

**Notice:** Use this form to request a **written response (on agency letterhead)** from the Department of Natural Resources (DNR) regarding technical assistance, a post-closure change to a site, a specialized agreement or liability clarification for Property with known or suspected environmental contamination. A fee will be required as is authorized by s. 292.55, Wis. Stats., and NR 749, Wis. Adm. Code., unless noted in the instructions below. Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Open Records law [ss. 19.31 - 19.39, Wis. Stats.].

## Definitions

**"Property"** refers to the subject Property that is perceived to have been or has been impacted by the discharge of hazardous substances.

**"Liability Clarification"** refers to a written determination by the Department provided in response to a request made on this form. The response clarifies whether a person is or may become liable for the environmental contamination of a Property, as provided in s. 292.55, Wis. Stats.

**"Technical Assistance"** refers to the Department's assistance or comments on the planning and implementation of an environmental investigation or environmental cleanup on a Property in response to a request made on this form as provided in s. 292.55, Wis. Stats.

**"Post-closure modification"** refers to changes to Property boundaries and/or continuing obligations for Properties or sites that received closure letters for which continuing obligations have been applied or where contamination remains. Many, but not all, of these sites are included on the GIS Registry layer of RR Sites Map to provide public notice of residual contamination and continuing obligations.

## Select the Correct Form

This form should be used to request the following from the DNR:

- Technical Assistance
- Liability Clarification
- Post-Closure Modifications
- Specialized Agreements (tax cancellation, negotiated agreements, etc.)

Do **not** use this form if one of the following applies:

- Request for an **off-site liability exemption or clarification** for Property that has been or is perceived to be contaminated by one or more hazardous substances that originated on another Property containing the source of the contamination. Use DNR's Off-Site Liability Exemption and Liability Clarification Application Form 4400-201.
- Submittal of an Environmental Assessment for the **Lender Liability Exemption**, s 292.21, Wis. Stats., **if no response or review by DNR is requested**. Use the Lender Liability Exemption Environmental Assessment Tracking Form 4400-196.
- Request for an **exemption to develop on a historic fill site** or licensed landfill. Use DNR's Form 4400-226 or 4400-226A.
- **Request for closure** for Property where the investigation and cleanup actions are completed. Use DNR's Case Closure - GIS Registry Form 4400-202.

All forms, publications and additional information are available on the internet at: [dnr.wi.gov/topic/Brownfields/Pubs.html](http://dnr.wi.gov/topic/Brownfields/Pubs.html).

## Instructions

1. Complete sections 1, 2, 6 and 7 for all requests. Be sure to provide adequate and complete information.
2. Select the type of assistance requested: Section 3 for technical assistance or post-closure modifications, Section 4 for a written determination or clarification of environmental liabilities; or Section 5 for a specialized agreement.
3. Include the fee payment that is listed in Section 3, 4, or 5, unless you are a "Voluntary Party" enrolled in the Voluntary Party Liability Exemption Program **and** the questions in Section 2 direct otherwise. Information on to whom and where to send the fee is found in Section 8 of this form.
4. Send the completed request, supporting materials and the fee to the appropriate DNR regional office where the Property is located.

See the map on the last page of this form. A paper copy of the signed form and all reports and supporting materials shall be sent with an electronic copy of the form and supporting materials on a compact disk. For electronic document submittal requirements see: <http://dnr.wi.gov/files/PDF/pubs/rr/RR690.pdf>

The time required for DNR's determination varies depending on the complexity of the site, and the clarity and completeness of the request and supporting documentation.

# Technical Assistance, Environmental Liability Clarification or Post-Closure Modification Request

Form 4400-237 (R 12/18)

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## Section 1. Contact and Recipient Information

### Requester Information

This is the person requesting technical assistance or a post-closure modification review, that his or her liability be clarified or a specialized agreement and is identified as the requester in Section 7. DNR will address its response letter to this person.

Last Name Nelson	First Denice	MI	Organization/ Business Name Tyco Fire Products LP
Mailing Address 2700 Industrial Parkway South		City Marinette	State WI
		ZIP Code 54143	
Phone # (include area code)	Fax # (include area code)	Email	

The requester listed above: (select all that apply)

- Is currently the owner
  Is considering selling the Property  
 Is renting or leasing the Property
  Is considering acquiring the Property  
 Is a lender with a mortgagee interest in the Property  
 Other. Explain the status of the Property with respect to the applicant:

### Contact Information (to be contacted with questions about this request)

Select if same as requester

Contact Last Name Rutkowski	First Lisa	MI M	Organization/ Business Name Arcadis
Mailing Address 126 N Jefferson Street, Suite 400		City Milwaukee	State WI
		ZIP Code 53202	
Phone # (include area code) (414) 276-7742	Fax # (include area code)	Email lisa.rutkowski@arcadis.com	

### Environmental Consultant (if applicable)

Contact Last Name Rutkowski	First Lisa	MI M	Organization/ Business Name Arcadis
Mailing Address 126 N Jefferson Street, Suite 400		City Milwaukee	State WI
		ZIP Code 53202	
Phone # (include area code) (414) 276-7742	Fax # (include area code)	Email lisa.rutkowski@arcadis.com	

## Section 2. Property Information

Property Name Tyco Fire Technology Center - PFCs	FID No. (if known) 438005590
BRRTS No. (if known) 0238580694	Parcel Identification Number
Street Address 2700 Industrial Parkway South	City Marinette
	State WI
	ZIP Code 54143
County Marinette	Municipality where the Property is located <input checked="" type="radio"/> City <input type="radio"/> Town <input type="radio"/> Village of Marinette
	Property is composed of: <input type="radio"/> Single tax parcel <input checked="" type="radio"/> Multiple tax parcels
	Property Size Acres 380

# Technical Assistance, Environmental Liability Clarification or Post-Closure Modification Request

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1. Is a response needed by a specific date? (e.g., Property closing date) Note: Most requests are completed within 60 days. Please plan accordingly.

No  Yes

Date requested by: \_\_\_\_\_

Reason: \_\_\_\_\_

2. Is the "Requester" enrolled as a Voluntary Party in the Voluntary Party Liability Exemption (VPLE) program?

No. **Include the fee that is required for your request in Section 3, 4 or 5.**

Yes. **Do not include a separate fee.** This request will be billed separately through the VPLE Program.

**Fill out the information in Section 3, 4 or 5 which corresponds with the type of request:**

**Section 3. Technical Assistance or Post-Closure Modifications;**

**Section 4. Liability Clarification; or Section 5. Specialized Agreement.**

## Section 3. Request for Technical Assistance or Post-Closure Modification

Select the type of technical assistance requested: [Numbers in brackets are for WI DNR Use]

- No Further Action Letter (NFA) (Immediate Actions) - NR 708.09, [183] - **Include a fee of \$350.** Use for a written response to an immediate action after a discharge of a hazardous substance occurs. Generally, these are for a one-time spill event.
- Review of Site Investigation Work Plan - NR 716.09, [135] - **Include a fee of \$700.**
- Review of Site Investigation Report - NR 716.15, [137] - **Include a fee of \$1050.**
- Approval of a Site-Specific Soil Cleanup Standard - NR 720.10 or 12, [67] - **Include a fee of \$1050.**
- Review of a Remedial Action Options Report - NR 722.13, [143] - **Include a fee of \$1050.**
- Review of a Remedial Action Design Report - NR 724.09, [148] - **Include a fee of \$1050.**
- Review of a Remedial Action Documentation Report - NR 724.15, [152] - **Include a fee of \$350**
- Review of a Long-term Monitoring Plan - NR 724.17, [25] - **Include a fee of \$425.**
- Review of an Operation and Maintenance Plan - NR 724.13, [192] - **Include a fee of \$425.**

Other Technical Assistance - s. 292.55, Wis. Stats. [97] (For request to build on an abandoned landfill use Form 4400-226)

- Schedule a Technical Assistance Meeting - **Include a fee of \$700.**
- Hazardous Waste Determination - **Include a fee of \$700.**
- Other Technical Assistance - **Include a fee of \$700.** Explain your request in an attachment.

Post-Closure Modifications - NR 727, [181]

- Post-Closure Modifications: Modification to Property boundaries and/or continuing obligations of a closed site or Property; sites may be on the GIS Registry. This also includes removal of a site or Property from the GIS Registry. **Include a fee of \$1050, and:**
  - Include a fee of \$300 for sites with residual soil contamination; and
  - Include a fee of \$350 for sites with residual groundwater contamination, monitoring wells or for vapor intrusion continuing obligations.

Attach a description of the changes you are proposing, and documentation as to why the changes are needed (if the change to a Property, site or continuing obligation will result in revised maps, maintenance plans or photographs, those documents may be submitted later in the approval process, on a case-by-case basis).

## Skip Sections 4 and 5 if the technical assistance you are requesting is listed above and complete Sections 6 and 7 of this form Section 6. Other Information Submitted

Identify all materials that are included with this request.

