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Date: July 20, 2023

Our Ref: 30171092

Subject: Response to Comments – Semi-Annual O&M Progress Report #8  
Tyco FTC - Ditch A Interim Action Treatment System  
2700 Industrial Parkway South, Marinette, Wisconsin 54143  
BRTTS #02-38-580694; Site ID (FIN): 64624

Dear Ms. Sellwood,

Arcadis U.S., Inc. (Arcadis) has prepared this letter on behalf of Tyco Fire Products LP (Tyco) in response to the comments Wisconsin Department of Natural Resources (WDNR) provided in a letter dated June 12, 2023 regarding Semi-Annual Operations, Maintenance, and Optimization Progress Report #8 (O&M Progress Report #8) for the Ditch A Interim Action Treatment System (Ditch A system) located at 2700 Industrial Parkway South, Marinette, Wisconsin (Site).

WDNR comments are provided in italics with Tyco's responses shown in plain text.

#### WDNR Comment 1

*Per Wis. Admin. Code § NR 724.13(4), the DNR requests that JCI/Tyco update Table 4-1 and Sections 7.5 of the OM&M Plan for Ditch A to improve characterization of PFAS in the surface water downstream of the Ditch A treatment system. This should include, at a minimum, collection of surface water samples at SW-26 concurrent with the monthly sampling at SW-40. Please submit the updated Sections of the OM&M plan to the DNR within 45 days of date of this letter and begin implementing these changes to the long-term surface water monitoring program for Ditch A. (If JCI/Tyco includes the recommendations presented herein, then a fee for additional DNR review and response is not required).*

#### Response

Tyco will collect monthly surface water samples from sample locations SW-26 and SW-40 during open water season (defined as observable flow in Ditch A as well as Ditch A System operation) as described in the revised Operations, Maintenance, and Monitoring (OM&M) Plan Sections 4 and 7, included as Attachment 1. Tyco does not intend to collect surface water samples from stagnant water. Sample collection at SW-26 will begin in August 2023 and the corresponding data and field observations will be included in O&M Progress Report #10 (July 1, 2023 – December 31, 2023 reporting period).

Alyssa Sellwood, PE  
WDNR  
July 20, 2023

WDNR Comment 2

*Because the concentrations of PFOA and PFOS in the surface water in Ditch A on the FTC property remain above the Wis. Admin. Code § NR 102.04 surface water standards, the DNR recommends that JCI/Tyco continue to operate an interim remedial action to remove PFAS from the surface water. If the PFAS concentrations at SW-26 are found to be greater than the Wis. Admin. Code § NR 102.04 surface water standards during operation of the Ditch A treatment system, then JCI/Tyco must evaluate and report on the cause and significance per Wis. Admin. Code § NR 724.17(3m)(f) and may need to evaluate if modification or additional interim actions are needed.*

Response

Tyco will continue to operate the Ditch A system. Sample collection at sample location SW-26 will begin in August 2023 and the corresponding data will be included in O&M Progress Report #10 (July 1, 2023 – December 31, 2023 reporting period). All data collected will be evaluated relative to historical Ditch A system operation on an ongoing basis.

Please contact me with any comments or questions.

Sincerely,  
Arcadis U.S., Inc.



Ben Verburg, PE  
Principal Engineer

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Direct Line: 414-277-6231

CC. Denice Nelson (Tyco)  
Mike Bedard (Arcadis)  
Scott Potter (Arcadis)

Enclosures:

Attachment 1 Ditch A System OM&M Plan Sections 4 and 7 – Revised July 2023

# **Attachment 1**

**Ditch A System OM&M Plan Sections 4 and 7 – Revised July 2023**

## 4 Long Term Monitoring Plan – Revised July 2023

Tyco will collect the data outlined below as part of the long-term monitoring plan.

