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July 17, 2023

Andrew Kleinberg
U.S. Environmental Protection Agency Region 5
Land, Chemicals & Redevelopment Division
77 West Jackson Blvd, LR-16J
Chicago, IL 60604-3590

Subject: ***Quarterly Progress Report (April through June 2023)***
Administrative Order on Consent (February 26, 2009)
Tyco Fire Products LP, Stanton Street Facility, Marinette, Wisconsin
WID 006 125 215

Dear Mr. Kleinberg:

In accordance with Section VI, 21, b (page 10) of the Administrative Order on Consent (AOC), dated February 26, 2009,[1] Tyco Fire Products LP (Tyco) has prepared this quarterly progress report for the U.S. Environmental Protection Agency (EPA) Region 5 and Wisconsin Department of Natural Resources (WDNR) (collectively referred to herein as the Agencies). Progress reports are required to document activities conducted as part of the Resource Conservation and Recovery Act (RCRA) corrective actions at the Tyco facility on Stanton Street in Marinette, Wisconsin (Figure 1). This report covers the period from April 1 through June 30, 2023, and presents a brief description of the work performed, data collected, problems encountered, and schedule of activities as required by the February 2009 AOC and subsequent agreements.

Work Completed during This Reporting Period

Groundwater Collection and Treatment

Attachment 1 summarizes the operational data for the groundwater collection and treatment system (GWCTS) during second quarter 2023, and Attachment 2 contains the monthly Discharge Monitoring Reports for Wisconsin Pollutant Discharge Elimination System (WPDES) outfall OF004 (Figure 2) and sampling point SP108 (GWCTS effluent). The GWCTS treats groundwater extracted from the Main Plant (EW-4, EW-5, EW-6, and EW-7) and Wetlands Area (EW-1) to maintain groundwater levels in those areas below ground surface and prevent surface flooding of the facility (Figures 1 and 2). Because the GWCTS was shut down on September 20, 2022, as part of the GWCTS improvements, there was no groundwater discharged by the GWCTS during the reporting period (groundwater recovered from the pump down program [PDP] operations, which includes the former Salt Vault and former 8th Street Slip areas [Figure 1], is tracked separately in this memorandum). The GWCTS upgrades were substantially completed in June

[1] U.S. Environmental Protection Agency. 2009. *Resource Conservation and Recovery Act Administrative Order on Consent, Ansul, Incorporated*. EPA Docket No. RCRA-05-2009-0007542-S-02-001. February 26.

2023, and clean water testing of the system was conducted from the beginning of June 2023 until the end of the month. On June 29, 2023, approximately 5,100 gallons of groundwater (including PDP groundwater) was fully treated through the improved treatment system and was sampled and sent to a frac tank pending the analytical results from the laboratory to allow for discharge.

As indicated in an April 1, 2023, email from Tyco, as a temporary measure to address spring snowmelt and rain, extraction well EW-7 (Figure 2) was operated, as needed, starting on March 14, 2023, to reduce groundwater levels in the area. Groundwater extracted from EW-7 was being transferred via the conveyance lines that run from the groundwater treatment plant to the PDP area collection tanks in the PDP building. In addition, water generated during GWCTS clean water testing was also transferred to the PDP building tanks. Approximately 139,000 gallons of groundwater from EW-7 and the water from the GWCTS clean water testing was pumped and transferred to the PDP building during the reporting period. The groundwater from EW-7 and water from the GWCTS the clean water testing are being managed consistent with the existing PDP groundwater, which is currently sent for offsite disposal. A portion of this water has been stored in 20,000-gallon frac tanks on the former Salt Vault and former 8th Street Slip to be either conveyed to the groundwater treatment plant following its start-up or was disposed offsite (see below). EW-7 was reconnected to discharge into the treatment plant as part of the clean water testing operations that began in June 2023.

An estimated 420,000 gallons of groundwater was also pumped during the reporting period as part of construction dewatering operations and the operation of building sumps at the site. This water has been temporarily stored onsite in the 20,000-gallon frac tanks, located in the former Salt Vault and former 8th Street Slip areas. A portion of this volume has been disposed of offsite (see below).

Overall, an estimated 309,000 gallons of groundwater (from EW-7, GWCTS clean water testing, dewatering operations, and construction dewatering) was removed from the site during the reporting period to the Waste Management Vickery Deepwell Hazardous Waste disposal facility in Vickery, Ohio. The remaining volume of collected groundwater onsite from all sources stored in frac tanks is approximately 1,200,000 gallons. The stored water will continue to be disposed of offsite as trucks allow and will also be slowly added in to the GWCTS once operations are consistent and reliable with groundwater from the extraction wells.

Pump down operations with the pump house system continued through second quarter 2023 in the former Salt Vault and former 8th Street Slip areas. The groundwater generated from the PDP continues to be disposed offsite at the Vickery disposal facility until the GWCTS upgrades are complete. PDP operations continued under management of Endpoint Solutions (Endpoint) of Franklin, Wisconsin. Both the former Salt Vault and former 8th Street Slip areas have maintained average groundwater levels below the target elevation during the reporting period, as indicated by the target elevation calculation included in the manual water level measurements table (Attachment 3) and also shown on the hydrographs of transducer data collected as part of the pump house system operations (Attachment 4), except on the following dates that were related to truck availability from the disposal facility (this will be mitigated with the operation of improved GWCTS, which will be in July 2023):

- April 25 – The water level in the former 8th Street Slip was 0.03 foot above the target elevation.
- May 3 – The water levels in the former Salt Vault and former 8th Street Slip were 0.03 and 0.15 foot above the target elevation, respectively.
- June 6 – The water level in the former Salt Vault was 0.07 foot above the target elevation.

Note that during the reporting period, the groundwater levels were well below the river elevation; therefore, an inward gradient was maintained in these areas during the reporting period. From April 1 to June 30, 2023, approximately 315,671 gallons of groundwater was extracted and disposed of offsite as part of the PDP. The overall average pumping rate for the reporting period in the former Salt Vault was 1.2 gallons per minute (gpm) and in the former 8th Street Slip was 1.2 gpm. Average weekly pumping rates (which include both areas) ranged from 1.2 to 3.6 gpm and are summarized in Attachment 4.

Cover Area H

As noted in the last quarterly report, the sealing conducted in August 2022 at Cover Area H (Figure 3) will likely need additional sealing activities in 2023. However, prior to resealing, Tyco plans to modify this area in 2023 by adding a shallow french drain that will be tied into the groundwater extraction system, as indicated in an April 1, 2023, email. A meeting was held on May 2 with the Agencies, Tyco, Jacobs, and Endpoint to discuss this work. As requested during the meeting, additional information regarding the proposed work was provided on May 16, 2023, and a revised submittal on May 26, 2023. The design includes the addition of a shallow french drain that will be used to maintain groundwater levels in this low-lying area to the west of the former Salt Vault. The french drain will further reduce the risk of seasonal flooding, and prevent potential mixing of groundwater with stormwater that is conveyed at grade as part of the Outfalls 5 and 6 (Figure 2) permitted stormwater discharge system. This area will be resealed following installation activities.

Barrier Wall Groundwater Monitoring Activities

Tyco submitted the *2022 Barrier Wall Groundwater Monitoring Annual Report* on April 15, 2023.

The spring barrier wall groundwater monitoring and sampling event was conducted the week of June 19, 2023, by Endpoint. The sampling was conducted in accordance with the *Revised Barrier Wall Groundwater Monitoring Plan Update* (BWGMPU)[2] and the 2019 Addendum to the 2015 BWGMPU.[3] Monitoring well nest MW105 is planned for installation in third quarter 2023, and these wells will be sampled following their installation and development. The sitewide water levels will also be measured at that time so that MW105 nest wells are included in the event. As part of the MW105 monitoring well nest installation, bedrock test well BT-02 is also planned to be abandoned. Details on BT-02 and the abandonment request were included in the May 17, 2023, email correspondence. BT-02 was installed in 2014 to assess the hydraulic conductivity of the bedrock aquifer and the connectedness of the unit to the overlying lacustrine silt/sand and alluvial sand units. BT-02 was not tested as it yielded no to very little water (purged dry rapidly at rate of 1 gpm and took weeks to recover) and has not been used as part of the monitoring program. Abandonment is proposed because BT-02 is not being used, exhibits very low hydraulic conductivities and poor hydraulic connection to other parts of the aquifer and is also near MW106 nest (which also includes a bedrock well MW106D, all just southwest of the groundwater treatment system building).

Pressure transducer–related activities were completed on June 22, 2023. These activities included downloading data from each transducer and collecting manual water levels at the time of transducer downloads.

[2] CH2M HILL, Inc. 2015. *Revised Barrier Wall Groundwater Monitoring Plan Update*. September 3.

[3] Jacobs. 2019. *Addendum to 2015 Barrier Wall Groundwater Monitoring Plan Update*. June.

Maintenance Inspections

Routine maintenance and inspections were conducted by Sand County Environmental, Inc. of Rhinelander, Wisconsin, in phyto-plot Zones 4 and 7 (Figure 2) during the reporting period. The other zones will be inspected in third quarter 2023. Beyond the routine maintenance, there were no major issues or findings to address in Zones 4 and 7. During the week of May 8, 2023, the Wetlands Area (Zone 4) had several trees replanted in the area where new trees were planted in 2022. Most of the trees were established quickly last year, and some have doubled in size. The fence was still in place and there was no evidence of deer browse, but there was some minor vole damage. A follow-up maintenance inspection was conducted on June 2, and the replants have taken root and were in good condition. On May 10, 2023, Zone 7 was set up with an upgraded drip irrigation system. The previous system was being turned off because it interfered with the water pressure at the boiler house (Building 40, Figure 2). The new system was set up with a steady drip into a tote that then periodically discharges onto the trees. The deer fence was repaired, and approximately 40 percent of the trees were replanted that had not been established since last year's replanting.

The landside and waterside (above-water and underwater inspection with the divers) inspection of the sheet pile vertical barrier wall (Figures 1 and 4) along the Menominee River was completed on June 27 and 28, 2023. Note the slurry wall portion was not included in the inspection and will be conducted when the survey of the vertical barrier wall is completed. No major issues were identified during the sheet pile wall inspection. Some areas were identified that require some follow-up maintenance. This work will be completed by Tyco during third quarter 2023 and includes the following tasks:

- Several tieback cover plates (that are external to the barrier wall and protect the ends of the tiebacks that penetrate the wall) were cracked or missing. These cover plates will be repaired or replaced.
- Five bolts along the Main Plant area had small leaks. Marine weld epoxy sealant will be reapplied, and the bolts will be tightened, eliminating the leaks.

The vertical barrier wall inspection details will be provided in the annual report.

2023 Sediment Sampling Event

On May 24, 2023, EPA provided comments on the December 9, 2022, *Sediment Sampling Work Plan*. Teleconference meetings with the Agencies, Tyco, and Jacobs were conducted on June 1 and 5, 2023, to discuss the comments. Two additional memorandums were submitted as separate deliverables on June 8 and 13, 2023, to respond expeditiously to specific EPA and WDNR comments regarding the sediment field sampling methodology and the surface weighted average concentration methodology for the Turning Basin, respectively. These memorandums were expedited to facilitate the Agencies' review and approval and allow the sediment sampling to proceed as planned for the last week of June 2023. The Agencies provided comments on the June 8, 2023, sediment field sampling methodology memorandum in an email on June 15, 2023, to which Tyco provided responses and proposed adjustments to the methodology on June 16, 2023. Where applicable in the responses, these June 8 and 13, 2023, memorandums (and subsequent follow-up emails) will be referenced herein. On June 27, 2023, EPA approved the June 8 and 16, 2023, sediment field sampling approach submissions, with some comments to be addressed or considered. Per EPA's request, a response to comments document was submitted on June 28, 2023, that consolidated a formal response to all the Agencies' comments provided in the May 25, 2023, letter. In addition, a *Revised Sediment Sampling Work Plan* was included as Attachment A to the June 28, 2023, response letter. The field team was onsite June 30, 2023, to start the scientific scuba diver portion of the sediment sampling activities, and this work was completed by July 6, 2023. The

data will be compiled and provided in a memorandum that will be submitted 60 days after all validated soft sediment sampling data are received.

Quarterly Report Comments

EPA provided comments on the first quarter 2023 quarterly report on June 30, 2023. Tyco is reviewing the comments and will submit a response in third quarter 2023. Where applicable, modifications to this report have been made per those comments (such as inclusion of additional figures with site features and udpates to Attachments 3 and 4).

Additional Activities

WPDES Permit Activities

Follow-on activities as part of the final WPDES Permit WI-0001040-08-0 (effective January 1, 2021, through December 31, 2025) continued in second quarter 2023, which included the following:

- Activities to implement the GWCTS improvements continued in second quarter 2023, including equipment and material procurement, substantial completion of construction, and initiation of clean water and groundwater start-up and commissioning activities.
- Engineering optimization continued for the portions of the stormwater improvement (approved by WDNR). All final stormwater construction activities will be completed in 2023.
- The estimated 4,000 tons of soil stockpiled onsite from the construction activities was removed and sent offsite for disposal to the Waste Management Chemical Waste Management of the Northwest Subtitle C Hazardous Waste disposal facility in Arlington, Oregon, by June 14, 2023.