**Send both a paper copy of the signed form and all reports and supporting materials, and an electronic copy of the form and all reports, including Environmental Site Assessment Reports, and supporting materials on a compact disk.**

**Include one copy of any document from any state agency files that you want the Department to review as part of this request. The person submitting this request is responsible for contacting other state agencies to obtain appropriate reports or information.**

Phase I Environmental Site Assessment Report - Date: \_\_\_\_\_

Phase II Environmental Site Assessment Report - Date: \_\_\_\_\_

Technical Assistance, Environmental Liability  
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Legal Description of Property (required for all liability requests and specialized agreements)

Map of the Property (required for all liability requests and specialized agreements)

Analytical results of the following sampled media: Select all that apply and include date of collection.

Groundwater

Soil

Sediment

Other medium - Describe: \_\_\_\_\_

Date of Collection: \_\_\_\_\_

A copy of the closure letter and submittal materials

Draft tax cancellation agreement

Draft agreement for assignment of tax foreclosure judgment

Other report(s) or information - Describe: Revised Long-Term Potable Well Sampling Plan, v.6

For Property with newly identified discharges of hazardous substances only: Has a notification of a discharge of a hazardous substance been sent to the DNR as required by s. NR 706.05(1)(b), Wis. Adm. Code?

Yes - Date (if known): \_\_\_\_\_

No

Note: The Notification for Hazardous Substance Discharge (non-emergency) form is available at:  
[dnr.wi.gov/files/PDF/forms/4400/4400-225.pdf](http://dnr.wi.gov/files/PDF/forms/4400/4400-225.pdf).

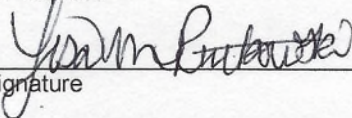
**Section 7. Certification by the Person who completed this form**

I am the person submitting this request (requester)

I prepared this request for: Denice Nelson

Requester Name

I certify that I am familiar with the information submitted on this request, and that the information on and included with this request is true, accurate and complete to the best of my knowledge. I also certify I have the legal authority and the applicant's permission to make this request.



Signature

10/3/2022

Date Signed

Project Environmental Specialist

Title

(414) 277-6233

Telephone Number (include area code)



# Technical Assistance, Environmental Liability Clarification or Post-Closure Modification Request

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## Section 8. DNR Contacts and Addresses for Request Submittals

Send or deliver one paper copy and one electronic copy on a compact disk of the completed request, supporting materials, and fee to the region where the property is located to the address below. Contact a [DNR regional brownfields specialist](#) with any questions about this form or a specific situation involving a contaminated property. For electronic document submittal requirements see: <http://dnr.wi.gov/files/PDF/pubs/rr/RR690.pdf>.

### DNR NORTHERN REGION

Attn: RR Program Assistant  
Department of Natural Resources  
223 E Steinfest Rd Antigo, WI 54409

### DNR NORTHEAST REGION

Attn: RR Program Assistant  
Department of Natural Resources  
2984 Shawano Avenue  
Green Bay WI 54313

### DNR SOUTH CENTRAL REGION

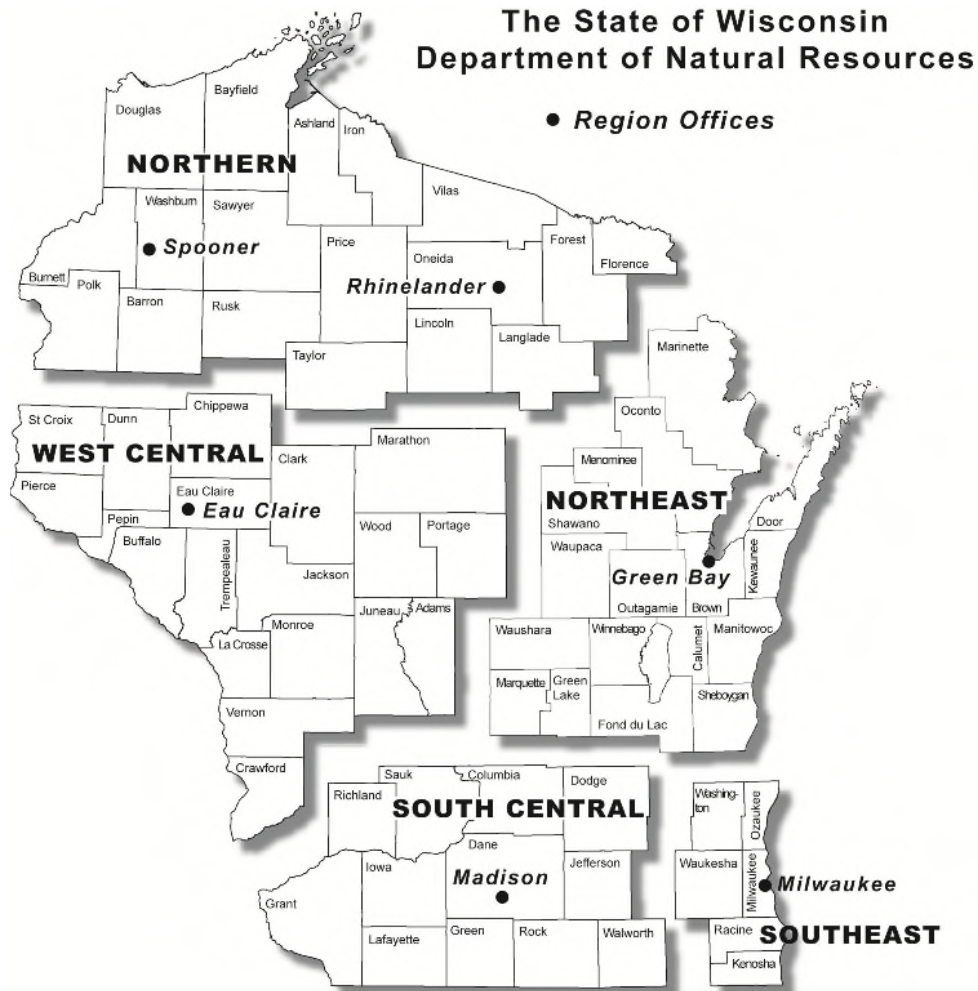
Attn: RR Program Assistant  
Department of Natural Resources  
3911 Fish Hatchery Road  
Fitchburg WI 53711

### DNR SOUTHEAST REGION

Attn: RR Program Assistant  
Department of Natural Resources  
2300 North Martin Luther King Drive  
Milwaukee WI 53212

### DNR WEST CENTRAL REGION

Attn: RR Program Assistant  
Department of Natural Resources  
1300 Clairemont Ave.  
Eau Claire WI 54702



Note: These are the Remediation and Redevelopment Program's designated regions. Other DNR program regional boundaries may be different.

DNR Use Only			
Date Received	Date Assigned	BRRTS Activity Code	BRRTS No. (if used)
DNR Reviewer		Comments	
Fee Enclosed? <input type="radio"/> Yes <input type="radio"/> No	Fee Amount \$	Date Additional Information Requested	Date Requested for DNR Response Letter
Date Approved	Final Determination		

Tyco Fire Products LP

# REVISED LONG-TERM POTABLE WELL SAMPLING PLAN

**Tyco Fire Technology Center  
2700 Industrial Parkway South  
Marinette, Wisconsin 54143  
BRRTS# 02-38-580694**

October 3, 2022

# REVISED LONG-TERM POTABLE WELL SAMPLING PLAN

**Tyco Fire Technology Center, 2700 Industrial Parkway South  
Marinette, Wisconsin 54143 BRRTS# 02-38-580694**

October 3, 2022

**Prepared By:**

Arcadis U.S., Inc.  
126 North Jefferson Street, Suite 400  
Milwaukee  
Wisconsin 53202  
Phone: 414 276 7742  
Fax: 414 276 7603

**Prepared For:**

Tyco Fire Products LP  
2700 Industrial Parkway South  
Marinette, Wisconsin 54143

**Our Ref:**

30130622



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Lisa M. Rutkowski  
Project Environmental Scientist



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Matthew C. Coleman  
Project Communications Manager



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Scott T. Potter  
Chief Hydrogeologist

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## Version Control

Revision No.	Date Issued	Page No.	Description
0	3/8/2018	All	Initial Release
1	4/20/2018	All	Revisions based on WDNR comment letter dated March 30, 2018
2	4/1/2020	All	Regular update as requested by WDNR
3	3/16/2021	All	Revisions based on WDNR letter dated November 16, 2020
4	10/1/2021	All	Revisions based on WDNR comment letter dated June 18, 2021
5	5/17/2022	All	Revisions based on WDNR comment letters dated December 16, 2021
6	10/3/2022	All	Revisions reflecting potential drinking water source changes within PWSA



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## Figure

- Figure 1. Potable Well Sampling Area

## Exhibit

- Exhibit 1. Potable Well Sampling Results Letter Template

## Acronyms and Abbreviations

Arcadis	Arcadis U.S., Inc.
COC	chain-of-custody
FTC	Fire Technology Center
GAC	Granular Activated Carbon
HDPE	high-density polyethylene
ID	identification
ng/L	nanograms per liter
PFAS	per- and polyfluoroalkyl substances
PFOA	perfluorooctanoic acid
PFOS	perfluorooctanesulfonic acid
POET	point of entry treatment
PTFE	polytetrafluoroethylene
PWSA	potable well sampling area
RL	reporting limit
TOC	total organic carbon
Tyco	Tyco Fire Products LP
WDHS	Wisconsin Department of Health Services
WDNR	Wisconsin Department of Natural Resources

## Executive Summary

Arcadis on behalf of Tyco Fire Products LP (Tyco) has prepared this Revised Long-Term Potable Well Sampling Plan (sampling plan) for the Tyco Fire Technology Center (FTC) site located at 2700 Industrial Parkway South in Marinette, Wisconsin (Site).<sup>1</sup> This sampling plan outlines the frequency of future sampling events for the Potable Well Sampling Program which includes existing drinking water wells currently within the potable well sampling area (PWSA) as defined by Tyco. It also outlines the Point of Entry Treatment (POET) System Monitoring Program, a separate program specific to wells that have a POET system installed and maintained by Tyco on their property. This document also provides the rationale for both the Potable Well Sampling Program and the POET System Monitoring Program.