- Stream flow in Ditch A during each weekly monitoring event.
- Duration of Ditch A check dam overtopping events and the depth of flow above the check dam.
- PFAS samples from surface water in Ditch A downstream of the treatment system at two locations (SW-40 and SW-26) at least once per month. The samples will be collected concurrently during open water season (defined as observable flow in Ditch A and Ditch A System operation) and analyzed for the 36 PFAS analyte list that JCI/Tyco is required to report.

The Ditch A system flow volume and Ditch A stream flow volume will be calculated using the procedures outlined in Appendix C of O&M Progress Report #8. A summary of the long-term monitoring plan per Wis. Admin Code § NR 724.17(2) for the Ditch A System is presented in the table below.

Table 4-1 Long-Term Monitoring Plan Summary

Sample Location	Description	Parameter	Analytical Method	Sampling Frequency
V-200	Ditch A System Influent	PFAS (36 Analyte List)****	US EPA Method 537 (Modified)	Weekly*
V-900	Ditch A System Effluent	PFAS (36 Analyte List)****	US EPA Method 537 (Modified)	Weekly*
SW-40	Downstream of Ditch A System Discharge	PFAS (36 Analyte List)****	US EPA Method 537 (Modified)	Monthly***
SW-26	Downstream of SW-40	PFAS (36 Analyte List)****, Description of Flow Conditions	US EPA Method 537 (Modified),	Monthly***
SG-26	Staff Gauge Adjacent to SW-26	Water Depth	--	Monthly
Upstream Stilling Well/Downstream Stilling Well	Stilling Wells Upstream and Downstream of Ditch A Check Dam	Water Depth and Duration of Check Dam Overtopping Event	--	Daily**
FIT-05 and FIT-07	Treatment Train Flow Meters	Ditch A System Treated Flow	--	Daily**

**Notes:**

\*: Collected per WPDES permit compliance sampling requirements

\*\* : Collected daily by the SCADA system but presented weekly for reporting purposes

\*\*\*: Replicate and QA/QC samples collected per Wis. Admin Code § NR 716.13

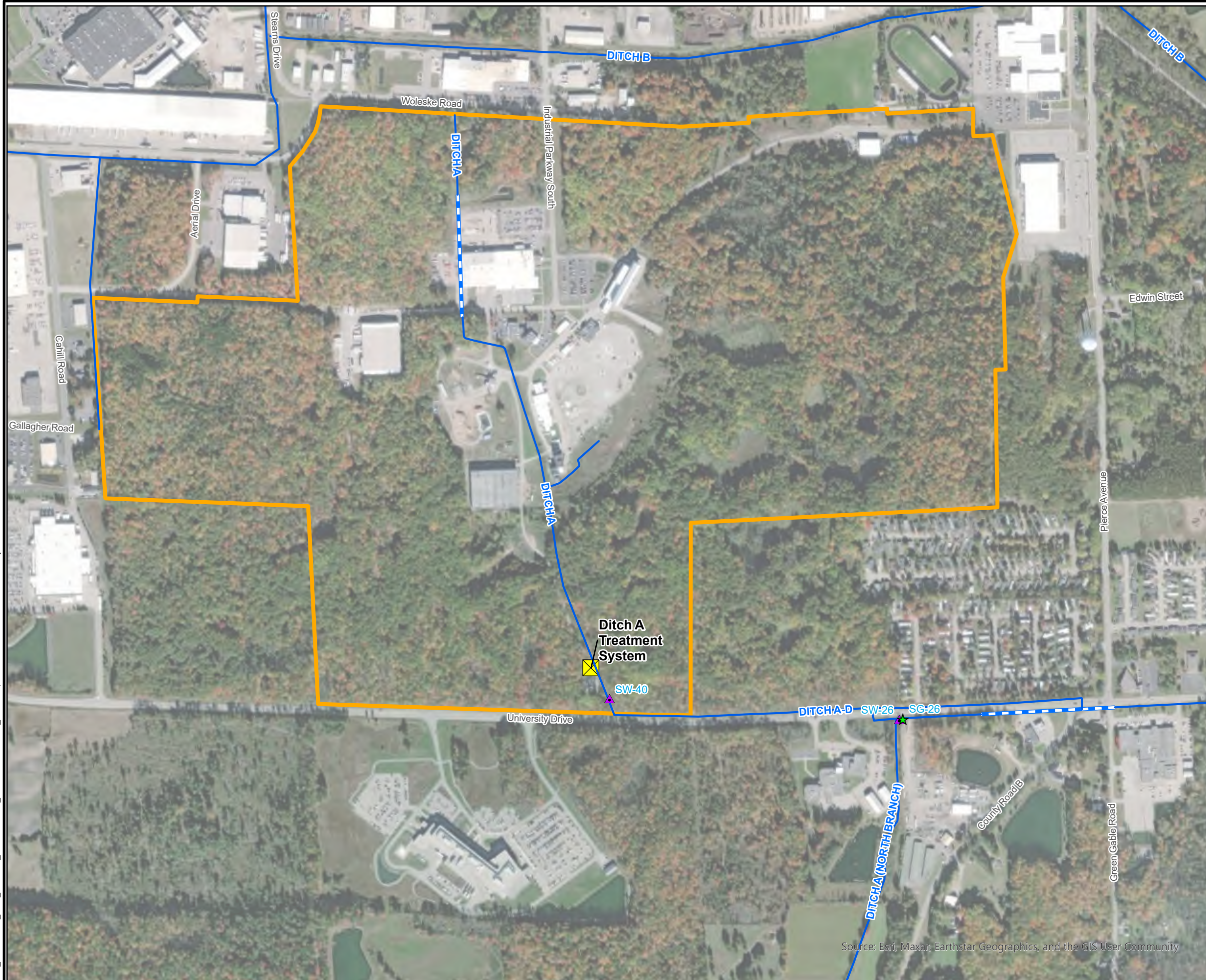
\*\*\*\*: 36 PFAS analyte list included in **Appendix I**

