State of Wisconsin
Department of Natural Resources
PO Box 7921, Madison WI 53707-7921
dnr.wi.gov

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

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 from 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.

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.

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

The requester listed above: (select all that apply)

- [x] 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	First	MI	Organization/ Business Name		
Johnson	Shauna		Arcadis		
Mailing Address			City	State	ZIP Code
126 N Jefferson Street, Suite 400			Milwaukee	WI	53202
Phone # (include area code)	Fax # (include area code)		Email		
(312) 575-3732			shauna.johnson@arcadis.com		

Environmental Consultant (if applicable)

Contact Last Name	First	MI	Organization/ Business Name		
Johnson	Shauna		Arcadis		
Mailing Address			City	State	ZIP Code
126 N Jefferson Street, Suite 400			Milwaukee	WI	53202
Phone # (include area code)	Fax # (include area code)		Email		
(312) 575-3732			shauna.johnson@arcadis.com		

Section 2. Property Information

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

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 fo

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: _____

☐ 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: GETS Semi-Annual Monitoring – November 13, 2023 through May 12, 2024

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.

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

Date Signed: 6/3/2024

Title: Senior Environmental Specialist

Telephone Number (include area code): (312) 575-3732

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.

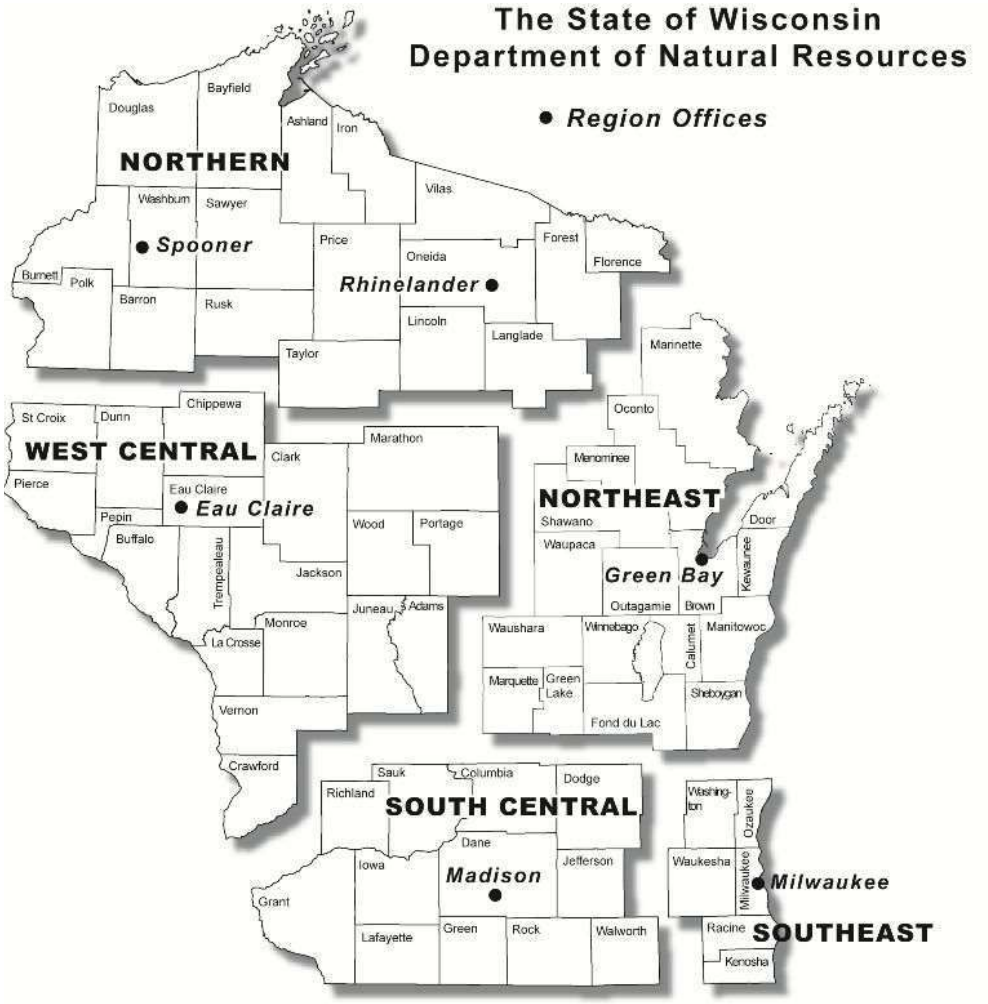
DNR NORTHERN REGION
Attn: RR Program Assistant
Department of Natural Resources
223 E Steinfest Rd Antigo, WI 54409

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? ◯ Yes ◯ No	Fee Amount $	Date Additional Information Requested	Date Requested for DNR Response Letter
Date Approved	Final Determination		

Ms. Alyssa Sellwood, P.E.
Complex Sites Project Manager, Remediation and Redevelopment Program
State of Wisconsin Department of Natural Resources
101 South Webster Street
Box 7921
Madison, WI 53707-7921

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

Date: June 3, 2024
BRRTS No.: 02-38-580694
Our Ref: 30129347
Subject: **GETS Semi-Annual Monitoring** –
November 13, 2023 through May 12, 2024
Tyco FTC PFAS, 2700 Industrial Parkway South, Marinette, WI

Dear Ms. Sellwood,

This letter report is the Semi-Annual Monitoring (SAM) representing the third short term monitoring and performance summary of the Groundwater Extraction and Treatment System (GETS) spanning the first 18 months of operation. The additional data requested in the February 2, 2024 correspondence from the WDNR is included where available. This report summarizes the performance data, operating data, and system optimization performed from the start of the GETS (November 14, 2022) through May 12, 2024. As detailed in the *Long-Term Monitoring Plan for the Groundwater Extraction and Treatment System* (Arcadis, 2021), the STM phase began following the first 6 months of the GETS operation. The GETS began operating November 14, 2022. The GETS STM began on May 15, 2023 and will continue through May 11, 2025 when it will transition to a future long term monitoring plan that will be prepared under separate cover. Reporting during short term monitoring is every six months. This is the third of five planned STM reports.

SUMMARY OF DATA

In 18 months of operation, the GETS has removed approximately 6.00 kg of PFOA plus PFOS from groundwater prior to entering ditch B (See Figure 10 and Table 14). The treatment system is operating as intended to remove PFAS from extracted groundwater and reducing concentrations of PFOA and PFOS in Ditch B. Various system optimization activities have been ongoing since initial startup to increase the treatment capacity of the GETS to treat more water, modify the pretreatment filtration process and filtration media to remove more iron, manganese and organic matter from the water, and the GAC vessels were re-plumbed to permit changing the sequence of the vessels in the treatment train. This last change to the system assures the last vessel closest to the outfall always contains the “freshest” GAC with the least PFAS adsorbed to the media, reduces GAC use and carbon footprint, and provides a higher level of assurance the effluent will meet criteria. Collectively, these initial optimizations have improved the treatment capacity permitting groundwater pumping to increase approximately 20%. Additional optimization activities are further discussed below and include supplemental wells and treatment process upgrades to further increase the rate of water pumping and treatment.

Tables 1 through 14 summarize the available operational data and monitoring activities for this reporting period. Tables 1 through 7 summarize the operational data for the GETS and the extraction wells, while Tables 8 and 9 summarize Ditch B Flow and concentration data. Table 10 summarizes observed groundwater and surface water

interaction in Ditch B. Tables 11 through 13 contain the chemistry and water level data from monitoring wells and surface water locations outlined in the *Long-Term Monitoring Plan for the Groundwater Extraction and Treatment System* (July 2021) approved in October 2021. Table 14 summarizes the mass of PFOA and PFOS that have been removed by the GETS during the first 18 months of operations. Figure 1 is a local site map near the GETS identifying the treatment plant, the extraction wells and the monitoring network. Figure 2 summarizes flow in Ditch B and local precipitation. Figures 3 through 5 summarize water levels and pumping rates at the extraction wells. Figures 6 and 7 summarize groundwater elevations. Figure 8 summarizes PFOA and PFOS concentrations in Ditch B while Figure 9 summarizes PFOA and PFOS removal by the GETS. Figures 10 through 13 present PFAS concentrations in groundwater.

GETS Operational Data

The treatment rates and groundwater pumping varied during the first 8 weeks of GETS operation while final system testing was completed. The GETS has been running continuously since the afternoon of January 11, except for brief periods for routine maintenance. The average treatment rates each week are summarized in Table 6. The average weekly treatment rates has gradually increased from 190 gpm in Week 11 (January 2023) to approximately 240 gpm in Week 78 (May 2024). It should be noted that there are small differences between the total volumes of water at the influent of the GETS, the effluent of the GETS, and total volume discharged to Ditch B reported on Table 6. For example, during week 20, the average treatment rate (211.6) equals the discharge to Ditch B, which equals the total pumping from the extraction wells (215.1). The small discrepancies reflect storage in the treatment system, the piping, and differences in the accuracy of the 10 flow meters used to make the calculations. These differences account for approximately a 1% bias between extraction well pumping and discharge to Ditch B, i.e., the measured total flow from the extraction wells is greater than the measured discharge to the ditch.

Groundwater Concentrations

Groundwater concentrations in monitoring wells and extraction wells are summarized in Tables 5 and 13. During the eighteen months of GETS operations, 300 samples were collected from monitoring wells and 172 samples were collected from the extraction wells. Over the eighteen-month collective data set, the influent concentration of PFOA plus PFOS to the GETS (Table 7) through Week 66 trended downward, as reflected by the similar downward trend in the weekly mass removed of PFOA plus PFOS (Figure 9). Recent optimization activities have included increased pumping rates, which has resulted in an increase in mass removal over the last 6 weeks of the reporting period. As a result of these activities, there has also been changes in plume concentrations over the reporting period. Figures 10 and 11 compare shallow groundwater concentrations (less than 18 feet of the land surface) over the past 6 months. Shallow groundwater concentrations of PFOA plus PFOS at these locations have declined at 7 of the 10 locations. The small increase at three locations is likely a result of redistribution of mass within the capture zone of the extraction wells. The deep groundwater concentrations are shown in Figures 12 and 13. The recent data shown in Figure 13 also show a pattern of changes with the 11 wells east and south of the plume center (PZ-30-59, PZ-57-38, PZ-32-72, PZ-31-53, PZ-31-40, PZ-24-47, PZ-58-50, EX-9, EX-7, EX-6, EX-5) decreasing in concentrations over the past 6 months. The 16 wells in the center and to the immediate east-northeast of the plume center have increased in concentrations likely due to the natural tendency for plumes to redistribute during pumping along focused flow paths. The increases to the east-northeast indicate an opportunity to capture more water within this area as discussed in greater detail below. Note the changes in concentrations discussed above were not evaluated statistically as valid statistical analysis typically require 8 or more sampling

events at each location, and at the current time no monitoring wells have been sampled more than 6 times. It is anticipated a statistical analysis of key wells will be included in the next semi-annual monitoring report.

Surface Water & Stream Bed Piezometer Data

PFAS Concentrations in surface water are monitored at multiple locations in Ditch B between Industrial Parkway and Location L-03 downstream of the Ditch B surface water treatment system. These data are summarized in Table 9 and Table 13. Table 9 and Figure 9 summarize the weekly samples at the influent to the Ditch B treatment system. These data continue to show PFAS concentrations decreased in the ditch after the GETS became operational. The sample collected April 1 (Week 73) had 107 ng/L of PFOA plus PFOS, the lowest concentration measured during this reporting period. Seven synoptic rounds of samples were collected from Ditch B upgradient of the Ditch B treatment system between September 8, 2022 and April 24, 2024. These data show a gradual decrease in PFAS concentrations over this period. Generally, surface water samples collected down gradient of the Ditch B treatment system at SW-L03 since September 2023 have been low. Only two samples have been greater than non-detect for PFOA and PFOS. The February 2024 results were 13 PFOA and ND for PFOS while April samples were 110 PFOA and 14 PFOS during high flow conditions.

Streambed piezometers placed at 7 locations, L-09, M-01, M-04, M-07, M-09, U-03, and U-10 were used to measure water levels. The water levels inside and adjacent to each piezometer are summarized in Table 10. The data in column ‘delta’ at each location show the transition of Ditch B from “gaining” (positive) to “losing” (negative). Comparing April 2024 conditions to May 2023 conditions show reduced positive gradients as the zone of influence of the extraction wells has continued to develop and reduce upwelling of groundwater into Ditch B. Groundwater samples were collected at 5 locations, M-01, M-04, M-07, M-09 and U-03. Groundwater concentrations in streambed piezometers were highest in the center of the monitoring network near M07 and M09 (Figure 11). A review of surface water concentrations with streambed piezometer data indicates the area near M09 contributes the majority of the PFOA and PFOS to Ditch B. This area is consistent with the observation above related to the observed increases in groundwater to the east-northeast of the immediate center of the plume, further supporting potential for capturing more water within this area.

As part of the ongoing optimization evaluations, supplemental surface water samples were collected from Ditch B near the intersection with Pierce Avenue (location M09) on April 22, 2024 concurrent with the routine surface water samples within the ditch. The supplemental surface water samples evaluated a tributary (called the northern tributary) to Ditch B that flows from the City of Marinette. Previous monitoring of the northern tributary was performed upstream of the confluence of the tributary and Ditch B at the intersection of Cleveland Avenue (SW-32) in 2018 and 2019. PFOA and PFOS concentrations were detected at concentrations below current applicable surface water standards during those sampling events. The northern tributary was sampled at a different location during the supplemental sampling event, at Pierce Avenue near the confluence of the tributary and Ditch B. The data from the northern tributary as it entered the main Ditch B waters contained 3,300 ng/L PFOA and 240 ng/L PFOS. Confirmation samples were collected on May 1, 2024 and those results indicated 820 ng/L PFOA and 52 ng/L PFOS was present within the northern tributary water at that location. Additional samples were collected along the northern tributary on May 8, 2024 moving upstream from Pierce Avenue towards and beyond Cleveland Avenue. Concentrations of PFOA and PFOS were below applicable surface water standards at and upstream of Cleveland Avenue, similar to the 2018 and 2019 results. PFOA and PFOS were above applicable surface water standards in the northern tributary between Cleveland Avenue and Pierce Avenue. These findings are consistent with the latest plume contours developed using the most recent GETS monitoring data (Figure 13), and the data coupled with the above observations were used to locate placement of additional extraction wells as part of the

optimization activities described below. In addition, three surface water sampling locations along the northern tributary will be added to the ongoing GETS surface water monitoring activities (upgradient, midpoint and confluence; sample locations SW-P5, SW-P4, and SW-P1 on Figure 11), as discussed further in Appendix A.

Extraction Well Data

Water level data were periodically downloaded from the transducers installed in the monitoring wells adjacent to the extraction wells. These data are shown on Figures 3, 4, and 5. The changes in water levels on the figures coincide with changes in pumping rates of the extraction wells, precipitation events, and snow melt. The graphs on the figures are organized based on location relative to Ditch B. Figures 3 and 4 summarize water levels near the 6 extraction wells along Ditch B organized from north to south. Prior to continuous operations, water levels were highest at MW-EX-3 (592 feet) in the north, decreasing to 590 feet PZ-52-41 (EX-7), and increasing to 591.5 feet at PZ-53-40 (EX-9). This u-shaped pattern of water levels forms a trough in the water table, focusing groundwater eastward. This u-shaped pattern has remained unchanged during continuous operations with water levels declining by an average of 1.35 feet near the extraction wells. Figure 5 presents graphs of the three extraction wells upgradient of Ditch B. Groundwater elevations at these wells are approximately 5-feet higher than the wells along Ditch B. Fall water levels near wells EX-1 and EX-8 have declined to approximately 593 ft, approximately 5 feet less than maximum elevations in 2023. EX-2 has declined approximately 3 feet from maximum elevation to approximately 595 ft. Figures 3, 4 and 5 show a temporary increase in water levels from snow melt and significant rainfall events during the month of April. Data from the end of May show a decline in water levels near extraction wells EX-3, EX-4, EX-5, EX-6, AND EX- 7 to elevations observed in March, before the water level increases observed during April. The average weekly water levels near each extraction well are summarized in Table 4.

Extraction wells EX-1 and EX-5 have recently undergone maintenance. The conveyance line from EX-1 to the GETS was cleaned in August to remove biological growth. The cause of the growth is not known but may be from degradation of naturally occurring organic material that is further exacerbated by residual emulsified vegetable oil that was used in this area in 2017 to degrade low levels of chlorinated compounds. Pumping rates were restored after the cleaning. These wells and associated conveyance lines will require cleaning as part of normal operations, therefore optimization activities (discussed below) will be conducted to more readily enable routine maintenance. The pump in EX-5 had a mechanical failure at the end September 2023 and was replaced. The changes these events had on pumping rates and water levels can be seen on Figures 3 and 5.

The recuring maintenance issues at EX-1 and EX-2 were address by reengineering access and installing new wells. Extraction wells EX-1S and EX-2S were installed adjacent to EX-1 and EX-2. The new wells have larger well vaults permitting better access and are larger in diameter (8-inches versus 6-inches). The new wells have been online since February 2024. Well cleaning and redevelopment also occurred at EX-3 and EX-4 in February 2024. These maintenance and optimization activities have allowed pumping rates from EX-1S, EX-2S, and EX-3 to increase. As a result, the nominal treatment rate of the GETS has increased this period to approximately 240 gpm.

Monthly water chemistry data from the operating extraction wells are summarized in Table 5. One-hundred and seventy two samples were collected during 19 sampling events to assess PFOS and PFOA concentrations in the extraction wells. The data results for the May 2024 sampling event are pending from the laboratory at the time of this report. Three extraction wells, EX-4, EX-6 and EX-9, were not operating during all samplings and surrogate samples were collected from adjacent monitoring wells MW-EX-4, PZ-51-38 and PZ-53-40, respectively, when necessary. The groundwater data show peak concentrations along Ditch B are being captured by wells EX-5, EX-

6, and EX-7. These three wells and EX-8 upgradient, are capturing the center of the PFAS plume moving eastward and are in the center of the trough in the water table between EX-3 and EX-9. Concentrations in EX-6, EX-7, and EX-8 are consistently greater than 10,000 ng/L of PFOA plus PFOS and have not changed significantly since GETS operations began. The concentration of PFOA plus PFOS in 4 operating extraction wells, EX-1, EX-2, EX-3, and EX-4 are less than 10,000 ng/L but have increased in concentration over this reporting period due to increased pumping rates. Concentrations in EX-5 have decreased during this reporting period. EX-9 is only operated for sampling purposes. The operation of EX-9 for remediation was not started when the GETS began operations as PFAS concentrations are much lower than at the other extraction wells. Concentrations in EX-9 have declined to 37 ng/L PFOA and 2.6 ng/L PFOS.

Water levels are no-longer being collected at PZ-52-41 near EX-7. The piezometer was abandoned on August 24 2023 during reconstruction of Edwin St. by the City of Marinette. The replacement well, PZ-52-41R was installed on April 20, 2024. Sampling results and water levels will be included in the next semi-annual monitoring report.

The weekly influent concentrations of PFOA plus PFOS and the total weekly pumping from the extraction wells were used to estimate the mass removed by the GETS during the 18 months of operations. The data is presented on Figure 9 and summarized in Table 14. The calculations estimate that 6.00 kg of PFOA plus PFOS were removed by the GETS through May 12, 2024.

Summary of Cumulative Data

Table 11 presents groundwater and surface water elevations since GETS startup. Figures 6 and 7 present groundwater elevations for current previous time periods. Figure 6 present May 2023 water from last spring while Figure 7 presents April 2024 water levels. A comparison of the figures shows the effects of heavy rains and snow melt in spring 2024 had a smaller effect on water level increase than in 2023. The lesser effect is attributed to the increase in pumping at EX-1S and EX-2S this past winter. There has also been observed more than a 2-foot decrease in water levels in all monitoring wells across the investigation area. This large areal decline is attributed to a decline in water levels in Green Bay.

GETS Optimization

The objective of the GETS is to prevent PFAS present in groundwater from entering Ditch B and to ultimately replace the Ditch B system as a long-term solution. As such, optimization of the GETS began in July 2023 and included:

- Increased pumping in key wells to enhance capture of PFAS.
- Infrastructure improvements to enable routine maintenance related to ongoing biological growth within the wells and conveyance lines and restoration of pumping capacity (EX-3 and EX-4).
- Installation of supplemental extraction wells EX-1S and EX-2S near the existing EX-1 and EX-2 wells. The new wells and associated vaults permit easier access for periodic rehabilitation to address future biological accumulation in the conveyance piping.

Further optimization are planned at three locations based on recent groundwater and surface water data.

1. Ditch B: Additional pumping near EX-3 and EX-4 to further reduce PFAS concentrations in Ditch B and to mitigate the concentrations detected in the northern tributary;

2. Shallow Bedrock: Pumping from a shallow bedrock extraction well near EX-4 to capture and address the shallow bedrock PFAS plume that is not discharging to Ditch B, therefore not currently captured by the GETS;
3. Ditch A: Extraction along Ditch A on Tyco property to prevent shallow groundwater from affecting Surface water, similar to the Ditch B interim remedial objective.

These supplemental optimization activities are shown on Figure 15, their objectives and associated monitoring program are discussed in Appendix A.

Sustainability Summary

The GETS has a net 0 impact on water in operations by design. All groundwater removed by the system is returned to the environment via discharge to Ditch B. Approximately 8.5 million gallons of water are treated per month as a result of GETS operations. 147.7 million gallons of water have been treated as of May 12, 2024.

Granular Activated Carbon (GAC) and Calgon CalRes resin are the primary filtration media employed by the GETS. System operations to date required 200,000 pounds of virgin GAC while also using 180,000 pounds of regenerated GAC. As of October, 2023, all spent GAC is sent for regeneration and reuse utilizing one carbon pool from the Site. 36,000 pounds of Calgon CalRes (resin media) has been employed by the GETS to date, with 24,000 pounds disposed offsite.

As of May 14, 2024, 785,886 kilowatt hours (kWh) of energy had been consumed by the GETS building and it's ancillary power drop locations for the extraction wells.

CONCLUSION

Some analytical data collected the first weeks of May are not available for reporting this period and will be included in the next semi-annual report. The next GETS Short Term Monitoring Report will summarize the first 2 years of operation; from November 14, 2022 to November 11, 2024. GETS Short Term Monitoring Report #4 will be provided December 13, 2024. If you have questions or comments, please reach out.

Sincerely,

Arcadis U.S., Inc.

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CC. D. Nelson
S. Wahl

Alyssa Sellwood, P.E.
Wisconsin Department of Natural Resources
June 3, 2024

Attachments:

Tables

Table 1	Weekly pumping time of each extraction well (hours)
Table 2	Volume of water pumped from each extraction well (gallons per week)
Table 3	Maximum pumping at each extraction well (gallons per minute)
Table 4	Water levels at each extraction well monitoring point (feet NAD88)
Table 5	Concentration of PFOA/PFOS measured at each extraction well (ng/L)
Table 6	Summary of weekly treatment plant operations
Table 7	Summary of weekly influent and effluent PFAS sampling of the GETS (ng/L)
Table 8	Summary of average daily flow in Ditch B (gallons per minute)
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Table 10	Summary of temporary streambed piezometers data (feet from top of casing)
Table 11	Groundwater and Surface Water Elevations
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Figures

Figure 1	GETS startup monitoring locations
Figure 2	Ditch B water depth, estimated stream flow and precipitation
Figure 3	Water level elevations and pumping rates at extraction wells along Ditch B
Figure 4	Water level elevations and pumping rates at extraction wells along Ditch B
Figure 5	Water level elevations and pumping rates at extraction wells upgradient of Ditch B
Figure 6	Potentiometric Surface May 2023
Figure 7	Potentiometric Surface May 2024
Figure 8	Summary of PFOA and PFOS concentrations in Ditch B
Figure 9	Summary of PFOA and PFOS removed by the GETS
Figure 10	Shallow PFOA plus PFOS Concentrations at GETS Startup Monitoring Locations (Nov 2023)
Figure11	Shallow PFOA plus PFOS Concentrations at GETS Startup Monitoring Locations (May 2024)
Figure 12	Deep PFOA plus PFOS Concentrations at GETS Startup Monitoring Locations (November 2023)
Figure 13	Deep PFOA plus PFOS Concentrations at GETS Startup Monitoring Locations (May 2024)
Figure 14	Cross Section C-C', PFOA+PFOS Plume Contours of Recent Sampling Results (Fall 2022 / Spring 2024)
Figure 15	Additional GETS Optimizations Planned Locations

Memo

ARCADIS

SUBJECT
Tyco GETS Proposed Expansion

DATE
June 3, 2024

COPIES TO
Denice Nelson – Tyco

TO
Alyssa Sellwood, PE
Wisconsin Department of Natural Resources

PROJECT NUMBER
30129347

NAME
Wes May – Arcadis
Scott Potter – Arcadis

An evaluation of the data collected to date indicates that optimization of the extraction portion of the Groundwater Extraction and Treatment System (GETS) would enhance shallow groundwater capture from the Ditch B area. Therefore, it is proposed that three additional extraction wells be installed along Ditch B, two in overburden and one in bedrock. In addition, two new extraction wells be installed on the FTC along Ditch A for capture of shallow groundwater in that area (see Figure 15).

The extracted groundwater from each of the new wells will be conveyed to the GETS building for treatment before discharge to Ditch B. Modifications will be required to the treatment system to allow for the treatment of the higher total flow rate, anticipated to be up to 600 gallons per minute (gpm). A summary of these modifications will be prepared and submitted along with a request for modification of the Wisconsin Pollution Discharge Elimination System (WPDES) permit.

This following summarizes the locations of the proposed groundwater extraction wells and a general discussion of changes required of the treatment portion of the system to handle the additional flow.

Proposed Changes to Groundwater Extraction System

As discussed in the GETS Short-Term Monitoring Report, three locations are targeted for additional extraction wells: Ditch B, Shallow Bedrock, and Ditch A. The interim remedial objective for each location, activities to meet that objective and associated monitoring to demonstrate achievement of that objective are discussed below. Following permit modification, all extracted groundwater from each of the new wells will be conveyed to the GETS building for treatment before discharge to Ditch B under the modified WPDES permit.

Ditch B Groundwater:

In accordance with the GETS primary objective to reduce the PFAS groundwater plume upwelling into Ditch B, two additional extraction wells (EX-3S and EX-4S) will be installed to supplement the existing extraction well system and enhance capture of groundwater in the vicinity of Ditch B. The two new wells (EX-3S and EX-4S) will be located in the vicinity of existing extraction wells EX-3 and EX-4. EX-3S is anticipated to be placed near Pierce Avenue, to the north of EX-3 (Figure 15). EX-4S is anticipated to be placed between EX-3 and EX-4 (Figure 15).

The ongoing GETS monitoring program will continue to track the performance of the optimized extraction well network. In addition, three new surface water sample locations within the northern tributary of Ditch B will be added to the GETS surface water monitoring (upgradient, midpoint and confluence; sample locations SW-P5, SW-P4, and SW-P1 on Figure 11). A new piezometers will installed adjacent to each extraction well to monitor changes in groundwater water elevations using pressure transducers.

Shallow Bedrock Groundwater:

The current GETS extraction well network addresses the shallow overburden PFAS plume that historically upwelled into Ditch B. The objective of the new shallow bedrock extract well is to hydraulically capture PFAS

within the shallow bedrock plume emanating from the FTC and moving underneath Ditch B, preventing further off-site migration.

One shallow bedrock extraction well (EX-4BR) is recommended near existing extraction well EX-4 to capture the shallow bedrock plume. It is proposed that existing piezometer PZ-64-67, which was installed with a 6-inch casing and is located near EX-4, be converted into a bedrock extraction well for this purpose.

To monitor the influence of this extraction well, the following shallow bedrock wells will be added to GETS Monitoring program: PZ-1D, PZ-29-68, PZ-63-60, and PZ-28-54. In addition, pressure transducers will be placed in PZ-29-68 and PZ-1D to evaluate influence on shallow bedrock groundwater elevation.

Ditch A Groundwater:

Similar to the remedial objectives for the GETS related to Ditch B, extraction wells will be placed along Ditch A to capture shallow groundwater and prevent any upwelling of shallow groundwater into Ditch A.

Two new shallow extractions wells (EX-10 and EX-11) will be installed along Ditch A (Figure 15). EX-10 is anticipated to be located to the south of Building 127, and EX-11 is anticipated to be installed a few hundred feet south of EX-10.

To monitor the influence of these extraction wells, the following shallow wells will be added to GETS Monitoring program: HMW-2-1S and PZ-70-17. In addition, new piezometers will installed adjacent to each extraction well to monitor changes in groundwater water elevations in this area using pressure transducers. Upstream Ditch A surface water locations (SW-25 and SW-27) will be added to the GETS surface water monitoring program. Additionally, influent concentrations and downstream sampling location (SW-40) monitored as part of the ongoing Ditch A surface water system operation and maintenance will be incorporated into the assessment of the Ditch A extraction well network during semi-annual monitoring reports.

Proposed Changes to Groundwater Treatment System

Modifications to the treatment system operation will be required to accommodate the additional flow. As currently designed and operated, the treatment system is capable of treating a total combined flow of 300 gallons per minute (gpm), which consists of both flow from the extraction wells as well as backwash water that is processed through the system.