Free access to bottled water has been offered to every user of a potable well within the PWSA that responded to outreach efforts to date. By providing bottled water regardless of sampling access or results, Tyco is eliminating the primary potential exposure pathway for per- and polyfluoroalkyl substances (PFAS) associated with the FTC groundwater plume to enter the body. In addition, Tyco is advancing long term drinking water solutions by offering private, deep bedrock drinking water wells to a segment of the PWSA that is not considering requesting annexation and municipal water from the City of Marinette. Simultaneously, Tyco is prepared to expand the municipal water system of the City of Marinette should the neighbors within the PWSA successfully petition to be annexed. Providing private wells that draw water from an unimpacted aquifer and offering a connection to a monitored municipal source of water are two more ways Tyco is eliminating the primary potential exposure pathway for PFAS.

Under this plan, Tyco will continue to sample wells currently within the Potable Well Sampling Program at the frequency previously used.<sup>2</sup> The attached tables and figure are reflective of previous Potable Well Sampling Program and current POET Monitoring Program categorizations. Any new deep bedrock potable wells will not be sampled at the frequency described in this report as they will have a separate monitoring program reflective of the groundwater conditions in that aquifer (Arcadis 2022b,c).

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<sup>1</sup> DNR has incorrectly identified Johnson Controls, Inc. (JCI) as a “responsible party” for this property under the Wisconsin Spills Law. The WDNR is in error. JCI does not own or operate the property at issue. In addition, JCI is not the corporate parent of Tyco.

<sup>2</sup> Tyco believes that continuing sampling at the frequency previously used will result in less disruption and confusion to the well owners and citizens of Marinette County. However, by continuing this activity, Tyco is not acknowledging the authority of the WDNR to require an investigation or remediation of PFAS, or to require the provision of alternate water supplies. Tyco is also not acknowledging or confirming the validity, enforceability, accuracy, or scientific basis for, the use of 20 nanograms per liter (ng/L) for PFOA or PFOS (individually or combined), or any enforcement standards for PFAS proposed by Wisconsin Department of Health Services (WDHS), Wisconsin Department of Natural Resources (WDNR), or other state or federal agency.

# 1 Introduction

On behalf of Tyco Fire Products LP (Tyco), Arcadis US, Inc. (Arcadis) has prepared this *Revised Long-Term Potable Well Sampling Plan* (sampling plan) for the Tyco Fire Technology Center (FTC) located at 2700 Industrial Parkway South in Marinette, Wisconsin (the Site). Tyco and Arcadis are conducting Site investigation and monitoring activities under the oversight of the Wisconsin Department of Natural Resources (WDNR). As requested by WDNR, this document provides an update to the Revised Long-Term Potable Well Sampling Plan (Arcadis 2022a). This sampling plan and future versions, to be submitted every 6 months, will be applicable while these potable wells are in operation. This sampling plan does not apply to any new deep bedrock potable wells because they will have a separate monitoring program reflective of the groundwater conditions in that aquifer (Arcadis 2022b,c).

## 2 Potable Well Sampling Summary

### 2.1 Potable Well Sampling Program

A potable well sampling program was initiated in December 2017 and continues quarterly. The Potable Well Sampling Program is conducted independent of the POET Monitoring Program described below. Potable wells within the PWSA are in one program or the other. The PWSA is illustrated on **Figure 1**. A list of wells within the Potable Well Sampling Program is presented in **Table 1**. A list of wells within the POET Monitoring Program is presented in **Table 2**.

The fall 2022 quarterly event extends through December 31, 2022. During the previous events, Arcadis sampled a total of 173 potable wells located generally to the southeast of the Site where residents rely on private wells for drinking water. A summary of the most conservative results from the previous sampling events is included in the following list:

- Potable wells sampled through June 2022: 173
- Potable wells analyzed for 36 PFAS compound list: 152
- Potable wells with results above the reporting limit (RL) for compounds in **Table 3**: 79
- Potable wells with results below the RL for compounds in **Table 3**: 94

Bottled water is offered by Tyco to users of the private wells that are within the PWSA regardless of sampling participation or results. The only criteria for being eligible for bottled water within the PWSA is that the tenant has a potable well plumbed to the building that is a primary source of drinking water. Bottled water is managed per the Comprehensive Alternative Water Management Plan submitted to WDNR in March 2020.

### 2.2 POET Monitoring Program

Forty-seven POET systems have been installed to date to treat groundwater used as drinking water under this program. One POET was removed from service after a parcel was sold and the new owner did not require a second POET for an outer building. A list of wells with POET systems is included in **Table 2**. Arcadis has collected POET system samples on a regular basis to confirm the effectiveness of PFAS removal and system operations.

Routine maintenance is conducted on each POET system. Sediment filters are typically replaced every 3 months; UV lights and the quartz sleeves are replaced once every year; and granular activated carbon (GAC) tanks are replaced when initial breakthrough is observed or as appropriate based on a conservative analysis of previous results for the specific POET system over the course of at least 12 months. Those analyses indicate breakthrough varies based on water usage, concentrations of PFAS for each well, and concentration of total organic carbon (TOC). The water available or yield from a driven point well also causes variability in when breakthrough is observed. POET system monitoring data has been provided to WDNR.

## 3 Long-Term Sampling Plan

### 3.1 Potable Wells

All well owners/users within the PWSA have been offered bottled water; however, not all residents accepted the offer. Those with confirmed results above the laboratory RL for perfluorooctanoic acid (PFOA) and/or perfluorooctanesulfonic acid (PFOS) have been offered POET systems, although not all POET system offers were accepted. The frequency of sampling for existing wells will be consistent with those proposed in the *Fifth Revised Long Term Potable Well Sampling Plan* (Arcadis 2022a). This approach is consistent with that previously approved in the *Fourth Revised Long Term Potable Well Sampling Plan* (dated October 1, 2021), although there is no enforceable groundwater standard for PFOA or PFOS in the state of Wisconsin.<sup>3</sup> The PWSA is roughly defined to the north by University Drive, to the west by County Road B, to the south by Rader Road and to the east by the Bay of Green Bay. The extent of groundwater contamination will be monitored through a network of monitoring wells and piezometers already in place or planned. Any new deep bedrock potable wells will not be sampled at the frequency described in this report as they will have a separate monitoring program reflective of the groundwater conditions in that aquifer (Arcadis 2022b,c).

The potable well sampling plan criteria were established based on data collected to date that indicate most wells in the PWSA do not have detections above the reporting limit and all wells were offered bottled water to eliminate the drinking water exposure pathway regardless of sampling results. Results from potable wells are used to inform residents of their specific groundwater conditions relative to PFAS and are not a source of remedial decision-making data. Instead, borings, piezometers, and wells installed for monitoring purposes are used to monitor groundwater quality over time.

As noted in **Section 1**, this sampling plan will be updated every six months. The next update will be provided April 3, 2023.

### 3.2 POET Systems

#### 3.2.1 Proposed POET Maintenance Schedule for Existing POET Systems

Systems installed for less than one year will continue to be sampled on a quarterly basis to determine POET system efficiency. After a minimum of one year of monitoring, POET systems will be transitioned to the maintenance program described below. The POET system maintenance program uses sampling data from each

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<sup>3</sup> As previously noted, Tyco believes that continuing sampling at the frequency previously used will result in less disruption and confusion to the well owners and citizens of Marinette County. However, Tyco wants to be very clear that by continuing this activity, Tyco is not in any manner acknowledging the authority of the WDNR to require an investigation or remediation of PFAS, or to require the provision of alternate water supplies. Tyco is also not acknowledging or confirming the validity, enforceability, accuracy, or scientific basis or necessity for, the use of 20 ng/L for PFOA or PFOS (individually or combined), or any enforcement standards for PFAS proposed by WDHS, WDNR, or any other state or federal agency.