The Ditch A downstream surface water sampling locations (SW-40 and SW-26) are shown on **Figure 4**. SW-40 is located immediately downstream of the Ditch A system outfall. SW-26 is located downstream of SW-40 along the south side of University Drive. At the time of sample collection at SW-26, flow conditions in Ditch A north, south, east, and west of SW-26 will be noted along with the water depth reading from the adjacent staff gauge (SG-26) and the Ditch A system operational status (on/off). At a minimum, the following replicates and QA/QC samples will be collected from the downstream sampling locations per Wis. Admin Code § NR 716.13(c)







- One replicate for every 10 or less samples
- One equipment blank for every 10 or less samples, unless dedicated sampling equipment is used to prevent cross-contamination
- One temperature blank for every shipping container of samples that require cooling for preservation, unless samples are shipped on ice

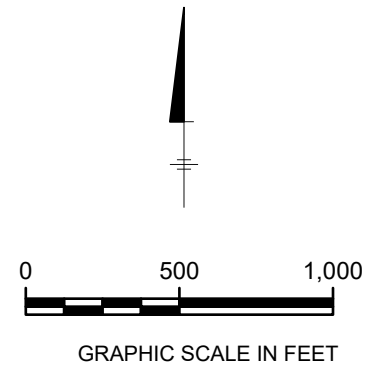


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**Legend**

-  Surface Water Sample
-  Staff Gauge
-  Ditches or Stream
-  Culvert
-  Approximate Site Property Boundary
-  Surface Water Treatment System



TYCO FIRE TECHNOLOGY CENTER  
MARINETTE, WISCONSIN

**DITCH A DOWNSTREAM SURFACE WATER  
SAMPLING LOCATIONS**

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



## 7 Reporting – Revised July 2023

### 7.1 Ditch A Check Dam Overtopping

In the event that surface water overtops the Ditch A check dam, an alarm is generated by the PLC. The alarm is triggered when the surface water levels upstream of the Ditch A check dam exceed the height of the check dam. Representatives from WDNR, Tyco, and Arcadis are included on the email list and are notified of the event automatically. The high flow event is monitored until the upstream surface water elevation is recedes to below the Ditch A check dam. The details of each event are included in the semi-annual report for Ditch A.