ChemDesign Building 67 Expansion

ChemDesign, which is a long-term tenant on the property, was in the process of expanding existing Building 67 (Figure 2), and the new building layout and related demolition and construction activities was recently determined to impact monitoring wells MW011S and MW011M (Figure 2). On April 6, 2023, an email was sent to the Agencies regarding ChemDesign work. The email was requesting approval to abandon these wells. A memorandum was submitted on April 20, 2023, that further detailed changes to RCRA site components due to ChemDesign Building 67 expansion. A teleconference meeting was held on May 2, 2023, with the Agencies, Tyco, Jacobs, and Endpoint, and the details of the work were discussed. It was later determined that ChemDesign had already moved ahead with components of the work (MW011S/MW011M were abandoned on April 24, 2023, by ChemDesign's contractor, and work in cover areas had already been started to allow for grading to start the building construction); the memorandum was therefore revised and submitted May 26, 2023, and updated with the work that was completed.

Alternate Site-Specific Grout Mixture

During ChemDesign's planning for abandonment of MW011S and MW011M, the Type II Portland cement component of the site-specific mix design was not available from regional suppliers and had to be procured and shipped in from other alternative suppliers. Due to the future availability concerns and Type II Portland cement not being readily available, Tyco requested that an alternate mix design be allowed, in which the Portland-limestone cement Type IL serves as a direct substitute at the same dose in the mix design as the Type II Portland cement. The memorandum titled *Request for Alternate Site Specific*

Grout Mixture was submitted on May 26, 2023, for WDNR review and approval. WDNR approved the use of the alternate mixture via email on June 6, 2023.

Soil Management Plan

During the May 2, 2023, meeting with the Agencies, Tyco, Jacobs, and Endpoint, it was also discussed that a soil management plan be prepared for the site. A Soil Management Plan was submitted on May 15, 2023. EPA provided review comments on June 30, 2023. Tyco is reviewing the comments and will submit a response in third quarter 2023.

Data Collected

Extraction and treatment volumes, analytical testing, and discharge data are required as part of the WPDES permits obtained from WDNR for operating the existing GWCTS, which operates under WPDES Permit WI-0001040-08-0. Attachment 2 includes the GWCTS monthly WPDES Discharge Monitoring Reports for March 2023 through May 2023 for WPDES outfall OF004; there was no discharge in March 2023 through May 2023 for the GWCTS at OF004. Attachment 1 contains additional data on GWCTS operations.

Weekly groundwater elevation data were collected from monitoring wells in the former 8th Street Slip and former Salt Vault areas in accordance with the PDP requirements, and the data are included in the 2023 PDP summary table (Attachment 3). Water level data from transducers in monitoring wells and pumping rates collected as part of the PDP pump house system are also summarized in a hydrograph and stacked bar chart (with average weekly pumping rates), respectively (Attachment 4). Although we are in the post-draw down monitoring phase (which requires quarterly manual water level measurements, instead of weekly), weekly water level measurements will continue to be collected until the GWCTS is fully operational and the frac tanks staged on the former Salt Vault and former 8th Street Slip are removed out of the transducer line-of-sight to the pump house building (Figure 2).

Spring barrier wall groundwater monitoring event data are not yet available and will be included in the annual/5-year review report. Groundwater elevation data recorded by transducers are being compiled and evaluated. The transducer data will also be provided in the annual/5-year review report.

Problems Encountered

During GWCTS construction activities, influent samples were being collected at each of the extraction wells to provide current data on the incoming anticipated concentrations of WPDES permit required analytes. During the sampling effort, it was determined that the EW-5 and EW-6 extraction wells (Figure 2) were not pumping water. After some initial troubleshooting, it was determined that the conveyance line for these wells may have been damaged during the water line installation work conducted in fall 2022. Endpoint and Barley conducted an investigation using several types of non-invasive utility-locating equipment. The break in the line was found northwest of Building 83 (Figure 2). The repair work to reconnect the lines was conducted on May 5, 2023. Once the line was repaired it was determined the pump at EW-5 also was not working and the pump was replaced on June 21, 2023.

Schedule of Upcoming Activities

The following summarizes the activities to be conducted during the next reporting period:

- Submit the quarterly progress report
- Complete start-up activities for the GWCTS improvements
- Begin full time operation of the improved GWCTS once laboratory results are received
- Continue PDP operations in the former Salt Vault and former 8th Street Slip areas until incorporated into GWCTS operations
- Begin implementation of remaining stormwater improvement optimization construction activities, once the site soil management plan/materials management plan procedure is approved
- Initiate and complete installation of the shallow french drain to maintain groundwater levels within the low-lying area to the west of the former Salt Vault
- Install replacement monitoring wells for MW105 nest and abandonment of BT-02 (as noted in the May 17, 2023, email correspondence)
- Submit response to Agencies' comments on *Soil Management Plan*
- Submit response to Agencies' comments on the First Quarter 2023 Quarterly Progress Report
- Complete the spring barrier wall groundwater monitoring sampling event by sampling the MW105 nest and collecting sitewide water level
- Complete underwater scientific scuba diver–conducted sediment sampling event
- Conduct transducer data download activities
- Conduct cover area and remaining tree plot inspections
- Conduct vertical barrier wall survey and inspection of the slurry wall
- Address inspection findings for the vertical barrier wall, tree plot, cover areas, and monitoring wells, as needed

List of Key Correspondence and Document Submittals

Project-related documents submitted to and received from the Agencies during second quarter 2023 are summarized in Tables 1 and 2, respectively.

Table 1. Documents Submitted

Quarterly Progress Report (April through June 2023), Tyco Fire Products LP Facility, Marinette, Wisconsin

Description of Submittal	Submitted To	Date Submitted
Email Notification—Modification to Groundwater Extraction System (Endpoint design documents attached)	EPA and WDNR	April 1, 2023
Email Notification—MW011 Well Nest Abandonment Activities	EPA and WDNR	April 6, 2023
Quarterly Progress Report (First Quarter 2023)	EPA	April 14, 2023
2022 Barrier Wall Groundwater Monitoring Annual Report	EPA	April 15, 2023

Table 1. Documents Submitted

Quarterly Progress Report (April through June 2023), Tyco Fire Products LP Facility, Marinette, Wisconsin

Description of Submittal	Submitted To	Date Submitted
Changes to RCRA Site Components Due to ChemDesign Building 67 Expansion	EPA and WDNR	April 20, 2023
Email—Regarding Status of EPA Review of the Sediment Sampling Work Plan	EPA	April 20, 2023
Email—Tyco Stanton Street Stock Pile: Information Request Follow-up	EPA and WDNR	April 26, 2023
Email—Tyco Stanton Street Stock Pile: Second Information Request Follow-up	EPA	April 26, 2023
Soil Management Plan	EPA and WDNR	May 15, 2023
Email—Requested additional details related to the proposed horizontal extraction well (Endpoint Memorandum Attached – New Horizontal Well (HW-3) Installation)	EPA and WDNR	May 16, 2023
Email—June 1 Proposed RCRA Meeting Agenda Items for Review and Response Needed on 2 Upcoming Tasks	EPA and WDNR	May 17, 2023
NR 718 Location Standards Exemption Request	WDNR	May 19, 2023
Email—Requested additional details related to the proposed horizontal extraction well (Revised Endpoint Memorandum Attached – PDP – French Drain Installation)	WDNR	May 26, 2023
Revision 1 – Changes to RCRA Site Components Due to ChemDesign Building 67 Expansion	EPA and WDNR	May 26, 2023
Request for Alternate Site Specific Grout Mixture	WDNR	May 26, 2023
Email Acknowledgment—EPA Sediment Work Plan comments received and request for meeting to discuss	EPA	May 30, 2023
Email—Request for June 5, 2023, meeting	EPA	May 31, 2023
Updated 2023 Sediment Sampling Field Sampling Approach	EPA	June 8, 2023
Surface Weighted Average Concentration Response To Comments	EPA	June 13, 2023
Email Notification—Annual Groundwater Sampling	EPA and WDNR	June 16, 2023
Email Response—Responses to EPA and WDNR June 15, 2023, email comments on the June 8, 2023, memorandum *Updated 2023 Sediment Sampling Field Sampling Approach*	EPA	June 16, 2023
Email Status Check-in—Check-in on June 16, 2023, responses and status of other items	EPA and WDNR	June 20, 2023
Response to Comments on EPA Review of 2023 Sediment Sampling Work Plan (with Attachment A – *Revised Sediment Sampling Work Plan*)	EPA	June 28, 2023
Email—July 6 Proposed RCRA Meeting Agenda Items	EPA and WDNR	June 29, 2023

Table 2. Correspondence from Agency

Quarterly Progress Report (April through June 2023), Tyco Fire Products LP Facility, Marinette, Wisconsin

Description of Correspondence	Submitted By	Date Submitted
Email Notification—Christopher Black No Longer EPA Project Manager	EPA	April 3, 2023
Email Response—Modification to Groundwater Extraction System	WDNR	April 4, 2023
Email—New EPA Project Manager Identified and request for meeting to discuss soil stockpiles onsite and future soil management practices	EPA	April 5, 2023
Email Response—MW011 Well Nest Abandonment Activities	WDNR	April 7, 2023
Email Response—Regarding Status of EPA Review of the Sediment Sampling Work Plan	EPA	April 21, 2023
Email—Follow-up on May 2, 2023, Call to Discuss April Notifications for Tyco Fire Products, Ansul Stanton Street Facility	WDNR	May 3, 2023
EPA Review of Sediment Sampling Work Plan	EPA	May 24, 2023
Email Response— Stanton Street – Requested additional details related to the proposed horizontal extraction well	WDNR	May 24, 2023
Email Response—Use June 1, 2023, meeting to discuss EPA Sediment Work Plan comments	EPA	May 30, 2023
Email Approval—Alternate Site Specific Grout Mixture	WDNR	June 6, 2023
Email Response—EPA and WDNR Response to Updated 2023 Sediment Sampling Field Sampling Approach	EPA	June 15, 2023
Email Conditional Approval—Sediment Sampling Memo Response to Comments	EPA	June 27, 2023
Soil Management Plan Review with Comments	EPA	June 30, 2023
Email Rejection—Stanton Street NR718 Location Standards Exemption Request	WDNR	June 30, 2023
Q1 2023 Progress Report Review with Comments	EPA	June 30, 2023

If you have any questions or require additional information, please contact me at 262-644-6167 or Denice Nelson at 651-280-7259.

Respectfully Yours,

Jacobs

Heather Ziegelbauer
Project Manager

cc: Angela Carey, WDNR
Sarah Krueger, WDNR
Ryan Suennen, Tyco Fire Products
Denice Nelson, Johnson Controls
Mariel Carter, Stephenson Public Library

Figures

1 Site Map
2 Site Plan with Wells and Phyto-Plot Location Map
3 Cover Area Location Map
4 Vertical Barrier Wall Details

Attachments

1 Groundwater Collection and Treatment System Operation Summary
2 Discharge Monitoring Reports for the Groundwater Collection and Treatment System
3 2023 Pump Down Program Groundwater Elevation Monitoring
4 Second Quarter 2023 PDP Pump House System Hydrograph and Pumping Rates

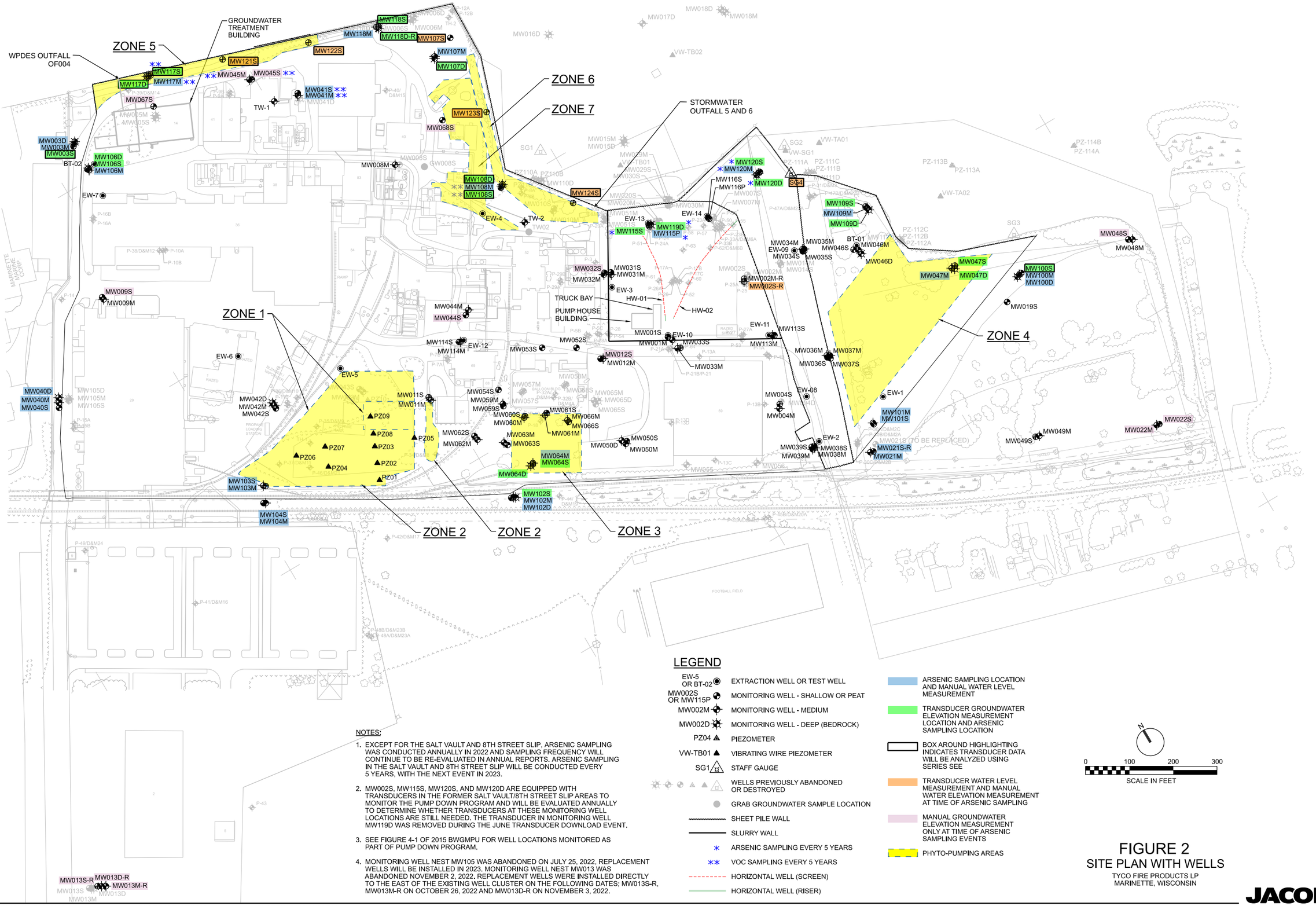
Document Control No.: D3766600.304

Figures

Figure 1. Site Map
Tyco Fire Products LP Facility
Marinette, WI

JACOBS

\\LAKEFRONT\PROJ\TYCO\MAPFILES\2018\FIVEYEARREVIEW\FIGURE 1 - SITE MAP.MXD, DATE SAVED: 8/24/2020 1:38:28 PM, USER NAME: JHANSEN1