## REVISED LONG-TERM POTABLE WELL SAMPLING PLAN

POET over the course of at least one year to determine a conservative GAC vessel change out schedule. POET users are not required to forfeit their bottled water service.

Any POET systems with original GAC tanks that have been in operation for a year or more without exhibiting any signs of PFAS break-through will be maintained by replacing the GAC tanks once per year. POET systems with historic influent results below concentrations set forth in **Table 3** will be sampled at the effluent approximately every other year to confirm the efficacy of the selected maintenance program. POET systems with historic influent results above concentrations set forth in **Table 3** will be sampled at the effluent approximately annually to confirm the efficacy of the selected maintenance program. There is more than two years of data supporting the following POET systems had non-detect concentrations at the mid-carbon and post-carbon sampling locations for more than a year:

- POET Systems – 10, 13, 14, 15, 16, 18, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 31, 32, 33, 34, 35, 36, 38, 39, 40, 41, 42, 43

POET systems that have shown PFAS breakthrough between 9 months and 1 year will be maintained by replacing the GAC tanks every 9 months. This applies to the following systems:

- POET Systems – 1, 2

POET systems that have shown PFAS breakthrough between six months and nine months will be maintained by replacing the GAC tanks every six months. This applies to the following systems:

- POET Systems – 3, 17, 30

POET systems that have shown varying influent or PFAS breakthrough before six months will continue to be monitored on a quarterly basis and the GAC tanks will be replaced when breakthrough is observed. The sampling frequency may be increased or decreased based on future sampling results. This applies to the following systems:

- POET Systems – 4, 6, 12, 37

Any POET systems that have shown PFAS breakthrough before three months will be maintained by replacing the GAC tanks every two to three months. This applies to the following systems:

- POET Systems – 5, 7, 19

Any POET systems that have not operated for at least a year will be monitored quarterly for at least 12 months to determine the future GAC maintenance schedule, at which point sampling will be discontinued. This applies to the following systems:

- POET Systems – 8, 44, 45, 46, 47

Any POET system that is in operation for less than 12 months because of planned service disruption due to extended vacations or absence for the winter will be winterized and then reinstalled with new GAC upon the homeowner's return without the collection of additional samples. Any POET system that has an unplanned service disruption due to vacancy, death, or home for sale will be winterized and reinstalled when needed. Winterization consists of bypassing the system, removing the GAC tanks and filters, and removing residual water from the system.

- POET System - 11

POET system 9 has been removed as requested by the owner.

Sediment filters and UV/Quartz maintenance will continue to be changed out based on the schedule defined in Section 2.2.

In the event that an alternative long-term drinking water solution is implemented at a home with a POET system, the system will cease monitoring and maintenance activities and the owner will be given the option to maintain the system at their own cost or have the system removed at no cost to them.

### 3.2.2 Proposed POET Maintenance Schedule for New POET Systems

New POET systems will be monitored quarterly for one year to determine the GAC maintenance schedule and monitor any fluctuation of potable well results. Sediment filters will continue to be changed out every three months and the UV light and quartz sleeves will continue to be changed out once per year. These timeframes are based on evaluation of data from more than two years of performance monitoring data collected from POET systems within the PWSA.

POET system performance monitoring samples will be collected at the inlet, mid-carbon and outlet locations according to the following schedule:

- Initial Sampling – Upon system installation and start-up
- Month 3 (Week 12) – After 3 months or 12 weeks of system operation
- Month 6 – After 6 months of system operation
- Month 9 – After 9 months of system operation
- Month 12 – After 12 months of system operation.

The future GAC change schedule will be determined based on the data obtained from the sampling activities described in this section. The POET systems will be scheduled for GAC changes and subject to additional sampling as described in **Section 3.2.1**.

In the event that an alternative long-term drinking water solution is implemented at a home with a POET system, the system will cease monitoring and maintenance activities and the owner will be given the option to maintain the system at their own cost or have the system removed at no cost to them.

### 3.2.3 GAC Change Schedule

The conservative sampling schedule that was established for the POET program when systems were first installed starting in early 2018 resulted in a large amount of data available to help predict when POET systems would show breakthrough. In addition to analyzing inlet, mid-carbon and outlet samples for PFAS, TOC was collected from the well prior to POET system installation and flow meter readings were collected during each sampling event to determine weekly or monthly water usage. This information as well as the inlet concentrations and regular sampling to identify when initial breakthrough occurred resulted in the ability to reduce the sampling frequency for well-established POET systems and move them to a maintenance only program.

The GAC change schedule was established by looking at all data relevant to each system. The GAC will be changed in every system at least once per year, even if breakthrough was observed two years or more after installation. Systems where breakthrough was observed earlier than 12 months will be changed out more frequently. Section 3.2.1 describes the various scenarios that are relevant to determining the GAC changeout schedule. The observed breakthrough and GAC change frequency for each POET is included in **Table 2**. The GAC changeout schedule is based on when initial breakthrough was observed, not when detections of PFAS

## REVISED LONG-TERM POTABLE WELL SAMPLING PLAN

exceeded the concentrations set forth on **Table 3**. This conservative approach to establishing the GAC changeout schedule in conjunction with the offer of bottled water to users of the potable wells, eliminates any potential drinking water exposure pathway.

## 4 Sample Procedure

The sections that follow provide an overview of the potable well and POET system sample procedures.

### 4.1 Prior to Sample Collection

Arcadis staff will coordinate a sample date and time with each well's contact person. Upon arrival, Arcadis will provide introductions and let the resident/property owner know the purpose is to collect a potable well sample for PFAS analysis in accordance with previous correspondence provided to them regarding the sampling. Arcadis will request information from the property owner regarding the water system at each property. Information that will be recorded includes presence of water softeners, sediment traps, filters, etc., and the location of these items.

Additional activities to be performed and procedures to be followed by the sampling team prior to potable well sample collection include:

- Put on a new set of nitrile gloves immediately prior to sampling.
- Do not use gloved hands to subsequently handle papers, pens, clothes, etc., before collecting samples.
- Use the 2-250 milliliter high-density polyethylene (HDPE) bottles that are supplied by the laboratory for each sample location.
- Samples bottle caps must remain on the bottle until immediately prior to sample collection, and the bottle must be sealed immediately after sample collection.

Additional COVID-related precautions may be implemented as appropriate based on Federal, State, or County guidance to protect homeowners and the sampling team. Those precautions may include but are not limited to:

- Sampling team personnel will practice established social distancing protocols when interacting with homeowners.
- Sampling team personnel will wear individual protective masks.
- Sampling team personnel will request verbal sampling permission from each of the homeowners and sign the homeowner acceptance, on behalf of the homeowner, of such verbal agreement on the electronic tablet.
- Sampling locations will be prioritized to outdoor spigots, instead of indoor locations, when possible, weather permitting.

### 4.2 During Sample Collection

Potable water outfalls and taps are likely to vary. If possible, the team will avoid sampling from any taps fitted with Teflon tape or other PFAS-containing materials. Stainless steel and polyvinyl chloride materials are acceptable. The sampling team will collect unfiltered samples from a tap or port, as follows:

- Initiate flow from the water source and allow the system to flush for at least three minutes.
- Collect the sample into the HDPE bottle until the sample bottle is full (leaving slight headspace in the bottle is acceptable).
- Tightly screw on the polypropylene or HDPE cap.

### 4.3 After Sample Collection

Upon collection, the sample bottles will be placed in a sealed Ziploc® or similar bag. Sample collection information will be recorded including the sample identification (ID) and time of sampling on the sample bottle label, in the field notes, and on the chain-of-custody (COC) form. The COC form will be marked for analysis with a standard turnaround time (approximately two weeks). Samples will be placed in coolers, with enough ice to keep the sample temperature between 0 and 4°C until delivered to the laboratory. Only “wet” ice will be used, with no use of “blue ice” or similar cold storage packets. PFAS sample coolers will be shipped via Federal Express Priority Overnight delivery to:

Sample Receiving  
Eurofins TestAmerica Sacramento  
880 Riverside Parkway  
West Sacramento, California 95605-1500

Samples will be analyzed for the 36 PFAS compounds reportable using Method 537 Modified.

All disposable sampling materials will be treated as single use and disposed appropriately after sampling at each location. Samples from each residence will be kept in their own dedicated cooler with the appropriate quality assurance samples.

### 4.4 Quality Assurance/Quality Control

Avoiding cross-contamination from PFAS-containing materials during this sampling will be of utmost importance given the very low detection limits for the analyses that will be conducted for these compounds. As such, materials with the potential to contain PFAS will not be used during the sampling (including polytetrafluoroethylene [PTFE] pipe tape, pipe thread pastes that contain PTFE, PTFE sample tubing, food wrappers, water resistant/proof clothing, waterproof field books, etc.)

Sample information, including sample ID and date/time collected, will be recorded on the provided bottle labels and attached to the sample bottles immediately after sealing the bottles. This information also will be recorded on the COC form provided by the laboratory, in a Potable Water Supply Sample Log, and in the sampling team’s field notes. A signed copy of the COC form will be provided to the laboratory whenever a sample cooler is delivered to the laboratory. A copy of each COC form will be kept with the field notes and sample logs.