An evaluation of the system's capabilities at higher flow rates is being conducted. The primary changes to the system would likely include increasing the size of a portion of the process pumps to accommodate the higher flow rates along with use of all twelve granular activated carbon (GAC) vessels simultaneously. Currently only six GAC vessels operate at a time and six are on standby. In addition, the increase in the quantity of solids generated by the higher flow rate may require changes in how solids are handled.

Permitting

The additional extraction wells will require modifications to the high capacity well permits to accommodate the additional extraction volume. The permit modifications will be prepared and submitted to the Wisconsin Department of Natural Resources (WDNR) for review and approval.

Changes to the total flow and unit processes within the treatment system will require a modification to the Wisconsin Pollution Discharge Elimination System (WPDES) permit to account for changes to the GETS operations that are outside of the currently approved system operations.

Construction activities associated with the optimization activities may require additional permits for erosion control and/or conducting work in a wetland. Necessary permits will be determined as the scope of the optimization activities is further defined.

Table 1. Weekly pumping time of each extraction well (hours)

Starting Day	Week	EX-1	EX-2	EX-3	EX-4	EX-5	EX-6	EX-7	EX-8	EX-9
14-Nov-2022	1	72	72	0	0	72	0	20	20	47
21-Nov-2022	2	71	71	0	0	71	0	71	71	0
28-Nov-2022	3	49	49	19	0	49	0	49	49	0
5-Dec-2022	4	59	59	59	29	59	42	59	59	0
12-Dec-2022	5	22	22	22	22	22	22	22	22	0
19-Dec-2022	6	32	32	32	32	32	32	32	32	0
26-Dec-2022	7	5	5	5	5	5	5	5	5	0
2-Jan-2023	8	46	46	46	46	46	46	46	46	0
9-Jan-2023	9	140	140	140	140	140	140	140	140	0
16-Jan-2023	10	168	168	168	168	168	168	168	168	0
23-Jan-2023	11	168	168	168	168	168	168	168	168	0
30-Jan-2023	12	162	162	162	162	162	162	162	162	0
6-Feb-2023	13	168	168	168	168	168	168	168	168	0
13-Feb-2023	14	168	168	168	168	168	168	168	168	0
20-Feb-2023	15	160	160	160	160	160	160	160	160	0
27-Feb-2023	16	168	168	168	168	168	168	168	168	1
6-Mar-2023	17	168	168	168	168	168	168	168	168	0
13-Mar-2023	18	168	168	168	168	168	168	168	168	0
20-Mar-2023	19	168	168	168	168	168	168	168	168	0
27-Mar-2023	20	168	168	168	168	168	168	168	168	0
3-Apr-2023	21	168	168	168	168	161	168	168	168	0
10-Apr-2023	22	168	168	168	168	161	168	168	168	0
17-Apr-2023	23	138	138	138	138	138	138	138	138	0
24-Apr-2023	24	168	168	168	168	161	168	168	168	0
1-May-2023	25	168	168	168	168	161	168	168	168	1
8-May-2023	26	168	166	168	168	168	168	168	168	0
15-May-2023	27	163	157	163	163	163	163	163	163	0
22-May-2023	28	168	164	168	168	168	168	168	168	0
29-May-2023	29	168	167	168	168	168	168	168	168	0
5-Jun-2023	30	147	157	159	159	159	159	159	159	1
12-Jun-2023	31	147	165	167	167	167	167	167	167	0
19-Jun-2023	32	160	159	160	162	163	163	163	163	0

Table 1. Weekly pumping time of each extraction well (hours)

Starting Day	Week	EX-1	EX-2	EX-3	EX-4	EX-5	EX-6	EX-7	EX-8	EX-9
26-Jun-2023	33	161	166	167	168	168	168	167	168	0
3-Jul-2023	34	168	164	168	168	168	168	168	168	2
10-Jul-2023	35	168	164	168	168	168	168	168	168	0
17-Jul-2023	36	7	79	166	168	168	168	168	168	0
24-Jul-2023	37	61	158	158	158	158	158	158	158	0
31-Jul-2023	38	168	167	168	168	168	168	168	168	2
7-Aug-2023	39	168	168	167	168	168	168	167	168	0
14-Aug-2023	40	168	168	168	168	168	168	168	168	0
21-Aug-2023	41	163	158	167	168	168	168	168	168	0
28-Aug-2023	42	168	168	167	168	168	168	145	168	0
4-Sep-2023	43	164	163	164	164	164	164	164	164	2
11-Sep-2023	44	166	165	168	168	168	168	168	168	0
18-Sep-2023	45	158	157	160	160	160	160	160	160	0
25-Sep-2023	46	163	160	162	162	9	163	162	162	0
2-Oct-2023	47	160	168	168	168	0	168	168	168	1
9-Oct-2023	48	166	168	168	168	131	168	168	168	0
16-Oct-2023	49	168	165	168	168	168	168	168	168	0
23-Oct-2023	50	165	167	168	168	168	168	168	166	0
30-Oct-2023	51	168	168	168	168	168	168	168	168	1
6-Nov-2023	52	168	168	168	168	168	168	168	168	0
13-Nov-2023	53	168	168	168	168	168	168	168	168	0
20-Nov-2023	54	168	168	168	168	168	168	168	168	0
27-Nov-2023	55	168	168	168	168	168	168	168	168	0
4-Dec-2023	56	167	163	167	167	167	167	167	167	1
11-Dec-2023	57	131	131	131	131	131	130	130	130	0
18-Dec-2023	58	163	163	163	163	163	163	163	163	0
25-Dec-2023	59	163	163	167	167	167	167	139	167	0
1-Jan-2024	60	100	100	100	100	100	100	100	100	0
8-Jan-2024	61	166	164	166	166	166	166	166	166	1
15-Jan-2024	62	167	165	167	167	167	167	167	167	0
22-Jan-2024	63	159	157	159	159	159	159	159	159	0
29-Jan-2024	64	168	168	168	168	168	168	168	168	0

Table 1. Weekly pumping time of each extraction well (hours)

Starting Day	Week	EX-1	EX-2	EX-3	EX-4	EX-5	EX-6	EX-7	EX-8	EX-9
5-Feb-2024	65	168	168	168	168	168	168	168	168	1
12-Feb-2024	66	164	162	86	112	164	164	164	164	0
19-Feb-2024	67	111	114	166	166	166	166	166	166	0
26-Feb-2024	68	168	168	168	168	168	168	168	168	0
4-Mar-2024	69	167	161	167	167	167	167	167	167	0
11-Mar-2024	70	163	159	163	163	163	163	163	163	1
18-Mar-2024	71	168	168	168	168	168	168	168	168	0
25-Mar-2024	72	116	116	116	116	116	116	116	116	0
1-Apr-2024	73	168	168	168	168	167	167	158	168	0
8-Apr-2024	74	168	168	168	168	168	168	168	168	1
15-Apr-2024	75	168	168	168	168	168	168	168	168	0
22-Apr-2024	76	166	166	166	166	166	166	166	166	0
29-Apr-2024	77	168	168	168	168	168	168	168	168	1
6-May-2024	78	168	168	168	168	168	168	153	168	0
13-May-2024	79	-	-	-	-	-	-	-	-	-
20-May-2024	80	-	-	-	-	-	-	-	-	-
Totals		11422	11583	11545	11528	11417	11593	11673	11750	63

Note: Reported value is rounded to the nearest hour.

Table 2. Volume of water pumped from each extraction well (gallons per week)

Starting Day	Week	EX-1	EX-2	EX-3	EX-4	EX-5	EX-6	EX-7	EX-8	EX-9	Total Pumping
14-Nov-2022	1	98,516	81,370	-	-	97,548	-	28,402	28,442	57,702	391,980
21-Nov-2022	2	113,198	94,669	-	-	113,185	-	113,179	113,201	25	547,457
28-Nov-2022	3	85,862	74,588	28,967	-	85,742	-	85,912	85,895	-	446,966
5-Dec-2022	4	91,534	76,856	83,145	44,412	89,667	62,472	89,703	89,723	-	627,511
12-Dec-2022	5	32,628	25,969	32,653	32,623	32,127	32,163	32,145	32,144	-	252,453
19-Dec-2022	6	48,832	41,222	47,113	47,050	46,784	47,034	48,516	48,703	-	375,253
26-Dec-2022	7	6,632	5,609	6,379	6,373	6,344	6,376	6,624	6,629	-	50,964
2-Jan-2023	8	66,360	58,175	66,366	66,291	66,256	68,157	68,163	68,163	-	527,930
9-Jan-2023	9	214,024	157,305	214,186	214,192	214,187	214,296	211,514	211,563	-	1,651,266
16-Jan-2023	10	259,630	160,434	257,270	256,083	254,276	247,813	247,742	252,906	-	1,936,153
23-Jan-2023	11	259,909	151,159	260,176	257,991	257,317	256,618	256,442	253,165	-	1,952,777
30-Jan-2023	12	249,795	143,796	250,792	249,901	249,713	248,905	247,832	249,238	1,194	1,891,165
6-Feb-2023	13	260,244	143,429	257,274	257,604	255,815	256,999	258,073	258,561	8	1,948,007
13-Feb-2023	14	252,141	141,420	252,444	252,734	253,316	253,270	256,144	259,420	-	1,920,889
20-Feb-2023	15	238,684	134,006	238,968	239,062	243,942	244,388	244,278	242,946	-	1,826,274
27-Feb-2023	16	249,736	135,757	249,941	248,690	341,391	341,509	341,415	256,994	1,328	2,166,761
6-Mar-2023	17	246,024	135,438	247,341	246,762	350,095	350,160	349,919	248,757	1	2,174,497
13-Mar-2023	18	249,015	130,740	248,267	249,170	351,247	351,310	351,164	251,637	-	2,182,550
20-Mar-2023	19	245,066	127,462	248,793	248,649	352,654	352,573	352,476	250,191	-	2,177,864
27-Mar-2023	20	246,261	129,552	246,376	246,950	350,319	350,377	350,289	247,776	-	2,167,900
3-Apr-2023	21	241,228	141,092	242,420	242,029	336,742	351,631	351,547	248,562	2,536	2,157,787
10-Apr-2023	22	242,331	135,101	241,804	242,999	351,250	351,340	351,180	247,647	-	2,163,652
17-Apr-2023	23	195,353	110,361	195,372	197,354	289,119	289,196	286,021	203,664	-	1,766,440
24-Apr-2023	24	239,862	132,690	240,681	241,176	351,473	351,586	351,390	250,293	-	2,159,151
1-May-2023	25	234,339	133,380	238,588	241,659	350,826	350,950	350,832	250,962	893	2,152,429
8-May-2023	26	227,065	132,416	230,719	236,264	352,242	352,278	352,066	247,473	-	2,130,523
15-May-2023	27	215,625	127,166	223,407	224,697	340,935	341,099	341,032	233,292	25	2,047,278
22-May-2023	28	196,803	129,808	238,118	239,817	352,415	352,585	352,357	252,913	-	2,114,816
29-May-2023	29	164,291	121,476	244,602	255,544	352,709	352,893	352,707	279,915	-	2,124,137
5-Jun-2023	30	113,988	111,958	222,568	241,732	334,197	334,396	334,218	259,685	1,226	1,953,968
12-Jun-2023	31	91,139	117,012	221,429	259,359	351,413	355,051	351,397	277,287	-	2,024,087

Table 2. Volume of water pumped from each extraction well (gallons per week)

Starting Day	Week	EX-1	EX-2	EX-3	EX-4	EX-5	EX-6	EX-7	EX-8	EX-9	Total Pumping
19-Jun-2023	32	74,071	107,698	210,742	247,616	342,007	351,915	342,073	264,881	-	1,941,003
26-Jun-2023	33	61,097	109,034	220,537	267,675	351,817	355,262	353,714	280,986	-	2,000,122
3-Jul-2023	34	59,045	104,440	200,352	248,494	352,405	354,777	352,612	278,168	1,889	1,952,182
10-Jul-2023	35	57,375	103,504	191,327	249,424	352,179	356,243	352,149	284,390	-	1,946,591
17-Jul-2023	36	2,242	46,874	195,667	226,578	352,772	352,880	352,645	267,651	-	1,797,309
24-Jul-2023	37	85,000	94,007	180,332	218,717	331,956	332,109	331,995	251,428	-	1,825,544
31-Jul-2023	38	238,627	83,045	187,914	241,858	352,815	352,879	352,651	264,616	1,773	2,076,178
7-Aug-2023	39	248,413	80,225	181,023	241,988	352,722	355,115	341,653	261,477	-	2,062,616
14-Aug-2023	40	251,936	74,020	181,617	237,904	352,739	352,872	342,536	269,684	-	2,063,308
21-Aug-2023	41	283,123	66,590	180,711	241,674	352,376	352,601	342,455	264,588	-	2,084,118
28-Aug-2023	42	301,196	80,092	176,320	241,235	351,860	351,867	301,537	248,841	-	2,052,948
4-Sep-2023	43	328,168	77,624	167,647	235,691	344,398	344,516	336,933	241,007	2,519	2,078,503
11-Sep-2023	44	348,720	77,497	164,127	239,481	352,135	384,078	342,085	246,139	-	2,154,262
18-Sep-2023	45	366,201	74,410	144,361	232,056	326,417	374,573	317,380	239,622	-	2,075,020
25-Sep-2023	46	391,368	70,844	146,258	233,326	17,431	390,571	339,666	259,293	-	1,848,757
2-Oct-2023	47	368,782	66,867	151,324	235,474	-	403,256	343,068	287,221	962	1,856,954
9-Oct-2023	48	379,214	64,974	135,321	223,527	275,857	366,161	309,917	307,586	-	2,062,557
16-Oct-2023	49	402,523	63,162	130,877	221,360	352,157	356,066	305,691	312,618	-	2,144,454
23-Oct-2023	50	381,922	64,876	130,737	220,264	344,795	355,418	323,806	305,122	-	2,126,940
30-Oct-2023	51	379,341	65,080	131,612	218,012	353,772	353,869	332,080	311,988	1,932	2,147,686
6-Nov-2023	52	357,987	63,737	130,654	212,982	351,705	351,842	329,838	315,961	-	2,114,706
13-Nov-2023	53	348,915	60,691	129,642	213,451	348,520	348,674	328,599	306,859	-	2,085,351
20-Nov-2023	54	222,578	42,252	124,254	210,129	334,338	334,528	315,331	286,702	-	1,870,112
27-Nov-2023	55	360,123	63,818	128,408	216,906	344,976	345,149	322,424	290,121	-	2,071,925
4-Dec-2023	56	381,517	63,092	130,592	234,541	351,538	351,648	342,696	301,947	969	2,158,540
11-Dec-2023	57	293,953	50,786	102,261	195,668	273,798	271,619	270,272	232,597	-	1,690,954
18-Dec-2023	58	347,756	65,256	127,334	257,303	342,659	340,268	341,221	297,156	-	2,118,953
25-Dec-2023	59	339,914	67,091	130,128	269,341	350,204	357,304	291,222	320,209	-	2,125,413
1-Jan-2024	60	213,488	41,996	78,276	162,106	210,560	213,976	209,770	184,239	-	1,314,411
8-Jan-2024	61	351,556	63,676	129,879	268,215	349,602	349,726	349,666	299,660	991	2,162,971
15-Jan-2024	62	336,031	60,725	130,485	254,150	351,094	396,360	351,136	314,435	-	2,194,416

Table 2. Volume of water pumped from each extraction well (gallons per week)

Starting Day	Week	EX-1	EX-2	EX-3	EX-4	EX-5	EX-6	EX-7	EX-8	EX-9	Total Pumping
22-Jan-2024	63	301,106	56,256	124,141	238,624	334,156	381,418	334,188	304,973	-	2,074,862
29-Jan-2024	64	299,428	60,066	129,869	251,949	352,834	403,260	352,808	322,551	-	2,172,765
5-Feb-2024	65	281,842	60,042	130,934	251,765	352,504	402,892	372,608	322,262	672	2,175,521
12-Feb-2024	66	259,050	57,671	67,451	167,369	343,512	392,606	372,878	314,042	-	1,974,579
19-Feb-2024	67	140,689	90,709	183,603	219,980	308,092	352,160	334,438	281,664	-	1,911,335
26-Feb-2024	68	290,761	201,571	271,722	271,422	380,098	434,432	412,548	311,192	-	2,573,746
4-Mar-2024	69	300,700	178,812	250,679	250,516	350,638	400,852	380,800	277,008	-	2,390,005
11-Mar-2024	70	293,092	160,678	244,382	244,129	341,830	390,790	371,184	247,042	933	2,294,060
18-Mar-2024	71	302,178	151,024	251,974	251,737	352,532	402,920	382,860	247,526	-	2,342,751
25-Mar-2024	72	209,188	104,462	174,410	174,078	243,666	278,554	264,554	154,088	-	1,603,000
1-Apr-2024	73	301,628	150,644	251,482	251,199	351,718	402,156	359,972	226,714	-	2,295,513
8-Apr-2024	74	302,410	151,049	252,170	251,946	352,728	403,248	383,034	218,456	1,271	2,316,311
15-Apr-2024	75	302,202	151,013	251,987	251,688	352,534	402,672	382,796	226,112	-	2,321,004
22-Apr-2024	76	299,044	149,593	249,365	249,163	348,436	398,228	378,220	227,604	-	2,299,653
29-Apr-2024	77	302,380	151,363	252,188	251,889	352,810	403,256	382,982	259,194	1,236	2,357,298
6-May-2024	78	302,514	151,298	252,176	251,942	352,754	403,256	349,864	289,944	-	2,353,748
13-May-2024	79	-	-	-	-	-	-	-	-	-	-
20-May-2024	80	-	-	-	-	-	-	-	-	-	-
Totals (x1,000)		18,727	7,786	13,865	16,834	23,068	24,578	23,699	19,035	80	147,672

Table 3. Maximum pumping rate at each extraction well (gallons per minute)

Starting Day	Week	EX-1	EX-2	EX-3	EX-4	EX-5	EX-6	EX-7	EX-8	EX-9
14-Nov-2022	1	25.0	25.0	0.0	0.0	25.0	0.0	25.0	25.0	25.0
21-Nov-2022	2	25.0	20.0	0.0	0.0	25.0	0.0	25.0	25.0	-
28-Nov-2022	3	25.0	22.0	20.0	0.0	30.0	0.0	27.0	28.0	-
5-Dec-2022	4	27.0	22.0	27.0	25.0	25.0	25.0	25.0	25.0	-
12-Dec-2022	5	25.0	20.0	25.0	25.0	25.0	25.0	25.0	25.0	-
19-Dec-2022	6	26.0	22.0	25.0	25.0	25.0	25.0	26.0	26.0	-
26-Dec-2022	7	26.0	22.0	25.0	25.0	25.0	25.0	26.0	26.0	-
2-Jan-2023	8	25.0	22.0	25.0	25.0	25.0	25.0	25.0	25.0	-
9-Jan-2023	9	25.0	18.0	25.0	25.0	25.0	25.0	25.0	25.0	-
16-Jan-2023	10	25.0	15.5	25.0	25.0	25.0	25.0	25.0	25.0	-
23-Jan-2023	11	25.0	15.5	25.0	25.0	25.0	25.0	25.0	25.0	-
30-Jan-2023	12	25.0	15.5	25.0	25.0	25.0	25.0	25.0	25.0	-
6-Feb-2023	13	25.0	15.5	25.0	25.0	25.0	25.0	25.0	25.0	-
13-Feb-2023	14	25.0	15.5	25.0	25.0	25.0	25.0	25.0	25.0	-
20-Feb-2023	15	25.0	15.5	25.0	25.0	30.0	30.0	30.0	25.0	-
27-Feb-2023	16	25.0	14.0	25.0	25.0	35.0	35.0	35.0	26.0	25.0
6-Mar-2023	17	25.0	14.0	25.0	25.0	35.0	35.0	35.0	25.0	-
13-Mar-2023	18	25.0	14.0	25.0	25.0	35.0	35.0	35.0	25.0	-
20-Mar-2023	19	25.0	14.0	25.0	25.0	35.0	35.0	35.0	25.0	-
27-Mar-2023	20	25.0	14.0	25.0	25.0	35.0	35.0	35.0	25.0	-
3-Apr-2023	21	25.0	14.0	25.0	25.0	35.0	35.0	35.0	25.0	-
10-Apr-2023	22	25.0	14.0	25.0	25.0	35.0	35.0	35.0	25.0	-
17-Apr-2023	23	25.0	14.0	25.0	25.0	35.0	35.0	35.0	25.0	-
24-Apr-2023	24	25.0	14.0	25.0	25.0	35.0	35.0	35.0	25.0	-
1-May-2023	25	25.0	14.0	25.0	25.0	35.0	35.0	35.0	25.0	20.0
8-May-2023	26	24.0	13.5	24.0	25.0	35.0	35.0	35.0	26.0	-
15-May-2023	27	24.0	13.5	24.0	25.0	35.0	35.0	35.0	26.0	-
22-May-2023	28	18.0	13.5	25.0	25.0	35.0	35.0	35.0	27.0	-
29-May-2023	29	18.0	13.5	25.0	25.0	35.0	35.0	35.0	27.0	-
5-Jun-2023	30	14.4	11.7	24.1	26.0	35.0	35.1	35.0	28.0	20.0
12-Jun-2023	31	11.9	12.0	23.1	25.0	35.0	35.1	35.1	28.0	-
19-Jun-2023	32	8.8	12.0	22.1	27.1	35.0	36.1	35.0	28.0	-

Table 3. Maximum pumping rate at each extraction well (gallons per minute)

Starting Day	Week	EX-1	EX-2	EX-3	EX-4	EX-5	EX-6	EX-7	EX-8	EX-9
26-Jun-2023	33	6.7	11.0	22.1	28.1	35.0	36.1	35.1	29.0	-
3-Jul-2023	34	6.1	11.0	22.0	26.0	35.0	35.1	36.0	28.1	20.0
10-Jul-2023	35	5.8	11.1	19.1	25.1	35.0	36.1	35.0	29.0	-
17-Jul-2023	36	5.7	11.0	19.1	25.1	35.0	35.1	35.1	28.0	-
24-Jul-2023	37	4.3	10.0	20.1	22.0	35.0	35.1	35.0	27.0	-
31-Jul-2023	38	23.2	10.0	20.1	24.0	35.0	35.1	35.0	24.1	20.0
7-Aug-2023	39	24.1	8.0	18.1	24.1	35.1	35.1	35.0	27.0	-
14-Aug-2023	40	25.0	8.0	18.1	24.1	35.1	35.1	34.0	27.0	-
21-Aug-2023	41	25.0	6.5	18.1	24.1	35.0	35.1	34.0	27.0	-
28-Aug-2023	42	30.0	8.0	18.1	24.0	35.1	35.1	35.0	25.0	-
4-Sep-2023	43	30.0	8.0	17.1	24.0	35.1	35.1	35.1	25.1	20.0
11-Sep-2023	44	35.1	8.0	17.1	25.1	35.1	35.1	34.0	25.0	-
18-Sep-2023	45	40.1	8.0	15.1	24.1	35.1	40.1	34.0	25.1	-
25-Sep-2023	46	40.0	8.0	15.0	24.1	35.0	40.1	35.0	24.0	-
2-Oct-2023	47	40.1	7.0	15.1	24.0	0.0	40.1	35.1	29.0	20.0
9-Oct-2023	48	37.1	6.5	15.1	23.1	0.0	40.1	33.0	30.1	-
16-Oct-2023	49	40.1	6.5	13.0	22.1	35.0	35.1	30.0	30.0	-
23-Oct-2023	50	40.1	6.6	13.1	22.1	35.1	36.1	33.1	32.0	-
30-Oct-2023	51	38.1	6.5	13.1	22.2	35.1	35.1	33.1	31.1	20.0
6-Nov-2023	52	38.0	6.5	12.0	22.0	35.0	35.0	33.0	31.0	-
13-Nov-2023	53	35.1	6.6	13.1	22.1	35.0	35.1	33.1	32.1	-
20-Nov-2023	54	34.0	6.5	13.0	22.0	35.0	35.0	33.0	30.0	-
27-Nov-2023	55	38.1	6.5	13.1	22.1	35.0	35.1	33.1	30.1	-
4-Dec-2023	56	38.1	6.8	13.1	24.1	35.1	35.1	35.0	32.0	20.0
11-Dec-2023	57	37.9	6.5	13.1	25.0	35.1	37.0	35.0	30.1	-
18-Dec-2023	58	36.8	7.1	13.1	27.1	35.1	35.1	35.0	32.1	-
25-Dec-2023	59	35.1	7.1	13.1	27.1	35.1	37.1	35.1	32.1	-
1-Jan-2024	60	36.0	7.0	13.1	27.1	35.1	37.1	35.1	32.0	-
8-Jan-2024	61	36.0	7.0	13.1	27.1	35.0	35.1	35.1	30.1	20.0
15-Jan-2024	62	34.5	6.5	15.8	27.0	36.2	40.1	35.1	32.8	-
22-Jan-2024	63	32.5	6.1	13.1	25.0	35.0	40.1	35.1	32.1	-
29-Jan-2024	64	30.6	6.0	13.1	25.0	35.1	40.1	35.1	32.1	-

Table 3. Maximum pumping rate at each extraction well (gallons per minute)

Starting Day	Week	EX-1	EX-2	EX-3	EX-4	EX-5	EX-6	EX-7	EX-8	EX-9
5-Feb-2024	65	28.8	6.1	13.1	25.1	35.0	40.1	38.0	32.1	20.0
12-Feb-2024	66	27.2	6.0	13.1	25.0	35.1	40.1	38.1	32.1	-
19-Feb-2024	67	25.6	20.1	25.1	25.0	35.1	40.1	38.1	32.1	-
26-Feb-2024	68	30.1	23.5	25.1	25.0	35.1	40.1	38.1	30.1	-
4-Mar-2024	69	30.1	23.7	25.1	25.1	35.1	40.1	38.1	30.1	-
11-Mar-2024	70	30.1	18.7	25.1	25.0	35.1	40.1	38.1	27.1	20.0
18-Mar-2024	71	30.1	15.1	25.1	25.0	35.1	40.1	38.1	25.1	-
25-Mar-2024	72	30.1	15.1	25.1	25.1	35.1	40.1	38.1	25.1	-
1-Apr-2024	73	30.1	15.1	25.1	25.0	35.1	40.1	38.0	25.1	-
8-Apr-2024	74	30.1	15.1	25.1	25.1	35.0	40.1	38.1	25.0	20.0
15-Apr-2024	75	30.1	15.1	25.1	25.1	35.1	40.1	38.1	25.1	-
22-Apr-2024	76	30.1	15.2	25.1	25.1	35.1	40.1	38.1	27.0	-
29-Apr-2024	77	30.1	15.2	25.1	25.1	35.1	40.1	38.1	30.1	20.0
6-May-2024	78	30.1	15.1	25.1	25.1	35.0	40.1	38.1	30.1	-
13-May-2024	79	-	-	-	-	-	-	-	-	-
20-May-2024	80	-	-	-	-	-	-	-	-	-

Table 4. Water levels at each extraction well monitoring point (feet NAD88)

Starting Day	Week	PZ-45-31 (EX-1)	MW-EX-2 (EX-2)	MW-EX-3 (EX-3)	MW-EX-4 (EX-4)	MW-EX-5 (EX-5)	PZ-51-38 (EX-6)	PZ-52-41 (EX-7)	PZ-55-64 (EX-8)	PZ-53-40 (EX-9)
Pre-Startup	**0**	**598.54**	**597.42**	**591.47**	**590.73**	**586.28**	**590.29**	**590.01**	**596.46**	**591.02**
14-Nov-2022	1	597.62	596.74	591.84	591.06	589.47	590.61	590.29	596.69	591.42
21-Nov-2022	2	597.49	596.60	591.69	590.71	589.36	590.43	589.91	595.99	591.59
28-Nov-2022	3	597.64	596.67	591.57	590.64	589.61	590.39	589.94	596.09	591.53
5-Dec-2022	4	597.60	596.62	591.27	590.31	589.56	589.91	589.85	596.01	591.03
12-Dec-2022	5	598.34	597.23	591.72	591.06	590.42	590.57	590.31	596.69	591.91
19-Dec-2022	6	598.33	597.24	591.51	590.82	590.23	590.42	590.19	596.65	591.84
26-Dec-2022	7	598.60	597.44	591.64	590.96	590.44	590.56	590.28	596.84	591.84
2-Jan-2023	8	598.15	597.07	591.63	590.96	589.93	590.30	590.30	596.57	591.89
9-Jan-2023	9	596.62	596.03	590.90	590.33	588.31	589.46	589.71	595.44	591.79
16-Jan-2023	10	595.92	595.72	590.69	590.19	587.89	589.33	589.57	595.03	591.83
23-Jan-2023	11	595.77	595.66	590.50	590.00	587.73	589.13	589.39	594.87	591.63
30-Jan-2023	12	595.74	595.60	590.37	589.88	587.73	589.14	589.27	594.72	591.34
6-Feb-2023	13	595.50	595.44	590.28	589.81	587.62	589.09	589.16	594.50	591.27
13-Feb-2023	14	595.49	595.38	590.43	589.97	587.73	589.25	589.27	594.49	591.48
20-Feb-2023	15	595.55	595.37	590.37	589.87	587.77	589.21	589.25	594.52	591.40
27-Feb-2023	16	595.35	595.26	590.29	589.90	586.69	588.72	588.90	594.32	591.33
6-Mar-2023	17	595.30	595.21	590.42	589.91	586.67	588.83	589.04	594.40	591.65
13-Mar-2023	18	595.30	595.26	590.53	590.00	586.73	588.91	589.16	594.47	591.83
20-Mar-2023	19	595.54	595.49	590.74	590.19	586.85	589.09	589.37	594.75	592.08
27-Mar-2023	20	596.45	595.95	590.17	590.69	587.28	589.52	589.81	595.19	592.54
3-Apr-2023	21	597.11	596.81	591.67	591.24	588.07	589.92	590.25	595.92	593.19
10-Apr-2023	22	597.68	597.44	591.38	590.93	587.46	589.57	589.94	596.32	592.95
17-Apr-2023	23	598.23	597.83	591.44	590.95	587.93	589.75	590.06	596.85	592.87
24-Apr-2023	24	597.84	597.54	591.06	590.57	587.16	589.25	589.60	596.60	592.45
1-May-2023	25	597.94	597.54	591.32	590.88	587.45	589.53	589.89	596.74	592.79
8-May-2023	26	598.46	598.02	591.37	590.85	587.40	589.51	589.90	596.92	592.83
15-May-2023	27	598.30	597.80	591.02	590.49	587.18	589.13	589.49	596.88	592.28
22-May-2023	28	598.14	597.46	590.77	590.26	586.94	588.90	589.24	596.47	591.97
29-May-2023	29	598.13	597.27	590.51	589.99	586.76	588.75	589.04	595.84	591.62
5-Jun-2023	30	598.45	597.18	590.42	589.88	586.87	588.74	588.99	595.63	591.34

