylene oxide dimer acid (C6)

F-53B Major = 9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (C8)

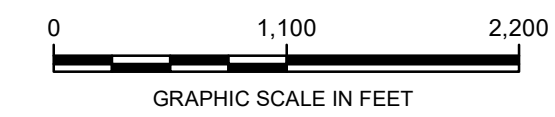
F-53B Minor = 11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (C10)



**LEGEND:**

- SAMPLE LOCATIONS
- OUTDOOR TESTING/TRAINING AREA
- APPROXIMATE SITE PROPERTY BOUNDARY
- APPROXIMATE MARINETTE CITY BOUNDARY
- ROAD
- DITCH/STREAM
- WATERBODY

- NOTES:**
1. CITY BOUNDARY DATA SOURCE: WISCONSIN LEGISLATIVE TECHNOLOGY SERVICES BUREAU, WISCONSIN COUNTY CLERKS AND LAND INFORMATION OFFICES, ACCESSED FALL 2017.
  2. DITCH/STREAM DATA SOURCE: U.S. GEOLOGICAL SURVEY NATIONAL HYDROGRAPHY DATASET, ACCESSED FALL 2017.
  3. ROAD DATA SOURCE: OPEN STREET MAP, ACCESSED FALL 2017.
  4. AERIAL IMAGERY: 4/27/2016 DIGITALGLOBE, VIVID-USA



TYCO FIRE PRODUCTS, LP  
 MARINETTE, WISCONSIN

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**POND SURFACE WATER  
 SAMPLING LOCATIONS**

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**FIGURE**  
**1**