After receipt from the laboratory, Arcadis will conduct a preliminary data quality review (Level 2 data validation). The sample results will be communicated to well owners/users after completion of the preliminary data quality review, as outlined in the “Project Communication” section below. After completion of the preliminary data quality review, Arcadis will conduct a more comprehensive validation of the data (Level 4 data validation). The timeframe for the Level 4 validation may vary based on the amount of time required for the laboratory to send additional Quality Assurance/Quality Control information to Arcadis, and the number of samples under review. The anticipated timeframe for completion of Level 4 validation is approximately four weeks after receipt of the complete Level 4 data package from the laboratory. If any changes to the reported sampling results become necessary after completion of the Level 4 validation, the well owners/users and WDNR will be notified of those changes.

## 5 Project Communication

Results letters will be provided to the applicable well owners/users and WDNR within 10 business days of Arcadis receiving results from the laboratory. If the PFAS concentrations at a well were below the concentrations set forth on **Table 3** based on data available for past sampling events but are above those concentrations for the current sampling event, then a phone call will be placed to the well owner/user within two days of completing the preliminary data quality review for the laboratory results for that sample to inform the owner or tenant of their results and confirm their bottled water status or offer bottled water as appropriate. A list of wells that were previously sampled for less than 36 compounds is included in **Table 4**. A copy of the form letter and associated results table is attached as **Exhibit 1**.

Tyco will provide WDNR copies of the letters provided to well owners/users within 10 business days of Arcadis receiving results from the laboratory. An annual report summarizing the drinking water results from April 1, 2022 through March 31, 2023 will be provided to the WDNR by July 31, 2023. Validated results have been and will continue to be included in the bi-weekly database submission.



## 6 Closing

This sampling plan presents the approach for sampling potable wells and POET systems, bottled water service, and POET system operation and maintenance. Tyco is advancing long term drinking water solutions by offering private, deep bedrock drinking water wells to a segment of the PWSA that is not considering requesting annexation and municipal water from the City of Marinette. Simultaneously, Tyco is prepared to expand the municipal water system of the City of Marinette should the neighbors within the PWSA successfully petition to be annexed. Providing private wells that draw water from an unimpacted aquifer and offering a connection to a monitored municipal source of water are two more ways Tyco is eliminating the primary potential exposure pathway for PFAS. Any new deep bedrock potable wells will not be sampled at the frequency described in this report as they will have a separate monitoring program reflective of the groundwater conditions in that aquifer (Arcadis 2022b,c).

## 7 References

- Arcadis 2018. Revised Long-Term Potable Well Sampling Plan. Tyco Fire Technology Center, 2700 Industrial Parkway, Marinette, Wisconsin 54143. BRRTS# 02-38-580694. Revision 1. April 20, 2018.
- Arcadis 2020a. Revised Long-Term Potable Well Sampling Plan. Tyco Fire Technology Center, 2700 Industrial Parkway, Marinette, Wisconsin 54143. BRRTS# 02-38-580694. Revision 2. April 1, 2020.
- Arcadis 2020b. Potable Well Sampling Program Summary Report. Tyco Fire Technology Center, 2700 Industrial Parkway South, Marinette, Wisconsin 54143. BRRTS# 02-38-580694. June 1, 2020.
- Arcadis 2021a. Response to Wisconsin Department of Natural Resources Revised Long-Term Potable Well Sampling Plan. JCI/TYCO FTC (PFAS), 2700 Industrial Parkway, Marinette, Wisconsin 54143. BRRTS# 02-38-580694. January 12, 2021.
- Arcadis 2021b. Revised Long-Term Potable Well Sampling Plan. Tyco Fire Technology Center, 2700 Industrial Parkway South, Marinette, Wisconsin 54143. BRRTS# 02-38-580694. Revision 3. March 16, 2021
- Arcadis 2021c. Response to Comments – Response to 3rd Revised Long-Term Potable Well Sampling Plan. Tyco FTC PFAS, 2700 Industrial Parkway South, Marinette, WI. BRRTS# 02-38-580694. July 16, 2021.
- Arcadis 2021d. Private Drinking Water Well Sampling Program Annual Summary Report – FTC Sampling Area. Tyco Fire Technology Center, 2700 Industrial Parkway, Marinette, WI 54143. BRRTS# 02-38-580694. August 6, 2021.
- Arcadis 2021e. Revised Long-Term Potable Well Sampling Plan. Tyco Fire Technology Center, 2700 Industrial Parkway South, Marinette, Wisconsin 54143. BRRTS# 02-38-580694. October 1, 2021
- Arcadis 2021f. Updates to Point of Entry Treatment System Sampling. Tyco FTC PFAS, 2700 Industrial Parkway South, Marinette, WI. BRRTS No.: 02-38-580694. November 22, 2021.
- Arcadis 2022a. Revised Long-Term Potable Well Sampling Plan. Tyco Fire Technology Center, 2700 Industrial Parkway South, Marinette, Wisconsin 54143. BRRTS# 02-38-580694. May 19, 2022.
- Arcadis 2022b. Deep Aquifer Bedrock Well Design and Long Term Monitoring Work Plan. Tyco Fire Technology Center, 2700 Industrial Parkway South, Marinette, Wisconsin 54143. BRRTS# 02-38-580694. September 28, 2022.
- Arcadis 2022c. PWSA Drinking Water Update. Tyco Fire Technology Center, 2700 Industrial Parkway South, Marinette, Wisconsin 54143. BRRTS# 02-38-580694. September 28, 2022.
- Wisconsin Department of Natural Resources. 2020. Response to Revised Long-Term Potable Well Sampling Plan. JCI/TYCO FTC (PFAS), 2700 Industrial Parkway, Marinette, WI. BRRTS Activity #02-38-580694. November 16, 2020.
- Wisconsin Department of Natural Resources. 2021a. Response to 3rd Revised Long-Term Potable Well Sampling Plan. JCI/TYCO FTC (PFAS), 2700 Industrial Parkway South, Marinette, WI. BRRTS #02-38-580694. June 18, 2021.
- Wisconsin Department of Natural Resources. 2021b. Response to 4<sup>th</sup> Revised Long-Term Potable Well Sampling Plan JCI/Tyco FTC PFAS, 2700 Industrial Parkway South, Marinette, WI. BRRTS #02-38-580694. December 16, 2021.

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Wisconsin Department of Natural Resources. 2021c. Response to 4<sup>th</sup> Revised Long-Term Potable Well Sampling Plan JCI/Tyco FTC PFAS, 2700 Industrial Parkway South, Marinette, WI. BRRTS #02-38-580694. December 16, 2021.

# Tables

**Table 1**  
**Potable Well Program**  
**Revised Long-Term Potable Well Sampling Plan**  
**Marinette, Wisconsin**

Well Sample ID	# of Quarterly Samples Collected <sup>(3)</sup>	Next Sampling Event
WS-001	9	Winter 2023
WS-002	2	Well no longer in use
WS-004	1	Well no longer in use
WS-005	11	Winter 2024
WS-005B	2	Not a drinking water well
WS-006	4	Spring 2023
WS-007B <sup>(1)</sup>	2	Fall 2022
WS-010	6	Spring 2024
WS-011	8	Winter 2023
WS-012	7	Winter 2023
WS-014	11	Winter 2024
WS-015	5	Winter 2023
WS-016	7	Winter 2023
WS-020	8	Winter 2023
WS-021	2	Fall 2022
WS-022	8	Winter 2023
WS-026	9	Winter 2023
WS-027	6	Winter 2023
WS-028	5	Winter 2024
WS-029	8	Winter 2023
WS-031	10	Winter 2023
WS-033	10	Winter 2023
WS-034	10	Winter 2023
WS-035	6	Winter 2023
WS-039	8	Winter 2023
WS-040	8	Winter 2023
WS-043	7	Fall 2022
WS-044	10	Winter 2023
WS-045	10	Winter 2023
WS-046	5	Winter 2023
WS-047	2	Fall 2022
WS-048 <sup>(1)</sup>	9	Spring 2023
WS-050	10	Winter 2023
WS-051	10	Spring 2023
WS-055	7	Winter 2023
WS-056	5	Spring 2023
WS-059	5	Fall 2022
WS-061A	3	Fall 2022
WS-063	10	Winter 2023
WS-064	8	Winter 2023
WS-065	10	Winter 2023
WS-066	9	Winter 2024
WS-069A	8	Winter 2023
WS-069B <sup>(1)</sup>	8	Spring 2023
WS-070 <sup>(1)</sup>	1	Fall 2022
WS-071	7	Winter 2023
WS-072	10	Winter 2023
WS-073	10	Winter 2023

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**Table 1**  
**Potable Well Program**  
**Revised Long-Term Potable Well Sampling Plan**  
**Marinette, Wisconsin**