Table 4. Water levels at each extraction well monitoring point (feet NAD88)

Starting Day	Week	PZ-45-31 (EX-1)	MW-EX-2 (EX-2)	MW-EX-3 (EX-3)	MW-EX-4 (EX-4)	MW-EX-5 (EX-5)	PZ-51-38 (EX-6)	PZ-52-41 (EX-7)	PZ-55-64 (EX-8)	PZ-53-40 (EX-9)
12-Jun-2023	31	598.49	596.98	590.48	589.93	586.75	588.71	588.96	595.34	591.34
19-Jun-2023	32	598.50	596.93	590.34	589.77	586.76	588.60	588.85	595.13	591.11
26-Jun-2023	33	598.54	596.86	590.31	589.73	586.67	588.61	588.79	594.81	591.06
3-Jul-2023	34	598.46	596.80	590.40	589.79	586.69	588.64	588.77	594.62	590.98
10-Jul-2023	35	598.44	596.79	590.55	589.87	586.74	588.67	588.81	594.44	591.06
17-Jul-2023	36	598.81	597.23	590.37	589.74	586.63	588.57	588.68	594.33	590.87
24-Jul-2023	37	598.00	596.65	590.38	589.76	586.87	588.70	588.74	594.26	590.80
31-Jul-2023	38	596.32	596.41	590.48	589.86	586.75	588.71	588.64	594.03	590.84
7-Aug-2023	39	596.06	596.30	590.59	589.93	586.79	588.78	588.70	593.93	590.84
14-Aug-2023	40	595.99	596.30	590.72	589.99	586.80	588.83	588.78	593.85	591.11
21-Aug-2023	41	595.55	596.23	590.50	589.79	586.70	588.68	588.62	593.70	590.93
28-Aug-2023	42	595.20	595.96	590.41	589.68	586.48	588.58	-	593.63	590.74
4-Sep-2023	43	594.81	595.82	590.40	589.69	586.46	588.62	-	593.53	590.63
11-Sep-2023	44	594.44	595.65	590.42	589.67	586.33	588.41	-	593.37	590.63
18-Sep-2023	45	594.15	595.52	590.37	589.58	586.52	588.35	-	593.29	590.50
25-Sep-2023	46	593.76	595.40	590.36	589.66	589.59	588.27	-	593.03	590.43
2-Oct-2023	47	593.79	595.27	590.28	589.60	589.96	588.12	-	592.71	590.34
9-Oct-2023	48	593.59	595.17	590.31	589.56	587.32	588.25	-	592.46	590.31
16-Oct-2023	49	593.26	595.06	590.34	589.52	586.46	588.25	-	592.32	590.29
23-Oct-2023	50	593.65	595.22	591.18	590.46	587.15	588.97	-	592.66	590.99
30-Oct-2023	51	594.01	595.45	590.93	589.99	586.74	588.69	-	592.81	591.31
6-Nov-2023	52	593.98	595.28	590.82	589.93	586.70	588.63	-	592.68	591.26
13-Nov-2023	53	593.88	595.13	590.70	589.81	586.66	588.56	-	592.64	591.14
20-Nov-2023	54	594.99	595.34	590.64	589.75	586.77	588.56	-	592.69	591.02
27-Nov-2023	55	593.64	594.96	590.55	589.70	586.64	588.47	-	592.58	590.92
4-Dec-2023	56	593.27	594.86	590.58	589.73	586.63	588.62	-	592.44	590.88
11-Dec-2023	57	594.04	594.99	590.71	589.86	587.42	588.97	-	592.98	590.91
18-Dec-2023	58	593.44	594.75	590.53	589.64	586.72	588.66	-	592.42	590.81
25-Dec-2023	59	593.45	594.68	590.58	589.66	586.63	588.56	-	592.23	590.88
1-Jan-2024	60	594.66	595.01	590.80	589.89	588.02	589.09	-	593.31	590.85
8-Jan-2024	61	593.32	594.64	590.64	589.60	586.64	588.47	-	592.39	590.84

Table 4. Water levels at each extraction well monitoring point (feet NAD88)

Starting Day	Week	PZ-45-31 (EX-1)	MW-EX-2 (EX-2)	MW-EX-3 (EX-3)	MW-EX-4 (EX-4)	MW-EX-5 (EX-5)	PZ-51-38 (EX-6)	PZ-52-41 (EX-7)	PZ-55-64 (EX-8)	PZ-53-40 (EX-9)
15-Jan-2024	62	593.37	594.62	590.59	589.56	586.57	588.15	-	592.23	590.78
22-Jan-2024	63	593.65	594.65	590.63	589.65	586.78	588.26	-	592.26	590.79
29-Jan-2024	64	593.69	594.65	590.86	589.82	586.73	588.39	-	592.26	591.21
5-Feb-2024	65	593.99	594.75	590.72	589.79	586.72	588.43	-	592.32	591.26
12-Feb-2024	66	594.41	594.98	590.93	589.97	586.82	588.43	-	592.46	591.23
19-Feb-2024	67	595.61	594.71	590.34	589.63	586.70	588.30	-	592.44	591.08
26-Feb-2024	68	595.00	593.88	590.13	589.58	586.76	588.30	-	592.73	590.96
4-Mar-2024	69	594.56	593.74	590.16	589.65	586.73	588.32	-	592.76	591.04
11-Mar-2024	70	594.58	593.88	590.05	589.52	586.74	588.30	-	593.00	590.99
18-Mar-2024	71	594.45	593.91	589.92	589.40	586.60	588.19	-	592.96	590.88
25-Mar-2024	72	595.34	594.64	590.78	590.27	588.07	589.24	-	593.99	591.52
1-Apr-2024	73	595.10	594.64	590.88	590.41	587.31	589.06	-	593.91	592.09
8-Apr-2024	74	595.56	595.09	590.65	590.06	587.10	588.83	-	594.31	592.08
15-Apr-2024	75	595.74	595.22	590.78	590.27	587.26	588.96	-	594.48	592.16
22-Apr-2024	76	595.85	595.32	590.63	590.08	587.19	588.81	-	594.71	592.01
29-Apr-2024	77	-	-	-	-	-	-	-	-	-
6-May-2024	78	-	-	-	-	-	-	-	-	-
13-May-2024	79	-	-	-	-	-	-	-	-	-
20-May-2024	80	-	-	-	-	-	-	-	-	-

Note: Pre-Startup water level elvations collected the week of November 7th. Pre-Startup pump testing may have influenced measurements.

Note: Water level data is compiled through April 25, 2024.

Table 5. Concentration of PFOA/PFOS measured at each extraction well (ng/L)

ARCADIS

Starting Day	Week	EX-1	EX-2	EX-3	EX-4	EX-5	EX-6	EX-7	EX-8	EX-9
16-Sep-2022	0	11,000/1,000	5,600/350	4,900/490	11,000/940	2,100/180	18,000/1,400	9,300/470	17,000/1,200	90/2.1
14-Nov-2022	1	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
21-Nov-2022	2	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
28-Nov-2022	3	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
5-Dec-2022	4	10,000/860	6,400/450	2,400/270	50,000/3,100*	16,000/1,300	18,000/2,100*	11,000/510	14,000/1,200	65/3.0*
12-Dec-2022	5	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
19-Dec-2022	6	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
26-Dec-2022	7	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
2-Jan-2023	8	9,400/850	5,100/330	1,700/150	9,500/650	15,000/1,300	20,000/1,400	8,800/500	12,000/1,100	40/3.7*
9-Jan-2023	9	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
16-Jan-2023	10	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
23-Jan-2023	11	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
30-Jan-2023	12	6,700/660	4,200/370	1,800/160	4,600/350	18,000/1,400	16,000/1,100	13,000/580	15,000/1,600	65/2.1
6-Feb-2023	13	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
13-Feb-2023	14	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
20-Feb-2023	15	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
27-Feb-2023	16	7,400/670	6,400/520	1,500/130	5,700/440	16,000/1,400	19,000/1,200	15,000/690	16,000/1,500	61/2.3
6-Mar-2023	17	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
13-Mar-2023	18	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
20-Mar-2023	19	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
27-Mar-2023	20	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
3-Apr-2023	21	7,000/730	6,300/520	2,100/200	5,400/460	18,000/1,400	18,000/1,300	17,000/730	20,000/1,500	160/7.8
10-Apr-2023	22	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
17-Apr-2023	23	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
24-Apr-2023	24	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
1-May-2023	25	6,800/690	5,100/410	2,400/220	5,500/420	11,000/1,000	17,000/930	15,000/610	14,000/1,200	120/2.3
8-May-2023	26	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
15-May-2023	27	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
22-May-2023	28	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
29-May-2023	29	7,200/720	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--

Table 5. Concentration of PFOA/PFOS measured at each extraction well (ng/L)

ARCADIS

Starting Day	Week	EX-1	EX-2	EX-3	EX-4	EX-5	EX-6	EX-7	EX-8	EX-9
5-Jun-2023	30	**7,200/720**	**4,600/420**	**2,500/190**	**5,800/480**	**10,000/1,100**	**16,000/1,400**	**15,000/590**	**13,000/1,800**	**140/1.7**
12-Jun-2023	31	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
19-Jun-2023	32	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
26-Jun-2023	33	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
3-Jul-2023	34	**7,400/780**	**4,600/420**	**3,200/220**	**5,400/480**	**9,900/1,100**	**18,000/1,100**	**17,000/630**	**12,000/1,500**	**190/2.0**
10-Jul-2023	35	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
17-Jul-2023	36	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
24-Jul-2023	37	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
31-Jul-2023	38	**9,000/850**	**5,100/420**	**4,000/240**	**6,400/510**	**17,000/1,300**	**20,000/960**	**15,000/510**	**12,000/1,100**	**230/2.2**
7-Aug-2023	39	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
14-Aug-2023	40	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
21-Aug-2023	41	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
28-Aug-2023	42	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
4-Sep-2023	43	**6,400/690**	**3,500/340**	**4,300/200**	**6,000/440**	**8,900/740**	**16,000/910**	**14,000/420**	**11,000/1,100**	**230/2.2**
11-Sep-2023	44	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
18-Sep-2023	45	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
25-Sep-2023	46	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
2-Oct-2023	47	**5,600/550**	**3,500/370**	**3,400/200**	**4,600/490**	--/--	**16,000/860**	**11,000/410**	**9,300/1,100**	**190/ND (<0.5)**
9-Oct-2023	48	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
16-Oct-2023	49	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
23-Oct-2023	50	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
30-Oct-2023	51	**6,800/610**	**3,300/350**	**5,400/230**	**3,700/330**	**8,800/720**	**14,000/920**	**13,000/470**	**12,000/1,200**	**250/1.9**
6-Nov-2023	52	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
13-Nov-2023	53	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
20-Nov-2023	54	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
27-Nov-2023	55	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
4-Dec-2023	56	**7,000/820**	**3,100/310**	**2,600/120**	**3,600/340**	**8,500/750**	**18,000/810**	**14,000/450**	**13,000/1,200**	**140/1.0**
11-Dec-2023	57	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
18-Dec-2023	58	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
25-Dec-2023	59	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--

Table 5. Concentration of PFOA/PFOS measured at each extraction well (ng/L)

Starting Day	Week	EX-1	EX-2	EX-3	EX-4	EX-5	EX-6	EX-7	EX-8	EX-9
1-Jan-2024	60	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
8-Jan-2024	61	**6,300/770**	**2,900/400**	**5,600/250**	**5,000/450**	**8,000/710**	**15,000/930**	**13,000/540**	**11,000/1,300**	**110/1.6**
15-Jan-2024	62	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
22-Jan-2024	63	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
29-Jan-2024	64	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
5-Feb-2024	65	**6,200/730**	**2,300/260**	**4,800/180**	**4,100/300**	**6,200/630**	**14,000/770**	**11,000/420**	**9,700/1,100**	**130/1.8**
12-Feb-2024	66	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
19-Feb-2024	67	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
26-Feb-2024	68	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
4-Mar-2024	69	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
11-Mar-2024	70	**7,900/720**	**2,200/220**	**6,400/180**	**5,700/450**	**7,500/580**	**14,000/790**	**13,000/400**	**12,000/1,200**	**81/ND (<0.48)**
18-Mar-2024	71	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
25-Mar-2024	72	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
1-Apr-2024	73	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
8-Apr-2024	74	**7,100/800**	**2,800/310**	**9,500/230**	**5,700/440**	**7,600/690**	**13,000/760**	**12,000/440**	**12,000/1,400**	**37/2.6**
15-Apr-2024	75	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
22-Apr-2024	76	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
29-Apr-2024	77	**Pending**	**Pending**	**Pending**	**Pending**	**Pending**	**Pending**	**Pending**	**Pending**	**Pending**
6-May-2024	78	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
13-May-2024	79	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--
20-May-2024	80	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--	--/--

Notes: Data is scheduled to be collected monthly (once every 4 weeks) at each extraction well. Wells EX-4, EX-6, and EX-9 could not be sampled during Week 4. Adjacent wells MW-EX-4, PZ-51-38 and PZ-53-40, respectively were sampled as surragates.

Table 6. Summary of weekly treatment plant operations

Starting Day	Week	Total volume at influent[1] (gal)	Total volume at effluent[1] (gal)	Total volume discharged to Ditch B[1] (gal)	Weekly Uptime (%)	Maximum treatment rate (gpm)	Average treatment rate (gpm)
14-Nov-2022	1	472,728	417,899	386,083	43%	125.0	38.3
21-Nov-2022	2	607,850	551,162	535,774	42%	120.0	53.2
28-Nov-2022	3	506,836	455,986	439,862	29%	125.0	43.6
5-Dec-2022	4	682,594	636,639	616,763	35%	201.0	61.2
12-Dec-2022	5	277,569	310,735	255,597	13%	195.0	25.4
19-Dec-2022	6	401,859	340,389	371,189	19%	200.0	36.8
26-Dec-2022	7	61,120	57,365	50,776	3%	200.0	5.0
2-Jan-2023	8	550,150	539,405	519,026	27%	197.0	51.5
9-Jan-2023	9	1,688,032	1,683,834	1,637,933	83%	197.0	162.5
16-Jan-2023	10	1,979,928	1,967,721	1,918,925	100%	190.5	190.4
23-Jan-2023	11	2,012,535	1,998,503	1,934,988	100%	190.5	192.0
30-Jan-2023	12	1,963,386	1,941,373	1,873,503	96%	190.5	185.9
6-Feb-2023	13	2,020,156	1,993,873	1,925,064	100%	190.5	191.0
13-Feb-2023	14	2,025,719	1,983,035	1,899,939	100%	190.5	188.5
20-Feb-2023	15	1,941,144	1,891,595	1,800,272	95%	205.5	178.6
27-Feb-2023	16	2,292,912	2,236,432	2,142,228	100%	245.0	212.5
6-Mar-2023	17	2,311,924	2,253,028	2,150,306	100%	219.0	213.3
13-Mar-2023	18	2,324,522	2,261,426	2,154,216	100%	219.0	213.7
20-Mar-2023	19	2,327,328	2,262,136	2,159,298	100%	219.0	214.4
27-Mar-2023	20	2,317,824	2,248,108	2,132,510	100%	219.0	211.6
3-Apr-2023	21	2,310,782	2,236,654	2,122,732	100%	219.0	210.6
10-Apr-2023	22	2,328,272	2,252,708	2,143,038	100%	219.0	212.6
17-Apr-2023	23	1,936,272	1,870,284	1,769,000	82%	219.0	175.5
24-Apr-2023	24	2,327,168	2,251,616	2,121,292	100%	219.0	210.4
1-May-2023	25	2,328,340	2,242,548	2,126,368	100%	239.0	210.9
8-May-2023	26	2,328,324	2,237,708	2,115,576	100%	217.5	209.9
15-May-2023	27	2,260,816	2,170,820	2,024,308	100%	217.5	200.8
22-May-2023	28	2,323,092	2,229,840	2,092,524	100%	213.5	207.6
29-May-2023	29	2,305,016	2,210,572	2,106,492	100%	213.5	209.0
5-Jun-2023	30	2,148,600	2,055,860	1,928,332	96%	226.0	191.3

Table 6. Summary of weekly treatment plant operations

Starting Day	Week	Total volume at influent[1] (gal)	Total volume at effluent[1] (gal)	Total volume discharged to Ditch B[1] (gal)	Weekly Uptime (%)	Maximum treatment rate (gpm)	Average treatment rate (gpm)
12-Jun-2023	31	2,221,144	2,129,680	2,004,956	98%	206.0	198.9
19-Jun-2023	32	2,107,132	2,022,692	1,926,712	100%	206.0	191.1
26-Jun-2023	33	2,168,120	2,078,416	1,985,468	100%	198.0	197.0
3-Jul-2023	34	2,126,648	2,038,124	1,935,612	100%	218.0	192.0
10-Jul-2023	35	2,118,280	2,029,768	1,934,840	100%	198.0	191.9
17-Jul-2023	36	1,965,344	1,893,336	1,791,056	100%	190.0	177.7
24-Jul-2023	37	1,989,104	1,920,480	1,823,936	100%	215.0	180.9
31-Jul-2023	38	2,258,576	2,182,056	2,076,192	100%	235.0	206.0
7-Aug-2023	39	2,242,464	2,167,616	2,067,900	100%	215.0	205.1
14-Aug-2023	40	2,241,416	2,171,856	2,074,852	100%	215.0	205.8
21-Aug-2023	41	2,257,888	2,194,440	2,098,720	100%	209.0	208.2
28-Aug-2023	42	2,236,336	2,171,712	2,077,488	100%	209.0	206.1
4-Sep-2023	43	2,243,768	2,182,544	2,082,480	96%	217.0	206.6
11-Sep-2023	44	2,344,192	2,282,880	2,195,504	100%	214.0	217.8
18-Sep-2023	45	2,242,488	2,199,600	2,107,192	100%	219.0	209.0
25-Sep-2023	46	2,020,200	1,987,776	1,892,944	100%	184.0	187.8
2-Oct-2023	47	2,024,768	2,006,112	1,918,928	100%	185.0	190.4
9-Oct-2023	48	2,193,576	2,179,744	2,088,904	100%	211.5	207.2
16-Oct-2023	49	2,286,056	2,269,464	2,197,696	100%	211.5	218.0
23-Oct-2023	50	2,269,600	2,253,296	2,180,056	100%	213.5	216.3
30-Oct-2023	51	2,277,920	2,274,992	2,208,464	100%	233.5	219.1
6-Nov-2023	52	2,237,376	2,246,816	2,182,928	100%	213.5	216.6
13-Nov-2023	53	2,199,496	2,230,320	2,155,552	100%	213.5	213.8
20-Nov-2023	54	1,958,736	2,006,008	1,931,904	100%	208.5	191.7
27-Nov-2023	55	2,131,160	2,199,512	2,129,520	100%	208.5	211.3
4-Dec-2023	56	2,112,288	2,232,160	2,165,464	100%	234.5	214.8
11-Dec-2023	57	1,687,992	1,752,992	1,687,432	100%	215.5	167.4
18-Dec-2023	58	2,132,968	2,187,112	2,124,200	100%	215.5	210.7
25-Dec-2023	59	2,125,144	2,174,032	2,123,992	100%	221.0	210.7
1-Jan-2024	60	1,339,512	1,360,992	1,320,424	59%	220.0	131.0

Table 6. Summary of weekly treatment plant operations

Starting Day	Week	Total volume at influent[1] (gal)	Total volume at effluent[1] (gal)	Total volume discharged to Ditch B[1] (gal)	Weekly Uptime (%)	Maximum treatment rate (gpm)	Average treatment rate (gpm)
8-Jan-2024	61	2,203,992	2,222,032	2,161,696	100%	220.0	214.5
15-Jan-2024	62	2,253,976	2,254,016	2,200,392	100%	222.0	218.3
22-Jan-2024	63	2,147,056	2,136,728	2,078,856	100%	222.0	206.2
29-Jan-2024	64	2,263,920	2,236,632	2,175,040	100%	218.0	215.8
5-Feb-2024	65	2,251,224	2,232,576	2,183,088	100%	238.0	216.6
12-Feb-2024	66	2,063,360	2,032,896	1,969,016	100%	214.0	195.3
19-Feb-2024	67	2,003,776	1,969,208	1,920,480	99%	228.0	190.5
26-Feb-2024	68	2,744,064	2,682,616	2,620,816	100%	260.0	242.0
4-Mar-2024	69	2,523,232	2,459,984	2,399,048	100%	239.0	238.0
11-Mar-2024	70	2,424,592	2,356,016	2,313,608	100%	259.0	229.5
18-Mar-2024	71	2,485,584	2,409,824	2,360,624	100%	233.0	234.2
25-Mar-2024	72	1,726,896	1,672,704	1,623,208	85%	233.0	161.0
1-Apr-2024	73	2,460,448	2,371,744	2,318,704	100%	233.0	230.0
8-Apr-2024	74	2,487,616	2,396,896	2,345,184	100%	251.0	232.7
15-Apr-2024	75	2,488,704	2,406,672	2,343,680	100%	231.0	232.5
22-Apr-2024	76	2,450,784	2,379,840	2,314,576	100%	254.0	229.6
29-Apr-2024	77	2,502,160	2,432,560	2,378,352	100%	238.0	235.9
6-May-2024	78	-	-	-			
13-May-2024	79	-	-	-			
20-May-2024	80	-	-	-			
Totals		154,603,872	151,468,724	145,651,596			

1. The difference in the totals is due to water recirculation within the treatment system, water storage in the treatment system and piping, and differences in instrument accuracy.

Table 7. Summary of weekly influent and effluent PFAS sampling of the GETS (ng/L)

ARCADIS

Starting Day	Week	Summary of Influent PFAS Concentrations (ng/L)		Summary of Effluent PFAS Concentrations (ng/L)	
		PFOA	PFOS	PFOA	PFOS
7-Nov-2022	0	18,000	1,300	ND (<0.77)	ND (<0.49)
14-Nov-2022	1	6,300	520	ND (<0.79)	ND (<0.50)
21-Nov-2022	2	11,000	620	ND (<0.74)	ND (<0.47)
28-Nov-2022	3	7,200	550	ND (<0.75)	ND (<0.48)
5-Dec-2022	4	11,000	940	ND (<0.77)	ND (<0.49)
12-Dec-2022	5	10,000	730	ND (<0.75)	ND (<0.47)
19-Dec-2022	6	11,000	890	ND (<0.76)	ND (<0.48)
26-Dec-2022	7	11,000	780	ND (<0.80)	ND (<0.51)
2-Jan-2023	8	9,000	750	ND (<0.73)	ND (<0.46)
9-Jan-2023	9	9,000	870	ND (<0.75)	ND (<0.48)
16-Jan-2023	10	6,400	830	ND (<0.81)	ND (<0.51)
23-Jan-2023	11	11,000	910	ND (<0.74)	ND (<0.47)
30-Jan-2023	12	11,000	870	ND (<0.74)	ND (<0.47)
6-Feb-2023	13	12,000	700	ND (<0.74)	ND (<0.47)
13-Feb-2023	14	11,000	880	ND (<0.79)	ND (<0.50)
20-Feb-2023	15	9,000	790	ND (<0.79)	ND (<0.50)
27-Feb-2023	16	11,000	910	ND (<0.74)	ND (<0.47)
6-Mar-2023	17	11,000	870	ND (<0.74)	ND (<0.47)
13-Mar-2023	18	12,000	700	ND (<0.74)	ND (<0.47)
20-Mar-2023	19	11,000	880	ND (<0.79)	ND (<0.50)
27-Mar-2023	20	9,300	670	ND (<0.85)	ND (<0.54)
3-Apr-2023	21	13,000	1,000	ND (<0.80)	ND (<0.51)
10-Apr-2023	22	13,000	730	ND (<0.83)	ND (<0.52)
17-Apr-2023	23	11,000	850	1.20 J	ND (<0.47)
24-Apr-2023	24	12,000	760	0.97 J	ND (<0.48)
1-May-2023	25	9,500	750	1.2 J	ND(<0.48)
8-May-2023	26	9,900	810	2.1	ND(<0.46)
15-May-2023	27	9,500	620	1.8 J	ND(<0.51)
22-May-2023	28	11,000	660	1.9	ND (<0.49)
29-May-2023	29	9,500	680	2.1	ND (<0.45)

Table 7. Summary of weekly influent and effluent PFAS sampling of the GETS (ng/L)

ARCADIS

Starting Day	Week	Summary of Influent PFAS Concentrations (ng/L)		Summary of Effluent PFAS Concentrations (ng/L)	
		PFOA	PFOS	PFOA	PFOS
5-Jun-2023	30	11,000	690	4.1	ND (<0.48)
12-Jun-2023	31	10,000	730	4.3	ND (<0.47)
19-Jun-2023	32	11,000	740	4.7	ND (<0.53)
26-Jun-2023	33	12,000	750	9.3	ND (<0.55)
3-Jul-2023	34	11,000	700	16	ND (<0.47)
10-Jul-2023	35	10,000	640	21 J	ND (<0.50)
17-Jul-2023	36	11,000	660	ND (<0.75)	ND (<0.47)
24-Jul-2023	37	9,900	670	ND (<0.75)	ND (<0.48)
31-Jul-2023	38	12,000	710	ND (<0.80)	ND (<0.51)
7-Aug-2023	39	10,000	640	ND (<0.81)	ND (<0.52)
14-Aug-2023	40	10,000	610	ND (<0.76)	ND (<0.48)
21-Aug-2023	41	11,000	770	ND (<0.72)	ND (<0.46)
28-Aug-2023	42	9,700	600	ND (<0.75)	ND (<0.47)
4-Sep-2023	43	11,000	610	ND (<0.73)	ND (<0.47)
11-Sep-2023	44	10,000	720	ND (<0.75)	ND (<0.47)
18-Sep-2023	45	10,000	660	ND (<0.72)	ND (<0.46)
25-Sep-2023	46	10,000	650	ND (<0.72)	ND (<0.46)
2-Oct-2023	47	9,200	660	ND (<0.72)	ND (<0.46)
9-Oct-2023	48	11,000	690	ND (<0.77)	ND (<0.49)
16-Oct-2023	49	9,300	660	ND (<0.79)	ND (<0.50)
23-Oct-2023	50	9,400	790	ND (<0.85)	ND (<0.54)
30-Oct-2023	51	9,000	730	ND (<0.79)	ND (<0.5)
6-Nov-2023	52	8,100	650	ND (<0.72)	ND (<0.46)
13-Nov-2023	53	10,000 D	690 DJ-	ND (<0.73)	ND (<0.46)
20-Nov-2023	54	11,000 D	710 D	ND (<0.74)	ND (<0.47)
27-Nov-2023	55	6,900 D	650 D	ND (<0.85)	ND (<0.54)
4-Dec-2023	56	10,000 D	720 D	ND (<0.78)	ND (<0.5)
11-Dec-2023	57	8,300 D	650 D	ND (<0.75)	ND (<0.48)
18-Dec-2023	58	9,400 D	620 D	ND (<0.82)	ND (<0.52)
25-Dec-2023	59	9,700	740	ND (<0.81)	ND (<0.51)

Table 7. Summary of weekly influent and effluent PFAS sampling of the GETS (ng/L)

Starting Day	Week	Summary of Influent PFAS Concentrations (ng/L)		Summary of Effluent PFAS Concentrations (ng/L)	
		PFOA	PFOS	PFOA	PFOS
1-Jan-2024	60	9,500 D	640 D	ND (<0.8)	0.65 J
8-Jan-2024	61	8,600 D	650 D	ND (<0.92)	ND (<0.58)
15-Jan-2024	62	9,100 D	660 D	ND (<0.87)	ND (<0.55)
22-Jan-2024	63	8,600 D	640 D	ND (<0.72)	ND (<0.46)
29-Jan-2024	64	9,000 D	640 D	ND (<0.81)	ND (<0.52)
5-Feb-2024	65	9,200 D	710 D	ND (<0.74)	ND (<0.47)
12-Feb-2024	66	11,000 D	900 D	ND (<0.74)	ND (<0.47)
19-Feb-2024	67	11,000 D	700 D	ND (<0.76)	ND (<0.48)
26-Feb-2024	68	4,500 D	550 D	ND (<0.82)	ND (<0.52)
4-Mar-2024	69	6,100 D	730 D	ND (<0.79)	ND (<0.5)
11-Mar-2024	70	9,500 D	610 D	1.8	ND (<0.46)
18-Mar-2024	71	9,600 D	540 D	3.1	0.87 J
25-Mar-2024	72	8,200 D	610 D	2.0	0.68 J
1-Apr-2024	73	11,000	700	ND (<0.82)	ND (<0.52)
8-Apr-2024	74	10,000	650	ND (<0.75)	ND (<0.47)
15-Apr-2024	75	10,000	720	ND (<0.73)	ND (<0.46)
22-Apr-2024	76	9,000	680	0.99 J	ND (<0.48)
29-Apr-2024	77	14,000	610	0.94 J	ND (<0.49)
6-May-2024	78	10,000	660	2.9	0.62 J
13-May-2024	79	-	-	-	-
20-May-2024	80	-	-	-	-