LEGEND

- EW-5 OR BT-02 — EXTRACTION WELL OR TEST WELL
- MW002S OR MW115P — MONITORING WELL - SHALLOW OR PEAT
- MW002M — MONITORING WELL - MEDIUM
- MW002D — MONITORING WELL - DEEP (BEDROCK)
- PZ04 — PIEZOMETER
- VW-TB01 — VIBRATING WIRE PIEZOMETER
- SG1 — STAFF GAUGE
- WELLS PREVIOUSLY ABANDONED OR DESTROYED
- GRAB GROUNDWATER SAMPLE LOCATION
- SHEET PILE WALL
- SLURRY WALL
- * — ARSENIC SAMPLING EVERY 5 YEARS
- ** — VOC SAMPLING EVERY 5 YEARS
- HORIZONTAL WELL (SCREEN)
- HORIZONTAL WELL (RISER)
- ARSENIC SAMPLING LOCATION AND MANUAL WATER LEVEL MEASUREMENT
- TRANSDUCER GROUNDWATER ELEVATION MEASUREMENT LOCATION AND ARSENIC SAMPLING LOCATION
- BOX AROUND HIGHLIGHTING INDICATES TRANSDUCER DATA WILL BE ANALYZED USING SERIES SEE
- TRANSDUCER WATER LEVEL MEASUREMENT AND MANUAL WATER ELEVATION MEASUREMENT AT TIME OF ARSENIC SAMPLING
- MANUAL GROUNDWATER ELEVATION MEASUREMENT ONLY AT TIME OF ARSENIC SAMPLING EVENTS
- PHYTO-PUMPING AREAS

NOTES:

1. EXCEPT FOR THE SALT VAULT AND 8TH STREET SLIP, ARSENIC SAMPLING WAS CONDUCTED ANNUALLY IN 2022 AND SAMPLING FREQUENCY WILL CONTINUE TO BE RE-EVALUATED IN ANNUAL REPORTS. ARSENIC SAMPLING IN THE SALT VAULT AND 8TH STREET SLIP WILL BE CONDUCTED EVERY 5 YEARS, WITH THE NEXT EVENT IN 2023.
2. MW002S, MW115S, MW120S, AND MW120D ARE EQUIPPED WITH TRANSDUCERS IN THE FORMER SALT VAULT/8TH STREET SLIP AREAS TO MONITOR THE PUMP DOWN PROGRAM AND WILL BE EVALUATED ANNUALLY TO DETERMINE WHETHER TRANSDUCERS AT THESE MONITORING WELL LOCATIONS ARE STILL NEEDED. THE TRANSDUCER IN MONITORING WELL MW119D WAS REMOVED DURING THE JUNE TRANSDUCER DOWNLOAD EVENT.
3. SEE FIGURE 4-1 OF 2015 BWGMPU FOR WELL LOCATIONS MONITORED AS PART OF PUMP DOWN PROGRAM.
4. MONITORING WELL NEST MW105 WAS ABANDONED ON JULY 25, 2022. REPLACEMENT WELLS WILL BE INSTALLED IN 2023. MONITORING WELL NEST MW013 WAS ABANDONED NOVEMBER 2, 2022. REPLACEMENT WELLS WERE INSTALLED DIRECTLY TO THE EAST OF THE EXISTING WELL CLUSTER ON THE FOLLOWING DATES; MW013S-R, MW013M-R ON OCTOBER 26, 2022 AND MW013D-R ON NOVEMBER 3, 2022.

FIGURE 2
SITE PLAN WITH WELLS

TYCO FIRE PRODUCTS LP
MARINETTE, WISCONSIN

JACOBS

FILENAME: PGETAMW5_D3630600.dgn PLOT DATE: 3/7/2023 PLOT TIME: 12:26:53 PM

AREA C
(ASPHALT REPAIR)

AREA D
(ASPHALT REPAIR)

AREA E
(ASPHALT)

AREA B
(ASPHALT &
CONCRETE)

AREA F
(ASPHALT)

AREA A
(ASPHALT,
STONE &
CONCRETE)

MENOMINEE RIVER

SB211

AREA G
(SOIL & ASPHALT)

GROUNDWATER
TREATMENT BUILDING

MENOMINEE RIVER

AREA H
(ASPHALT)

AREA I
(ASPHALT)

MARINETTE
MARINE

EIGHTH ST. SLIP

SIXTH ST. SLIP

AREA K
(SOIL,
ASPHALT &
CONCRETE)

AREA J
(SOIL, CRUSHED
STONE & CONCRETE)

AREA L
(EXCAVATED)

AREA M
(EXCAVATED)

AREA N
(EXCAVATED)

NOTES:

1. DUE TO CONSTRUCTION OF THE GROUNDWATER TREATMENT BUILDING, THE ASPHALT COVERS PLACED IN AREAS A AND B WERE REMOVED, MATERIAL EXCAVATED AND STOCK-PILED FOR OFFSITE DISPOSAL, AND THE BUILDING CONSTRUCTED OVER THE AREAS.
2. A PORTION OF AREAS C AND D WERE RE-ASPHALTED IN 2010 AS PART OF RESTORATION ACTIVITIES RELATED TO SHEETPILE BARRIER WALL INSTALLATION.
3. AREAS A, B, C, D, H, I, J, K, L, M, AND N WERE COMPLETED IN 2009. AREAS E, F, AND G WERE COMPLETED IN 2010.
4. AREAS L AND M WERE RE-EXCAVATED IN 2010 TO REMOVE ADDITIONAL MATERIAL.
5. AREA I WAS PREVIOUSLY REPLACED ALL WITH ASPHALT DURING SEDIMENT WORK.
6. AREAS G, H AND K HAD AREAS REPLACED WITH ASPHALT IN 2017 DURING STORMWATER OUTFALL UPDATES.

LEGEND

- STONE COVER
- ASPHALT OR CONCRETE COVER
- SOIL COVER
- 2017 CONVERTED TO ASPHALT

N

0 100 200 300
Scale In Feet

DSGN T. CHAPMAN
DR G. BOWLES
CHK J. DANKO
APVD H. ZIEGELBAUER

PRELIMINARY

JACOBS

TYCO FIRE PRODUCTS LP
Cover Maintenance Plan for
Onsite and Offsite Soil Areas at
the Tyco Fire Products LP Facility
Marinette, Wisconsin

FIGURE 3
AREA LOCATION MAP

SCALE: 1" = 200'
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"
DATE DECEMBER 2018
PROJ 704683
REVISION 1

FILENAME: O&M-Fig11_Overall.dgn PLOT DATE: 2018\12\17 PLOT TIME: 11:59:25 AM

FIGURE 4
VERTICAL BARRIER WALL DETAILS
TYCO FIRE PRODUCTS LP
MARINETTE, WISCONSIN

JACOBS

FILENAME: Figure_3_D3394600.dgn PLOT DATE: 2020\07\13 PLOT TIME: 3:50:23 AM

Attachment 1
Groundwater Collection and Treatment System Operation Summary

Groundwater Collection and Treatment System Operations for Tyco Fire Products LP, Marinette, Wisconsin, April 1 through June 30, 2023

The following summarizes groundwater collection and treatment system (GWCTS) operations from April 1 through June 30, 2023, at the Tyco Fire Products LP facility on Stanton Street in Marinette, Wisconsin:

- The GWCTS operated for 0 days in April 2023, 0 days in May 2023, and 1 day in June 2023, for a total of 1 day.
- For the reporting period, the precipitation recorded from the weather station in Marinette, Wisconsin, was 7.88 inches of rain and 5.5 inches of snow (http://www.ncdc.noaa.gov/cdo-web/datasets/GHCND/stations/GHCND:USC00475091/detail).
- An estimated 18,000 gallons of groundwater was extracted during the GWCTS start-up activities on June 29, 2023, and does include PDP system groundwater wells. Additionally, an estimated 420,000 gallons was removed from dewatering and sump activities and an estimated 139,000 gallons from GWCTS clean water testing and groundwater pumped from EW-7 when it was temporarily operated (and was either disposed of offsite at the Waste Management Vickery Deepwell Hazardous Waste disposal facility in Vickery, Ohio or stored in frac tanks on the former Salt Vault and former 8th Street Slip) during the reporting period.
- During the reporting period, 0 gallons of water was discharged to the Menominee River as effluent under the Wisconsin Pollutant Discharge Elimination System permit. The water that was treated on June 29, 2023, is being held in a frac tank pending laboratory results to allow for discharge.
- Approximately 2,500 gallons of reject water was produced during start-up activities this reporting period and will be disposed of at the Waste Management Vickery Deepwell Hazardous Waste disposal facility in Vickery, Ohio.

Attachment 2
Discharge Monitoring Reports for the Groundwater Collection and Treatment System

Wastewater Discharge Monitoring Long Report

For DNR Use Only

Facility Name: TYCO FIRE PRODUCTS LP
Contact Address: One Stanton St
Marinette, WI 54143
Facility Contact: Mike Elliott, EHS Manager
Phone Number: 715-735-7415
Reporting Period: 03/01/2023 - 03/31/2023
Form Due Date: 04/21/2023
Permit Number: 0001040

Date Received:	
DOC:	509600
FIN:	7245
FID:	438039470
Region:	Northeast Region
Permit Drafter:	Laura K Rodriguez Alvarez
Reviewer:	Laura A Gerold
Office:	Green Bay

	Sample Point	703	703	101	101	101
	Description	Menominee River Intake	Menominee River Intake	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent
	Parameter	211	35	211	373	374
	Description	Flow Rate	Arsenic, Total Recoverable	Flow Rate	pH (Maximum)	pH (Minimum)
	Units	gpd	ug/L	MGD	su	su
	Sample Type	TOT DAILY	GRAB	CONTINUOUS	CONTINUOUS	CONTINUOUS
	Frequency	DAILY	MONTHLY	DAILY	DAILY	DAILY
Sample Results	Day 1			0.03480	7.6	6.6
	2			0.04061	7.4	6.6
	3			0.02568	7.3	6.6
	4			0.01029	7.4	6.4
	5			0		
	6			0.03650	7.4	6.7
	7			0.02743	7.8	6.4
	8			0.03563	7.2	6.7
	9			0.03670	7.5	6.6
	10			0.02827	8.2	6.5
	11			0.00548	7.4	6.6
	12			0		
	13			0.04215	7.3	6.9
	14			0.03879	7.2	6.6
	15			0.04315	7.3	6.8
	16			0.02785	7.4	6.6
	17			0.03009	7.4	6.6
	18			0.01435	7.8	6.8
	19			0		
	20			0.04281	8.4	7.0
	21			0.03961	7.5	6.7
	22			0.03653	8.6	6.8
	23			0.03641	7.3	6.4
	24			0.02590	7.0	6.2
	25			0.00113	6.6	6.2
	26			0		
	27			0.04788	7.5	7.1
	28			0.04318	7.3	6.8
	29			0.03980	7.7	7.0
	30			0.03578	7.5	6.5
	31			0.03036	7.4	6.8

	Sample Point	703	703	101	101	101
	Description	Menominee River Intake	Menominee River Intake	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent
	Parameter	211	35	211	373	374
	Description	Flow Rate	Arsenic, Total Recoverable	Flow Rate	pH (Maximum)	pH (Minimum)
	Units	gpd	ug/L	MGD	su	su
Summary Values	**Monthly Avg**			0.027650323	7.496296296	6.648148148
	Monthly Total					
	Daily Max			0.04788	8.6	7.1
	Daily Min			0	6.6	6.2
Limit(s) in Effect	**Monthly Avg**					
	Monthly Total					
	Daily Max				9 0	
	Daily Min					6 0
QA/QC Information	**LOD**					
	LOQ					
	QC Exceedance	N	N	N	N	N
	Lab Certification					