Well Sample ID	# of Quarterly Samples Collected <sup>(3)</sup>	Next Sampling Event
WS-074	2	Fall 2022
WS-075	10	Winter 2023
WS-076	3	Fall 2022
WS-077	6	Winter 2023
WS-078	11	Fall 2023
WS-079	11	Fall 2023
WS-080	4	Fall 2022
WS-081	3	Fall 2022
WS-082	3	Fall 2022
WS-082B	2	Not a drinking water well
WS-082C	2	Not a drinking water well
WS-082D <sup>(1)</sup>	3	Not a drinking water well
WS-083	7	Winter 2023
WS-084	11	Summer 2023
WS-085	8	Winter 2023
WS-086	7	Winter 2024
WS-087	11	Fall 2023
WS-088	9	Fall 2022
WS-089	5	Winter 2024
WS-091	4	Fall 2022
WS-093	6	Winter 2023
WS-094 <sup>(1)</sup>	7	Winter 2023
WS-095	3	Fall 2022
WS-098	6	Spring 2023
WS-101 <sup>(2)</sup>	3	Fall 2022
WS-102	9	Winter 2023
WS-103	6	Winter 2023
WS-104	9	Winter 2023
WS-105	1	Fall 2022
WS-107	7	Winter 2023
WS-108	9	Winter 2023
WS-110A	10	Winter 2023
WS-112	9	Winter 2023
WS-113	10	Winter 2023
WS-114	6	Spring 2023
WS-116	8	Summer 2023
WS-117	8	Winter 2023
WS-118A	6	Winter 2023
WS-118B	5	Winter 2023
WS-119	10	Winter 2023
WS-120	7	Winter 2023
WS-122	10	Winter 2023
WS-123	6	Winter 2023
WS-124 <sup>(1)</sup>	6	Fall 2022
WS-125	7	Winter 2023
WS-127	3	Spring 2024
WS-128	4	Fall 2022
WS-130	10	Spring 2024

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**Table 1**  
**Potable Well Program**  
**Revised Long-Term Potable Well Sampling Plan**  
**Marinette, Wisconsin**

Well Sample ID	# of Quarterly Samples Collected <sup>(3)</sup>	Next Sampling Event
WS-131	7	Winter 2023
WS-132	9	Winter 2023
WS-134	5	Spring 2024
WS-135	4	Winter 2023
WS-136	6	Winter 2023
WS-137	7	Spring 2024
WS-138	8	Winter 2023
WS-139	8	Fall 2022
WS-140	5	Fall 2023
WS-141	8	Winter 2023
WS-142	4	Winter 2023
WS-143	6	Spring 2023
WS-144	6	Spring 2023
WS-145	5	Spring 2023
WS-146B	4	Not a drinking water well
WS-147 <sup>(2)</sup>	3	Fall 2022
WS-148	2	Abandoned by owner
WS-149	3	Fall 2022
WS-150	3	Fall 2022
WS-151	5	Spring 2023
WS-153	7	Winter 2023
WS-154	5	Spring 2023
WS-155	3	Fall 2022
WS-156	7	Winter 2023
WS-157	6	Winter 2023
WS-158	3	Fall 2022
WS-159 <sup>(1)</sup>	4	Winter 2023
WS-160	4	Winter 2023
WS-161	3	Spring 2024
WS-162	1	Fall 2022
WS-164	1	Fall 2022

**Notes:**

<sup>(1)</sup> = POET offer extended

<sup>(2)</sup> = POET offer declined

<sup>(3)</sup> = Number of quarterly samples collected through Winter 2022 sampling event

ID = Identification

**Table 2**  
**Potable Wells in POET OM&M Program**  
**Revised Long-Term Potable Well Sampling Plan**  
**Marinette, Wisconsin**

Well Sample ID	POET ID	Breakthrough Observed	GAC Change Frequency	Residency Status	Next Maintenance or Sampling Event <sup>(1)</sup>
WS-007A	POET-43	15 months w/o breakthrough	12 months		Maintenance, December 2022
WS-008	POET-7	3 months	2-3 months		Maintenance, October 2022
WS-009	POET-26	14 months w/o breakthrough	12 months		Maintenance, October 2022
WS-013	POET-10	13 months w/o breakthrough	12 months	Occasionally winterized	Maintenance, December 2022
WS-017	POET-40	15 months w/o breakthrough	12 months		Maintenance, October 2022
WS-018	POET-29	17 months w/o breakthrough	12 months		Maintenance, October 2022
WS-019	POET-5	2-3 months	2-3 months		Maintenance, December 2022
WS-023	POET-14	15 months w/o breakthrough	12 months		Maintenance, October 2022
WS-024	POET-11	8 months w/o breakthrough	TBD	Winterized 4 months each year	Maintenance, October 2022
WS-025	POET-28	16 months w/o breakthrough	12 months		Maintenance, December 2022
WS-030	POET-31	18 months w/o breakthrough	12 months		Maintenance, October 2022
WS-032	POET-25	18 months w/o breakthrough	12 months		Maintenance, October 2022
WS-036	POET-3	6 months, 6 months w/o breakthrough	6 months		Maintenance, December 2022
WS-037	POET-32	12 months w/o breakthrough	12 months		Maintenance, December 2022
WS-038	POET-19	2 months, 3 months, 5 months	2-3 months		Maintenance, December 2022
WS-041	POET-46	TBD	TBD		Maintenance and Sampling, October 2022
WS-042	POET-45	TBD	TBD		Maintenance and Sampling, October 2022
WS-049	POET-35	16 months w/o breakthrough	12 months		Maintenance, October 2022
WS-052	POET-2	11 months, 11 months w/o breakthrough	9 months		Maintenance, October 2022
WS-053	POET-21	18 months w/o breakthrough	12 months		Maintenance, October 2022
WS-054	POET-30	8 months, 9 months	6 months		Maintenance, October 2022
WS-057	POET-34	16 months w/o breakthrough	12 months		Maintenance, November 2022
WS-058	POET-1	12 months, 12 months w/o breakthrough	9 months		Maintenance, December 2022
WS-060	POET-47	TBD	TBD		Maintenance and Sampling, October 2022
WS-061B	POET-27	16 months w/o breakthrough	12 months		Maintenance, December 2022
WS-062	POET-44	TBD	TBD		Maintenance and Sampling, October 2022
WS-067	POET-39	7 months and 14 months w/o breakthrough	12 months		Maintenance, December 2022
WS-068	POET-12	13 months, 12 months w/o breakthrough	Observed breakthrough		Maintenance and Sampling, November 2022
WS-090	POET-4	2 mo, 4 mos, 7 mos w/o breakthrough	Observed breakthrough		Maintenance and Sampling, December 2022
WS-092	POET-22	15 months	12 months	Occasionally winterized	Maintenance, December 2022
WS-096	POET-6	4 months, 5 months, 8 months	Observed breakthrough		Maintenance and Sampling, October 2022
WS-097	POET-13	18 months w/o breakthrough	12 months		Maintenance, November 2022
WS-099	POET-15	19 months w/o breakthrough	12 months		Maintenance, December 2022
WS-100	POET-24	12 months	12 months		Maintenance, October 2022
WS-106R	POET-37	14 months w/o breakthrough	Observed breakthrough		Maintenance and Sampling, October 2022
WS-109	POET-17	6 months, 8 months	6 months		Maintenance, October 2022
WS-111	POET-18	17 months w/o breakthrough	12 months		Maintenance, October 2022
WS-115	POET-20	18 months w/o breakthrough	12 months		Maintenance, November 2022
WS-121A	POET-16	15 months w/o breakthrough	12 months		Maintenance, November 2022
WS-121B	POET-36	11 and 15 months w/o breakthrough	12 months	Occasionally winterized	Maintenance, November 2022
WS-126	POET-23	16 months w/o breakthrough	12 months	Occasionally winterized	Maintenance, October 2022
WS-129	POET-38	3 months and 9 months w/o breakthrough	12 months		Maintenance, October 2022
WS-133	POET-33	12 months w/o breakthrough	12 months		Maintenance, October 2022

**Table 2**  
**Potable Wells in POET OM&M Program**  
**Revised Long-Term Potable Well Sampling Plan**  
**Marinette, Wisconsin**

Well Sample ID	POET ID	Breakthrough Observed	GAC Change Frequency	Residency Status	Next Maintenance or Sampling Event <sup>(1)</sup>
WS-146AR	POET-8	TBD	TBD		Maintenance and Sampling, October 2022
WS-152	POET-42	13 months w/o breakthrough	12 months		Maintenance, October 2022
WS-163	POET-41	12 months w/o breakthrough	12 months		Maintenance, October 2022

**Notes:**

<sup>(1)</sup> = This program is operated independent of the private drinking water well sampling program

Effluent from POETs not sampled for 12 months are still eligible for quarterly sampling until 12 months of data has been collected