Table 8. Summary of average daily flow in Ditch B (gallons per minute)

Starting Day	Week	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
7-Nov-2022	0	978	809	797	974	2,721	980	834
14-Nov-2022	1	758	898	1,176	991	877	782	733
21-Nov-2022	2	754	711	709	770	748	778	716
28-Nov-2022	3	671	784	1,020	748	694	683	599
5-Dec-2022	4	627	565	534	548	571	530	599
12-Dec-2022	5	535	547	1,301	3,556	1,469	969	835
19-Dec-2022	6	793	732	658	701	671	638	561
26-Dec-2022	7	510	502	551	693	1,101	838	778
2-Jan-2023	8	734	1,326	1,979	1,277	1,081	921	951
9-Jan-2023	9	831	819	834	864	830	793	777
16-Jan-2023	10	1,239	1,730	1,062	1,103	1,028	895	851
23-Jan-2023	11	842	803	798	794	764	679	631
30-Jan-2023	12	596	534	565	513	445	504	494
6-Feb-2023	13	481	721	598	592	556	549	593
13-Feb-2023	14	593	974	1,828	802	667	630	656
20-Feb-2023	15	648	594	560	536	579	585	587
27-Feb-2023	16	588	642	655	637	620	642	697
6-Mar-2023	17	1,235	1,081	941	873	918	863	950
13-Mar-2023	18	876	774	879	1,379	2,711	1,267	1,011
20-Mar-2023	19	1,029	1,030	1,751	2,086	2,443	2,682	2,701
27-Mar-2023	20	2,729	2,652	2,539	2,255	4,388	9,974	5,030
3-Apr-2023	21	4,532	4,358	8,431	5,060	4,336	5,213	4,543
10-Apr-2023	22	4,173	3,784	3,507	3,160	2,882	2,624	3,223
17-Apr-2023	23	5,036	3,376	3,150	3,946	3,238	2,834	2,654
24-Apr-2023	24	2,411	2,162	1,739	1,824	1,463	1,640	1,933
1-May-2023	25	4,652	3,555	2,814	2,585	2,583	2,478	10,789
8-May-2023	26	4,786	3,901	3,313	2,984	2,529	2,223	1,459
15-May-2023	27	1,336	1,276	1,195	1,145	2,047	1,199	1,096
22-May-2023	28	1,019	960	926	867	862	814	797
29-May-2023	29	789	766	732	718	768	681	681
5-Jun-2023	30	645	702	620	560	597	586	565

Table 8. Summary of average daily flow in Ditch B (gallons per minute)

Starting Day	Week	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
12-Jun-2023	31	568	2,666	1,254	807	717	666	642
19-Jun-2023	32	581	626	577	597	548	552	950
26-Jun-2023	33	2,279	902	724	702	667	632	611
3-Jul-2023	34	594	658	2,024	1,965	873	820	1,380
10-Jul-2023	35	882	3,916	1,170	1,137	1,038	1,018	927
17-Jul-2023	36	922	889	905	994	979	779	771
24-Jul-2023	37	687	664	932	1,172	2,653	2,022	1,313
31-Jul-2023	38	936	814	2,067	5,186	Data Loss / Instrument Failure		
7-Aug-2023	39	1,078	1,015	898	819	2,890	6,180	2,540
14-Aug-2023	40	2,315	2,497	1,815	2,963	1,699	1,295	1,223
21-Aug-2023	41	1,115	1,283	1,266	1,158	1,449	2,356	1,079
28-Aug-2023	42	999	1,322	941	821	793	935	849
4-Sep-2023	43	828	858	2,353	1,196	797	714	1,869
11-Sep-2023	44	1,188	681	617	715	707	714	683
18-Sep-2023	45	667	625	1033*	1368*	1788*	1298*	1873*
25-Sep-2023	46	1556*	1317*	1012*	1911*	3332*	3499*	4138*
2-Oct-2023	47	3655*	3268*	1937*	545	544	517	506
9-Oct-2023	48	505	503	504	493	746	1,634	614
16-Oct-2023	49	541	481	471	541	547	526	489
23-Oct-2023	50	1,070	4,067	5,394	5,375	3,310	1,648	1,046
30-Oct-2023	51	1,007	952	890	858	845	813	779
6-Nov-2023	52	1,703	896	858	930	810	752	747
13-Nov-2023	53	707	647	685	586	628	594	612
20-Nov-2023	54	574	561	567	582	592	566	626
27-Nov-2023	55	634	539	524	559	547	528	718
4-Dec-2023	56	677	551	517	609	486	943	917
11-Dec-2023	57	626	555	444	445	454	498	514
18-Dec-2023	58	523	447	495	462	500	465	450
25-Dec-2023	59	440	1,903	702	712	594	572	550
1-Jan-2024	60	528	532	446	397	412	477	576
8-Jan-2024	61	538	625	611	597	584	671	511
15-Jan-2024	62	480	777	1,203	442	300	300	300

Table 8. Summary of average daily flow in Ditch B (gallons per minute)

Starting Day	Week	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
22-Jan-2024	63	328	345	385	438	923	898	701
29-Jan-2024	64	615	628	665	730	655	610	582
5-Feb-2024	65	562	561	594	660	790	679	590
12-Feb-2024	66	580	565	502	728	613	519	526
19-Feb-2024	67	485	470	483	544	562	471	475
26-Feb-2024	68	472	521	573	452	472	506	506
4-Mar-2024	69	900	1,451	618	544	553	558	517
11-Mar-2024	70	523	513	485	470	462	489	498
18-Mar-2024	71	447	472	468	422	465	560	482
25-Mar-2024	72	1,864	4,652	1,612	848	829	1,082	934
1-Apr-2024	73	833	1,471	4,571	4,905	3,794	3,006	2,657
8-Apr-2024	74	2,436	1,924	1,455	1,270	1,189	1,011	1,644
15-Apr-2024	75	974	1,033	5,729	3,294	2,537	1,715	1,223
22-Apr-2024	76	1,092	1,216	1,145	899	867	3,324	2,284
29-Apr-2024	77	4,150	2,822	5,823	3,383	2,873	2,476	2,014
6-May-2024	78	1,754	3,998	7,132	3,681	2,931	2,676	2,334
13-May-2024	79	1,988	1,376	1,109	3,029	2,998	1,736	1,209
20-May-2024	80	1,348		4,179	2,812			

Notes: Data collected at Ditch B surface water treatment plant; *Flow less than reported - Instrument replaced 10/4

Table 9. Summary of weekly PFAS concentrations in Ditch B (ng/L)

ARCADIS

Starting Day	Week	Summary of PFAS Concentrations (ng/L)		
		PFOA	PFOS	PFOA plus PFOS
7-Nov-2022	0	1,500	120	1,620
14-Nov-2022	1	1,600	99	1,699
21-Nov-2022	2	1,900	120	2,020
28-Nov-2022	3	1,700	100	1,800
5-Dec-2022	4	1,600	100	1,700
12-Dec-2022	5	1,300	86	1,386
19-Dec-2022	6	1,700	82	1,782
26-Dec-2022	7	1,300	81	1,381
2-Jan-2023	8	2,300	120	2,420
9-Jan-2023	9	1,800	110	1,910
16-Jan-2023	10	920	68	988
23-Jan-2023	11	920	55	975
30-Jan-2023	12	810	58	868
6-Feb-2023	13	650	71	721
13-Feb-2023	14	120	31	151
20-Feb-2023	15	630	44	674
27-Feb-2023	16	310	35	345
6-Mar-2023	17	380	28	408
13-Mar-2023	18	320	28	348
20-Mar-2023	19	550	43	593
27-Mar-2023	20	600	40	640
3-Apr-2023	21	670	41	711
10-Apr-2023	22	913	53	966
17-Apr-2023	23	770	52	822
24-Apr-2023	24	1,100	90	1,190
1-May-2023	25	210	26	236
8-May-2023	26	1,300	81	1,381
15-May-2023	27	1,200	76	1,276
22-May-2023	28	890	70	960
29-May-2023	29	830	130	960

Table 9. Summary of weekly PFAS concentrations in Ditch B (ng/L)

ARCADIS

Starting Day	Week	Summary of PFAS Concentrations (ng/L)		
		PFOA	PFOS	PFOA plus PFOS
5-Jun-2023	30	520	63	583
12-Jun-2023	31	500	66	566
19-Jun-2023	32	450	56	506
26-Jun-2023	33	370	58	428
3-Jul-2023	34	89	27	116
10-Jul-2023	35	290	40	330
17-Jul-2023	36	360	58	418
24-Jul-2023	37	200	60	260
31-Jul-2023	38	200	30	230
7-Aug-2023	39	280	43	323
14-Aug-2023	40	280	54	334
21-Aug-2023	41	230	41	271
28-Aug-2023	42	190	28	218
4-Sep-2023	43	170	25	195
11-Sep-2023	44	160	25	185
18-Sep-2023	45	130	21	151
25-Sep-2023	46	130	23	153
2-Oct-2023	47	95	19	114
9-Oct-2023	48	92	17	109
16-Oct-2023	49	100	27	127
23-Oct-2023	50	87	18	105
30-Oct-2023	51	180	38	218
6-Nov-2023	52	99	51	150
13-Nov-2023	53	150	34	184
20-Nov-2023	54	150	32	182
27-Nov-2023	55	150	27	177
4-Dec-2023	56	120	22	142
11-Dec-2023	57	280	29	309
18-Dec-2023	58	170	26	196
25-Dec-2023	59	130	21	151

Table 9. Summary of weekly PFAS concentrations in Ditch B (ng/L)

Starting Day	Week	Summary of PFAS Concentrations (ng/L)		
		PFOA	PFOS	PFOA plus PFOS
1-Jan-2024	60	300	36	336
8-Jan-2024	61	210	30	240
15-Jan-2024	62	110	22	132
22-Jan-2024	63	130	23	153
29-Jan-2024	64	200	26	226
5-Feb-2024	65	230	44	274
12-Feb-2024	66	260	28	288
19-Feb-2024	67	260	39	299
26-Feb-2024	68	180	26	206
4-Mar-2024	69	190	25	215
11-Mar-2024	70	210	29	239
18-Mar-2024	71	180	27	207
25-Mar-2024	72	330	36	366
1-Apr-2024	73	95	12	107
8-Apr-2024	74	230	28	258
15-Apr-2024	75	260	33	293
22-Apr-2024	76	290	34	324
29-Apr-2024	77	150	20	170
6-May-2024	78	-	-	-
13-May-2024	79	-	-	-
20-May-2024	80	-	-	-

Note: Data collected from influent of Ditch B treatment system

Table 10. Summary of temporary streambed piezometers data (feet from top of casing)

Date	Week	Location L09			Location M01			Location M04			Location M07		
		Inner DTW	Outer DTW	Delta	Inner DTW	Outer DTW	Delta	Inner DTW	Outer DTW	Delta	Inner DTW	Outer DTW	Delta
1-Nov-2022	0	**3.85**	**4.03**	**0.18**	**1.85**	**1.91**	**0.06**	**1.74**	**1.77**	**0.03**	**4.68**	**4.99**	**0.31**
-	-												
6-Dec-2022	4	**3.82**	**3.95**	**0.13**	**1.76**	**2.05**	**0.29**	**1.80**	**1.85**	**0.05**	**4.70**	**5.09**	**0.39**
-	-												
15-May-2023	26	**3.13**	**3.39**	**0.26**	**4.23**	**4.31**	**0.08**	**1.37**	**1.39**	**0.02**	**2.46**	**2.91**	**0.45**
-	-												
10-Jun-2023	28	**3.37**	**3.52**	**0.15**	**4.51**	**4.41**	**-0.10**	**1.54**	**1.39**	**-0.15**	**5.90**	**2.78**	**-3.12**
-	-												
4-Aug-2023	39	**3.58**	**3.46**	**-0.12**	**4.48**	**4.35**	**-0.13**	**--***	**--***	**--**	**3.05**	**2.83**	**-0.22**
-	-												
23-Apr-2024	76	**3.28**	**3.49**	**0.21**	**4.17**	**4.19**	**0.02**	**1.72**	**1.64**	**-0.08**	**4.32**	**4.48**	**0.16**
-	-												

Note: All measurements are depth to water (DTW) from top of casing. Delta is outer minus inner with positive differences indicating groundwater is discharging to surface water.

*M04 was not gauged or sampled due to H&S concern during the August field event (Hornets)

Locations shown on Figure 1.

Table 10. Summary of temporary streambed piezometers data (feet from top of casing)

Date	Week	Location M09			Location U03			Location U10		
		Inner DTW	Outer DTW	Delta	Inner DTW	Outer DTW	Delta	Inner DTW	Outer DTW	Delta
1-Nov-2022	0	**4.06**	**4.62**	**0.56**	**1.80**	**1.99**	**0.19**	**1.28**	**2.08**	**0.80**
-	-									
6-Dec-2022	4	**4.21**	**4.74**	**0.53**	**1.73**	**1.96**	**0.23**	**1.52**	**2.10**	**0.58**
-	-									
15-May-2023	26	**3.39**	**4.21**	**0.82**	**2.55**	**2.94**	**0.39**	**2.28**	**3.97**	**1.69**
-	-									
10-Jun-2023	28	**4.22**	**4.30**	**0.08**	**3.03**	**3.39**	**0.36**	**2.65**	**4.28**	**1.63**
-	-									
4-Aug-2023	39	**4.40**	**4.25**	**-0.15**	**3.14**	**3.48**	**0.34**	**2.83**	**4.19**	**1.36**
-	-									
23-Apr-2024	76	**3.79**	**4.27**	**0.48**	**2.55**	**2.68**	**0.13**	**0.62**	**2.52**	**1.90**
-	-									

Note: All measurements are depth to water (DTW) from top of casing. Delta is outer minus inner with positive differences indicating groundwater is discharging to surface water.

Locations shown on Figure 1.

Table 11. Groundwater and Surface Water Elevations

Well ID	Depth to Top of Screen (ft bgs)	Depth to Bottom of Screen (ft bgs)	Top of Casing Elevation (NAVD 88, US FT)	Dec 2022 Dec 5 - Dec 6 Elevation (ft)	Jan 2023 Jan 4 Elevation (ft)	Feb 2023 Jan 30 Elevation (ft)	Mar 2023 Mar 1 - Mar 2 Elevation (ft)	Apr 2023 Apr 3 - Apr 4 Elevation (ft)	May 2023 May 1 - May 2 Elevation (ft)	Aug 2023 Jul 31 - Aug 2 Elevation (ft)	Nov 2023 Nov 7 - Nov 9 Elevation (ft)	Feb 2024 Feb 2 Elevation (ft)	Apr 2024 Apr 8 Elevation (ft)
Locations on Tyco FTC													
HMW-2-3S	6	16	613.19	605.49	605.95	606.19	606.00	608.14	608.73	605.76	605.31	605.19	606.64
HMW-2-3D	32	42	614.37	605.54	605.96	606.18	606.04	608.12	608.72	605.75	610.32	605.18	606.62
PZ-1D	63.5	68.5	606.23	594.29	594.64	594.26	594.09	595.39	595.64	594.11	593.81	593.30	594.24
PZ-3	38	43	609.20	598.92	599.20	599.11	598.67	599.91	601.20	609.20	597.69	596.93	598.40
PZ-4S	36	41	607.89	603.20	603.68	603.67	603.33	605.54	606.42	603.61	602.88	602.41	603.83
PZ-4D	68.5	73.5	607.86	602.36	602.77	602.72	602.51	604.30	604.94	602.55	601.98	601.37	602.86
PZ-9	38	43	611.16	603.18	603.59	603.54	603.27	605.69	606.50	611.16	602.96	602.58	603.98
PZ-14S	4	19	610.77	604.07	604.54	604.62	604.32	604.99	607.61	604.47	603.90	603.46	604.83
PZ-14D	25	35	611.15	603.90	604.38	604.35	604.10	606.50	607.18	604.85	603.74	603.30	604.73
PZ-15S	4	19	608.15	597.16	597.62	596.73	596.25	597.52	598.54	597.32	595.94	595.09	595.79
PZ-15D	22	32	608.17	596.62	596.97	596.42	596.07	597.33	598.21	597.08	595.85	595.10	595.66
PZ-16S	4	19	609.30	600.06	600.28	600.06	599.68	601.27	602.00	600.51	599.44	598.42	599.60
PZ-16D	28	38	608.98	599.68	600.01	599.66	599.34	600.84	601.65	599.95	598.96	598.26	599.33
PZ-17S	4	19	609.51	599.15	599.54	598.75	598.33	599.77	600.66	598.87	597.75	596.87	597.97
PZ-17D	23	33	609.51	598.61	598.99	598.37	598.02	599.50	600.38	598.95	597.39	596.76	597.78
PZ-22S	10	20	609.70	599.56	599.81	599.81	599.34	600.58	601.91	599.53	598.39	597.58	599.00
PZ-45-31	20.8	30.8	607.90	595.91	596.39	595.64	595.42	596.85	597.85	596.47	594.11	593.88	595.42
PZ-47-40	35	40	611.04	601.36	601.74	601.57	601.28	603.17	604.14	601.46	600.83	600.31	601.60
MW-EX-2	19.5	29.5	606.76	595.30	595.64	595.59	595.24	596.54	597.42	596.42	595.39	594.72	594.98
PZ-65-33	28	33	610.09	605.06	605.52	605.55	605.44	607.41	608.11	605.48	605.14	604.77	606.10
PZ-67-16	6	16	611.43	606.07	606.48	606.60	606.50	608.51	609.48	606.61	606.02	605.64	607.25
PZ-67-40	35	40	611.35	606.06	606.47	606.61	606.52	608.45	609.29	606.60	606.11	605.69	607.15
PZ-68-16	6	16	613.51	605.76	607.22	607.11	607.35	609.56	610.80	607.12	606.74	606.55	608.15
PZ-68-26	21	26	613.92	606.90	607.36	607.80	607.50	609.67	610.87	607.28	606.88	606.73	608.28
PZ-68-66	61	66	613.55	605.90	606.63	606.40	606.43	608.10	608.58	605.68	605.85	605.94	607.19
PZ-69-24	14	24	614.75	595.15	601.72	601.94	601.33	603.18	604.55	601.57	600.74	600.09	601.55
PZ-69-43	38	43	612.23	599.12	599.47	599.56	599.18	600.84	602.15	599.23	598.36	597.81	599.17
PZ-70-17	7	17	611.46	604.41	605.44	604.97	604.99	606.98	607.35	604.02	604.10	604.23	605.88
PZ-70-33	28	33	611.11	604.14	604.99	604.74	604.71	606.47	606.79	603.71	603.82	603.99	605.52
PZ-70-55	50	55	611.95	604.16	605.03	604.77	604.74	606.47	606.82	603.73	603.83	603.85	605.56
PZ-70-83	73	83	611.57	--	--	604.38	604.36	606.17	606.44	603.51	603.50	603.52	605.13
Locations on Tyco (Former Barley)													
MW-EX-3	22	27	595.16	591.01	591.72	590.37	590.31	591.52	591.45	590.25	590.94	590.68	590.78
MW-EX-4	22	27	595.51	590.77	591.16	588.89	589.81	591.07	591.17	589.65	590.06	589.64	590.17
MW-EX-5	45	50	594.6	589.44	589.81	587.61	586.59	587.58	587.65	586.59	586.83	586.64	587.16
PZ-64-67	58	67	595.07	588.267	590.787	589.977	589.847	591.127	591.077	589.61	590.02	589.26	590.53

Table 11. Groundwater and Surface Water Elevations

Well ID	Depth to Top of Screen (ft bgs)	Depth to Bottom of Screen (ft bgs)	Top of Casing Elevation (NAVD 88, US FT)	Dec 2022 Dec 5 - Dec 6 Elevation (ft)	Jan 2023 Jan 4 Elevation (ft)	Feb 2023 Jan 30 Elevation (ft)	Mar 2023 Mar 1 - Mar 2 Elevation (ft)	Apr 2023 Apr 3 - Apr 4 Elevation (ft)	May 2023 May 1 - May 2 Elevation (ft)	Aug 2023 Jul 31 - Aug 2 Elevation (ft)	Nov 2023 Nov 7 - Nov 9 Elevation (ft)	Feb 2024 Feb 2 Elevation (ft)	Apr 2024 Apr 8 Elevation (ft)
Location on School Property													
PZ-23	35	40	597.60	593.31	593.49	593.60	592.54	592.96	594.69	591.37	590.34	593.69	593.14
Location in City of Marinette Rights-of-Way													
PZ-24-17	7	17	604.84	598.12	598.50	598.39	--	599.71	600.62	597.79	597.28	596.90	598.15
PZ-24-47	37	47	604.73	598.03	598.50	598.26	--	599.74	600.51	597.65	597.22	596.83	598.05
PZ-25-17	7	17	598.30	591.02	592.21	591.35	591.94	592.90	592.69	590.82	591.91	591.54	592.46
PZ-26-11	6	11	597.77	592.37	592.97	592.49	592.48	594.08	594.48	591.89	592.51	592.61	593.41
PZ-26-36	31	36	596.14	595.35	595.59	595.54	595.44	596.14	596.14	595.34	594.58	594.52	595.17
PZ-29-17	7	17	593.62	589.59	590.09	589.61	589.57	591.29	591.43	589.25	589.86	589.60	590.69
PZ-29-43	38	43	593.52	588.83	589.13	588.90	588.82	590.24	590.03	589.04	589.13	588.80	589.71
PZ-29-68	58	68	593.46	588.90	589.17	588.95	588.86	589.95	590.06	589.04	588.89	588.78	588.96
PZ-30-12	7	12	594.32	589.94	590.38	590.09	589.90	591.62	591.13	589.40	589.77	589.84	590.76
PZ-30-45	35	45	594.22	588.92	589.25	588.96	589.21	590.01	590.03	589.66	589.17	588.79	589.61
PZ-30-59	54	59	594.15	588.76	588.84	588.94	589.27	589.16	589.65	587.72	588.55	589.04	589.19
PZ-31-17	7	17	595.49	590.95	591.42	590.90	590.58	592.07	591.90	590.07	590.45	590.38	591.28
PZ-31-40	35	40	595.38	589.73	591.24	591.00	590.34	591.96	591.77	589.88	590.35	590.24	591.05
PZ-31-53	48	53	595.24	590.86	591.29	591.02	590.53	591.93	591.54	589.95	590.26	590.18	591.02
PZ-33-12	7	12	594.33	591.81	592.97	591.75	--	593.90	594.03	591.24	591.98	591.85	593.02
PZ-33-33	28	33	594.33	591.79	592.84	591.83	--	593.88	593.93	591.25	591.91	591.84	592.97
PZ-33-67	57	67	594.42	591.75	592.43	592.01	--	593.81	593.72	591.10	591.40	591.73	592.82
PZ-51-38	33	38	594.41	590.38	589.82	589.25	588.69	589.86	589.77	588.52	586.76	588.41	577.89
PZ-52-41	36	41	594.73	589.37	590.55	589.40	588.84	590.19	590.05	588.57	Abandoned		
PZ-53-40	35	40	595.67	591.41	592.02	591.41	591.32	593.04	592.94	590.76	591.35	591.23	592.28
PZ-54-47	42	47	598.38	594.22	595.18	594.10	593.74	595.74	595.97	592.87	Abandoned		
PZ-55-64	59	64	616.26	594.80	596.77	594.67	594.35	595.64	596.71	594.20	592.86	591.31	594.35
PZ-56-42	37.2	42.2	605.43	595.21	595.51	595.08	596.11	595.80	596.61	594.70	593.87	593.39	594.42
PZ-57-38	33	38	594.04	589.17	589.39	589.35	589.09	590.54	590.24	588.75	588.75	589.01	589.94
PZ-58-40	35	40	596.38	590.99	591.55	590.98	590.80	592.45	592.26	590.34	590.82	590.72	591.61
PZ-58-50	45	50	596.44	590.98	591.55	590.97	590.80	592.46	592.26	590.32	590.83	590.73	591.58
Location on Northland Lutheran Property													
PZ-32-18	8	18	591.19	588.33	588.64	588.39	588.34	589.66	589.66	588.27	588.40	588.27	589.13
PZ-32-72	67	72	591.23	588.33	588.38	588.39	588.28	589.59	589.34	588.21	588.25	588.23	589.08

Table 11. Groundwater and Surface Water Elevations

Well ID	Depth to Top of Screen (ft bgs)	Depth to Bottom of Screen (ft bgs)	Top of Casing Elevation (NAVD 88, US FT)	Dec 2022 Dec 5 - Dec 6 Elevation (ft)	Jan 2023 Jan 4 Elevation (ft)	Feb 2023 Jan 30 Elevation (ft)	Mar 2023 Mar 1 - Mar 2 Elevation (ft)	Apr 2023 Apr 3 - Apr 4 Elevation (ft)	May 2023 May 1 - May 2 Elevation (ft)	Aug 2023 Jul 31 - Aug 2 Elevation (ft)	Nov 2023 Nov 7 - Nov 9 Elevation (ft)	Feb 2024 Feb 2 Elevation (ft)	Apr 2024 Apr 8 Elevation (ft)
Surface Water Benchmark Locations													
SG-L09	NA	NA	594.46	--	--	--	--	589.03	588.84	588.38	588.69	588.46	588.73
SG-M01	NA	NA	593.47	--	--	--	--	589.61	589.50	589.10	589.35	589.24	589.35
SG-M09	NA	NA	594.32	--	--	--	--	590.29	590.18	590.02	589.78	589.84	590.07
SG-U03	NA	NA	598.51	--	--	--	--	594.16	593.94	593.41	594.25	593.83	594.05
SG-U10	NA	NA	604.92	--	--	--	--	600.75	600.72	600.11	600.17	600.12	600.36
SG-50	NA	NA	608.47	--	--	--	--	607.12	607.32	606.90	605.68		606.72
SG-23	NA	NA	608.53	--	--	--	--	606.92	607.17	605.86	Dry		Dry
SG-A1	NA	NA	608.26	--	--	--	--	606.83	607.09	606.27	606.11		606.61
SG-53	NA	NA	608.58	--	--	--	--	605.13	605.14	604.86	604.96	604.97	605.14

Acronyms and Abbreviations:

bgs = below ground surface
FTC = Fire Technology Center
GETS = groundwater extraction and treatment system
MW = monitoring well
NA = not applicable
OB = overburden
PZ = Piezometer
-- = Location not gauged

Table 12. Groundwater Sampling Results

ARCADIS

Sampling Event	Sample Date	Location ID	PFOA (ng/L)	PFOS (ng/L)	PFOA+PFOS (ng/L)
GETS Baseline	4/12/2022	MW-EX-2	120	10	130
GETS Baseline	4/6/2022	MW-EX-3	18,000 D	990 D	18,990
GETS Baseline	4/6/2022	MW-EX-4	35,000 D	2,600 D	37,600
GETS Baseline	4/6/2022	MW-EX-5	13,000 D	530 D	13,530
GETS Baseline	4/11/2022	PZ-15D	1,100 D	66	1,166
GETS Baseline	4/8/2022	PZ-15S	5.2	ND (<0.51)	5.2
GETS Baseline	4/11/2022	PZ-16D	22,000 D	3,700 D	25,700
GETS Baseline	4/11/2022	PZ-16S	140	48	188
GETS Baseline	4/11/2022	PZ-18D	6,900 D	1,300 D	8,200
GETS Baseline	4/12/2022	PZ-1D	40	1.4 J	41
GETS Baseline	4/11/2022	PZ-22D	4,100 D	550 D	4,650
GETS Baseline	4/11/2022	PZ-22S	17	ND (<0.51)	17
GETS Baseline	4/7/2022	PZ-23	21,000 D	ND (<0.5)	21,000
GETS Baseline	4/7/2022	PZ-24-17	12	2.1	14
GETS Baseline	4/7/2022	PZ-24-47	1,000 D	74	1,074
GETS Baseline	4/7/2022	PZ-25-17	6.3	3.1 JN	9.4
GETS Baseline	4/7/2022	PZ-29-17	7.2	ND (<0.51)	7.2
GETS Baseline	4/7/2022	PZ-29-43	1,800 D	1.7 J	1,802
GETS Baseline	4/7/2022	PZ-29-68	1,000 D	1.5 J	1,002
GETS Baseline	4/11/2022	PZ-3	33,000 D	4,100 D	37,100
GETS Baseline	4/6/2022	PZ-30-12	43	ND (<0.51)	43
GETS Baseline	4/6/2022	PZ-30-45	130	ND (<0.52)	130
GETS Baseline	4/6/2022	PZ-30-59	1.4 J	ND (<0.49)	1.4
GETS Baseline	4/7/2022	PZ-31-17	18	6.0	24
GETS Baseline	4/7/2022	PZ-31-40	10,000 D	96	10,096
GETS Baseline	4/7/2022	PZ-31-53	81	1.2 J	82
GETS Baseline	4/6/2022	PZ-32-18	5.5	1.6 J	7.1
GETS Baseline	4/6/2022	PZ-32-72	1.9	ND (<0.51)	1.9
GETS Baseline	4/12/2022	PZ-45-31	940 D	74	1,014
GETS Baseline	4/8/2022	PZ-47-40	13,000 D	870 D	13,870
GETS Baseline	4/8/2022	PZ-4D	42,000 D	79 J-	42,079
GETS Baseline	4/6/2022	PZ-51-38	3,700 D	600 D	4,300
GETS Baseline	4/6/2022	PZ-52-41	65,000 D	2,300 D	67,300
GETS Baseline	4/6/2022	PZ-53-40	4.4	ND (<0.51)	4.4
GETS Baseline	4/7/2022	PZ-54-47	2,600 D	460 D	3,060
GETS Baseline	4/7/2022	PZ-55-64	300	75	375
GETS Baseline	4/7/2022	PZ-56-42	26,000 D	2,800 D	28,800
GETS Baseline	4/6/2022	PZ-57-38	13	0.51 J	14