	Sample Point	101	101	101	101	101
	Description	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent
	Parameter	379	376	457	651	87
	Description	pH Total Exceedance Time Minutes	pH Exceedances Greater Than 60 Minutes	Suspended Solids, Total	Oil & Grease (Hexane)	Cadmium, Total Recoverable
	Units	minutes	Number	mg/L	mg/L	ug/L
	Sample Type	CONTINUOUS	CONTINUOUS	24 HR FLOW PROP	GRAB	24 HR FLOW PROP
	Frequency	DAILY	DAILY	3/WEEK	MONTHLY	MONTHLY
Sample Results	**Day 1**			2.4		
	2			<1.9		
	3					
	4					
	5					
	6			2.4		
	7					
	8			2.6		
	9			2.0	<1.5	<0.49
	10					
	11					
	12					
	13			<1.9		
	14					
	15			<1.9		
	16			2.0		
	17					
	18					
	19					
	20			2.6		
	21					
	22			5.4		
	23			<1.9		
	24					
	25					
	26					
	27			<1.9		
	28					
	29					
	30					
	31					

	Sample Point	101		101		101		101		101	
	Description	Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent	
	Parameter	379		376		457		651		87	
	Description	pH Total Exceedance Time Minutes		pH Exceedances Greater Than 60 Minutes		Suspended Solids, Total		Oil & Grease (Hexane)		Cadmium, Total Recoverable	
	Units	minutes		Number		mg/L		mg/L		ug/L	
Summary Values	**Monthly Avg**					1.616666667		0		0	
	Monthly Total										
	Daily Max					5.4		<1.5		<0.49	
	Daily Min					<1.9		<1.5		<0.49	
Limit(s) in Effect	**Monthly Avg**					31	0	26	0	260	0
	Monthly Total	446	0	0	0						
	Daily Max					60	0	52	0	690	0
	Daily Min										
QA/QC Information	**LOD**							1.5		0.49	
	LOQ							5.6		1	
	QC Exceedance	N		N		N		N		N	
	Lab Certification					999580010		999580010		999580010	

	Sample Point	101	101	101	101	101
	Description	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent
	Parameter	147	315	553	507	280
	Description	Copper, Total Recoverable	Nickel, Total Recoverable	Zinc, Total Recoverable	Total Toxic Organics	Mercury, Total Recoverable
	Units	ug/L	ug/L	ug/L	ug/L	ng/L
	Sample Type	24 HR FLOW PROP	24 HR FLOW PROP	24 HR FLOW PROP	24 HR FLOW PROP	GRAB
	Frequency	MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Sample Results	**Day 1**					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9	5.5	11.0	42.0		
	10					
	11					
	12					
	13					
	14					
	15					
	16					
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26					
	27					
	28					0.19
	29					
	30					
	31					

	Sample Point	101		101		101		101		101	
	Description	Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent	
	Parameter	147		315		553		507		280	
	Description	Copper, Total Recoverable		Nickel, Total Recoverable		Zinc, Total Recoverable		Total Toxic Organics		Mercury, Total Recoverable	
	Units	ug/L		ug/L		ug/L		ug/L		ng/L	
Summary Values	**Monthly Avg**	5.5		11		42				0.19	
	Monthly Total										
	Daily Max	5.5		11		42				0.19	
	Daily Min	5.5		11		42				0.19	
Limit(s) in Effect	**Monthly Avg**	2070	0	2380	0	1480	0				
	Monthly Total										
	Daily Max	3380	0	3980	0	2610	0	2130			
	Daily Min										
QA/QC Information	**LOD**	1.7		1.5		3.6				0.079	
	LOQ	5		5		10				0.5	
	QC Exceedance	N		N		N		N		N	
	Lab Certification	999580010		999580010		999580010				999580010	

	Sample Point	101	101	101	704	704
	Description	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	GWCTS Influent	GWCTS Influent
	Parameter	280	35	35	211	35
	Description	Mercury, Total Recoverable	Arsenic, Total Recoverable	Arsenic, Total Recoverable	Flow Rate	Arsenic, Total Recoverable
	Units	mg/day	ug/L	lbs/day	gpd	ug/L
	Sample Type	CALCULATED	24 HR FLOW PROP	CALCULATED	CONTINUOUS	24 HR FLOW PROP
	Frequency	MONTHLY	MONTHLY	MONTHLY	DAILY	WEEKLY
Sample Results	**Day 1**					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9		<2.1	0.000651		
	10					
	11					
	12					
	13					
	14					
	15					
	16					
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26					
	27					
	28	0.03109616				
	29					
	30					
	31					

	Sample Point	101	101	101	704	704
	Description	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	GWCTS Influent	GWCTS Influent
	Parameter	280	35	35	211	35
	Description	Mercury, Total Recoverable	Arsenic, Total Recoverable	Arsenic, Total Recoverable	Flow Rate	Arsenic, Total Recoverable
	Units	mg/day	ug/L	lbs/day	gpd	ug/L
Summary Values	**Monthly Avg**	0.03109616	0	0.000651		
	Monthly Total					
	Daily Max	0.03109616	<2.1	0.000651		
	Daily Min	0.03109616	<2.1	0.000651		
Limit(s) in Effect	**Monthly Avg**					
	Monthly Total					
	Daily Max					
	Daily Min					
QA/QC Information	**LOD**		2.1			
	LOQ		5			
	QC Exceedance	N	N	N	N	N
	Lab Certification		999580010			

	Sample Point	704	704	107	004	004
	Description	GWCTS Influent	GWCTS Influent	Mercury Field Blank Results	Combined Process WW & GW	Combined Process WW & GW
	Parameter	457	280	280	211	373
	Description	Suspended Solids, Total	Mercury, Total Recoverable	Mercury, Total Recoverable	Flow Rate	pH (Maximum)
	Units	mg/L	ng/L	ng/L	MGD	su
	Sample Type	24 HR FLOW PROP	GRAB	BLANK	CONTINUOUS	CONTINUOUS
	Frequency	WEEKLY	MONTHLY	MONTHLY	DAILY	DAILY
Sample Results	Day 1					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10					
	11					
	12					
	13					
	14					
	15					
	16					
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26					
	27					
	28			0.099		
	29					
	30					
	31					

	Sample Point	704	704	107	004	004
	Description	GWCTS Influent	GWCTS Influent	Mercury Field Blank Results	Combined Process WW & GW	Combined Process WW & GW
	Parameter	457	280	280	211	373
	Description	Suspended Solids, Total	Mercury, Total Recoverable	Mercury, Total Recoverable	Flow Rate	pH (Maximum)
	Units	mg/L	ng/L	ng/L	MGD	su
Summary Values	**Monthly Avg**			0.099		
	Monthly Total					
	Daily Max			0.099		
	Daily Min			0.099		
Limit(s) in Effect	**Monthly Avg**					
	Monthly Total					
	Daily Max					9
	Daily Min					
QA/QC Information	**LOD**			0.079		
	LOQ			0.5		
	QC Exceedance	N	N	N	N	N
	Lab Certification			999580010		

	Sample Point	004	004	004	004	004
	Description	Combined Process WW & GW	Combined Process WW & GW	Combined Process WW & GW	Combined Process WW & GW	Combined Process WW & GW
	Parameter	374	112	35	35	280
	Description	pH (Minimum)	Chlorine, Total Residual	Arsenic, Total Recoverable	Arsenic, Total Recoverable	Mercury, Total Recoverable
	Units	su	ug/L	ug/L	lbs/day	ng/L
	Sample Type	CONTINUOUS	GRAB	24 HR FLOW PROP	CALCULATED	GRAB
	Frequency	DAILY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Sample Results	**Day 1**					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10					
	11					
	12					
	13					
	14					
	15					
	16					
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	004	004	004	004	004
	Description	Combined Process WW & GW	Combined Process WW & GW	Combined Process WW & GW	Combined Process WW & GW	Combined Process WW & GW
	Parameter	374	112	35	35	280
	Description	pH (Minimum)	Chlorine, Total Residual	Arsenic, Total Recoverable	Arsenic, Total Recoverable	Mercury, Total Recoverable
	Units	su	ug/L	ug/L	lbs/day	ng/L
Summary Values	**Monthly Avg**					
	Monthly Total					
	Daily Max					
	Daily Min					
Limit(s) in Effect	**Monthly Avg**		38			
	Monthly Total					
	Daily Max		38	194	0.22	18
	Daily Min	6				
QA/QC Information	**LOD**					
	LOQ					
	QC Exceedance					
	Lab Certification					

	Sample Point	004	004	004	004	004
	Description	Combined Process WW & GW	Combined Process WW & GW	Combined Process WW & GW	Combined Process WW & GW	Combined Process WW & GW
	Parameter	280	87	87	147	147
	Description	Mercury, Total Recoverable	Cadmium, Total Recoverable	Cadmium, Total Recoverable	Copper, Total Recoverable	Copper, Total Recoverable
	Units	mg/day	ug/L	lbs/day	ug/L	lbs/day
	Sample Type	CALCULATED	24 HR FLOW PROP	CALCULATED	24 HR FLOW PROP	CALCULATED
	Frequency	MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Sample Results	**Day 1**					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10					
	11					
	12					
	13					
	14					
	15					
	16					
	17					
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	21					
	22					
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	004	004	004	004	004
	Description	Combined Process WW & GW	Combined Process WW & GW	Combined Process WW & GW	Combined Process WW & GW	Combined Process WW & GW
	Parameter	280	87	87	147	147
	Description	Mercury, Total Recoverable	Cadmium, Total Recoverable	Cadmium, Total Recoverable	Copper, Total Recoverable	Copper, Total Recoverable
	Units	mg/day	ug/L	lbs/day	ug/L	lbs/day
Summary Values	**Monthly Avg**					
	Monthly Total					
	Daily Max					
	Daily Min					
Limit(s) in Effect	**Monthly Avg**		57		69	
	Monthly Total					
	Daily Max		57	0.23	69	0.28
	Daily Min					
QA/QC Information	**LOD**					
	LOQ					
	QC Exceedance					
	Lab Certification					

	Sample Point	004	004	004	004	004
	Description	Combined Process WW & GW	Combined Process WW & GW	Combined Process WW & GW	Combined Process WW & GW	Combined Process WW & GW
	Parameter	315	315	553	553	152
	Description	Nickel, Total Recoverable	Nickel, Total Recoverable	Zinc, Total Recoverable	Zinc, Total Recoverable	Cyanide, Amenable
	Units	ug/L	lbs/day	ug/L	lbs/day	ug/L
	Sample Type	24 HR FLOW PROP	CALCULATED	24 HR FLOW PROP	CALCULATED	24 HR FLOW PROP
	Frequency	MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Sample Results	**Day 1**					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10					
	11					
	12					
	13					
	14					
	15					
	16					
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	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	004		004		004		004		004	
	Description	Combined Process WW & GW		Combined Process WW & GW		Combined Process WW & GW		Combined Process WW & GW		Combined Process WW & GW	
	Parameter	315		315		553		553		152	
	Description	Nickel, Total Recoverable		Nickel, Total Recoverable		Zinc, Total Recoverable		Zinc, Total Recoverable		Cyanide, Amenable	
	Units	ug/L		lbs/day		ug/L		lbs/day		ug/L	
Summary Values	**Monthly Avg**										
	Monthly Total										
	Daily Max										
	Daily Min										
Limit(s) in Effect	**Monthly Avg**	2000				520				92	
	Monthly Total										
	Daily Max	2000		8.10		520		2.10		92	
	Daily Min										
QA/QC Information	**LOD**										
	LOQ										
	QC Exceedance										
	Lab Certification										

	Sample Point	004	004	004	004	004
	Description	Combined Process WW & GW	Combined Process WW & GW	Combined Process WW & GW	Combined Process WW & GW	Combined Process WW & GW
	Parameter	152	231	480	1352	1353
	Description	Cyanide, Amenable	Hardness, Total as CaCO3	Temperature Maximum	PFOA	PFOS
	Units	lbs/day	mg/L	degF	ng/L	ng/L
	Sample Type	CALCULATED	24 HR FLOW PROP	MEASURE	24 HR FLOW PROP	24 HR FLOW PROP
	Frequency	MONTHLY	MONTHLY	WEEKLY	MONTHLY	MONTHLY
Sample Results	Day 1					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10					
	11					
	12					
	13					
	14					
	15					
	16					
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	004	004	004	004	004
	Description	Combined Process WW & GW	Combined Process WW & GW	Combined Process WW & GW	Combined Process WW & GW	Combined Process WW & GW
	Parameter	152	231	480	1352	1353
	Description	Cyanide, Amenable	Hardness, Total as CaCO3	Temperature Maximum	PFOA	PFOS
	Units	lbs/day	mg/L	degF	ng/L	ng/L
Summary Values	**Monthly Avg**					
	Monthly Total					
	Daily Max					
	Daily Min					
Limit(s) in Effect	**Monthly Avg**					11
	Monthly Total					
	Daily Max	0.37				11
	Daily Min					
QA/QC Information	**LOD**					
	LOQ					
	QC Exceedance					
	Lab Certification					

	Sample Point	004	108	108	108	108
	Description	Combined Process WW & GW	GWCTS Effluent	GWCTS Effluent	GWCTS Effluent	GWCTS Effluent
	Parameter	1353	211	457	35	35
	Description	PFOS	Flow Rate	Suspended Solids, Total	Arsenic, Total Recoverable	Arsenic, Total Recoverable
	Units	mg/day	MGD	mg/L	ug/L	lbs/day
	Sample Type	CALCULATED	CONTINUOUS	24 HR FLOW PROP	24 HR FLOW PROP	CALCULATED
	Frequency	MONTHLY	DAILY	WEEKLY	WEEKLY	WEEKLY
Sample Results	Day 1					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10					
	11					
	12					
	13					
	14					
	15					
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	28					
	29					
	30					
	31					