GAC = Granular Activated Carbon

ID = Identification

OM&M = Operations, Maintenance and Monitoring

POET = Point of Entry Treatment

TBD = To be determined based on additional sampling

**Table 3**  
**List of Compounds**  
**Revised Long-Term Potable Well Sampling Plan**  
**Marinette, Wisconsin**

Analyte	June 2019 WDHS (Not Adopted by WDNR Board) <sup>(1)</sup>	November 2020 WDHS (Not Yet Proposed for Rulemaking by WDNR) <sup>(2)</sup>	Units
PFBA	--	10,000	ng/L
PFPeA	--	--	ng/L
PFHxA	--	150,000	ng/L
PFHpA	--	--	ng/L
PFOA	20	--	ng/L
PFNA	--	30	ng/L
PFDA	--	300	ng/L
PFUnA	--	3,000	ng/L
PFDaA	--	500	ng/L
PFTriA	--	--	ng/L
PFTeA	--	10,000	ng/L
PFHxDA	--	--	ng/L
PFODA	--	400,000	ng/L
PFBS	--	450,000	ng/L
PFPeS	--	--	ng/L
PFHxS	--	40	ng/L
PFHpS	--	--	ng/L
PFOS	20	--	ng/L
PFNS	--	--	ng/L
PFDS	--	--	ng/L
PFDOS	--	--	ng/L
4:2 FTS	--	--	ng/L
6:2 FTS	--	--	ng/L
8:2 FTS	--	--	ng/L
10:2 FTS	--	--	ng/L
FOSA	--	20	ng/L
NMeFOSA	--	--	ng/L
NEtFOSA	--	20	ng/L
NMeFOSAA	--	--	ng/L
NEtFOSAA	--	20	ng/L
NMeFOSE	--	--	ng/L
NEtFOSE	--	20	ng/L
GenX	--	300	ng/L
DONA	--	3,000	ng/L
F-53 Major	--	--	ng/L
F-53B Minor	--	--	ng/L

**Notes:**

<sup>(1)</sup> = In June 2019 the Wisconsin Department of Health Services (DHS) recommended individual groundwater standards of 20 ng/L for PFOA and PFOS. The WDNR proposed those standards through the state rulemaking process. In February 2022, the Wisconsin Natural Resources Board did not approve the proposed rulemaking for groundwater. In August 2022, WDNR promulgated a drinking water standard of 70 ng/L for PFOA and PFOS, individually and combined, for public water systems. This standard does not apply to private drinking water wells.

<sup>(2)</sup> = In November 2020 the Wisconsin DHS recommended a combined groundwater standard of 20 ng/L for: FOSA, NEtFOSE, NEtFOSA, NEtFOSAA, PFOS and PFOA. DHS also recommended individual standards for FOSA, NEtFOSE, NEtFOSA, NEtFOSAA, PFBS, PFHxS, PFNA, PFDA, PFDaA, PFHxA, PFTeA, PFUnA, PFBA, PFODA, DONA, and GenX. In March 2021, The Wisconsin Natural Resources Board approved a Statement of Scope to initiate a rulemaking for this recommendation. The WDNR has not yet proposed rules to initiate the rulemaking process to implement this recommendation; the agency's authority to do so under the Statement of Scope will expire in September 2023.

ng/L = nanograms per liter

**Table 3**  
**List of Compounds**  
**Revised Long-Term Potable Well Sampling Plan**  
**Marinette, Wisconsin**

**Chemical Abbreviations:**

Perfluorobutanoic acid (PFBA)  
Perfluoropentanoic acid (PFPeA)  
Perfluorohexanoic acid (PFHxA)  
Perfluoroheptanoic acid (PFHpA)  
Perfluorooctanoic acid (PFOA)  
Perfluorononanoic acid (PFNA)  
Perfluorodecanoic acid (PFDA)  
Perfluoroundecanoic acid (PFUnA)  
Perfluorododecanoic acid (PFDoA)  
Perfluorotridecanoic acid (PFTriA)  
Perfluorotetradecanoic acid (PFTeA)  
Perfluorohexadecanoic acid (PFHxDA)  
Perfluorooctadecanoic acid (PFODA)  
Perfluorobutane sulfonic acid (PFBS)  
Perfluoropentane sulfonic acid (PFPeS)  
Perfluorohexane sulfonic acid (PFHxS)  
Perfluoroheptane sulfonic acid (PFHpS)  
Perfluorooctane sulfonic acid (PFOS)  
Perfluorononane sulfonic acid (PFNS)  
Perfluorodecane sulfonic acid (PFDS)  
Perfluorododecane sulfonic acid (PFDOS)  
4:2 Fluorotelomer sulfonate (4:2 FTS)  
6:2 Fluorotelomer sulfonate (6:2 FTS)  
8:2 Fluorotelomer sulfonate (8:2 FTS)  
10:2 Fluorotelomer sulfonate (10:2 FT)  
Perfluorooctane sulfonamide (FOSA)  
N-methylperfluorooctanesulfonamide (NMeFOSA)  
N-ethylperfluorooctanesulfonamide (NEtFOSA)  
N-methylperfluorooctanesulfonamidoacetic acid (MeFOSAA)  
N-methylperfluorooctanesulfonamidoethanol (NEtFOSAA)  
N-methylperfluorooctanesulfonamidoethanol (NMeFOSE)  
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)  
Hexafluoropropylene oxide dimer acid (GenX)  
4,8-Dioxa-3H-perfluorononanoic acid (DONA)  
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (F-53 Major)  
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (F-53B Minor)

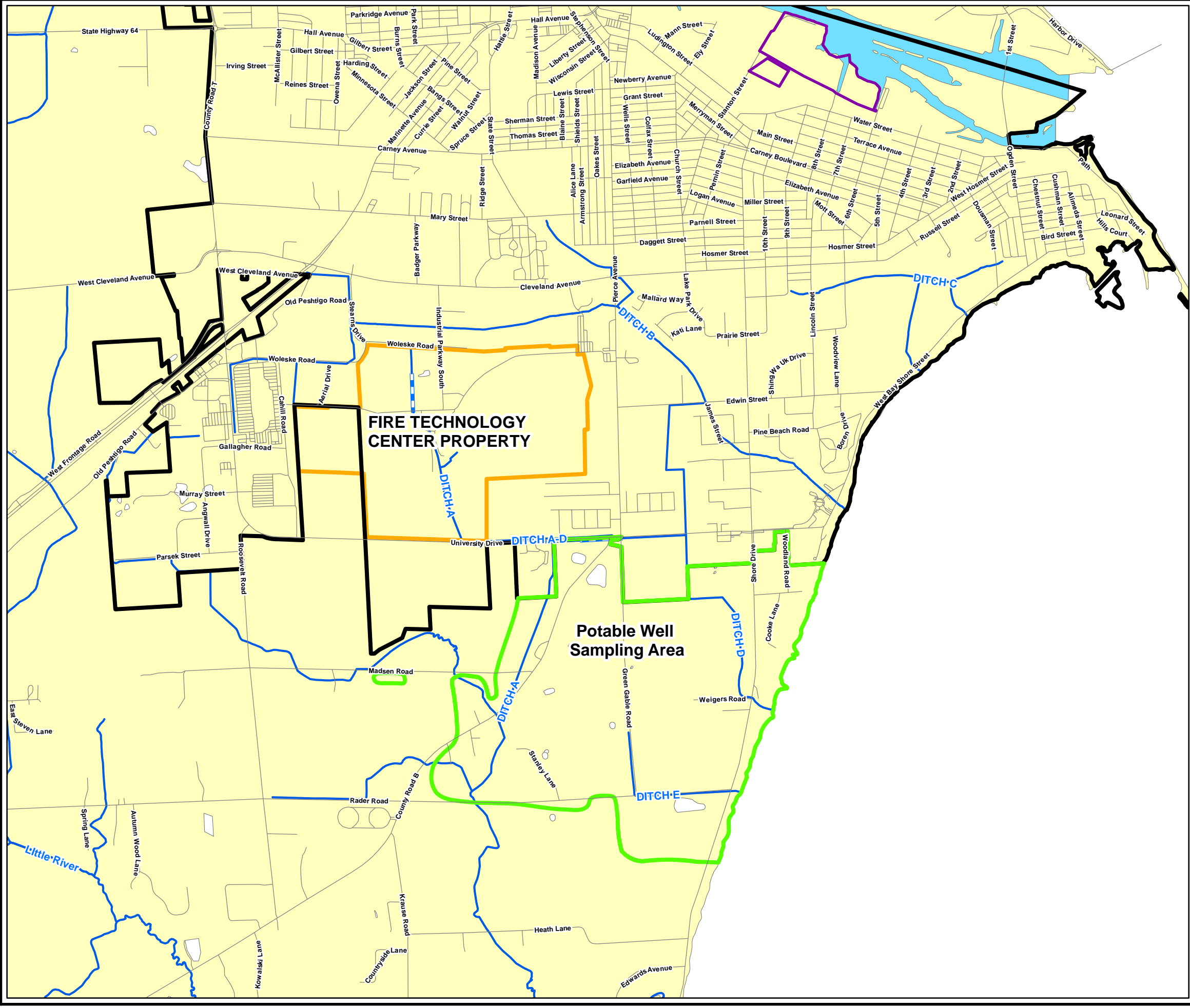
**Table 4**  
**Potable Wells Not Sampled for 36 PFAS Compounds**  
**Revised Long-Term Potable Well Sampling Plan**  
**Marinette, Wisconsin**