Table 12. Groundwater Sampling Results

Sampling Event	Sample Date	Location ID	PFOA (ng/L)	PFOS (ng/L)	PFOA+PFOS (ng/L)
2022-05 Groundwater	5/19/2022	PZ-26-11	2.1	ND (<0.53)	2.1
2022-05 Groundwater	5/19/2022	PZ-33-12	6.7	4.8	12
2022-05 Groundwater	5/19/2022	PZ-33-33	1,300 D	ND (<0.5)	1,300
2022-05 Groundwater	5/19/2022	PZ-46-19	24	25	49
2022-05 Groundwater	5/19/2022	PZ-46-40	270	91	361
2022-05 Groundwater	5/19/2022	PZ-46-65	77	ND (<0.49)	77
2022-05 Groundwater	5/19/2022	PZ-4S	58,000 D	11,000 D	69,000
2022-06 Groundwater	6/7/2022	PZ-33-67	1.4 J	ND (<0.5)	1.4
2022-07 Groundwater	7/20/2022	PZ-34-17	12	2.2	14
2022-07 Groundwater	7/20/2022	PZ-34-84	ND (<0.78)	ND (<0.5)	0.00
2022-07 Groundwater	7/20/2022	PZ-36-19	4.9	ND (<0.51)	4.9
2022-07 Groundwater	7/21/2022	PZ-36-38	ND (<0.79)	ND (<0.5)	0.00
2022-07 Groundwater	7/20/2022	PZ-36-85	ND (<0.74)	ND (<0.47)	0.00
2022-07 Groundwater	7/19/2022	PZ-37-12	1.0 J	ND (<0.51)	1.0
2022-07 Groundwater	7/19/2022	PZ-37-29	6.0	3.2	9.2
2022-07 Groundwater	7/19/2022	PZ-37-75	ND (<0.8)	ND (<0.51)	0.00
2022-07 Groundwater	7/19/2022	PZ-38-17	ND (<0.79)	ND (<0.5)	0.00
2022-07 Groundwater	7/19/2022	PZ-38-75	ND (<0.76)	ND (<0.48)	0.00
2022-07 Groundwater	7/19/2022	PZ-41-17	2.1	3.0	5.1
2022-07 Groundwater	7/19/2022	PZ-41-84	ND (<0.83)	ND (<0.53)	0.00
2022-07 Groundwater	7/19/2022	PZ-42-17	6.1 J	ND (<2.7)	6.1
2022-07 Groundwater	7/19/2022	PZ-42-76	ND (<0.82)	1.1 J	1.1
2022-07 Groundwater	7/20/2022	PZ-43-19	1.7 J	ND (<0.49)	1.7
2022-07 Groundwater	7/20/2022	PZ-43-80	ND (<0.8)	ND (<0.51)	0.00
2022-07 Groundwater	7/21/2022	PZ-44-73	ND (<0.76)	ND (<0.48)	0.00
2022-11 Groundwater	11/16/2022	MW003D	1,300 DJ	1.7	1,302
2022-11 Groundwater	11/22/2022	MW003M	210	ND (<0.53)	210
2022-11 Groundwater	11/16/2022	MW003S	1,100 DJ	370 DJ	1,470
2022-11 Groundwater	11/17/2022	MW013D-R	780 D	2.1	782
2022-11 Groundwater	11/17/2022	MW013M-R	84	1.9	86
2022-11 Groundwater	11/17/2022	MW013S-R	39	3.6 J	43
2022-11 Groundwater	11/16/2022	MW021M	13	1.2 J	14
2022-11 Groundwater	11/16/2022	MW022M	21	1.7 J	23
2022-11 Groundwater	11/16/2022	MW022S	71	6.7	78
2022-11 Groundwater	11/22/2022	MW040M-R	86	13 J	99
2022-11 Groundwater	11/21/2022	MW040S	330	79	409
2022-11 Groundwater	11/17/2022	MW042D	740 D	1.6 J	742
2022-11 Groundwater	11/22/2022	MW046D	510 D	5.6 J+	516
2022-11 Groundwater	11/22/2022	MW064D	340	ND (<0.49)	340
2022-11 Groundwater	11/7/2022	MW-100-32	2.6	1.2 J	3.8
2022-11 Groundwater	11/7/2022	MW-100-68	ND (<0.79)	ND (<0.5)	0.00
2022-11 Groundwater	11/16/2022	MW100D	140	ND (<0.47)	140

Table 12. Groundwater Sampling Results

Sampling Event	Sample Date	Location ID	PFOA (ng/L)	PFOS (ng/L)	PFOA+PFOS (ng/L)
2022-11 Groundwater	11/16/2022	MW100S	160	4.1	164
2022-11 Groundwater	11/7/2022	MW-101-16	18	3.8 J	22
2022-11 Groundwater	11/7/2022	MW-101-72	1,400 D	43	1,443
2022-11 Groundwater	11/17/2022	MW102D	1,200 D	ND (<0.48)	1,200
2022-11 Groundwater	11/16/2022	MW102M	41	ND (<0.5)	41
2022-11 Groundwater	11/16/2022	MW102S	910 D	2.2	912
2022-11 Groundwater	11/22/2022	MW118D-R	32	ND (<0.49)	32
2022-11 Groundwater	11/15/2022	MW125D-60	26	ND (<0.5)	26
2022-11 Groundwater	11/15/2022	MW125M-35	14	ND (<0.52)	14
2022-11 Groundwater	11/15/2022	MW125S-20	61	19 J	80
2022-11 Groundwater	11/16/2022	MW126D-40	15	2.3 J	17
2022-11 Groundwater	11/16/2022	MW126S-20	32	9.7	42
2022-11 Groundwater	11/17/2022	MW128M-30	12	2.0	14
2022-11 Groundwater	11/21/2022	MW129M-45	1.8 J	ND (<0.5)	1.8
2022-11 Groundwater	11/17/2022	PZ-11	28,000 DJ	19,000 DJ	47,000
2022-11 Groundwater	11/10/2022	PZ-14D	10,000 D	800 D	10,800
2022-11 Groundwater	11/10/2022	PZ-14S	35,000 D	5,600 D	40,600
2022-11 Groundwater	11/11/2022	PZ-16D	25,000 D	3,000 D	28,000
2022-11 Groundwater	11/11/2022	PZ-16S	140	140 J	280
2022-11 Groundwater	11/11/2022	PZ-19	8,600 D	870	9,470
2022-11 Groundwater	11/10/2022	PZ-1D	30 J	ND (<0.5)	30
2022-11 Groundwater	11/16/2022	PZ-1S	59,000 DJ	16	59,016
2022-11 Groundwater	11/11/2022	PZ-22S	22	ND (<0.51)	22
2022-11 Groundwater	11/17/2022	PZ-23	26,000 DJ	ND (<0.48)	26,000
2022-11 Groundwater	11/9/2022	PZ-24-17	4.7	3.7 J	8.4
2022-11 Groundwater	11/9/2022	PZ-24-47	1,900 D	220	2,120
2022-11 Groundwater	11/8/2022	PZ-25-17	14	13 J	27
2022-11 Groundwater	11/8/2022	PZ-26-11	ND (<4.3)	ND (<2.7)	0.00
2022-11 Groundwater	11/15/2022	PZ-26-36	9.2	ND (<0.53)	9.2
2022-11 Groundwater	11/8/2022	PZ-28-14	65	10	75
2022-11 Groundwater	11/8/2022	PZ-28-54	270	ND (<0.52)	270
2022-11 Groundwater	11/8/2022	PZ-28-75	240	ND (<0.5)	240
2022-11 Groundwater	11/8/2022	PZ-29-17	8.7 J	ND (<2.7)	8.7
2022-11 Groundwater	11/8/2022	PZ-29-43	24	3.1	27
2022-11 Groundwater	11/8/2022	PZ-29-68	780 D	5.1 J	785
2022-11 Groundwater	11/15/2022	PZ-3	27,000 D	2,100 D	29,100
2022-11 Groundwater	11/8/2022	PZ-30-12	40	ND (<0.52)	40
2022-11 Groundwater	11/8/2022	PZ-30-45	150	ND (<2.7)	150
2022-11 Groundwater	11/10/2022	PZ-30-59	230	ND (<0.5)	230
2022-11 Groundwater	11/9/2022	PZ-31-17	12	5.4	17
2022-11 Groundwater	11/9/2022	PZ-31-40	100,000 D	1,300 D	101,300
2022-11 Groundwater	11/15/2022	PZ-31-53	24	ND (<0.51)	24
2022-11 Groundwater	11/8/2022	PZ-32-18	5.6	2.7 J	8.3
2022-11 Groundwater	11/8/2022	PZ-32-72	2.6	ND (<0.52)	2.6
2022-11 Groundwater	11/15/2022	PZ-33-105	ND (<0.8)	ND (<0.51)	0.00
2022-11 Groundwater	11/8/2022	PZ-33-12	5.8	3.9	9.7
2022-11 Groundwater	11/8/2022	PZ-33-33	840 D	1.2 J	841
2022-11 Groundwater	11/8/2022	PZ-33-67	ND (<0.78)	ND (<0.5)	0.00
2022-11 Groundwater	11/7/2022	PZ-34-17	23	4.6	28
2022-11 Groundwater	11/7/2022	PZ-34-84	ND (<0.71)	ND (<0.45)	0.00
2022-11 Groundwater	11/8/2022	PZ-35-17	20	ND (<0.53)	20

Table 12. Groundwater Sampling Results

Sampling Event	Sample Date	Location ID	PFOA (ng/L)	PFOS (ng/L)	PFOA+PFOS (ng/L)
2022-11 Groundwater	11/8/2022	PZ-35-37	1.2 J	ND (<0.5)	1.2
2022-11 Groundwater	11/8/2022	PZ-35-48	ND (<0.77)	ND (<0.49)	0.00
2022-11 Groundwater	11/7/2022	PZ-36-19	5.8	ND (<0.46)	5.8
2022-11 Groundwater	11/9/2022	PZ-36-38	ND (<0.79)	ND (<0.5)	0.00
2022-11 Groundwater	11/7/2022	PZ-36-85	ND (<0.77)	ND (<0.49)	0.00
2022-11 Groundwater	11/3/2022	PZ-37-12	2.6	ND (<0.52)	2.6
2022-11 Groundwater	11/3/2022	PZ-37-29	3.7	2.4	6.1
2022-11 Groundwater	11/3/2022	PZ-37-75	ND (<0.78)	ND (<0.49)	0.00
2022-11 Groundwater	11/3/2022	PZ-38-17	ND (<0.79)	ND (<0.5)	0.00
2022-11 Groundwater	11/3/2022	PZ-38-75	ND (<0.91)	ND (<0.58)	0.00
2022-11 Groundwater	11/3/2022	PZ-41-17	22	4.4 J	26
2022-11 Groundwater	11/3/2022	PZ-41-84	ND (<0.79)	ND (<0.5)	0.00
2022-11 Groundwater	11/4/2022	PZ-42-17	3.8	1.4 J	5.2
2022-11 Groundwater	11/4/2022	PZ-42-76	ND (<0.79)	1.8 J	1.8
2022-11 Groundwater	11/2/2022	PZ-43-19	1.6 J	ND (<0.5)	1.6
2022-11 Groundwater	11/2/2022	PZ-43-80	ND (<0.8)	ND (<0.51)	0.00
2022-11 Groundwater	11/4/2022	PZ-44-73	ND (<0.81)	ND (<0.52)	0.00
2022-11 Groundwater	11/7/2022	PZ-46-19	28	27	55
2022-11 Groundwater	11/7/2022	PZ-46-40	130	71	201
2022-11 Groundwater	11/7/2022	PZ-46-65	130	ND (<0.49)	130
2022-11 Groundwater	11/11/2022	PZ-47-40	15,000 DJ-	670 D	15,670
2022-11 Groundwater	11/9/2022	PZ-54-47	26,000 D	3,000 D	29,000
2022-11 Groundwater	11/9/2022	PZ-56-42	53,000 D	10,000 D	63,000
2022-11 Groundwater	11/9/2022	PZ-57-38	16	0.67 J	17
2022-11 Groundwater	11/9/2022	PZ-58-40	120	4.2	124
2022-11 Groundwater	11/9/2022	PZ-58-50	30,000 D	520 DJ-	30,520
2022-11 Groundwater	11/9/2022	PZ-59-21	16	1.2 J	17
2022-11 Groundwater	11/9/2022	PZ-60-20	6.3	11	17
2022-11 Groundwater	11/9/2022	PZ-61-11	18	ND (<2.7)	18
2022-11 Groundwater	11/14/2022	PZ-62-62	13	ND (<0.52)	13
2022-11 Groundwater	11/8/2022	PZ-63-60	1,300	6.0 J	1,306
2022-11 Groundwater	11/8/2022	PZ-64-67	3,000 D	ND (<0.48)	3,000
2022-11 Groundwater	11/9/2022	PZ-65-16	4,000 D	4,300 D	8,300
2022-11 Groundwater	11/9/2022	PZ-65-33	390 D	330 D	720
2022-11 Groundwater	11/9/2022	PZ-66-20	1.6 J	ND (<0.51)	1.6
2022-11 Groundwater	11/9/2022	PZ-66-57	ND (<0.77)	ND (<0.49)	0.00
2022-11 Groundwater	11/10/2022	PZ-67-16	640 D	74	714
2022-11 Groundwater	11/9/2022	PZ-67-40	1,100 D	280	1,380
2022-11 Groundwater	11/9/2022	PZ-68-16	140	16	156
2022-11 Groundwater	11/9/2022	PZ-68-26	32	19	51
2022-11 Groundwater	11/9/2022	PZ-68-66	ND (<0.85)	ND (<0.54)	0.00
2022-11 Groundwater	11/10/2022	PZ-69-24	39	ND (<0.5)	39
2022-11 Groundwater	11/10/2022	PZ-69-43	4,700 D	790 D	5,490
2022-11 Groundwater	11/10/2022	PZ-70-17	440 D	ND (<0.54)	440
2022-11 Groundwater	11/10/2022	PZ-70-33	710 D	1,200 D	1,910
2022-11 Groundwater	11/10/2022	PZ-70-55	0.86 J	ND (<0.5)	0.86
2022-11 Groundwater	11/16/2022	PZ-70-83	1.9	ND (<0.5)	1.9
2022-11 Groundwater	11/9/2022	PZ-71-111	1,300 D	ND (<0.5)	1,300
2022-11 Groundwater	11/7/2022	PZ-73-16	1.8 J	1.1 J	2.9
2022-11 Groundwater	11/7/2022	PZ-73-75	ND (<0.82)	ND (<0.52)	0.00
2022-11 Groundwater	11/8/2022	PZ-75-18	9.1	1.4 J	11

Table 12. Groundwater Sampling Results

Sampling Event	Sample Date	Location ID	PFOA (ng/L)	PFOS (ng/L)	PFOA+PFOS (ng/L)
2022-11 Groundwater	11/8/2022	PZ-76-34	38	0.94 J	39
2022-11 Groundwater	11/2/2022	PZ-77-16	0.94 J	ND (<0.5)	0.94
2022-11 Groundwater	11/15/2022	PZ-78-74	2.2	ND (<0.51)	2.2
2022-11 Groundwater	11/10/2022	PZ-9	1,100 D	20	1,120
GETS Startup	12/8/2022	MW-EX-4	50,000 D	3,100 D	53,100
GETS Startup	12/8/2022	PZ-51-38	18,000 D	2,100 D	20,100
GETS Startup	12/8/2022	PZ-53-40	65	2.9 J	68
GETS Startup	1/4/2023	PZ-53-40	40	3.7	44
GETS Startup	2/8/2023	PZ-16D	15,000 D	3,100 D	18,100
GETS Startup	2/9/2023	PZ-23	20,000 D	2.2	20,002
GETS Startup	2/8/2023	PZ-24-17	12	0.85 J	13
GETS Startup	2/7/2023	PZ-26-11	2.2	ND (<0.49)	2.2
GETS Startup	2/7/2023	PZ-29-43	2,600 D	ND (<0.49)	2,600
GETS Startup	2/9/2023	PZ-3	4,800 D	330	5,130
GETS Startup	2/7/2023	PZ-30-45	140	ND (<0.5)	140
GETS Startup	2/7/2023	PZ-31-40	58,000 D	1,100 D	59,100
GETS Startup	2/7/2023	PZ-32-72	ND (<0.79)	ND (<0.5)	0.00
GETS Startup	2/8/2023	PZ-47-40	9,500 D	620 D	10,120
GETS Startup	2/8/2023	PZ-54-47	43,000 D	15,000 DJ	58,000
GETS Startup	2/8/2023	PZ-56-42	21,000 D	1,900 D	22,900
GETS Startup	2/8/2023	PZ-57-38	11	0.65 J	12
GETS Startup	2/7/2023	PZ-58-50	29,000 D	430 D	29,430
GETS Startup	5/3/2023	PZ-15D	7,200 D	680 D	7,880
GETS Startup	5/3/2023	PZ-15S	8.1	ND (<0.49)	8.1
GETS Startup	5/2/2023	PZ-16D	21,000 D	3,100 D	24,100
GETS Startup	5/3/2023	PZ-16S	170	150 J	320
GETS Startup	5/3/2023	PZ-1D	19	ND (<0.5)	19
GETS Startup	5/3/2023	PZ-22S	21	ND (<0.51)	21
GETS Startup	5/3/2023	PZ-23	19,000 D	ND (<0.51)	19,000
GETS Startup	5/3/2023	PZ-24-17	4.9	ND (<0.48)	4.9
GETS Startup	5/2/2023	PZ-24-47	600 D	88	688
GETS Startup	5/3/2023	PZ-25-17	14	ND (<0.49)	14
GETS Startup	5/3/2023	PZ-29-17	5.4	ND (<0.47)	5.4
GETS Startup	5/3/2023	PZ-29-43	2,900 D	ND (<0.46)	2,900
GETS Startup	5/3/2023	PZ-29-68	1,300 D	ND (<0.45)	1,300
GETS Startup	5/2/2023	PZ-3	23,000 D	1,200 D	24,200
GETS Startup	5/3/2023	PZ-30-12	41	ND (<0.47)	41
GETS Startup	5/3/2023	PZ-30-45	140	ND (<0.46)	140
GETS Startup	5/3/2023	PZ-30-59	12	ND (<0.46)	12
GETS Startup	5/3/2023	PZ-31-17	11	6.3	17
GETS Startup	5/3/2023	PZ-31-40	36,000 D	620 D	36,620
GETS Startup	5/3/2023	PZ-31-53	17	ND (<0.47)	17
GETS Startup	5/3/2023	PZ-32-18	6.9	ND (<0.52)	6.9
GETS Startup	5/3/2023	PZ-32-72	ND (<0.81)	ND (<0.51)	0.00
GETS Startup	5/2/2023	PZ-47-40	8,800 D	490 D	9,290
GETS Startup	5/3/2023	PZ-4D	38,000 DJ-	81 J-	38,081
GETS Startup	5/2/2023	PZ-54-47	38,000 D	9,200 D	47,200
GETS Startup	5/2/2023	PZ-56-42	21,000 D	2,400 D	23,400
GETS Startup	5/3/2023	PZ-57-38	12	ND (<0.51)	12
GETS Startup	5/3/2023	PZ-58-50	21,000 D	520 D	21,520
GETS STM	8/1/2023	PZ-23	17,000 D	ND (<0.48)	17,000

Table 12. Groundwater Sampling Results

Sampling Event	Sample Date	Location ID	PFOA (ng/L)	PFOS (ng/L)	PFOA+PFOS (ng/L)
GETS STM	8/1/2023	PZ-24-47	1,100 D	130	1,230
GETS STM	8/1/2023	PZ-26-11	5.4	ND (<0.5)	5.4
GETS STM	8/1/2023	PZ-29-43	4,000 D	ND (<0.5)	4,000
GETS STM	8/1/2023	PZ-3	17,000 D	1,300 D	18,300
GETS STM	8/1/2023	PZ-30-45	150	ND (<0.51)	150
GETS STM	8/1/2023	PZ-31-40	37,000 D	850 D	37,850
GETS STM	8/1/2023	PZ-32-72	ND (<0.74)	ND (<0.47)	0.00
GETS STM	8/1/2023	PZ-47-40	8,700 D	540 D	9,240
GETS STM	8/1/2023	PZ-54-47	32,000 D	8,600 D	40,600
GETS STM	8/1/2023	PZ-56-42	20,000 D	2,000 DJ	22,000
GETS STM	8/1/2023	PZ-57-38	31	1.8	33
GETS STM	8/1/2023	PZ-58-50	21,000 D	260	21,260
GETS LTM Startup	8/1/2023	PZ-16D	14,000 D	3,900 DJ-	17,900
GETS LTM Startup	8/1/2023	PZ-23	17,000 D	ND (<0.48)	17,000
GETS LTM Startup	8/1/2023	PZ-24-47	1,100 D	130	1,230
GETS LTM Startup	8/1/2023	PZ-26-11	5.4	ND (<0.5)	5.4
GETS LTM Startup	8/1/2023	PZ-29-43	4,000 D	ND (<0.5)	4,000
GETS LTM Startup	8/1/2023	PZ-3	17,000 D	1,300 D	18,300
GETS LTM Startup	8/1/2023	PZ-30-45	150	ND (<0.51)	150
GETS LTM Startup	8/1/2023	PZ-31-40	37,000 D	850 D	37,850
GETS LTM Startup	8/1/2023	PZ-32-72	ND (<0.74)	ND (<0.47)	0.00
GETS LTM Startup	8/1/2023	PZ-47-40	8,700 D	540 D	9,240
GETS LTM Startup	8/1/2023	PZ-54-47	32,000 D	8,600 D	40,600
GETS LTM Startup	8/1/2023	PZ-56-42	20,000 D	2,000 DJ	22,000
GETS LTM Startup	8/1/2023	PZ-57-38	31	1.8	33
GETS LTM Startup	8/1/2023	PZ-58-50	21,000 D	260	21,260
GETS LTM Startup	10/4/2023	MW-EX-5	11,000 D	200	11,200
GETS LTM Startup	11/8/2023	PZ-15D	80	22	102
GETS LTM Startup	11/8/2023	PZ-15S	19	ND (<0.48)	19
GETS LTM Startup	11/8/2023	PZ-16D	19,000 D	2,600 D	21,600
GETS LTM Startup	11/8/2023	PZ-16S	91	22	113
GETS LTM Startup	11/8/2023	PZ-1D	43	ND (<0.52)	43
GETS LTM Startup	11/8/2023	PZ-22S	20	ND (<0.54)	20
GETS LTM Startup	11/7/2023	PZ-23	21,000 D	ND (<0.5)	21,000
GETS LTM Startup	11/8/2023	PZ-24-17	2.4	0.90 J	3.3
GETS LTM Startup	11/8/2023	PZ-24-47	3,000 D	350 D	3,350
GETS LTM Startup	11/8/2023	PZ-25-17	15	5.2	20
GETS LTM Startup	11/7/2023	PZ-29-17	8.7 J+	0.58 J	9.3
GETS LTM Startup	11/7/2023	PZ-29-43	3,900 D	ND (<0.5)	3,900
GETS LTM Startup	11/7/2023	PZ-29-68	1,200 D	3.9	1,204
GETS LTM Startup	11/8/2023	PZ-3	4,900 D	370 D	5,270
GETS LTM Startup	11/7/2023	PZ-30-12	28	0.52 J	29
GETS LTM Startup	11/7/2023	PZ-30-45	140	ND (<0.49)	140
GETS LTM Startup	11/7/2023	PZ-30-59	20	ND (<0.52)	20
GETS LTM Startup	11/8/2023	PZ-31-17	18	12	30
GETS LTM Startup	11/8/2023	PZ-31-40	11,000 D	320	11,320
GETS LTM Startup	11/8/2023	PZ-31-53	15	0.52 J	16
GETS LTM Startup	11/7/2023	PZ-32-18	6.0 J+	2.1	8.1
GETS LTM Startup	11/7/2023	PZ-32-72	3.9 J+	0.69 J	4.6
GETS LTM Startup	11/8/2023	PZ-47-40	8,100 D	370 D	8,470
GETS LTM Startup	11/8/2023	PZ-4D	32,000 D	64	32,064

Table 12. Groundwater Sampling Results

Sampling Event	Sample Date	Location ID	PFOA (ng/L)	PFOS (ng/L)	PFOA+PFOS (ng/L)
GETS LTM Startup	11/7/2023	PZ-56-42	20,000 D	2,100 D	22,100
GETS LTM Startup	11/7/2023	PZ-57-38	11	ND (<0.5)	11
GETS LTM Startup	11/7/2023	PZ-58-50	28,000 D	190	28,190
GETS LTM Startup	2/7/2024	PZ-16D	10,000	2,400	12,400
GETS LTM Startup	2/6/2024	PZ-23	13,000	ND (<0.51)	13,000
GETS LTM Startup	2/7/2024	PZ-24-47	1,000	160	1,160
GETS LTM Startup	2/7/2024	PZ-26-11	2.3	ND (<0.51)	2.3
GETS LTM Startup	2/6/2024	PZ-29-43	730	2.7	733
GETS LTM Startup	2/6/2024	PZ-3	16,000	1,800	17,800
GETS LTM Startup	2/6/2024	PZ-30-45	120 F1	ND (<0.51)	120
GETS LTM Startup	2/7/2024	PZ-31-40	8,200	320	8,520
GETS LTM Startup	2/6/2024	PZ-32-72	ND (<0.81)	ND (<0.52)	0.00
GETS LTM Startup	2/7/2024	PZ-47-40	1,700	140	1,840
GETS LTM Startup	2/6/2024	PZ-56-42	14,000	2,700	16,700
GETS LTM Startup	2/6/2024	PZ-57-38	7.9	ND (<0.5)	7.9
GETS LTM Startup	2/6/2024	PZ-58-50	25,000	550	25,550

Lab Qualifiers

D The analyte was analyzed at dilution.

DJ The analyte was analyzed at dilution and the result is an estimated quantity

DJ- The analyte was analyzed at dilution and the result is an estimated quantity; the result may be biased low.

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

J+ The result is an estimated quantity; the result may be biased high.

J- The result is an estimated quantity; the result may be biased low.

JN The analyte has been tenatively identified; the result is an estimated quantity

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

UB The analyte is considered nondetect at the listed value due to associated blank contamination.