	Sample Point	004	108	108	108	108
	Description	Combined Process WW & GW	GWCTS Effluent	GWCTS Effluent	GWCTS Effluent	GWCTS Effluent
	Parameter	1353	211	457	35	35
	Description	PFOS	Flow Rate	Suspended Solids, Total	Arsenic, Total Recoverable	Arsenic, Total Recoverable
	Units	mg/day	MGD	mg/L	ug/L	lbs/day
Summary Values	**Monthly Avg**					
	Monthly Total					
	Daily Max					
	Daily Min					
Limit(s) in Effect	**Monthly Avg**	2.10				
	Monthly Total					
	Daily Max				500	0.17
	Daily Min					
QA/QC Information	**LOD**					
	LOQ					
	QC Exceedance					
	Lab Certification					

	Sample Point	108	108	108	108
	Description	GWCTS Effluent	GWCTS Effluent	GWCTS Effluent	GWCTS Effluent
	Parameter	280	280	1352	1353
	Description	Mercury, Total Recoverable	Mercury, Total Recoverable	PFOA	PFOS
	Units	ng/L	mg/day	ng/L	ng/L
	Sample Type	24 HR FLOW PROP	CALCULATED	24 HR FLOW PROP	24 HR FLOW PROP
	Frequency	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Sample Results	**Day 1**				
	2				
	3				
	4				
	5				
	6				
	7				
	8				
	9				
	10				
	11				
	12				
	13				
	14				
	15				
	16				
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	20				
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	24				
	25				
	26				
	27				
	28				
	29				
	30				
	31				

	Sample Point	108	108	108	108
	Description	GWCTS Effluent	GWCTS Effluent	GWCTS Effluent	GWCTS Effluent
	Parameter	280	280	1352	1353
	Description	Mercury, Total Recoverable	Mercury, Total Recoverable	PFOA	PFOS
	Units	ng/L	mg/day	ng/L	ng/L
Summary Values	**Monthly Avg**				
	Monthly Total				
	Daily Max				
	Daily Min				
Limit(s) in Effect	**Monthly Avg**				
	Monthly Total				
	Daily Max	24			
	Daily Min				
QA/QC Information	**LOD**				
	LOQ				
	QC Exceedance				
	Lab Certification				

Footnotes (DNR Use Only; Instructions for completing this form that are unique for your facility may be displayed here.)

General Remarks

Laboratory Quality Control Comments

Submitted by Anne Fleury(afleury16) on 4/20/2023 6:44:52 AM

Wastewater Discharge Monitoring Long Report

For DNR Use Only

Facility Name: TYCO FIRE PRODUCTS LP
Contact Address: One Stanton St
Marinette, WI 54143
Facility Contact: Mike Elliott, EHS Manager
Phone Number: 715-735-7415
Reporting Period: 04/01/2023 - 04/30/2023
Form Due Date: 05/21/2023
Permit Number: 0001040

Date Received:	
DOC:	517358
FIN:	7245
FID:	438039470
Region:	Northeast Region
Permit Drafter:	Laura K Rodriguez Alvarez
Reviewer:	Laura A Gerold
Office:	Green Bay

	Sample Point	703	703	101	101	101
	Description	Menominee River Intake	Menominee River Intake	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent
	Parameter	211	35	211	373	374
	Description	Flow Rate	Arsenic, Total Recoverable	Flow Rate	pH (Maximum)	pH (Minimum)
	Units	gpd	ug/L	MGD	su	su
	Sample Type	TOT DAILY	GRAB	CONTINUOUS	CONTINUOUS	CONTINUOUS
	Frequency	DAILY	MONTHLY	DAILY	DAILY	DAILY
Sample Results	Day 1			0.0230	7.9	6.5
	2			0		
	3			0.0425	7.6	7.2
	4			0.0369	7.4	7.0
	5			0.0507	7.4	6.7
	6			0.0470	8.9	6.9
	7			0.0305	7.2	6.7
	8			0		
	9			0		
	10			0.0572	7.4	7.0
	11			0.0472	7.4	7.0
	12			0.0576	7.4	6.6
	13			0.0145	7.3	7.0
	14			0.0486	7.5	6.6
	15			0.0162	7.7	7.1
	16			0		
	17			0.0537	7.3	6.8
	18			0.0580	7.4	6.5
	19			0.0556	7.8	6.9
	20			0.0565	7.6	6.4
	21			0.0465	7.6	6.6
	22			0.0203	8.0	6.4
	23			0		
	24			0.0537	7.4	6.3
	25			0.0445	8.4	6.9
	26			0.0466	8.2	6.7
	27			0.0438	7.9	6.7
	28			0.0574	7.8	7.0
	29			0.0155	7.6	6.3
	30			0		
	31					

	Sample Point	703	703	101	101	101
	Description	Menominee River Intake	Menominee River Intake	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent
	Parameter	211	35	211	373	374
	Description	Flow Rate	Arsenic, Total Recoverable	Flow Rate	pH (Maximum)	pH (Minimum)
	Units	gpd	ug/L	MGD	su	su
Summary Values	**Monthly Avg**			0.034133333	7.670833333	6.741666667
	Monthly Total					
	Daily Max			0.058	8.9	7.2
	Daily Min			0	7.2	6.3
Limit(s) in Effect	**Monthly Avg**					
	Monthly Total					
	Daily Max				9 0	
	Daily Min					6 0
QA/QC Information	**LOD**					
	LOQ					
	QC Exceedance	N	N	N	N	N
	Lab Certification					

	Sample Point	101	101	101	101	101
	Description	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent
	Parameter	379	376	457	651	87
	Description	pH Total Exceedance Time Minutes	pH Exceedances Greater Than 60 Minutes	Suspended Solids, Total	Oil & Grease (Hexane)	Cadmium, Total Recoverable
	Units	minutes	Number	mg/L	mg/L	ug/L
	Sample Type	CONTINUOUS	CONTINUOUS	24 HR FLOW PROP	GRAB	24 HR FLOW PROP
	Frequency	DAILY	DAILY	3/WEEK	MONTHLY	MONTHLY
Sample Results	Day 1					
	2					
	3			3.2		
	4			4.0		
	5			<1.9		
	6					
	7					
	8					
	9					
	10			2.2		<0.49
	11			2.0	1.7	
	12			<1.9		
	13					
	14					
	15					
	16					
	17			4.6		
	18			<1.9		
	19			<1.9		
	20					
	21					
	22					
	23					
	24			<1.9		
	25			<1.9		
	26			<1.9		
	27					
	28					
	29					
	30					
	31					

	Sample Point	101		101		101		101		101	
	Description	Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent	
	Parameter	379		376		457		651		87	
	Description	pH Total Exceedance Time Minutes		pH Exceedances Greater Than 60 Minutes		Suspended Solids, Total		Oil & Grease (Hexane)		Cadmium, Total Recoverable	
	Units	minutes		Number		mg/L		mg/L		ug/L	
Summary Values	**Monthly Avg**					1.333333333		1.7		0	
	Monthly Total										
	Daily Max					4.6		1.7		<0.49	
	Daily Min					<1.9		1.7		<0.49	
Limit(s) in Effect	**Monthly Avg**					31	0	26	0	260	0
	Monthly Total	446	0	0	0						
	Daily Max					60	0	52	0	690	0
	Daily Min										
QA/QC Information	**LOD**							1.4		0.49	
	LOQ							5.4		1	
	QC Exceedance	N		N		N		N		N	
	Lab Certification					999580010		999580010		999580010	

	Sample Point	101	101	101	101	101
	Description	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent
	Parameter	147	315	553	507	280
	Description	Copper, Total Recoverable	Nickel, Total Recoverable	Zinc, Total Recoverable	Total Toxic Organics	Mercury, Total Recoverable
	Units	ug/L	ug/L	ug/L	ug/L	ng/L
	Sample Type	24 HR FLOW PROP	24 HR FLOW PROP	24 HR FLOW PROP	24 HR FLOW PROP	GRAB
	Frequency	MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Sample Results	**Day 1**					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10	6.0	13.0	80.0		
	11					
	12					
	13					
	14					
	15					
	16					
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					0.31
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	101		101		101		101		101	
	Description	Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent	
	Parameter	147		315		553		507		280	
	Description	Copper, Total Recoverable		Nickel, Total Recoverable		Zinc, Total Recoverable		Total Toxic Organics		Mercury, Total Recoverable	
	Units	ug/L		ug/L		ug/L		ug/L		ng/L	
Summary Values	**Monthly Avg**	6		13		80				0.31	
	Monthly Total										
	Daily Max	6		13		80				0.31	
	Daily Min	6		13		80				0.31	
Limit(s) in Effect	**Monthly Avg**	2070	0	2380	0	1480	0				
	Monthly Total										
	Daily Max	3380	0	3980	0	2610	0	2130			
	Daily Min										
QA/QC Information	**LOD**	1.7		1.5		3.6				0.079	
	LOQ	5		5		10				0.5	
	QC Exceedance	N		N		N		N		N	
	Lab Certification	999580010		999580010		999580010				999580010	

	Sample Point	101	101	101	704	704
	Description	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	GWCTS Influent	GWCTS Influent
	Parameter	280	35	35	211	35
	Description	Mercury, Total Recoverable	Arsenic, Total Recoverable	Arsenic, Total Recoverable	Flow Rate	Arsenic, Total Recoverable
	Units	mg/day	ug/L	lbs/day	gpd	ug/L
	Sample Type	CALCULATED	24 HR FLOW PROP	CALCULATED	CONTINUOUS	24 HR FLOW PROP
	Frequency	MONTHLY	MONTHLY	MONTHLY	DAILY	WEEKLY
Sample Results	Day 1					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10	0.05226321	<2.1	0.001008		
	11					
	12					
	13					
	14					
	15					
	16					
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	101	101	101	704	704
	Description	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	GWCTS Influent	GWCTS Influent
	Parameter	280	35	35	211	35
	Description	Mercury, Total Recoverable	Arsenic, Total Recoverable	Arsenic, Total Recoverable	Flow Rate	Arsenic, Total Recoverable
	Units	mg/day	ug/L	lbs/day	gpd	ug/L
Summary Values	**Monthly Avg**	0.05226321	0	0.001008		
	Monthly Total					
	Daily Max	0.05226321	<2.1	0.001008		
	Daily Min	0.05226321	<2.1	0.001008		
Limit(s) in Effect	**Monthly Avg**					
	Monthly Total					
	Daily Max					
	Daily Min					
QA/QC Information	**LOD**		2.1			
	LOQ		5			
	QC Exceedance	N	N	N	N	N
	Lab Certification		999580010			

	Sample Point	704	704	107	004	004
	Description	GWCTS Influent	GWCTS Influent	Mercury Field Blank Results	Combined Process WW & GW	Combined Process WW & GW
	Parameter	457	280	280	211	373
	Description	Suspended Solids, Total	Mercury, Total Recoverable	Mercury, Total Recoverable	Flow Rate	pH (Maximum)
	Units	mg/L	ng/L	ng/L	MGD	su
	Sample Type	24 HR FLOW PROP	GRAB	BLANK	CONTINUOUS	CONTINUOUS
	Frequency	WEEKLY	MONTHLY	MONTHLY	DAILY	DAILY
Sample Results	Day 1				0.0230	7.9
	2				0	
	3				0.0425	7.6
	4				0.0369	7.4
	5				0.0507	7.4
	6				0.0470	8.9
	7				0.0305	7.2
	8				0	
	9				0	
	10				0.0572	7.4
	11				0.0472	7.4
	12				0.0576	7.4
	13				0.0145	7.3
	14				0.0486	7.5
	15				0.0162	7.7
	16				0	
	17				0.0537	7.3
	18				0.0580	7.4
	19				0.0556	7.8
	20				0.0565	7.6
	21				0.0465	7.6
	22				0.0203	8.0
	23				0	
	24				0.0537	7.4
	25			0.16	0.0445	8.4
	26				0.0466	8.2
	27				0.0438	7.9
	28				0.0574	7.8
	29				0.0155	7.6
	30				0	
	31					

	Sample Point	704	704	107	004	004
	Description	GWCTS Influent	GWCTS Influent	Mercury Field Blank Results	Combined Process WW & GW	Combined Process WW & GW
	Parameter	457	280	280	211	373
	Description	Suspended Solids, Total	Mercury, Total Recoverable	Mercury, Total Recoverable	Flow Rate	pH (Maximum)
	Units	mg/L	ng/L	ng/L	MGD	su
Summary Values	**Monthly Avg**			0.16	0.034133333	7.670833333
	Monthly Total					
	Daily Max			0.16	0.058	8.9
	Daily Min			0.16	0	7.2
Limit(s) in Effect	**Monthly Avg**					
	Monthly Total					
	Daily Max					9 0
	Daily Min					
QA/QC Information	**LOD**			0.079		
	LOQ			0.5		
	QC Exceedance	N	N	N	N	N
	Lab Certification			999580010		