Well Sample ID	Comments
WS-002	Hospital well, not in use
WS-004	Hospital well, not in use
WS-005B	Not a drinking water well
WS-007B	Well not accessible
WS-021	Non-responsive to outreach
WS-043	Non-responsive to outreach
WS-047	Non-responsive to outreach
WS-061B	Non-responsive to outreach
WS-070	Non-responsive to outreach
WS-076	Non-responsive to outreach
WS-080	Well not accessible
WS-081	Non-responsive to outreach
WS-088	House vacant and winterized
WS-091	Non-responsive to outreach
WS-095	Non-responsive to outreach
WS-105	Sample delayed by FedEx; non-responsive to rescheduling effort
WS-124	Non-responsive to outreach
WS-139	Non-responsive to outreach
WS-146B	Not a drinking water well
WS-148	Abandoned by owner
WS-155	Non-responsive to outreach

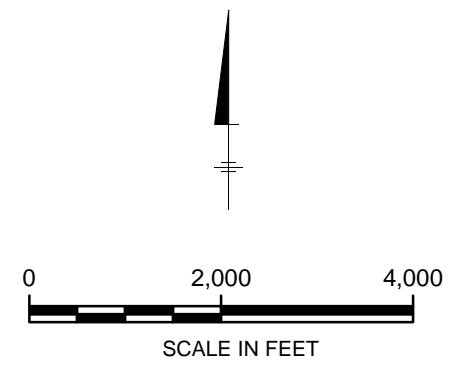


# Figure

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- LEGEND:**
- POTABLE WELL SAMPLING AREA
  - STANTON STREET FACILITY BOUNDARY
  - APPROXIMATE SITE PROPERTY BOUNDARY
  - APPROXIMATE MARINETTE CITY BOUNDARY
  - WATERBODY
  - DITCH OR STREAM
  - ROAD



TYCO FIRE PRODUCTS LP MARINETTE, WISCONSIN	
<b>POTABLE WELL SAMPLING AREA</b>	
<b>ARCADIS</b>	FIGURE <b>1</b>

# Exhibit



<First Name> <Last Name>  
<Mailing Address>  
<Mailing City>, <Mailing ST> <Mailing ZZZZZ-ZZZZ>

Arcadis U.S., Inc.  
126 North Jefferson Street  
Suite 400  
Milwaukee  
Wisconsin 53202  
www.arcadis.com

Subject: Private Well Sampling Results  
Parcel #<PIN>, <Property Address>  
Date: <Month DD, YYYY>

Dear <First Name>:

As you are aware, Arcadis U.S., Inc. (Arcadis) collected a water sample from your property located at <Property Address> on <Sample Date>. We recorded the sample location, date, and other information and had the sample tested at an accredited, independent laboratory. That testing is now complete.

Laboratory results for these samples are summarized in the attached table. The full results from the laboratory<sup>1</sup> and the Water Sampling Collection Log are also included with this letter.

Thank you for your patience and assistance with our investigation. Based on the sampling results from your well to date, your next scheduled sampling event is <Season Year>. We will continue to provide updates to the community as our work continues.

If you have any questions or want to discuss these results further, please call the toll-free number that has been set up for this matter (800) 314-1381. Contact information for the Wisconsin Department of Natural Resources (WDNR) and Wisconsin Department of Health Services (WDHS) is provided below if you have other questions.

WDNR Alyssa Sellwood 608-622-8606 Alyssa.Sellwood@wisconsin.gov  
<http://dnr.wisconsin.gov/topic/Contaminants/PFAS.html>

WDHS Amanda Koch 608-405-2292 Amanda.Koch@dhs.wi.gov  
<http://www.dhs.wisconsin.gov/chemical/pfas.htm>

Sincerely,  
Arcadis U.S., Inc.

Matthew Coleman  
Project Communications Manager

Enc. Results Summary Table  
Laboratory Results  
Water Sampling Collection Log

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<sup>1</sup> The attached preliminary laboratory report from TestAmerica Laboratories, Inc. includes sample results and summary quality control/quality assurance (QA/QC) forms associated with the samples. Pages containing sample results and associated QA/QC results that are not associated with this address have been removed from the report.

## Results Summary Table

Analyte	Location		Sample Date	Sample Type	WS-XXX	DUP-XXX
	June 2019 WDHS (Not Adopted by WDNR Board) <sup>(1)</sup>	November 2020 WDHS (Not Yet Proposed for Rulemaking by WDNR) <sup>(2)</sup>			MM/DD/YYYY N	MM/DD/YYYY FD
PFOA	20	--		ng/L	< 0.77 U	< 0.76 U
PFOS	20	--		ng/L	< 0.49 U	< 0.48 U
PFBS	--	450,000		ng/L	< 0.18 U	< 0.18 U
PFHpA	--	--		ng/L	< 0.23 U	< 0.22 U
PFHxS	--	40		ng/L	< 0.52 U	< 0.51 U
PFNA	--	30		ng/L	< 0.24 U	< 0.24 U
PFDA	--	300		ng/L	< 0.28 U	< 0.28 U
PFDoA	--	500		ng/L	< 0.50 U	0.62 J
PFHxA	--	150,000		ng/L	< 0.53 U	< 0.52 U
PFTeA	--	10,000		ng/L	< 0.66 U	0.71 J
PFTriA	--	--		ng/L	< 1.2 U	< 1.2 U
PFUnA	--	3,000		ng/L	< 1.0 U	< 0.98 U
NEtFOSAA	--	20 <sup>(2)</sup>		ng/L	< 1.2 U	< 1.2 U
NMeFOSAA	--	--		ng/L	< 1.1 U	< 1.1 U
PFBA	--	10,000		ng/L	< 2.2 U	< 2.1 U
PFPeA	--	--		ng/L	< 0.44 U	< 0.44 U
PFHxDA	--	--		ng/L	< 0.81 U	< 0.79 U
PFODA	--	400,000		ng/L	< 0.85 U	< 0.84 U
PFPeS	--	--		ng/L	< 0.27 U	< 0.27 U
PFHpS	--	--		ng/L	< 0.17 U	< 0.17 U
PFNS	--	--		ng/L	< 0.34 U	< 0.33 U
PFDS	--	--		ng/L	< 0.29 U	< 0.28 U
PFDoS	--	--		ng/L	< 0.88 U	< 0.86 U
FOSA	--	20 <sup>(2)</sup>		ng/L	< 0.89 U	1.2 J
NEtFOSA	--	20 <sup>(2)</sup>		ng/L	< 0.79 U	< 0.77 U
NMeFOSA	--	--		ng/L	< 0.39 U	< 0.38 U
NMeFOSE	--	--		ng/L	< 1.3 U	< 1.2 U
NEtFOSE	--	20 <sup>(2)</sup>		ng/L	< 0.77 U	< 0.76 U
4:2 FTS	--	--		ng/L	< 0.22 U	< 0.21 U
6:2 FTS	--	--		ng/L	< 2.3 U	< 2.2 U
8:2 FTS	--	--		ng/L	< 0.42 U	< 0.41 U
10:2 FTS	--	--		ng/L	< 0.61 U	< 0.60 U
DONA	--	3,000		ng/L	< 0.36 U	< 0.36 U
GenX	--	300		ng/L	< 1.4 U	< 1.3 U
F-53B Major	--	--		ng/L	< 0.22 U	0.44 J
F-53B Minor	--	--		ng/L	< 0.29 U	0.75 J

**Notes:**

< = Compound not detected at method detection limit.

<sup>(1)</sup> = In June 2019 the Wisconsin Department of Health Services (DHS) recommended individual groundwater standards of 20 ng/L for PFOA and PFOS. The WDNR proposed those standards through the state rulemaking process. In February 2022, the Wisconsin Natural Resources Board did not approve the proposed rulemaking for groundwater. In August 2022, WDNR promulgated a drinking water standard of 70 ng/L for PFOA and PFOS, individually and combined, for public water systems. This standard does not apply to private drinking water wells.

<sup>(2)</sup> = In November 2020 the Wisconsin DHS recommended a combined groundwater standard of 20 ng/L for: FOSA, NEtFOSE, NEtFOSA, NEtFOSAA, PFOS and PFOA. DHS also recommended individual standards for FOSA, NEtFOSE, NEtFOSA, NEtFOSAA, PFBS, PFHxS, PFNA, PFDA, PFDoA, PFHxA, PFTeA, PFUnA, PFBA, PFODA, DONA, and GenX. In March 2021, the Wisconsin Natural Resources Board approved a Statement of Scope to initiate a rulemaking for this recommendation. The WDNR has not yet proposed rules to initiate the rulemaking process to implement this recommendation; the agency's authority to do so under the Statement of Scope will expire in September 2023.

-- = No standard

FD = Field duplicate

N = Normal sample

ng/L = nanograms per liter

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

U = The analyte was analyzed for but the result was not detected above the method detection limit.

**Chemical Abbreviations:**

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-Dioxa-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-chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (C10)

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