UJ The analyte was analyzed for but was not detected. The reported reporting limit (RL) is approximate and

Notes:

1. PFOA + PFOS is the sum of PFOA and PFOS detections in a sample.

Acronyms and Abbreviations:

ng/L = nanogram per liter

PFOA = perfluorooctanoic acid

PFOS = perfluorooctanesulfonic acid

ND = not detected above method detection limit

< = substance may be present less than method detection limit

Table 13. Ditch B Sampling Results

Sample Date	Ditch B Area	Location ID	PFOA (ng/L)	PFOS (ng/L)	PFOA+PFOS (ng/L)
Ditch B Sampling Sep 2022					
Groundwater					
9/8/2022	Upper	GW-U10	4.8	ND (<0.45)	4.8
9/8/2022	Upper	GW-U03	86	ND (<0.53)	86
9/8/2022	Middle	GW-M09	140	24	164
9/8/2022	Middle	GW-M07	1,300 D	350 D	1,650
9/8/2022	Middle	GW-M04	940 D	34	974
9/8/2022	Middle	GW-M01	16	5.2 J	21
9/8/2022	Lower	GW-L09	21	5.3 J	26
Surface Water					
9/8/2022	Upper	SW-U10	25	9.0	34
9/8/2022	Upper	SW-U03	310	100	410
9/8/2022	Middle	SW-M09	550 D	110	660
9/8/2022	Middle	SW-M07	420 D	110	530
9/8/2022	Middle	SW-M04	1,000 D	130	1,130
9/8/2022	Middle	SW-M01	2,000 D	160	2,160
9/8/2022	Lower	SW-L09	1,500 D	130	1,630
9/8/2022	Lower	SW-39	26	1.8 J	28
Ditch B Sampling Oct 2022					
Surface Water					
10/7/2022	Lower	SW-39	ND (<0.82)	ND (<0.52)	0.00
Ditch B Sampling Nov 2022					
Groundwater					
11/16/2022	Upper	GW-U10	4.5	ND (<0.52)	4.5
11/16/2022	Upper	GW-U03	83	ND (<2.7)	83
11/16/2022	Middle	GW-M09	150	24	174
11/16/2022	Middle	GW-M07	810 D	160	970
11/16/2022	Middle	GW-M04	3,500 D	200	3,700
11/16/2022	Middle	GW-M01	14	5.3 J	19
11/16/2022	Lower	GW-L09	22	8.8 J	31
Surface Water					
11/16/2022	Upper	SW-U10	12	5.6	18
11/16/2022	Upper	SW-U03	130	60	190
11/16/2022	Middle	SW-M09	430 D	59	489
11/16/2022	Middle	SW-M07	470 D	61	531
11/16/2022	Middle	SW-M04	460 D	53	513
11/16/2022	Middle	SW-M01	1,600 D	110	1,710
11/16/2022	Lower	SW-L09	1,300 D	87	1,387
11/1/2022	Lower	SW-39	11	ND (<0.52)	11

Table 13. Ditch B Sampling Results

Sample Date	Ditch B Area	Location ID	PFOA (ng/L)	PFOS (ng/L)	PFOA+PFOS (ng/L)
Ditch B Sampling Dec 2022					
Groundwater					
12/6/2022	Upper	GW-U03	ND (<0.8)	ND (<0.51)	0.00
12/6/2022	Middle	GW-M09	120 J-	23 J-	143
12/6/2022	Middle	GW-M07	ND (<0.78)	ND (<0.5)	0.00
12/6/2022	Middle	GW-M04	78 J	5.6 J	84
12/6/2022	Middle	GW-M01	16 J+	3.4 J+	19
Surface Water					
12/5/2022	Upper	SW-U10	22	7.4	29
12/5/2022	Upper	SW-U03	270	83	353
12/5/2022	Middle	SW-M09	670 D	94	764
12/5/2022	Middle	SW-M07	420 D	58	478
12/5/2022	Middle	SW-M04	510 D	63	573
12/5/2022	Middle	SW-M01	1,600 D	110	1,710
12/5/2022	Lower	SW-L09	1,700 D	110	1,810
12/2/2022	Lower	SW-39	22	ND (<0.51)	22
Ditch B Sampling Jan 2023					
Surface Water					
1/10/2023	Lower	SW-39	310	19	329
Ditch B Sampling Feb 2023					
Surface Water					
2/17/2023	Lower	SW-39	260	18	278
Ditch B Sampling Mar 2023					
Surface Water					
3/3/2023	Lower	SW-39	45	4.7	50
Ditch B Sampling Apr 2023					
Surface Water					
4/25/2023	Upper	SW-U10	15	ND (<0.48)	15
4/25/2023	Middle	SW-M09	280	50	330
4/10/2023	Lower	SW-39	690 D	38	728

Table 13. Ditch B Sampling Results

Sample Date	Ditch B Area	Location ID	PFOA (ng/L)	PFOS (ng/L)	PFOA+PFOS (ng/L)
Ditch B Sampling May 2023					
Groundwater					
5/15/2023	Upper	GW-U03	58	ND (<2.7)	58
5/15/2023	Middle	GW-M09	150	18	168
5/15/2023	Middle	GW-M07	24,000 D	1,500	25,500
5/15/2023	Middle	GW-M04	230,000 DJ	4,100 D	234,100
5/15/2023	Middle	GW-M01	2,000 D	51	2,051
Surface Water					
5/15/2023	Upper	SW-U10	16	6.4	22
5/15/2023	Upper	SW-U03	160	70	230
5/15/2023	Middle	SW-M09	260	61	321
5/15/2023	Middle	SW-M07	260	58	318
5/15/2023	Middle	SW-M04	360	61	421
5/15/2023	Middle	SW-M01	1,600 D	100	1,700
5/15/2023	Lower	SW-L09	1,300 D	87	1,387
5/15/2023	Lower	SW-39	620 D	40	660
Ditch B Sampling Jun 2023					
Groundwater					
6/22/2023	Middle	GW-M04	40,000 D	1,300	41,300
6/22/2023	Middle	GW-M04	19,000 D	910 D	19,910
Surface Water					
6/8/2023	Lower	SW-39	ND (<0.76)	ND (<0.48)	0.00
Ditch B Sampling Jul 2023					
Surface Water					
7/3/2023	Lower	SW-39	5.5	ND (<0.45)	5.5

Table 13. Ditch B Sampling Results

Sample Date	Ditch B Area	Location ID	PFOA (ng/L)	PFOS (ng/L)	PFOA+PFOS (ng/L)
Ditch B Sampling Aug 2023					
Groundwater					
8/2/2023	Upper	GW-U03	55	4.9 J	60
8/2/2023	Middle	GW-M09	160	23	183
8/2/2023	Middle	GW-M07	3,900 D	610 D	4,510
8/2/2023	Middle	GW-M01	480 D	63	543
Surface Water					
8/2/2023	Upper	SW-U10	26	8.8	35
8/2/2023	Upper	SW-U03	270	170	440
8/2/2023	Middle	SW-M09	200	52	252
8/2/2023	Middle	SW-M07	330	86	416
8/2/2023	Middle	SW-M04	220	65	285
8/2/2023	Middle	SW-M01	210	65 J-	275
8/2/2023	Lower	SW-L09	320	53	373
8/14/2023	Lower	SW-39	78	15	93
8/14/2023	Lower	SW-L03	57	16	73
Ditch B Sampling Sep 2023					
Surface Water					
9/25/2023	Lower	SW-39	ND (<0.76)	ND (<0.48)	0.00
9/25/2023	Lower	SW-L03	ND (<0.82)	ND (<0.52)	0.00
Ditch B Sampling Oct 2023					
Surface Water					
10/2/2023	Lower	SW-39	ND (<0.91)	ND (<0.58)	0.00
10/2/2023	Lower	SW-L03	ND (<0.8)	ND (<0.51)	0.00

Table 13. Ditch B Sampling Results

Sample Date	Ditch B Area	Location ID	PFOA (ng/L)	PFOS (ng/L)	PFOA+PFOS (ng/L)
Ditch B Sampling Nov 2023					
Groundwater					
11/7/2023	Upper	GW-U03	89 J+	ND (<0.5)	89
11/7/2023	Middle	GW-M09	490 D	22	512
11/7/2023	Middle	GW-M07	1,700 D	920 D	2,620
11/7/2023	Middle	GW-M04	120	54	174
11/7/2023	Middle	GW-M01	120	24	144
Surface Water					
11/7/2023	Upper	SW-U10	17	4.7	22
11/7/2023	Upper	SW-U03	130	55	185
11/7/2023	Middle	SW-M09	150	34	184
11/7/2023	Middle	SW-M07	160	34	194
11/7/2023	Middle	SW-M04	160	34	194
11/7/2023	Middle	SW-M01	160	34	194
11/7/2023	Lower	SW-L09	200	34	234
11/14/2023	Lower	SW-39	ND (<0.79)	ND (<0.5)	0.00
11/14/2023	Lower	SW-L03	0.85 J	ND (<0.5)	0.85
Ditch B Sampling Dec 2023					
Surface Water					
12/1/2023	Lower	SW-39	ND (<0.71)	ND (<0.45)	0.00
12/1/2023	Lower	SW-L03	ND (<0.81)	ND (<0.51)	0.00
Ditch B Sampling Jan 2024					
Surface Water					
1/5/2024	Lower	SW-39	ND (<0.85)	ND (<0.54)	0.00
1/5/2024	Lower	SW-L03	ND (<0.82)	ND (<0.52)	0.00
Ditch B Sampling Feb 2024					
Surface Water					
2/7/2024	Lower	SW-39	17	ND (<0.51)	17
2/7/2024	Lower	SW-L03	13	ND (<0.54)	13
Ditch B Sampling Mar 2024					
Surface Water					
3/1/2024	Lower	SW-39	1.5 J	ND (<0.52)	1.5
3/1/2024	Lower	SW-L03	1.2 J	ND (<0.52)	1.2

Table 13. Ditch B Sampling Results

Sample Date	Ditch B Area	Location ID	PFOA (ng/L)	PFOS (ng/L)	PFOA+PFOS (ng/L)
Ditch B Sampling Apr 2024					
Groundwater					
4/24/2024	Upper	GW-U03	84	38	122
4/24/2024	Middle	GW-M09	1,400	230	1,630
4/24/2024	Middle	GW-M07	560	92	652
4/24/2024	Middle	GW-M04	140	41	181
4/24/2024	Middle	GW-M01	120	31	151
Surface Water - Ditich B					
4/22/2024	Upper	SW-U10	12	4.7	17
4/22/2024	Upper	SW-U03	68	51	119
4/22/2024	Middle	SW-M09	150	42	192
4/22/2024	Middle	SW-M07	150	39	189
4/22/2024	Middle	SW-M04	180	51	231
4/22/2024	Middle	SW-M01	170	44	214
4/22/2024	Lower	SW-L09	300	43	343
4/15/2024	Lower	SW-39	110	13	123
4/15/2024	Lower	SW-L03	110	14	124
Surface Water - Northern Tributary of Ditch B					
4/22/2024	Tributary	SW-P1A	3,300 E	240	3,540
4/22/2024	Pierce Ave	SW-P2	120	56	176
4/22/2024	Pierce Drain	SW-P3	40	10	50
5/1/2024	Tributary	SW-P1A	820 E	52 F1	872
5/1/2024	Pierce Ave	SW-P2	11	3	14
5/1/2024	Pierce Drain	SW-P3	2.1	1.1 J	3.2
5/8/2024	Tributary	SW-P1A	490	38	528
5/8/2024	Tributary	SW-P1B	460	36	496
5/8/2024	Tributary	SW-P4A	300	15	315
5/8/2024	Tributary	SW-P4B	360	17	377
5/8/2024	Tributary	SW-P5	4.4	2.8	7.2
5/8/2024	Tributary	SW-P6	7.5	2.6	10.1
5/8/2024	Tributary	SW-P7	8.4	2.8	11.2

Laboratory Qualifiers:

D The analyte was analyzed at dilution.

DJ The analyte was analyzed at dilution and the result is an estimated quantity

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

J+ The result is an estimated quantity; the result may be biased high.

J- The result is an estimated quantity; the result may be biased low.

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

UBJ The analyte is considered nondetect at the listed value due to the associated blank contaminatio. The

Table 13. Ditch B Sampling Results

Sample Date	Ditch B Area	Location ID	PFOA (ng/L)	PFOS (ng/L)	PFOA+PFOS (ng/L)

Notes:
1. PFOA + PFOS is the sum of PFOA and PFOS detections in a sample.
2. Ditch B sample locations are in order from furthest to closest to Green Bay

Acronyms and Abbreviations:
ng/L = nanograms per liter
PFOA = Perfluorooctanoic acid
PFOS = Perfluorooctanesulfonic acid
ND = Not Detected above method detection limit
< = Substance may be present less than method detection limit

Table 14. Summary of weekly PFAS removal by GETS

ARCADIS

Starting Day	Week	PFOA (ng/L)	PFOS (ng/L)	PFOA + PFOS (ng/L)	Gallons Treated	Grams of PFOA + PFOS Removed	Cumulative Mass Removed (kg)
14-Nov-2022	1	6,300	520	6,820	386,083	10.0	0.01
21-Nov-2022	2	11,000	620	11,620	535,774	23.6	0.03
28-Nov-2022	3	7,200	550	7,750	439,862	12.9	0.05
5-Dec-2022	4	11,000	940	11,940	616,763	27.9	0.07
12-Dec-2022	5	10,000	730	10,730	255,597	10.4	0.08
19-Dec-2022	6	11,000	890	11,890	371,189	16.7	0.10
26-Dec-2022	7	11,000	780	11,780	50,776	2.3	0.10
2-Jan-2023	8	9,000	750	9,750	519,026	19.2	0.12
9-Jan-2023	9	9,000	870	9,870	1,637,933	61.3	0.18
16-Jan-2023	10	6,400	830	7,230	1,918,925	52.6	0.24
23-Jan-2023	11	11,000	910	11,910	1,934,988	87.4	0.32
30-Jan-2023	12	11,000	870	11,870	1,873,503	84.4	0.41
6-Feb-2023	13	12,000	700	12,700	1,925,064	92.7	0.50
13-Feb-2023	14	11,000	880	11,880	1,899,939	85.6	0.59
20-Feb-2023	15	9,000	790	9,790	1,800,272	66.9	0.65
27-Feb-2023	16	11,000	910	11,910	2,142,228	96.8	0.75
6-Mar-2023	17	11,000	870	11,870	2,150,306	96.8	0.85
13-Mar-2023	18	12,000	700	12,700	2,154,216	103.8	0.95
20-Mar-2023	19	11,000	880	11,880	2,159,298	97.3	1.05
27-Mar-2023	20	9,300	670	9,970	2,132,510	80.6	1.13
3-Apr-2023	21	13,000	1,000	14,000	2,122,732	112.7	1.24
10-Apr-2023	22	13,000	730	13,730	2,143,038	111.6	1.35
17-Apr-2023	23	11,000	850	11,850	1,769,000	79.5	1.43
24-Apr-2023	24	12,000	760	12,760	2,121,292	102.7	1.54
1-May-2023	25	9,500	750	10,250	2,126,368	82.7	1.62
8-May-2023	26	9,900	810	10,710	2,115,576	85.9	1.70
15-May-2023	27	9,500	620	10,120	2,024,308	77.7	1.78
22-May-2023	28	11,000	660	11,660	2,092,524	92.5	1.87
29-May-2023	29	9,500	680	10,180	2,106,492	81.3	1.96
5-Jun-2023	30	11,000	690	11,690	1,928,332	85.5	2.04

Table 14. Summary of weekly PFAS removal by GETS

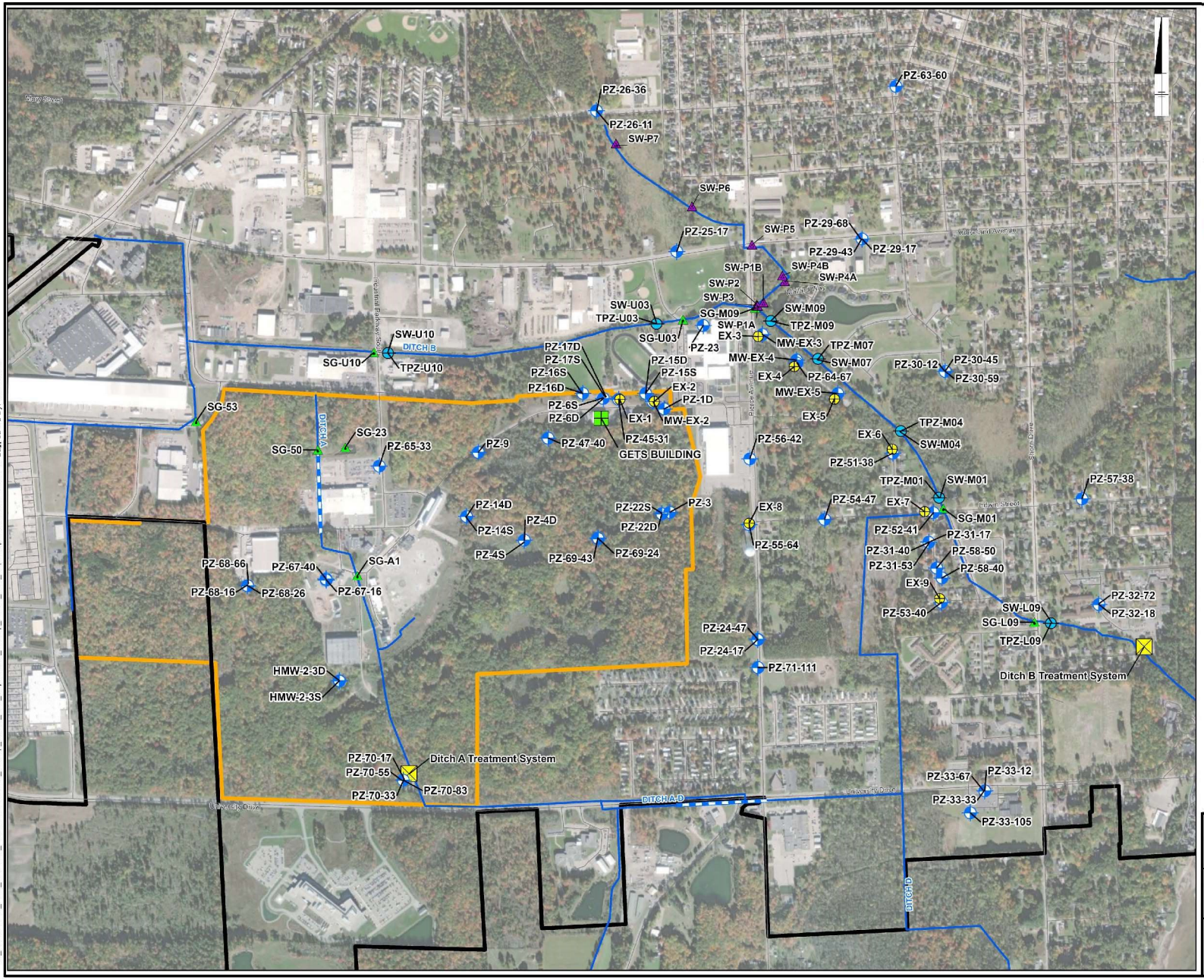
ARCADIS

Starting Day	Week	PFOA (ng/L)	PFOS (ng/L)	PFOA + PFOS (ng/L)	Gallons Treated	Grams of PFOA + PFOS Removed	Cumulative Mass Removed (kg)
12-Jun-2023	31	10,000	730	10,730	2,004,956	81.6	2.12
19-Jun-2023	32	11,000	740	11,740	1,926,712	85.8	2.21
26-Jun-2023	33	12,000	750	12,750	1,985,468	96.0	2.31
3-Jul-2023	34	11,000	700	11,700	1,935,612	85.9	2.39
10-Jul-2023	35	10,000	640	10,640	1,934,840	78.1	2.47
17-Jul-2023	36	11,000	660	11,660	1,791,056	79.2	2.55
24-Jul-2023	37	9,900	670	10,570	1,823,936	73.1	2.62
31-Jul-2023	38	12,000	710	12,710	2,076,192	100.1	2.72
7-Aug-2023	39	10,000	640	10,640	2,067,900	83.5	2.80
14-Aug-2023	40	10,000	610	10,610	2,074,852	83.5	2.89
21-Aug-2023	41	11,000	770	11,770	2,098,720	93.7	2.98
28-Aug-2023	42	9,700	600	10,300	2,077,488	81.2	3.06
4-Sep-2023	43	11,000	610	11,610	2,082,480	91.7	3.15
11-Sep-2023	44	10,000	720	10,720	2,195,504	89.3	3.24
18-Sep-2023	45	10,000	660	10,660	2,107,192	85.2	3.33
25-Sep-2023	46	10,000	650	10,650	1,892,944	76.5	3.41
2-Oct-2023	47	9,200	660	9,860	1,918,928	71.8	3.48
9-Oct-2023	48	11,000	690	11,690	2,088,904	92.6	3.57
16-Oct-2023	49	9,300	660	9,960	2,197,696	83.0	3.65
23-Oct-2023	50	9,400	790	10,190	2,180,056	84.3	3.74
30-Oct-2023	51	9,000	730	9,730	2,208,464	81.5	3.82
6-Nov-2023	52	8,100	650	8,750	2,182,928	72.5	3.89
13-Nov-2023	53	10,000	690	10,690	2,155,552	87.4	3.98
20-Nov-2023	54	11,000	710	11,710	1,931,904	85.8	4.06
27-Nov-2023	55	6,900	650	7,550	2,129,520	61.0	4.13
4-Dec-2023	56	10,000	720	10,720	2,165,464	88.1	4.21
11-Dec-2023	57	8,300	650	8,950	1,687,432	57.3	4.27
18-Dec-2023	58	9,400	620	10,020	2,124,200	80.7	4.35
25-Dec-2023	59	9,700	740	10,440	2,123,992	84.1	4.44
1-Jan-2024	60	9,500	640	10,140	1,320,424	50.8	4.49

Table 14. Summary of weekly PFAS removal by GETS

Starting Day	Week	PFOA (ng/L)	PFOS (ng/L)	PFOA + PFOS (ng/L)	Gallons Treated	Grams of PFOA + PFOS Removed	Cumulative Mass Removed (kg)
8-Jan-2024	61	8,600	650	9,250	2,161,696	75.8	4.56
15-Jan-2024	62	9,100	660	9,760	2,200,392	81.5	4.64
22-Jan-2024	63	8,600	640	9,240	2,078,856	72.9	4.72
29-Jan-2024	64	9,000	640	9,640	2,175,040	79.5	4.80
5-Feb-2024	65	9,200	710	9,910	2,183,088	82.1	4.88
12-Feb-2024	66	11,000	900	11,900	1,969,016	88.9	4.97
19-Feb-2024	67	11,000	700	11,700	1,920,480	85.2	5.05
26-Feb-2024	68	4,500	550	5,050	2,620,816	50.2	5.10
4-Mar-2024	69	6,100	730	6,830	2,399,048	62.2	5.16
11-Mar-2024	70	9,500	610	10,110	2,313,608	88.7	5.25
18-Mar-2024	71	9,600	540	10,140	2,360,624	90.8	5.34
25-Mar-2024	72	8,200	610	8,810	1,623,208	54.2	5.40
1-Apr-2024	73	11,000	700	11,700	2,318,704	102.9	5.50
8-Apr-2024	74	10,000	650	10,650	2,345,184	94.7	5.60
15-Apr-2024	75	10,000	720	10,720	2,343,680	95.3	5.69
22-Apr-2024	76	9,000	680	9,680	2,314,576	85.0	5.78
29-Apr-2024	77	14,000	610	14,610	2,378,352	131.8	5.91
6-May-2024	78	10,000	660	10,660	2,367,728	95.7	6.00
13-May-2024	79	0	0	0	0	0.0	6.00
20-May-2024	80	0	0	0	0	0.0	6.00
Averages		10,342	737	11,079	1,775,130	74.8	

Note: The difference in the totals is due to water recirculation within the treatment system, water storage in the treatment system and piping, and differences in instrument accuracy.



LEGEND:

- EXTRACTION WELL
- MONITORING WELL
- PIEZOMETER
- STAFF GAUGE
- APPROXIMATE SUPPLEMENTAL SURFACE WATER SAMPLE LOCATION
- APPROXIMATE MARINETTE CITY BOUNDARY
- APPROXIMATE SITE PROPERTY BOUNDARY
- ROAD
- CULVERT
- DITCH OR STREAM
- SURFACE WATER TREATMENT SYSTEM
- GETS BUILDING

NOTES:

1. GETS = GROUNDWATER EXTRACTION AND TREATMENT SYSTEM
2. AERIAL IMAGERY SOURCE: ESRI, MAXAR, EARTHSTAR, GEOGRAPHICS, AND THE GIS USER COMMUNITY

0 900 1,800

GRAPHIC SCALE IN FEET

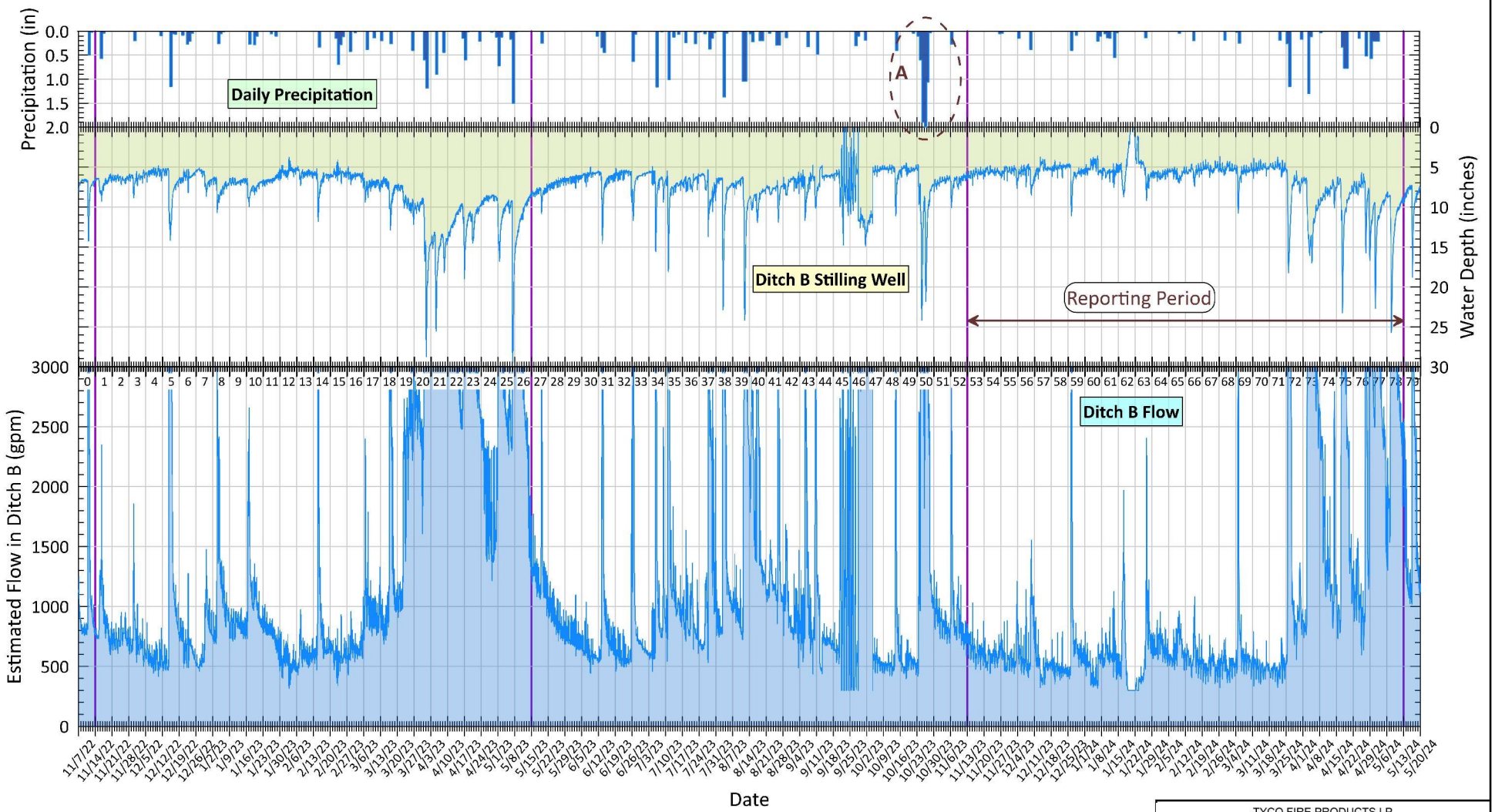
TYCO FIRE PRODUCTS LP
MARINETTE, WISCONSIN
GETS Semi-Annual Monitoring Report

GETS START UP MONITORING LOCATIONS

ARCADIS

FIGURE
1

T:_ENV\TYCO_PRO_REPORT_FIGURES\FTC\LTM_Startup_Phase_Last_Report\LTM_Startup_Phase_Last_Report.aprx 5/31/2024 12:03 PM Last Saved By: MEstifanos



Notes:

Precipitation: NOAA, Station USC00475091; August 2023 data supplemented with on-site data

Water Depth: Stilling wells are located near Ditch B treatment system. Location is shown on Figure 1.

Estimated Flow: Calculated from rating curve near the Ditch B treatment system.