	Sample Point	004	004	004	004	004
	Description	Combined Process WW & GW	Combined Process WW & GW	Combined Process WW & GW	Combined Process WW & GW	Combined Process WW & GW
	Parameter	374	112	35	35	280
	Description	pH (Minimum)	Chlorine, Total Residual	Arsenic, Total Recoverable	Arsenic, Total Recoverable	Mercury, Total Recoverable
	Units	su	ug/L	ug/L	lbs/day	ng/L
	Sample Type	CONTINUOUS	GRAB	24 HR FLOW PROP	CALCULATED	GRAB
	Frequency	DAILY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Sample Results	Day 1	6.5				
	2					
	3	7.2				
	4	7.0				
	5	6.7				
	6	6.9				
	7	6.7				
	8					
	9					
	10	7.0		<2.1	0.001008	
	11	7.0				
	12	6.6				
	13	7.0				
	14	6.6				
	15	7.1				
	16					
	17	6.8				
	18	6.5				
	19	6.9				
	20	6.4	<10			
	21	6.6				
	22	6.4				
	23					
	24	6.3				
	25	6.9				0.30
	26	6.7				
	27	6.7				
	28	7.0				
	29	6.3				
	30					
	31					

	Sample Point	004		004		004		004		004	
	Description	Combined Process WW & GW		Combined Process WW & GW		Combined Process WW & GW		Combined Process WW & GW		Combined Process WW & GW	
	Parameter	374		112		35		35		280	
	Description	pH (Minimum)		Chlorine, Total Residual		Arsenic, Total Recoverable		Arsenic, Total Recoverable		Mercury, Total Recoverable	
	Units	su		ug/L		ug/L		lbs/day		ng/L	
Summary Values	**Monthly Avg**	6.741666667		0		0		0.001008		0.3	
	Monthly Total										
	Daily Max	7.2		<10		<2.1		0.001008		0.3	
	Daily Min	6.3		<10		<2.1		0.001008		0.3	
Limit(s) in Effect	**Monthly Avg**			38	0						
	Monthly Total										
	Daily Max			38	0	194	0	0.22	0	18	0
	Daily Min	6	0								
QA/QC Information	**LOD**			30		2.1				0.079	
	LOQ			100		5				0.5	
	QC Exceedance	N		N		N		N		N	
	Lab Certification					999580010				999580010	

	Sample Point	004	004	004	004	004
	Description	Combined Process WW & GW	Combined Process WW & GW	Combined Process WW & GW	Combined Process WW & GW	Combined Process WW & GW
	Parameter	280	87	87	147	147
	Description	Mercury, Total Recoverable	Cadmium, Total Recoverable	Cadmium, Total Recoverable	Copper, Total Recoverable	Copper, Total Recoverable
	Units	mg/day	ug/L	lbs/day	ug/L	lbs/day
	Sample Type	CALCULATED	24 HR FLOW PROP	CALCULATED	24 HR FLOW PROP	CALCULATED
	Frequency	MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Sample Results	**Day 1**					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10		<0.49	0.0002352	5.0	0.0024
	11					
	12					
	13					
	14					
	15					
	16					
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25	0.0505773				
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	004		004		004		004		004	
	Description	Combined Process WW & GW		Combined Process WW & GW		Combined Process WW & GW		Combined Process WW & GW		Combined Process WW & GW	
	Parameter	280		87		87		147		147	
	Description	Mercury, Total Recoverable		Cadmium, Total Recoverable		Cadmium, Total Recoverable		Copper, Total Recoverable		Copper, Total Recoverable	
	Units	mg/day		ug/L		lbs/day		ug/L		lbs/day	
Summary Values	**Monthly Avg**	0.0505773		0		0.0002352		5		0.0024	
	Monthly Total										
	Daily Max	0.0505773		<0.49		0.0002352		5		0.0024	
	Daily Min	0.0505773		<0.49		0.0002352		5		0.0024	
Limit(s) in Effect	**Monthly Avg**			57	0			69	0		
	Monthly Total										
	Daily Max			57	0	0.23	0	69	0	0.28	0
	Daily Min										
QA/QC Information	**LOD**			0.49				1.7			
	LOQ			1				5			
	QC Exceedance	N		N		N		N		N	
	Lab Certification			999580010				999580010			

	Sample Point	004	004	004	004	004
	Description	Combined Process WW & GW	Combined Process WW & GW	Combined Process WW & GW	Combined Process WW & GW	Combined Process WW & GW
	Parameter	315	315	553	553	152
	Description	Nickel, Total Recoverable	Nickel, Total Recoverable	Zinc, Total Recoverable	Zinc, Total Recoverable	Cyanide, Amenable
	Units	ug/L	lbs/day	ug/L	lbs/day	ug/L
	Sample Type	24 HR FLOW PROP	CALCULATED	24 HR FLOW PROP	CALCULATED	24 HR FLOW PROP
	Frequency	MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Sample Results	**Day 1**					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10	13.0	0.00624	80.0	0.0384	<3.6
	11					
	12					
	13					
	14					
	15					
	16					
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	004		004		004		004		004	
	Description	Combined Process WW & GW		Combined Process WW & GW		Combined Process WW & GW		Combined Process WW & GW		Combined Process WW & GW	
	Parameter	315		315		553		553		152	
	Description	Nickel, Total Recoverable		Nickel, Total Recoverable		Zinc, Total Recoverable		Zinc, Total Recoverable		Cyanide, Amenable	
	Units	ug/L		lbs/day		ug/L		lbs/day		ug/L	
Summary Values	**Monthly Avg**	13		0.00624		80		0.0384		0	
	Monthly Total										
	Daily Max	13		0.00624		80		0.0384		<3.6	
	Daily Min	13		0.00624		80		0.0384		<3.6	
Limit(s) in Effect	**Monthly Avg**	2000	0			520	0			92	0
	Monthly Total										
	Daily Max	2000	0	8.10	0	520	0	2.10	0	92	0
	Daily Min										
QA/QC Information	**LOD**	1.5				3.6				3.6	
	LOQ	5				10				5	
	QC Exceedance	N		N		N		N		N	
	Lab Certification	999580010				999580010				999580010	

	Sample Point	004	004	004	004	004
	Description	Combined Process WW & GW	Combined Process WW & GW	Combined Process WW & GW	Combined Process WW & GW	Combined Process WW & GW
	Parameter	152	231	480	1352	1353
	Description	Cyanide, Amenable	Hardness, Total as CaCO3	Temperature Maximum	PFOA	PFOS
	Units	lbs/day	mg/L	degF	ng/L	ng/L
	Sample Type	CALCULATED	24 HR FLOW PROP	MEASURE	24 HR FLOW PROP	24 HR FLOW PROP
	Frequency	MONTHLY	MONTHLY	WEEKLY	MONTHLY	MONTHLY
Sample Results	Day 1					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10	0.001728			2.2	2.5
	11					
	12					
	13					
	14					
	15					
	16					
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25		400			
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	004		004		004		004		004	
	Description	Combined Process WW & GW		Combined Process WW & GW		Combined Process WW & GW		Combined Process WW & GW		Combined Process WW & GW	
	Parameter	152		231		480		1352		1353	
	Description	Cyanide, Amenable		Hardness, Total as CaCO3		Temperature Maximum		PFOA		PFOS	
	Units	lbs/day		mg/L		degF		ng/L		ng/L	
Summary Values	**Monthly Avg**	0.001728		400				2.2		2.5	
	Monthly Total										
	Daily Max	0.001728		400				2.2		2.5	
	Daily Min	0.001728		400				2.2		2.5	
Limit(s) in Effect	**Monthly Avg**									11	0
	Monthly Total										
	Daily Max	0.37	0							11	0
	Daily Min										
QA/QC Information	**LOD**							0.73		0.47	
	LOQ							1.7		1.7	
	QC Exceedance	N		N		N		N		N	
	Lab Certification			999580010							

	Sample Point	004	108	108	108	108
	Description	Combined Process WW & GW	GWCTS Effluent	GWCTS Effluent	GWCTS Effluent	GWCTS Effluent
	Parameter	1353	211	457	35	35
	Description	PFOS	Flow Rate	Suspended Solids, Total	Arsenic, Total Recoverable	Arsenic, Total Recoverable
	Units	mg/day	MGD	mg/L	ug/L	lbs/day
	Sample Type	CALCULATED	CONTINUOUS	24 HR FLOW PROP	24 HR FLOW PROP	CALCULATED
	Frequency	MONTHLY	DAILY	WEEKLY	WEEKLY	WEEKLY
Sample Results	Day 1					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10	0.5421975				
	11					
	12					
	13					
	14					
	15					
	16					
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	004		108		108		108		108	
	Description	Combined Process WW & GW		GWCTS Effluent		GWCTS Effluent		GWCTS Effluent		GWCTS Effluent	
	Parameter	1353		211		457		35		35	
	Description	PFOS		Flow Rate		Suspended Solids, Total		Arsenic, Total Recoverable		Arsenic, Total Recoverable	
	Units	mg/day		MGD		mg/L		ug/L		lbs/day	
Summary Values	**Monthly Avg**	0.5421975									
	Monthly Total										
	Daily Max	0.5421975									
	Daily Min	0.5421975									
Limit(s) in Effect	**Monthly Avg**	2.10	0								
	Monthly Total										
	Daily Max							500		0.17	
	Daily Min										
QA/QC Information	**LOD**										
	LOQ										
	QC Exceedance	N		N		N		N		N	
	Lab Certification										

	Sample Point	108	108	108	108
	Description	GWCTS Effluent	GWCTS Effluent	GWCTS Effluent	GWCTS Effluent
	Parameter	280	280	1352	1353
	Description	Mercury, Total Recoverable	Mercury, Total Recoverable	PFOA	PFOS
	Units	ng/L	mg/day	ng/L	ng/L
	Sample Type	24 HR FLOW PROP	CALCULATED	24 HR FLOW PROP	24 HR FLOW PROP
	Frequency	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Sample Results	**Day 1**				
	2				
	3				
	4				
	5				
	6				
	7				
	8				
	9				
	10				
	11				
	12				
	13				
	14				
	15				
	16				
	17				
	18				
	19				
	20				
	21				
	22				
	23				
	24				
	25				
	26				
	27				
	28				
	29				
	30				
	31				

	Sample Point	108	108	108	108
	Description	GWCTS Effluent	GWCTS Effluent	GWCTS Effluent	GWCTS Effluent
	Parameter	280	280	1352	1353
	Description	Mercury, Total Recoverable	Mercury, Total Recoverable	PFOA	PFOS
	Units	ng/L	mg/day	ng/L	ng/L
Summary Values	**Monthly Avg**				
	Monthly Total				
	Daily Max				
	Daily Min				
Limit(s) in Effect	**Monthly Avg**				
	Monthly Total				
	Daily Max	24			
	Daily Min				
QA/QC Information	**LOD**				
	LOQ				
	QC Exceedance	N	N	N	N
	Lab Certification				

Footnotes (DNR Use Only; Instructions for completing this form that are unique for your facility may be displayed here.)

General Remarks

The ground water system is still not running but water from SP101 is going through OF004. No sampling from SP704 yet. No sampling from SP108 either.

Laboratory Quality Control Comments

Submitted by Anne Fleury(afleury16) on 5/12/2023 8:11:08 AM

Wastewater Discharge Monitoring Long Report

Facility Name: TYCO FIRE PRODUCTS LP
Contact Address: One Stanton St
Marinette, WI 54143
Facility Contact: Mike Elliott, EHS Manager
Phone Number: 715-735-7415
Reporting Period: 05/01/2023 - 05/31/2023
Form Due Date: 06/21/2023
Permit Number: 0001040

For DNR Use Only

Date Received:	
DOC:	517359
FIN:	7245
FID:	438039470
Region:	Northeast Region
Permit Drafter:	Laura K Rodriguez Alvarez
Reviewer:	Laura A Gerold
Office:	Green Bay

	Sample Point	703	703	101	101	101
	Description	Menominee River Intake	Menominee River Intake	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent
	Parameter	211	35	211	373	374
	Description	Flow Rate	Arsenic, Total Recoverable	Flow Rate	pH (Maximum)	pH (Minimum)
	Units	gpd	ug/L	MGD	su	su
	Sample Type	TOT DAILY	GRAB	CONTINUOUS	CONTINUOUS	CONTINUOUS
	Frequency	DAILY	MONTHLY	DAILY	DAILY	DAILY
Sample Results	Day 1			0.05438	7.9	6.4
	2			0.05388	7.7	7.0
	3			0.04250	7.6	6.8
	4			0.04852	8.2	6.6
	5			0.03468	8.2	6.4
	6			0.01215	7.5	6.3
	7			0		
	8			0.04942	7.8	6.5
	9			0.04303	7.4	6.6
	10			0.04611	8.3	6.5
	11			0.04257	7.6	6.5
	12			0.02295	8.4	6.4
	13			0		
	14			0		
	15			0.04787	7.7	7.0
	16			0.03745	7.6	6.6
	17			0.05108	7.5	6.5
	18			0.04044	8.2	6.2
	19			0.03215	8.0	6.8
	20			0.00374	7.8	6.8
	21			0		
	22			0.04112	7.5	7.0
	23			0.04132	7.3	6.8
	24			0.04575	7.5	6.7
	25			0.04457	7.9	6.8
	26			0.02075	7.8	6.8
	27			0		
	28			0		
	29			0		
	30			0.04144	7.4	7.0
	31			0.04135	7.4	6.4