### 7.2 Electronic Discharge Monitoring Report

Results of the compliance sampling completed under the WPDES permit and associated coverage letter are tabulated on the appropriate electronic discharge monitoring report (eDMR) form and submitted to WDNR on a monthly basis.

### 7.3 Noncompliance Reporting

Per Section 7.1.4 of the WPDES permit, WDNR will be notified of the following types of noncompliance by a telephone call to the department's regional office within 24 hours after becoming aware of the noncompliance:

- Any noncompliance which may endanger health or the environment.
- Any violation of an effluent limitation resulting from a bypass.
- Any violation of an effluent limitation resulting from an upset.
- Any violation of a maximum discharge limitation for any of the pollutants listed by the department in the permit.

A written report describing the noncompliance shall also be submitted to WDNR within 5 business days after becoming aware of the noncompliance, unless otherwise directed by WDNR. The written report shall contain:

- A description of the noncompliance and its cause.
- The period of noncompliance, including exact dates and times.
- The steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
- If the noncompliance has not been corrected, the length of time it is expected to continue.

### 7.4 Semi-Annual Operation, Maintenance, and Optimization Progress Report

A summary report detailing the remedial operation, maintenance, optimization, and monitoring activities completed during the reporting period will be submitted to WDNR on a semi-annual basis in accordance with Wis. Admin Code § NR 724.17(3). Per instruction by WDNR, Form 4400-194 is not required for the semi-annual reports.

Historically, the semi-annual reports have included summaries of the following during the applicable reporting period:

- System description
- System modifications and maintenance activities
- Summary of system operating statistics including uptime, utilization, and average volume treated per day
- Summary of compliance sampling results
- Summary of PFAS mass removal and mass removal efficiency
- Summary of surface water levels upstream of the Ditch A check dam
- Summary of influent PFAS concentrations compared to historical trends.

Per a response letter to Tyco from WDNR dated April 20, 2021, the following information will also be included in the semi-annual reports:

- Sequential numbering of report titles.
- Volumes of materials generated during the reporting period.
- Documentation of disposal or other handling (e.g., carbon regeneration) of the waste materials.
- Table(s) that summarize the long-term monitoring results per Wis. Admin Code § NR 724.17(3m):
  - Monthly concentrations of PFOA and PFOS measured in surface water in Ditch A upstream and downstream of the treatment system (upstream may be an average of the influent).
  - Weekly flow volume treated by the system vs. estimate of total weekly flow in Ditch A (total flow accounting for system downtime, high flow events, and seepage not captured by the system).
  - Running total of PFOA and PFOS mass removed by the Ditch A treatment system.
- Long-term monitoring analytical results as outlined in **Section 7.5**.

## 7.5 Long-Term Monitoring Analytical Results

The analytical results from samples collected from the downstream sampling locations in Ditch A (SW-40 and SW-26) will be submitted to WDNR in the semi-annual report described in **Section 7.4**. Per Wis. Admin Code § NR 724.17(3m), the report will contain the following information will accompany the analytical results.

- The information specified under s. NR 724.05(2)(3).
- Sampling results.
- Monitoring results in tabular and graph form, including the current monitoring results and all previous results.
- Laboratory analytical reports and sample chain-of-custody forms.
- Identification of any specific environmental standards that have been attained or exceeded and an indication on a site map of the location where the standards have been attained or exceeded.
- A preliminary analysis of the cause and significance of any concentrations that attain or exceed specific environmental standards and any increases in concentration of substances that previously attained or exceeded specific environmental standards.



Per the letter issued by WDNR on April 20, 2021, analytical samples collected from the system influent (V-200) and system effluent (V-900) will continue to be included in the semi-annual report and monthly eDMR as described in **Section 7.4** and **Section 7.2**, respectively.