Transducer replaced October 2

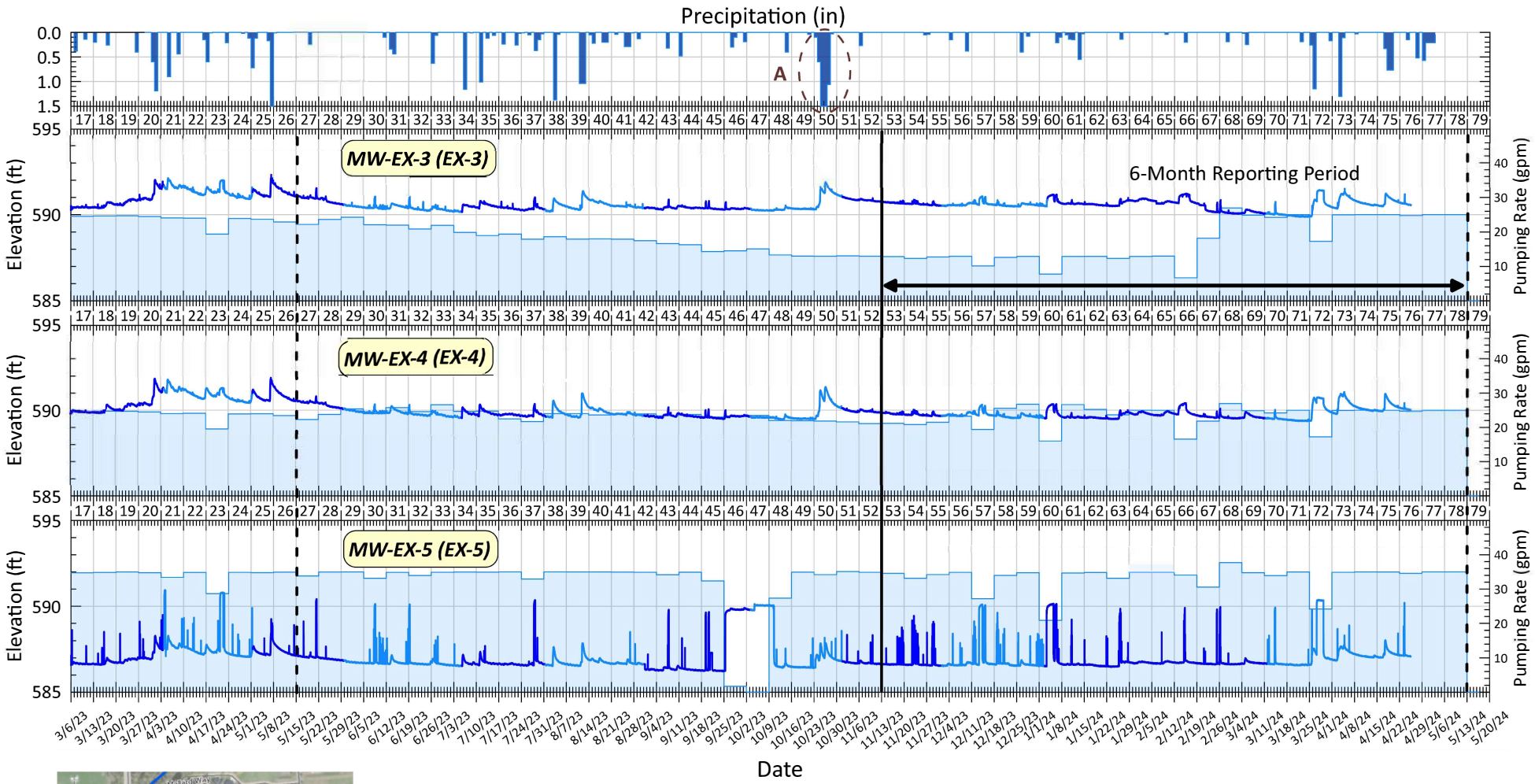
Precipitation Event A: 5.69 inches between Oct 23 and Oct 28

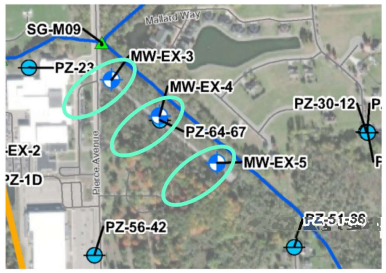
TYCO FIRE PRODUCTS LP
MARINETTE, WISCONSIN
GETS Semi-Annual Monitoring Report

Ditch B Water Depth,
Estimated Stream Flow and Precipitation

ARCADIS

FIGURE
2





Well Locations

Notes:

Precipitation: NOAA, Station USC00475091, daily total, inches per day; August precipitation data supplemented with on-site data

Pumping Rates: Shaded bar chart of average weekly rate (gpm)

Water Levels: Pressure transducer data, colors designate data download events

Date: Labeled ticks are day 1 of each week of GETS operation

Week of GETS Operation: Week 1 began Nov 14, 2022

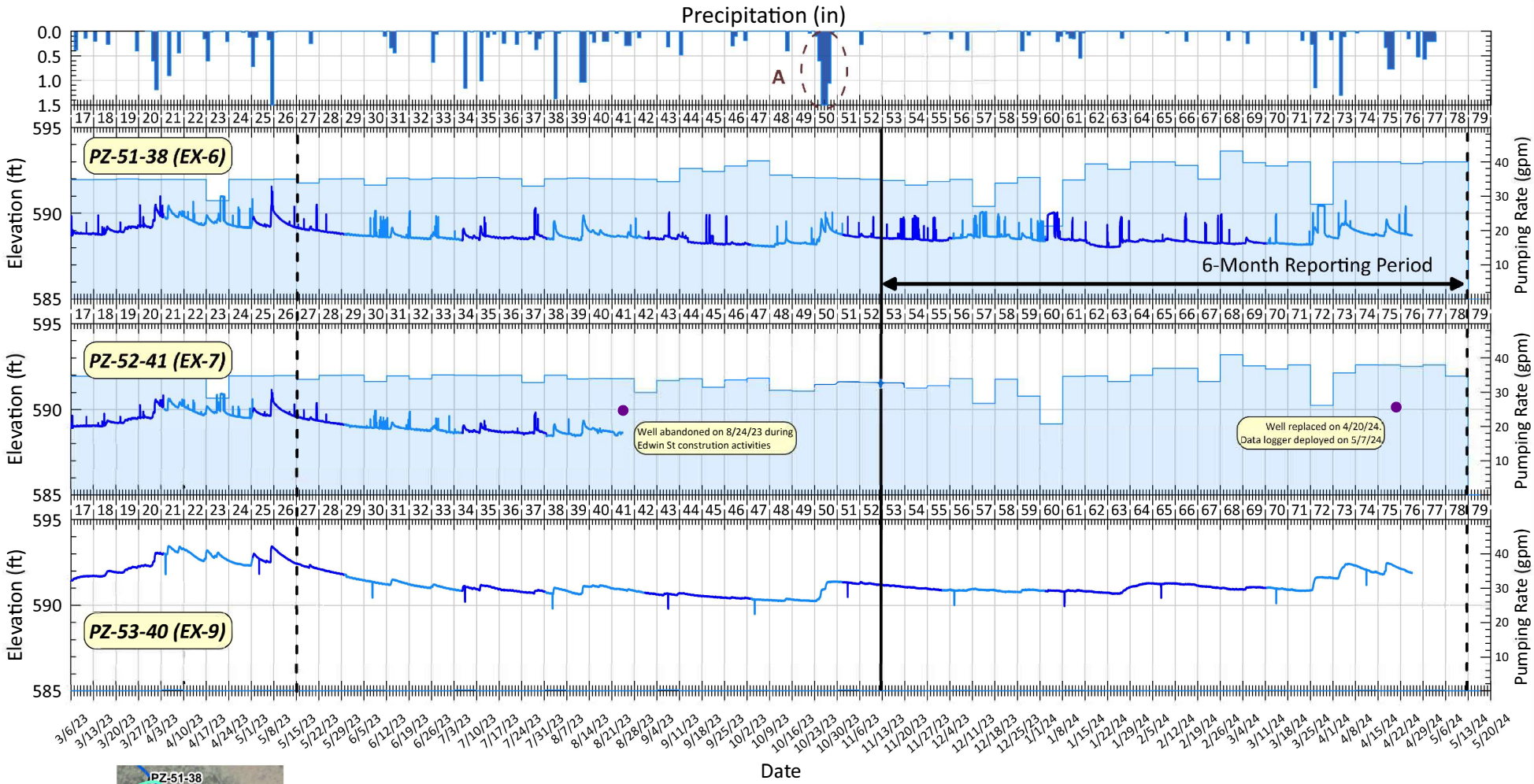
Precipitation Event A: 5.69 inches between Oct 23 and Oct 28

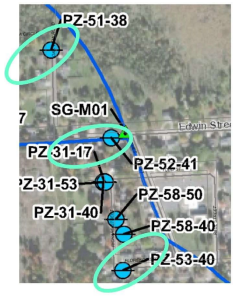
TYCO FIRE PRODUCTS LP
MARINETTE, WISCONSIN
GETS Semi-Annual Monitoring Report

Water Level Elevations and Pumping Rates at Extraction Wells along Ditch B

ARCADIS

FIGURE 3





Well Locations

Notes:

Precipitation: NOAA, Station USC00475091, daily total, inches per days; August precipitation data supplemented with on-site data

Pumping Rates: Shaded bar chart of average weekly rate (gpm)

Water Levels: Pressure transducer data, colors designate data download events

Date: Labeled ticks are day 1 of each week of GETS operation

Week of GETS Operation: Week 1 began Nov 14, 2022

Precipitation Event A: 5.69 inches between Oct 23 and Oct 28

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GETS Semi-Annual Monitoring Report

Water Level Elevations and Pumping Rates at Extraction Wells along Ditch B

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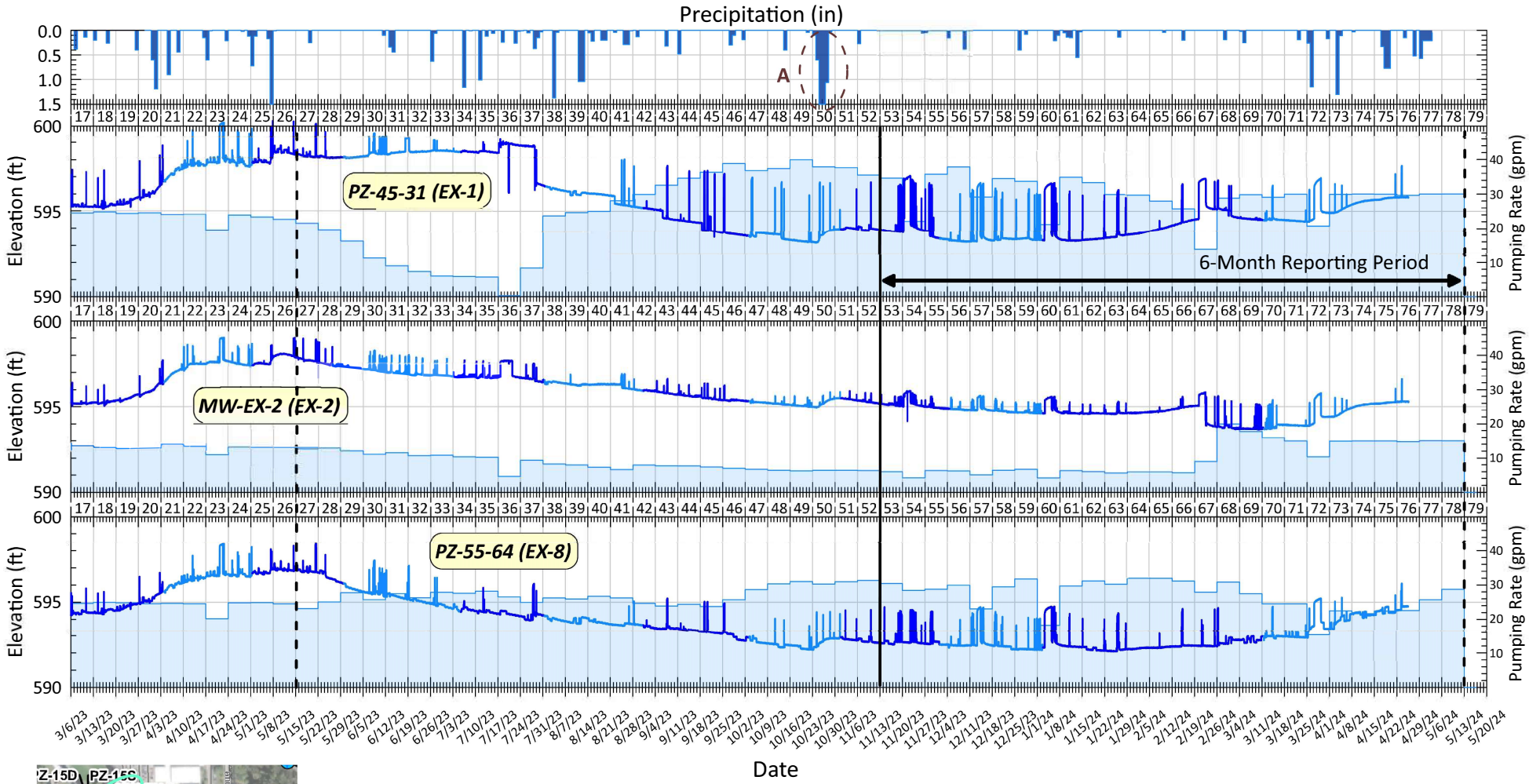
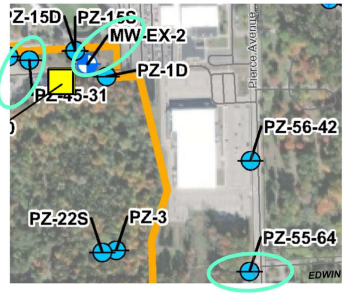
FIGURE 4





Well Locations

Notes:

Precipitation: NOAA, Station USC00475091, daily total, inches per days; August precipitation data supplemented with on-site data

Pumping Rates: Shaded bar chart of average weekly rate (gpm)

Water Levels: Pressure transducer data, colors designate data download events

Date: Labeled ticks are day 1 of each week of GETS operation

Week of GETS Operation: Week 1 began Nov 14, 2022

Precipitation Event A: 5.69 inches between Oct 23 and Oct 28

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MARINETTE, WISCONSIN
GETS Semi-Annual Monitoring Report

Water Level Elevations and Pumping Rates at Extraction Wells Upgradient of Ditch B

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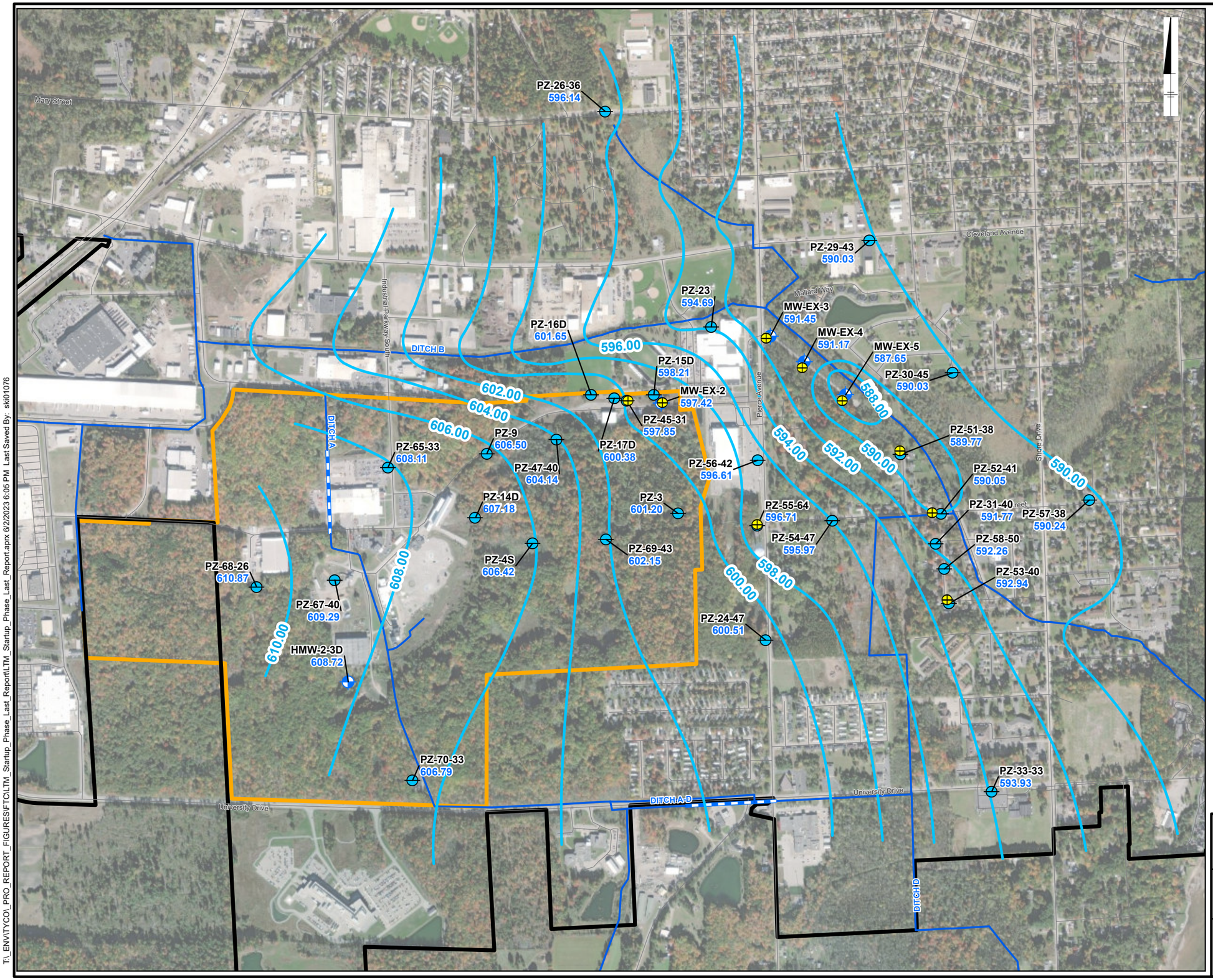
FIGURE 5



LEGEND:

- MONITORING WELL
- PIEZOMETER
- EXTRACTION WELL
- APPROXIMATE MARINETTE CITY BOUNDARY
- APPROXIMATE SITE PROPERTY BOUNDARY
- ROAD
- CULVERT
- DITCH OR STREAM
- POTENTIOMETRIC CONTOUR

0 900 1,800

GRAPHIC SCALE IN FEET

TYCO FIRE TECHNOLOGY CENTER
MARINETTE, WISCONSIN

Semi-Annual Monitoring Report May 2024

POTENTIOMETRIC SURFACE MAY 2023

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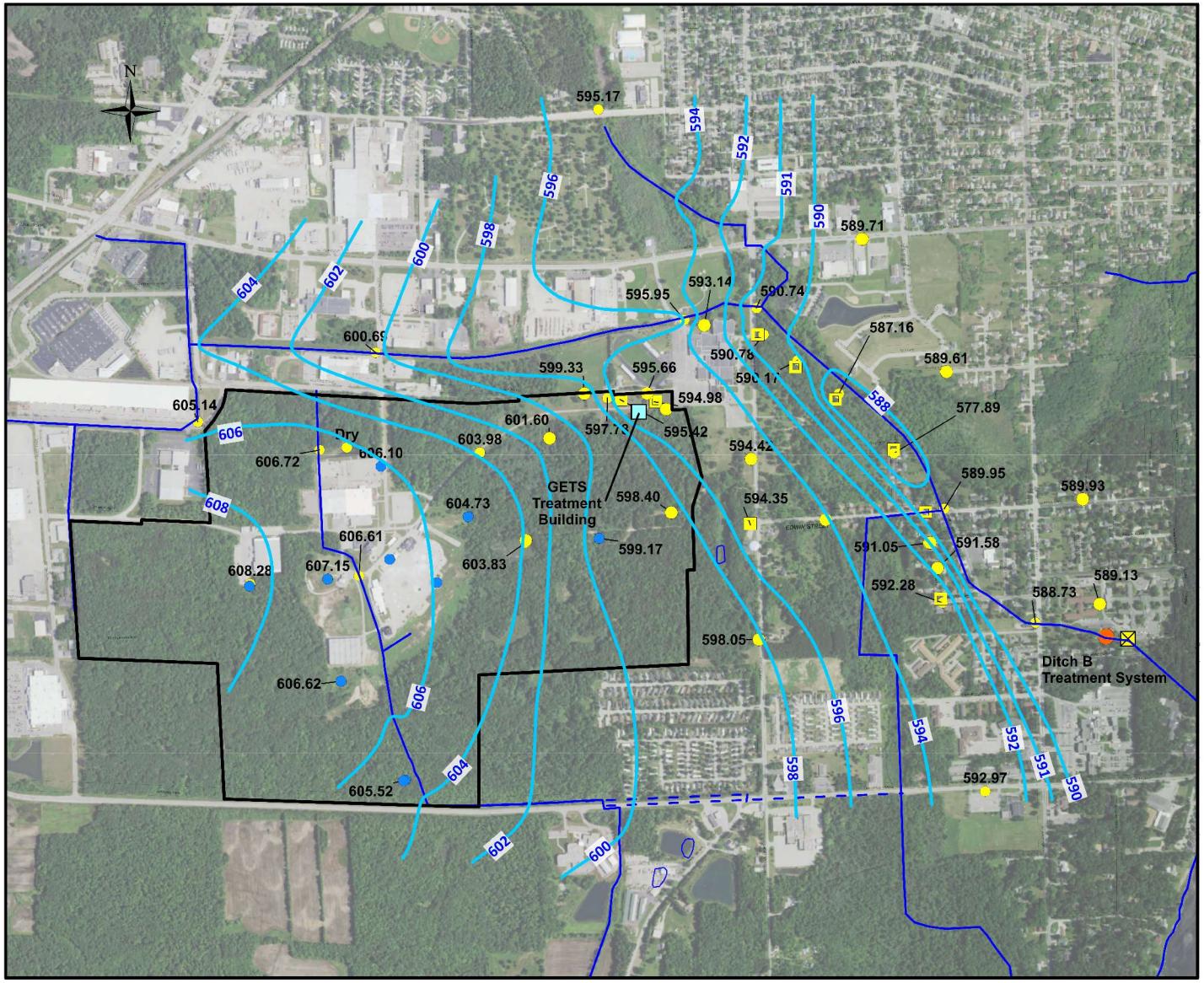
FIGURE
6

T:_ENV\TYCO_PRO_REPORT_FIGURES\FTC\LTM_Startup_Phase_Last_Report\LTM_Startup_Phase_Last_Report.aprx 6/2/2023 6:05 PM Last Saved By: skl01076



Legend/Notes

- FTC Site Area
- Ditches/Streams
- GETS Performance Monitoring Location
- GETS Extraction Well
- Ditch B Treatment System
- Ditch B Surface Water Location
- GETS Treatment Building
- Additional Monitoring Wells

Distance (ft)

0 1,000 2,000 3,000

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GETS Semi-Annual Monitoring Report

Potentiometric Surface May 2024

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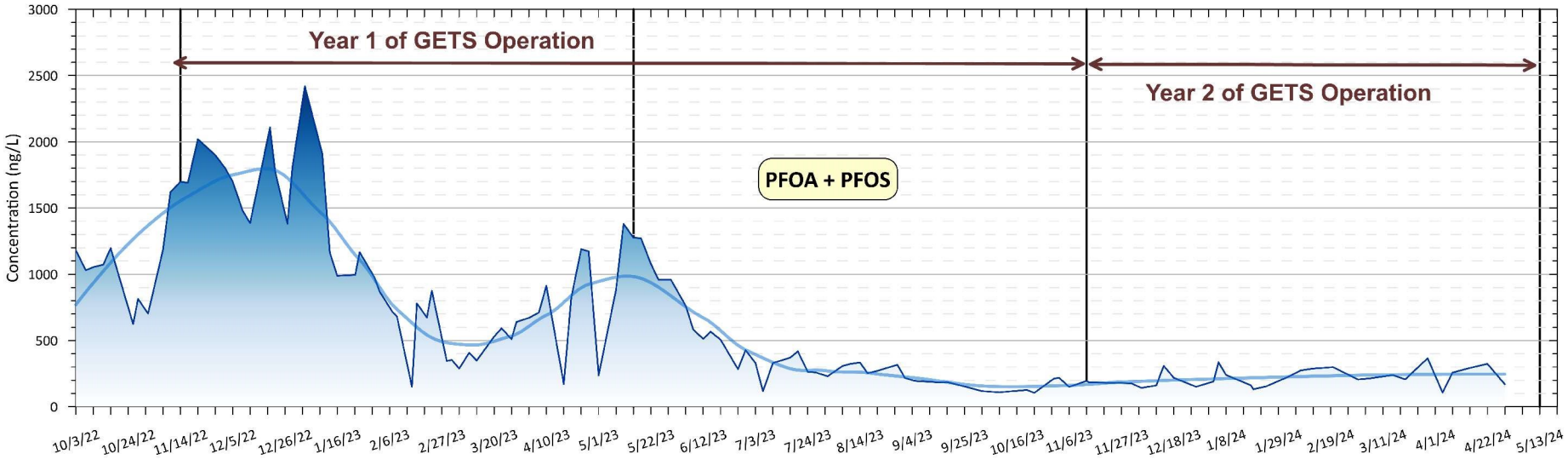
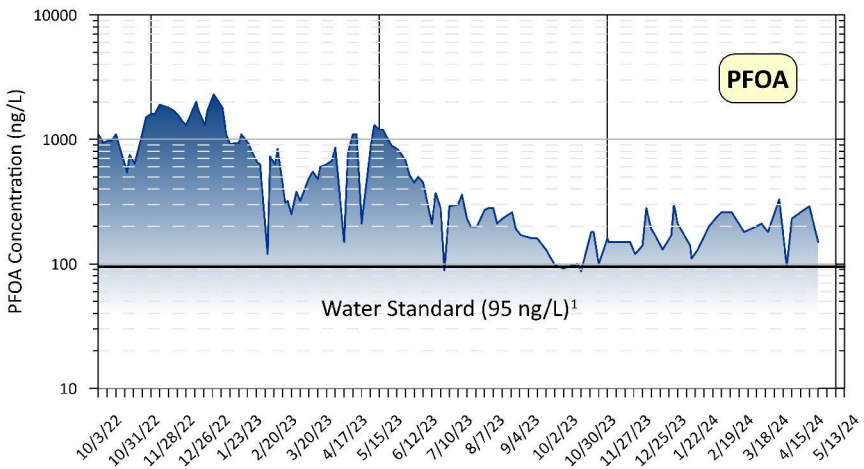
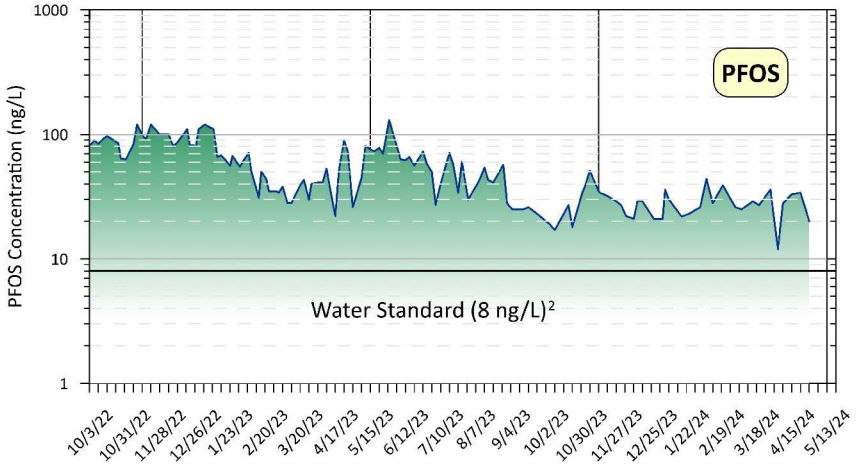
FIGURE
7







Notes:

1. The surface water quality standard for PFOA is 20 ng/L for waters classified as public water supplies and 95 ng/L for all other surface waters (WDNR NR 102.4).

2. The surface water quality standard for PFOS is 8 ng/L for all waters except those that cannot naturally support fish and do not have downstream waters that support fish (WDNR NR 102.4).