	Sample Point	703	703	101	101	101
	Description	Menominee River Intake	Menominee River Intake	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent
	Parameter	211	35	211	373	374
	Description	Flow Rate	Arsenic, Total Recoverable	Flow Rate	pH (Maximum)	pH (Minimum)
	Units	gpd	ug/L	MGD	su	su
Summary Values	**Monthly Avg**			0.030297419	7.758333333	6.641666667
	Monthly Total					
	Daily Max			0.05438	8.4	7
	Daily Min			0	7.3	6.2
Limit(s) in Effect	**Monthly Avg**					
	Monthly Total					
	Daily Max				9 0	
	Daily Min					6 0
QA/QC Information	**LOD**					
	LOQ					
	QC Exceedance	N	N	N	N	N
	Lab Certification					

	Sample Point	101	101	101	101	101
	Description	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent
	Parameter	379	376	457	651	87
	Description	pH Total Exceedance Time Minutes	pH Exceedances Greater Than 60 Minutes	Suspended Solids, Total	Oil & Grease (Hexane)	Cadmium, Total Recoverable
	Units	minutes	Number	mg/L	mg/L	ug/L
	Sample Type	CONTINUOUS	CONTINUOUS	24 HR FLOW PROP	GRAB	24 HR FLOW PROP
	Frequency	DAILY	DAILY	3/WEEK	MONTHLY	MONTHLY
Sample Results	**Day 1**			<1.9		
	2			<1.9		
	3			<1.9		
	4					
	5					
	6					
	7					
	8			2.8		
	9			<1.9		<0.49
	10			2.2	1.7	
	11					
	12					
	13					
	14					
	15			2.6		
	16			2.1		
	17			2.5		
	18					
	19					
	20					
	21					
	22			6.0		
	23			5.9		
	24			4.4		
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	101		101		101		101		101	
	Description	Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent	
	Parameter	379		376		457		651		87	
	Description	pH Total Exceedance Time Minutes		pH Exceedances Greater Than 60 Minutes		Suspended Solids, Total		Oil & Grease (Hexane)		Cadmium, Total Recoverable	
	Units	minutes		Number		mg/L		mg/L		ug/L	
Summary Values	**Monthly Avg**					2.375		1.7		0	
	Monthly Total										
	Daily Max					6		1.7		<0.49	
	Daily Min					<1.9		1.7		<0.49	
Limit(s) in Effect	**Monthly Avg**					31	0	26	0	260	0
	Monthly Total	446	0	0	0						
	Daily Max					60	0	52	0	690	0
	Daily Min										
QA/QC Information	**LOD**							1.4		0.49	
	LOQ							5.2		1	
	QC Exceedance	N		N		N		N		N	
	Lab Certification					999580010		999580010		999580010	

	Sample Point	101	101	101	101	101
	Description	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent
	Parameter	147	315	553	507	280
	Description	Copper, Total Recoverable	Nickel, Total Recoverable	Zinc, Total Recoverable	Total Toxic Organics	Mercury, Total Recoverable
	Units	ug/L	ug/L	ug/L	ug/L	ng/L
	Sample Type	24 HR FLOW PROP	24 HR FLOW PROP	24 HR FLOW PROP	24 HR FLOW PROP	GRAB
	Frequency	MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Sample Results	**Day 1**					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9	7.5	3.7	96		
	10					
	11					
	12					
	13					
	14					
	15					
	16					
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					0.31
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	101		101		101		101		101	
	Description	Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent	
	Parameter	147		315		553		507		280	
	Description	Copper, Total Recoverable		Nickel, Total Recoverable		Zinc, Total Recoverable		Total Toxic Organics		Mercury, Total Recoverable	
	Units	ug/L		ug/L		ug/L		ug/L		ng/L	
Summary Values	**Monthly Avg**	7.5		3.7		96				0.31	
	Monthly Total										
	Daily Max	7.5		3.7		96				0.31	
	Daily Min	7.5		3.7		96				0.31	
Limit(s) in Effect	**Monthly Avg**	2070	0	2380	0	1480	0				
	Monthly Total										
	Daily Max	3380	0	3980	0	2610	0	2130			
	Daily Min										
QA/QC Information	**LOD**	1.7		1.5		3.6				0.079	
	LOQ	5		5		10				0.5	
	QC Exceedance	N		N		N		N		N	
	Lab Certification	999580010		999580010		999580010				999580010	

	Sample Point	101	101	101	704	704
	Description	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	GWCTS Influent	GWCTS Influent
	Parameter	280	35	35	211	35
	Description	Mercury, Total Recoverable	Arsenic, Total Recoverable	Arsenic, Total Recoverable	Flow Rate	Arsenic, Total Recoverable
	Units	mg/day	ug/L	lbs/day	gpd	ug/L
	Sample Type	CALCULATED	24 HR FLOW PROP	CALCULATED	CONTINUOUS	24 HR FLOW PROP
	Frequency	MONTHLY	MONTHLY	MONTHLY	DAILY	WEEKLY
Sample Results	**Day 1**					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9	0.05374594	<2.1	0.000756		
	10					
	11					
	12					
	13					
	14					
	15					
	16					
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	101	101	101	704	704
	Description	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	GWCTS Influent	GWCTS Influent
	Parameter	280	35	35	211	35
	Description	Mercury, Total Recoverable	Arsenic, Total Recoverable	Arsenic, Total Recoverable	Flow Rate	Arsenic, Total Recoverable
	Units	mg/day	ug/L	lbs/day	gpd	ug/L
Summary Values	**Monthly Avg**	0.05374594	0	0.000756		
	Monthly Total					
	Daily Max	0.05374594	<2.1	0.000756		
	Daily Min	0.05374594	<2.1	0.000756		
Limit(s) in Effect	**Monthly Avg**					
	Monthly Total					
	Daily Max					
	Daily Min					
QA/QC Information	**LOD**		2.1			
	LOQ		5			
	QC Exceedance	N	N	N	N	N
	Lab Certification		999580010			

	Sample Point	704	704	107	004	004
	Description	GWCTS Influent	GWCTS Influent	Mercury Field Blank Results	Combined Process WW & GW	Combined Process WW & GW
	Parameter	457	280	280	211	373
	Description	Suspended Solids, Total	Mercury, Total Recoverable	Mercury, Total Recoverable	Flow Rate	pH (Maximum)
	Units	mg/L	ng/L	ng/L	MGD	su
	Sample Type	24 HR FLOW PROP	GRAB	BLANK	CONTINUOUS	CONTINUOUS
	Frequency	WEEKLY	MONTHLY	MONTHLY	DAILY	DAILY
Sample Results	Day 1				0.05438	7.9
	2				0.05388	7.7
	3				0.04250	7.6
	4				0.04852	8.2
	5				0.03468	8.2
	6				0.01215	7.5
	7				0	
	8				0.04942	7.8
	9				0.04303	7.4
	10				0.04611	8.3
	11				0.04257	7.6
	12				0.02295	8.4
	13				0	
	14				0	
	15				0.04787	7.7
	16				0.03745	7.6
	17				0.05108	7.5
	18				0.04044	8.2
	19				0.03215	8.0
	20				0.00374	7.8
	21				0	
	22				0.04112	7.5
	23				0.04132	7.3
	24			<0.079	0.04575	7.5
	25				0.04457	7.9
	26				0.02075	7.8
	27				0	
	28				0	
	29				0	
	30				0.04144	7.4
	31				0.04135	7.4

	Sample Point	704	704	107	004	004
	Description	GWCTS Influent	GWCTS Influent	Mercury Field Blank Results	Combined Process WW & GW	Combined Process WW & GW
	Parameter	457	280	280	211	373
	Description	Suspended Solids, Total	Mercury, Total Recoverable	Mercury, Total Recoverable	Flow Rate	pH (Maximum)
	Units	mg/L	ng/L	ng/L	MGD	su
Summary Values	**Monthly Avg**			0	0.030297419	7.758333333
	Monthly Total					
	Daily Max			<0.079	0.05438	8.4
	Daily Min			<0.079	0	7.3
Limit(s) in Effect	**Monthly Avg**					
	Monthly Total					
	Daily Max					9 0
	Daily Min					
QA/QC Information	**LOD**			0.079		
	LOQ			0.5		
	QC Exceedance	N	N	N	N	N
	Lab Certification			999580010		

	Sample Point	004	004	004	004	004
	Description	Combined Process WW & GW	Combined Process WW & GW	Combined Process WW & GW	Combined Process WW & GW	Combined Process WW & GW
	Parameter	374	112	35	35	280
	Description	pH (Minimum)	Chlorine, Total Residual	Arsenic, Total Recoverable	Arsenic, Total Recoverable	Mercury, Total Recoverable
	Units	su	ug/L	ug/L	lbs/day	ng/L
	Sample Type	CONTINUOUS	GRAB	24 HR FLOW PROP	CALCULATED	GRAB
	Frequency	DAILY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Sample Results	Day 1	6.4				
	2	7.0				
	3	6.8				
	4	6.6				
	5	6.4				
	6	6.3				
	7					
	8	6.5				
	9	6.6				
	10	6.5				
	11	6.5				
	12	6.4				
	13					
	14					
	15	7.0				
	16	6.6		<2.1	0.000651	
	17	6.5				
	18	6.2				
	19	6.8				
	20	6.8				
	21		<10			
	22	7.0				
	23	6.8				
	24	6.7				<0.079
	25	6.8				
	26	6.8				
	27					
	28					
	29					
	30	7.0				
	31	6.4				

	Sample Point	004		004		004		004		004	
	Description	Combined Process WW & GW		Combined Process WW & GW		Combined Process WW & GW		Combined Process WW & GW		Combined Process WW & GW	
	Parameter	374		112		35		35		280	
	Description	pH (Minimum)		Chlorine, Total Residual		Arsenic, Total Recoverable		Arsenic, Total Recoverable		Mercury, Total Recoverable	
	Units	su		ug/L		ug/L		lbs/day		ng/L	
Summary Values	**Monthly Avg**	6.641666667		0		0		0.000651		0	
	Monthly Total										
	Daily Max	7		<10		<2.1		0.000651		<0.079	
	Daily Min	6.2		<10		<2.1		0.000651		<0.079	
Limit(s) in Effect	**Monthly Avg**			38	0						
	Monthly Total										
	Daily Max			38	0	194	0	0.22	0	18	0
	Daily Min	6	0								
QA/QC Information	**LOD**			30		2.1				0.079	
	LOQ			100		5				0.5	
	QC Exceedance	N		N		N		N		N	
	Lab Certification					999580010				999580010	

	Sample Point	004	004	004	004	004
	Description	Combined Process WW & GW	Combined Process WW & GW	Combined Process WW & GW	Combined Process WW & GW	Combined Process WW & GW
	Parameter	280	87	87	147	147
	Description	Mercury, Total Recoverable	Cadmium, Total Recoverable	Cadmium, Total Recoverable	Copper, Total Recoverable	Copper, Total Recoverable
	Units	mg/day	ug/L	lbs/day	ug/L	lbs/day
	Sample Type	CALCULATED	24 HR FLOW PROP	CALCULATED	24 HR FLOW PROP	CALCULATED
	Frequency	MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Sample Results	**Day 1**					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10					
	11					
	12					
	13					
	14					
	15					
	16		<0.49	0.0001519	5.4	0.001674
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24	0.013696546				
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	004		004		004		004		004	
	Description	Combined Process WW & GW		Combined Process WW & GW		Combined Process WW & GW		Combined Process WW & GW		Combined Process WW & GW	
	Parameter	280		87		87		147		147	
	Description	Mercury, Total Recoverable		Cadmium, Total Recoverable		Cadmium, Total Recoverable		Copper, Total Recoverable		Copper, Total Recoverable	
	Units	mg/day		ug/L		lbs/day		ug/L		lbs/day	
Summary Values	**Monthly Avg**	0.013696546		0		0.0001519		5.4		0.001674	
	Monthly Total										
	Daily Max	0.013696546		<0.49		0.0001519		5.4		0.001674	
	Daily Min	0.013696546		<0.49		0.0001519		5.4		0.001674	
Limit(s) in Effect	**Monthly Avg**			57	0			69	0		
	Monthly Total										
	Daily Max			57	0	0.23	0	69	0	0.28	0
	Daily Min										
QA/QC Information	**LOD**			0.49				1.7			
	LOQ			1				5			
	QC Exceedance	N		N		N		N		N	
	Lab Certification			999580010				999580010			

	Sample Point	004	004	004	004	004
	Description	Combined Process WW & GW	Combined Process WW & GW	Combined Process WW & GW	Combined Process WW & GW	Combined Process WW & GW
	Parameter	315	315	553	553	152
	Description	Nickel, Total Recoverable	Nickel, Total Recoverable	Zinc, Total Recoverable	Zinc, Total Recoverable	Cyanide, Amenable
	Units	ug/L	lbs/day	ug/L	lbs/day	ug/L
	Sample Type	24 HR FLOW PROP	CALCULATED	24 HR FLOW PROP	CALCULATED	24 HR FLOW PROP
	Frequency	MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Sample Results	**Day 1**					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10					
	11					
	12					
	13					
	14					
	15					
	16	5.2	0.001612	73	0.02263	<3.6
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	004		004		004		004		004	
	Description	Combined Process WW & GW		Combined Process WW & GW		Combined Process WW & GW		Combined Process WW & GW		Combined Process WW & GW	
	Parameter	315		315		553		553		152	
	Description	Nickel, Total Recoverable		Nickel, Total Recoverable		Zinc, Total Recoverable		Zinc, Total Recoverable		Cyanide, Amenable	
	Units	ug/L		lbs/day		ug/L		lbs/day		ug/L	
Summary Values	**Monthly Avg**	5.2		0.001612		73		0.02263		0	
	Monthly Total										
	Daily Max	5.2		0.001612		73		0.02263		<3.6	
	Daily Min	5.2		0.001612		73		0.02263		<3.6	
Limit(s) in Effect	**Monthly Avg**	2000	0			520	0			92	0
	Monthly Total										
	Daily Max	2000	0	8.10	0	520	0	2.10	0	92	0
	Daily Min										
QA/QC Information	**LOD**	1.5				3.6				3.6	
	LOQ	5				10				5	
	QC Exceedance	N		N		N		N		N	
	Lab Certification	999580010				999580010				999580010	