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MARINETTE, WISCONSIN
GETS Semi-Annual Monitoring Report

Summary of PFOA and PFOS Concentrations in Ditch B

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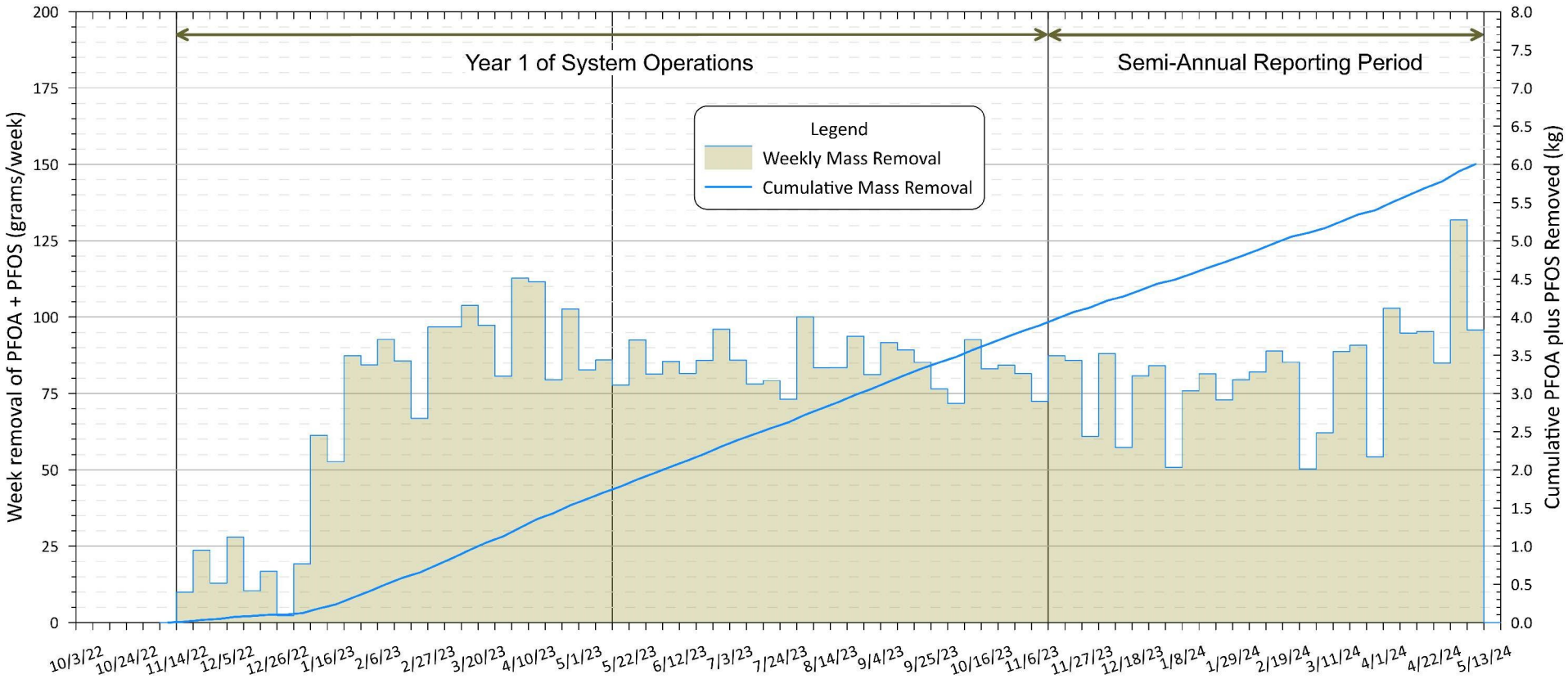
FIGURE
8



Notes:

1. Concentrations measured at the influent to the GETS (sampling port 1; SP1)
2. Flow is the sum of the total weekly pumping at each extraction well.
3. Approximately 3.74 kg of PFOA plus PFOS was removed by the GETS through Oct 29

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GETS Semi-Annual Monitoring Report

PFOA plus PFOS Removed
by the GETS

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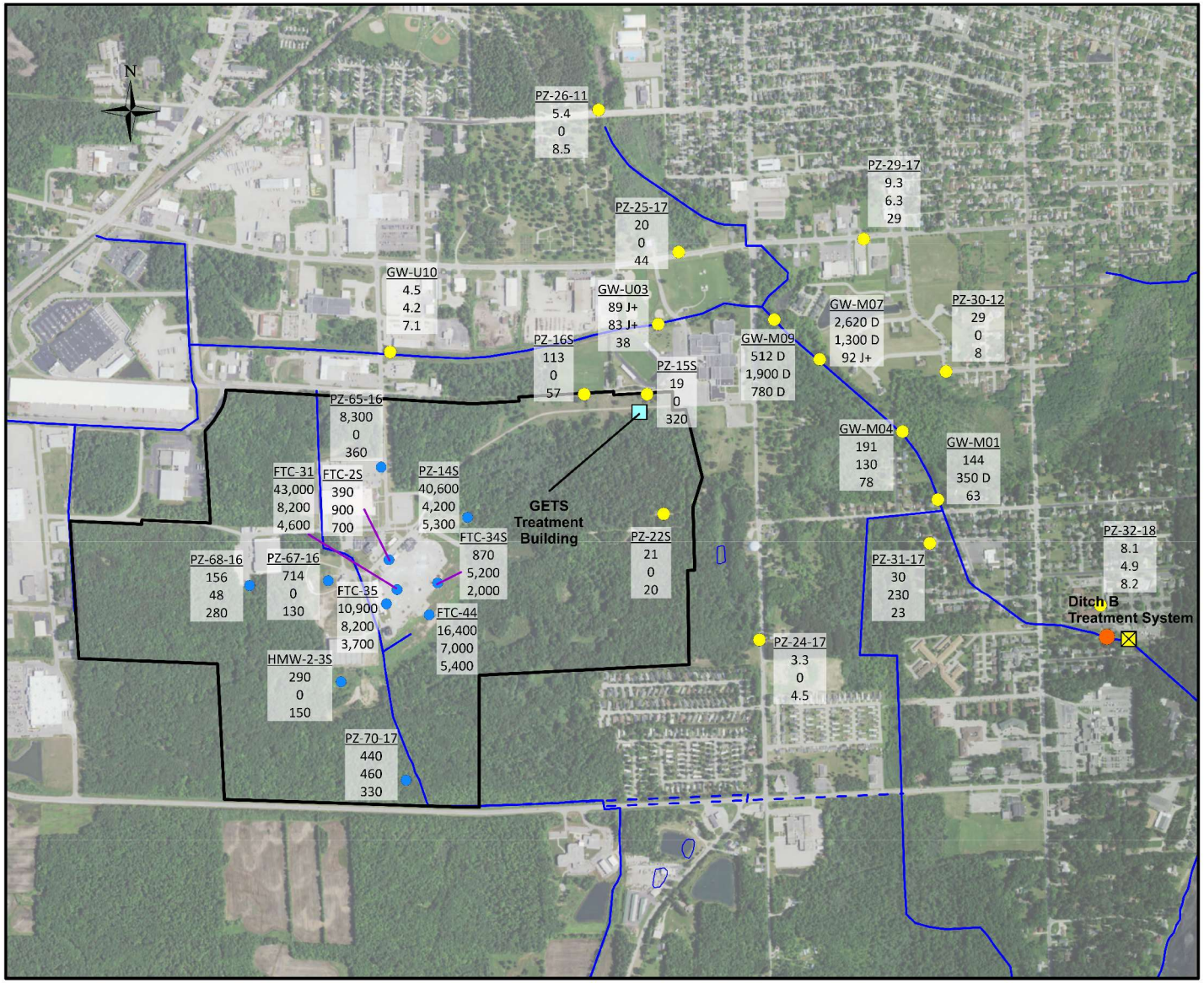
FIGURE
9



Legend

- FTC Site Area
- Ditches/Streams
- GETS Performance Monitoring Location
- GETS Extraction Well
- Ditch B Treatment System
- Ditch B Surface Water Location
- GETS Treatment Building
- Additional Monitoring Wells (Samples collected November 2022)

Label Legend

EX-1	Well ID
6,150	PFOS + PFOA (ng/L)
43,000	6:2 FTS (ng/L)
3,200	PFHxA (ng/L)

Note:
Figure presents concentrations of first encounted groundwater. The sampling interval is between the landsurface and a depth of 18 ft.

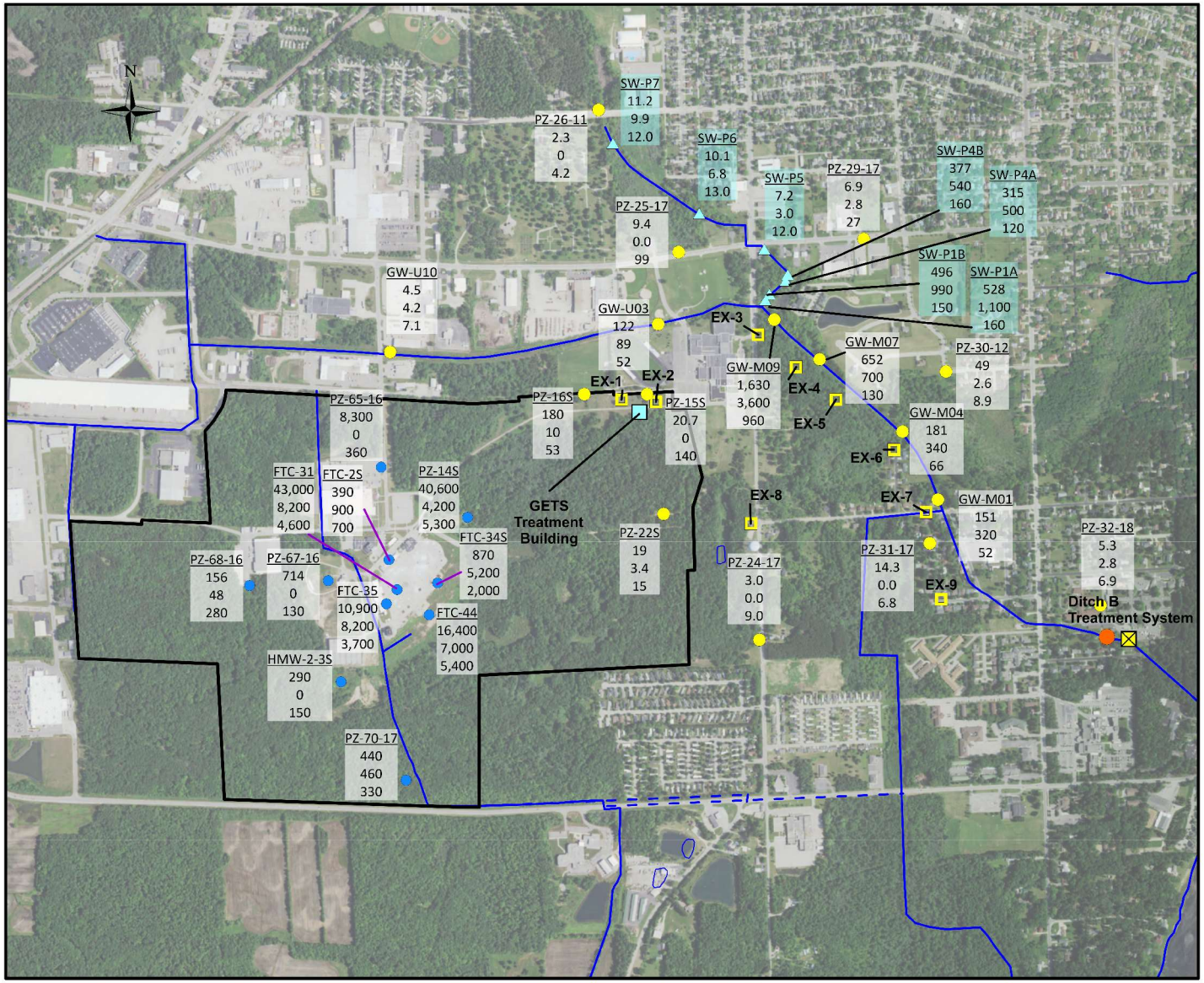
Distance (ft)
0 1,000 2,000 3,000

TYCO FIRE PRODUCTS LP
MARINETTE, WISCONSIN
GETS Semi-Annual Monitoring Report

Shallow PFAS Concentrations at GETS Startup Monitoring Locations (Nov 2023)

ARCADIS

FIGURE 10



Legend

- FTC Site Area
- Ditches/Streams
- GETS Performance Monitoring Location
- GETS Extraction Well
- Ditch B Treatment System
- Ditch B Surface Water Location
- GETS Treatment Building
- Additional Monitoring Wells (Samples collected November 2022)
- Supplemental Surface Water Data (Samples collected April & May 2024)

Label Legend

EX-1	Well ID
6,150	PFOS + PFOA (ng/L)
43,000	6:2 FTS (ng/L)
3,200	PFHxA (ng/L)

Notes:

Figure presents concentrations of first encounted groundwater. The sampling interval is between the landsurface and a depth of 18 ft.

Concentrations in blue shaded boxes are are supplemental surface water data collected in April & May 2024.

Distance (ft)

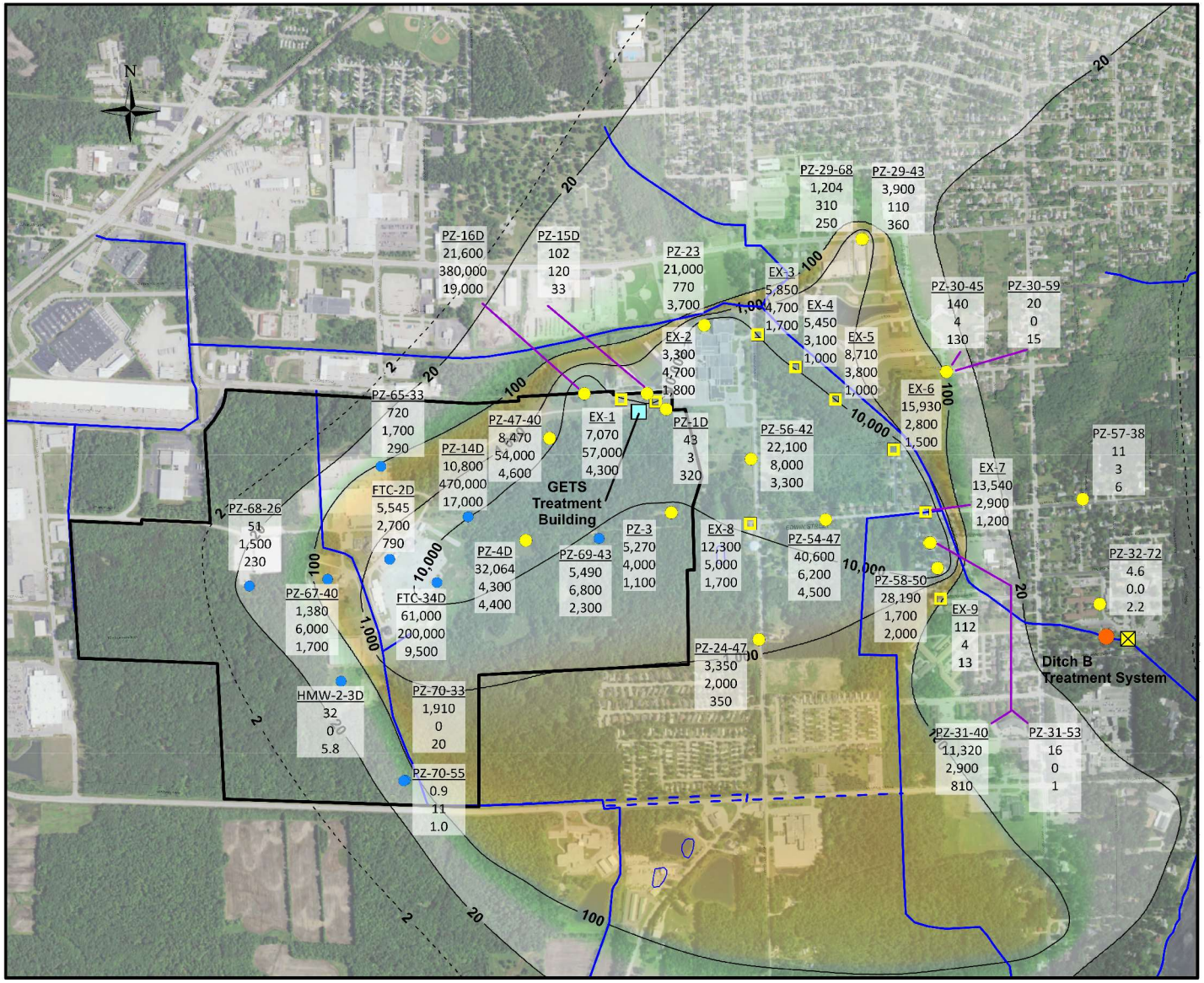
0 1,000 2,000 3,000

TYCO FIRE PRODUCTS LP
MARINETTE, WISCONSIN
GETS Semi-Annual Monitoring Report

Shallow PFAS Concentrations at GETS Startup Monitoring Locations (May 2024)

ARCADIS

FIGURE 11



Legend

- FTC Site Area
- Ditches/Streams
- GETS Performance Monitoring Location (sampled Nov 2023)
- GETS Extraction Well (sampled Jan 2024)
- Ditch B Treatment System
- Ditch B Surface Water Location
- GETS Treatment Building
- Additional Monitoring Wells (Samples collected November 2022)

Label Legend

EX-1	Well ID
6,150	PFOS + PFOA (ng/L)
43,000	6:2 FTS (ng/L)
3,200	PFHxA (ng/L)

Notes

Well PZ-54-47 was abandoned during the repaving of Edwin Ave. The replacement well PZ-54-47R will be sampled for next semi-annual report.

Distance (ft)

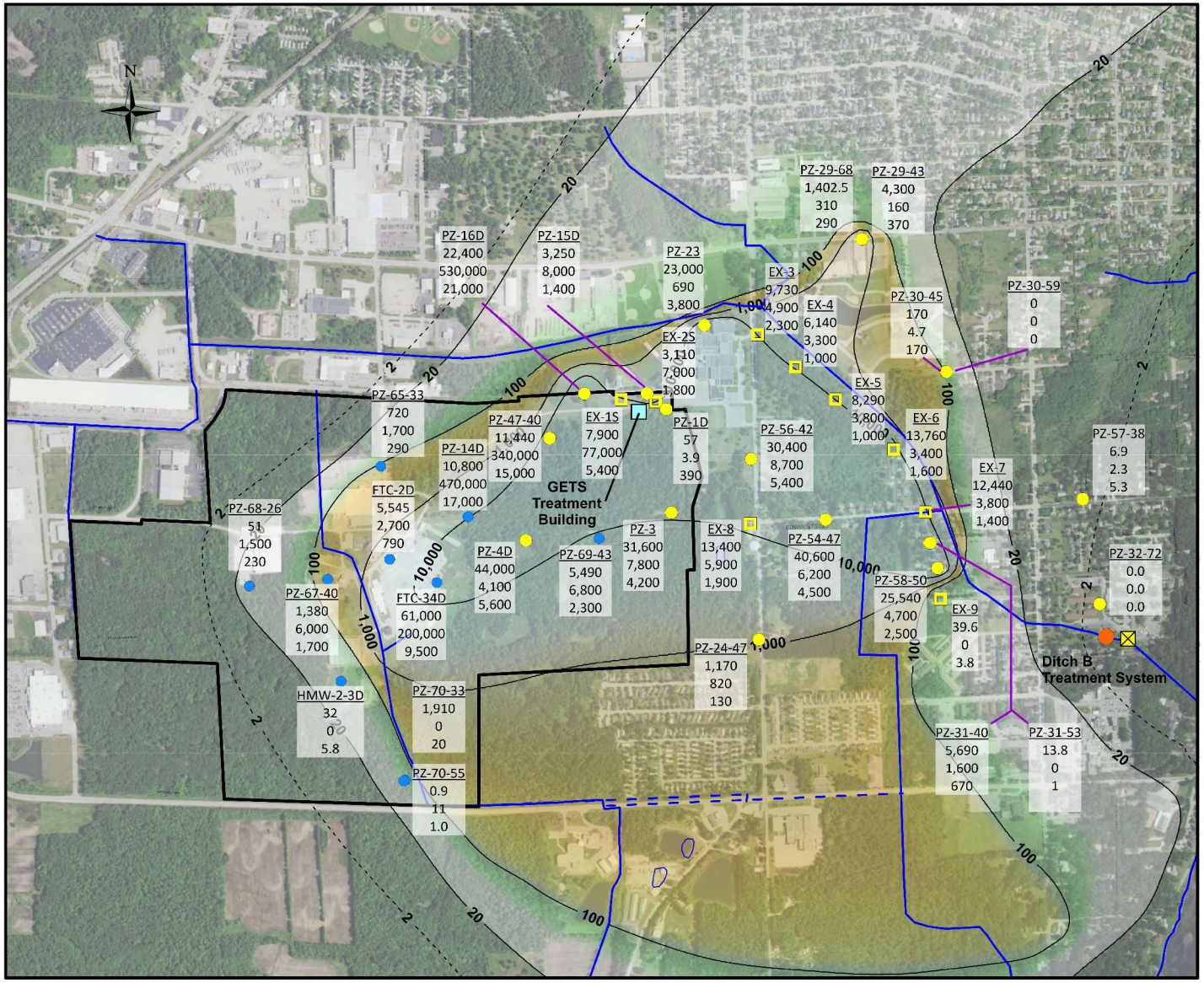
0 1,000 2,000 3,000

TYCO FIRE PRODUCTS LP
MARINETTE, WISCONSIN
GETS Semi-Annual Monitoring Report

Deep PFOA plus PFOS Concentrations at GETS Startup Monitoring Locations (Nov 2023)

ARCADIS

FIGURE 12



Legend/Notes

- FTC Site Area
- Ditches/Streams
- GETS Performance Monitoring Location (sampled Feb 2024)
- GETS Extraction Well (sampled Apr 2024)
- Ditch B Treatment System
- Ditch B Surface Water Location
- GETS Treatment Building
- Additional Monitoring Wells (Samples collected November 2022)

Label Boxes

EX-1	Well ID
6,150	PFOS + PFOA (ng/L)
43,000	6:2 FTS (ng/L)
3,200	PFHxA (ng/L)

Notes

Well PZ-54-47 was abandoned during the repaving of Edwin Ave. The replacement well PZ-54-47R will be sampled for next semi-annual report.

Distance (ft)

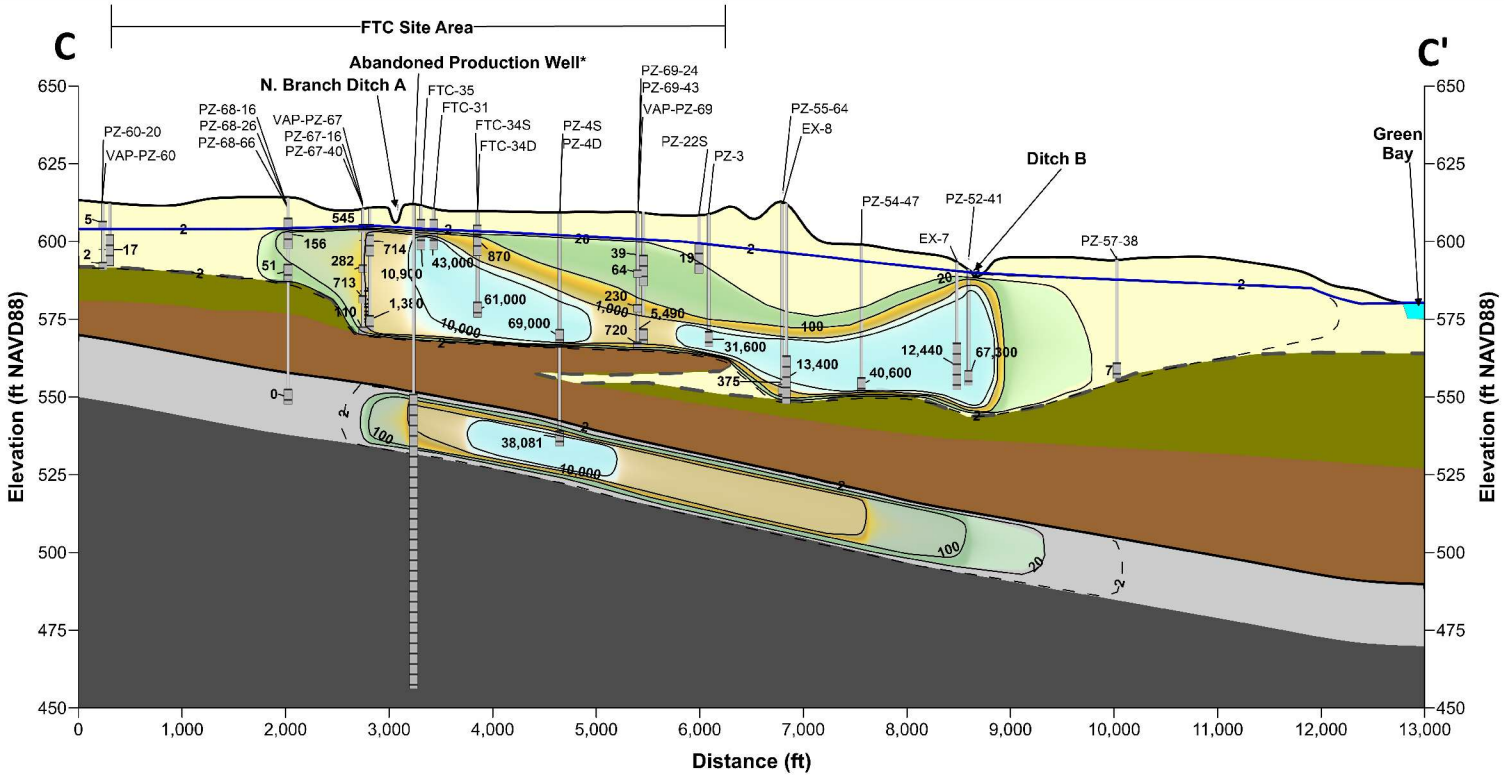
0 1,000 2,000 3,000

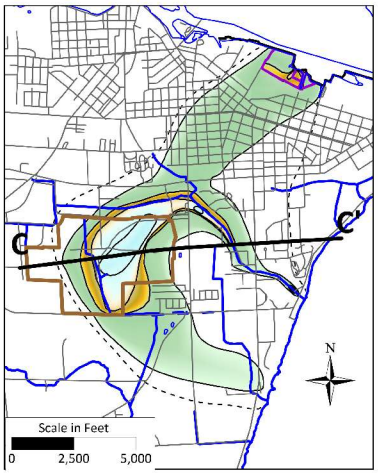
TYCO FIRE PRODUCTS LP
MARINETTE, WISCONSIN
GETS Semi-Annual Monitoring Report

Deep PFOA plus PFOS Concentrations at GETS Startup Monitoring Locations (May 2024)

ARCADIS

FIGURE 13





Legend

- Overburden Aquifer (clastics / sand to sandy silt)
- Overburden Aquitard - Till (silt and clay with gravel)
- Overburden Aquitard - Clay or silt
- Weathered Bedrock (Dolomite)
- Competent Bedrock (Dolomite)
- Top of Overburden Aquitard
- Water Table
- Stanton St. Site Barrier Walls

*Projected onto cross-section

PFOA + PFOS Concentration (ng/L)

1,000

Well / Piezometer / Soil Boring / VAP Location

Well Screen Interval or Sample Location

PFOA plus PFOS Concentration (ng/L)

100,000
10,000
1,000
100
20

Horizontal Scale in feet
0 1,200 2,400

Vertical Scale in feet
0 40 80

Vertical Exaggeration = 30

Notes:
1. The groundwater flow direction in the overburden is to the east, left to right on the page.
2. The groundwater flow direction in the bedrock is northeast into the page

TYCO FIRE PRODUCTS LP
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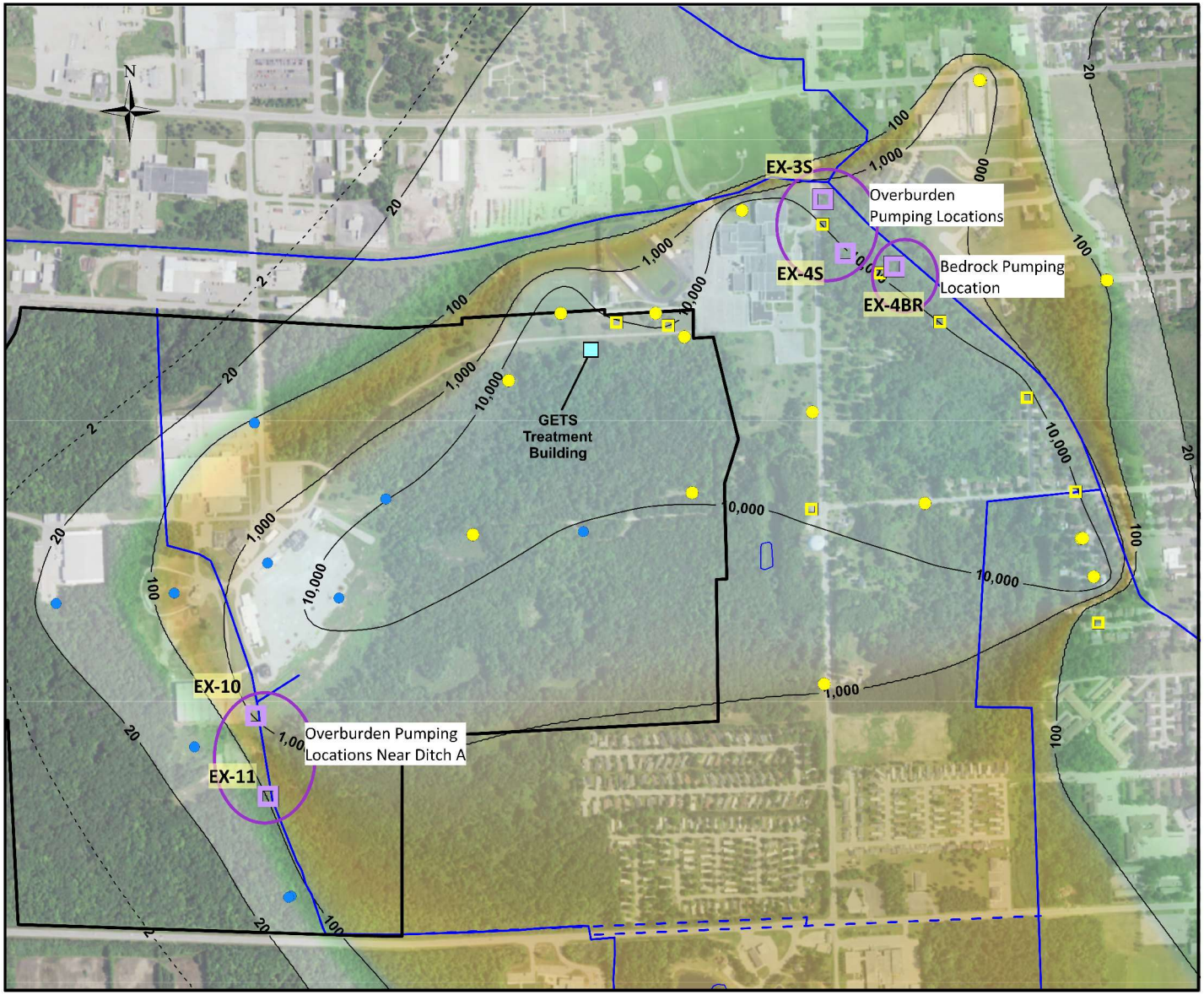
GETS Semi-Annual Monitoring Report

Cross Section C-C'
PFOA+PFOS Plume Contours of Recent Sampling Results (Fall 2022 / Spring 2024)

ARCADIS

FIGURE 14



Legend/Notes

- FTC Site Area
- Ditches/Streams
- GETS Performance Monitoring Location (sampled Feb 2024)
- GETS Extraction Well (sampled Apr 2024)
- Ditch B Treatment System
- Ditch B Surface Water Location
- GETS Treatment Building
- Additional Monitoring Wells (Samples collected November 2022)
- Proposed Extraction Well

Distance (ft)

0 1,000 2,000

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GETS Semi-Annual Monitoring Report

Additional GETS Optimizations
Planned Locations

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FIGURE
15