	Sample Point	004	004	004	004	004
	Description	Combined Process WW & GW	Combined Process WW & GW	Combined Process WW & GW	Combined Process WW & GW	Combined Process WW & GW
	Parameter	152	231	480	1352	1353
	Description	Cyanide, Amenable	Hardness, Total as CaCO3	Temperature Maximum	PFOA	PFOS
	Units	lbs/day	mg/L	degF	ng/L	ng/L
	Sample Type	CALCULATED	24 HR FLOW PROP	MEASURE	24 HR FLOW PROP	24 HR FLOW PROP
	Frequency	MONTHLY	MONTHLY	WEEKLY	MONTHLY	MONTHLY
Sample Results	Day 1					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10					
	11					
	12					
	13					
	14					
	15					
	16	0.001116	200		2.4	2.9
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	004	004	004	004	004
	Description	Combined Process WW & GW	Combined Process WW & GW	Combined Process WW & GW	Combined Process WW & GW	Combined Process WW & GW
	Parameter	152	231	480	1352	1353
	Description	Cyanide, Amenable	Hardness, Total as CaCO3	Temperature Maximum	PFOA	PFOS
	Units	lbs/day	mg/L	degF	ng/L	ng/L
Summary Values	**Monthly Avg**	0.001116	200		2.4	2.9
	Monthly Total					
	Daily Max	0.001116	200		2.4	2.9
	Daily Min	0.001116	200		2.4	2.9
Limit(s) in Effect	**Monthly Avg**					11 / 0
	Monthly Total					
	Daily Max	0.37 / 0				11 / 0
	Daily Min					
QA/QC Information	**LOD**				0.77	0.49
	LOQ				1.8	1.8
	QC Exceedance	N	N	N	N	N
	Lab Certification		999580010			

	Sample Point	004	108	108	108	108
	Description	Combined Process WW & GW	GWCTS Effluent	GWCTS Effluent	GWCTS Effluent	GWCTS Effluent
	Parameter	1353	211	457	35	35
	Description	PFOS	Flow Rate	Suspended Solids, Total	Arsenic, Total Recoverable	Arsenic, Total Recoverable
	Units	mg/day	MGD	mg/L	ug/L	lbs/day
	Sample Type	CALCULATED	CONTINUOUS	24 HR FLOW PROP	24 HR FLOW PROP	CALCULATED
	Frequency	MONTHLY	DAILY	WEEKLY	WEEKLY	WEEKLY
Sample Results	Day 1					
	2					
	3					
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	16	0.4116028				
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	31					

	Sample Point	004		108		108		108		108	
	Description	Combined Process WW & GW		GWCTS Effluent		GWCTS Effluent		GWCTS Effluent		GWCTS Effluent	
	Parameter	1353		211		457		35		35	
	Description	PFOS		Flow Rate		Suspended Solids, Total		Arsenic, Total Recoverable		Arsenic, Total Recoverable	
	Units	mg/day		MGD		mg/L		ug/L		lbs/day	
Summary Values	**Monthly Avg**	0.4116028									
	Monthly Total										
	Daily Max	0.4116028									
	Daily Min	0.4116028									
Limit(s) in Effect	**Monthly Avg**	2.10	0								
	Monthly Total										
	Daily Max							500		0.17	
	Daily Min										
QA/QC Information	**LOD**										
	LOQ										
	QC Exceedance	N		N		N		N		N	
	Lab Certification										

	Sample Point	108	108	108	108
	Description	GWCTS Effluent	GWCTS Effluent	GWCTS Effluent	GWCTS Effluent
	Parameter	280	280	1352	1353
	Description	Mercury, Total Recoverable	Mercury, Total Recoverable	PFOA	PFOS
	Units	ng/L	mg/day	ng/L	ng/L
	Sample Type	24 HR FLOW PROP	CALCULATED	24 HR FLOW PROP	24 HR FLOW PROP
	Frequency	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Sample Results	**Day 1**				
	2				
	3				
	4				
	5				
	6				
	7				
	8				
	9				
	10				
	11				
	12				
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	Sample Point	108	108	108	108
	Description	GWCTS Effluent	GWCTS Effluent	GWCTS Effluent	GWCTS Effluent
	Parameter	280	280	1352	1353
	Description	Mercury, Total Recoverable	Mercury, Total Recoverable	PFOA	PFOS
	Units	ng/L	mg/day	ng/L	ng/L
Summary Values	**Monthly Avg**				
	Monthly Total				
	Daily Max				
	Daily Min				
Limit(s) in Effect	**Monthly Avg**				
	Monthly Total				
	Daily Max	24			
	Daily Min				
QA/QC Information	**LOD**				
	LOQ				
	QC Exceedance				
	Lab Certification				

Footnotes (DNR Use Only; Instructions for completing this form that are unique for your facility may be displayed here.)

General Remarks

SP108 is still not in operation but will be next month.
SP703 no longer in use.
Temperature not in operations yet for OF004

Laboratory Quality Control Comments

Submitted by Anne Fleury(afleury16) on 6/8/2023 12:33:37 PM

Attachment 3
2023 Pump Down Program Groundwater Elevation Monitoring

Attachment 3. 2023 Pump Down Program Groundwater Elevation Monitoring

Tyco Fire Products LP, Marinette, Wisconsin

Target Elevation	577.9

Well ID	January 4, 2023		January 16, 2023		January 24, 2023		January 31, 2023		February 7, 2023		February 14, 2023		February 21, 2023		March 1, 2023		March 7, 2023		March 16, 2023		March 22, 2023		March 27, 2023		April 3, 2023	
	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)
Wells Inside Former Salt Vault																										
MW001M	10.63	576.51	10.31	576.83	11.43	575.71	11.32	575.82	11.63	575.51	11.38	575.76	11.37	575.77	10.98	576.16	10.83	576.31	10.48	576.66	10.21	576.93	10.04	577.10	9.74	577.40
MW001S	10.82	576.39	10.50	576.71	11.64	575.56	11.59	575.61	11.87	575.33	11.64	575.56	11.62	575.58	NM	-	NM	-	10.72	576.49	10.47	576.74	10.26	576.95	10.02	577.19
MW002M-R	14.02	576.38	13.63	576.77	14.72	575.67	14.59	575.81	14.99	575.40	14.70	575.69	14.71	575.68	14.30	576.10	14.24	576.16	13.83	576.57	13.59	576.81	13.39	577.01	13.16	577.25
MW002S-R	13.97	576.31	13.56	576.72	14.64	575.64	14.57	575.71	14.86	575.42	14.64	575.64	14.67	575.61	14.28	576.00	14.20	576.08	13.77	576.51	13.49	576.79	13.36	576.92	13.08	577.20
MW031M	11.39	576.56	11.16	576.80	12.13	575.82	12.16	575.79	12.31	575.64	12.20	575.75	12.16	575.79	11.69	576.26	11.61	576.34	11.16	576.80	10.89	577.07	10.78	577.18	10.48	577.48
MW031S	12.60	576.27	12.24	576.63	14.42	574.45	13.26	575.61	13.54	575.33	13.35	575.52	13.38	575.49	12.81	576.06	12.77	576.10	12.29	576.58	12.02	576.85	11.87	577.00	11.65	577.22
MW113S	13.82	576.44	13.45	576.81	14.55	575.71	14.47	575.79	14.82	575.44	14.59	575.67	14.59	575.67	14.22	576.04	14.11	576.15	13.71	576.55	13.44	576.82	13.27	576.99	13.02	577.24
MW113M	11.85	578.38	11.55	578.68	12.22	578.01	12.26	577.97	12.36	577.87	12.28	577.95	12.29	577.94	12.04	578.19	11.88	578.35	11.59	578.64	11.31	578.92	11.26	578.97	10.94	579.29
MW115P	12.26	576.81	11.24	577.83	12.99	576.08	13.06	576.01	13.37	575.70	13.24	575.83	13.24	575.83	12.85	576.22	12.79	576.28	12.30	576.77	11.13	577.94	10.29	578.78	9.62	579.45
MW115S	12.68	576.28	12.29	576.67	13.55	575.41	13.36	575.60	13.68	575.28	13.40	575.56	13.48	575.48	12.93	576.03	12.85	576.11	12.39	576.57	12.12	576.84	11.96	577.00	11.71	577.25
MW116P	12.96	576.89	12.96	576.89	13.00	576.85	12.95	576.90	12.95	576.90	12.94	576.91	12.95	576.90	12.95	576.90	12.94	576.91	12.95	576.90	12.91	576.94	12.94	576.91	11.96	577.89
MW116S	13.55	576.28	13.05	576.78	14.54	575.29	14.17	575.66	14.64	575.18	14.22	575.61	14.27	575.56	13.81	576.02	13.73	576.10	13.26	576.57	12.95	576.88	12.81	577.02	12.51	577.32
MW119D	9.21	579.51	9.24	579.48	9.29	579.43	9.29	579.43	9.36	579.36	9.42	579.30	9.44	579.28	9.46	579.26	9.50	579.22	9.45	579.27	9.49	579.23	9.48	579.24	9.41	579.31
EW-3	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
EW-10	10.68	576.37	10.22	576.83	11.10	575.95	11.30	575.75	11.59	575.46	11.45	575.60	11.36	575.69	NM	-	NM	-	NM	-	9.98	577.07	NM	-	9.43	577.62
EW-11	9.54	577.14	9.23	577.45	10.05	576.63	10.18	576.50	10.33	576.35	10.12	576.56	10.14	576.54	NM	-	NM	-	NM	-	9.08	577.60	NM	-	8.55	578.13
EW-13	8.72	576.39	8.39	576.72	9.42	575.68	9.34	575.76	9.68	575.42	9.50	575.60	9.43	575.67	NM	-	NM	-	NM	-	NM	-	7.77	577.34	7.44	577.67
EW-14	9.71	576.36	9.32	576.75	10.60	575.47	10.36	575.71	10.70	575.37	10.45	575.62	10.43	575.64	10.02	576.05	9.97	576.10	9.49	576.58	9.24	576.83	8.99	577.09	8.06	578.02
Wells Inside Former 8th Street Slip																										
MW034M	12.14	576.08	12.60	575.62	12.66	575.56	12.92	575.30	12.80	575.42	12.88	575.34	12.78	575.44	12.80	575.42	12.91	575.31	12.11	576.11	11.50	576.72	11.28	576.94	11.50	576.72
MW034S	12.52	575.66	12.21	575.97	13.02	575.16	13.28	574.90	13.21	574.97	13.23	574.95	13.11	575.07	13.16	575.02	13.25	574.93	12.48	575.70	11.83	576.35	11.55	576.63	11.62	576.56
MW036M	12.52	575.98	12.45	576.05	13.13	575.36	13.23	575.26	13.04	575.45	13.05	575.44	13.07	575.42	12.99	575.50	13.14	575.35	12.68	575.82	12.27	576.23	11.99	576.52	11.64	576.87
MW036S	12.02	576.23	11.92	576.33	12.68	575.57	12.68	575.57	12.55	575.70	12.56	575.69	12.59	575.66	12.51	575.74	12.66	575.59	12.19	576.06	11.74	576.51	11.47	576.78	11.08	577.17
MW038M	9.74	576.40	9.59	576.55	NM	-	10.43	575.71	10.19	575.95	10.21	575.93	10.28	575.86	NM	-	10.27	575.87	9.81	576.33	9.36	576.78	9.08	577.06	8.49	577.65
MW038S	11.51	576.31	11.29	576.53	12.34	575.48	12.16	575.66	11.96	575.86	11.92	575.90	11.99	575.83	11.90	575.92	11.95	575.87	11.57	576.25	11.06	576.76	10.78	577.04	10.11	577.72
MW120D	8.33	580.46	8.59	580.20	9.15	579.63	9.26	579.52	9.02	579.76	9.20	579.58	9.05	579.73	9.00	579.78	9.04	579.74	9.05	579.73	8.51	580.28	8.86	579.92	8.91	579.87
MW120M	12.55	576.35	12.56	576.34	12.94	575.95	13.23	575.65	13.11	575.78	13.30	575.58	13.22	575.66	13.24	575.64	13.38	575.50	12.88	576.01	12.48	576.42	12.20	576.70	11.83	577.08
MW120S	11.75	576.77	11.80	576.72	12.22	576.30	12.35	576.17	12.53	575.99	12.58	575.94	12.58	575.94	12.63	575.89	12.90	575.62	12.25	576.27	11.84	576.68	11.62	576.90	11.01	577.51
EW-2	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
EW-8	7.91	576.19	7.81	576.29	12.90	571.19	8.57	575.53	8.38	575.72	8.35	575.75	8.44	575.66	8.32	575.78	8.49	575.61	7.97	576.13	7.53	576.57	7.29	576.81	6.73	577.37
EW-9	11.69	571.66	12.24	571.11	16.10	567.24	NM	-	NM	-	NM	-	8.34	575.02	NM	-	NM	-	NM	-	NM	-	6.79	576.57	10.32	573.04
Wells Outside Pump Down Program Area																										
MW004M	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
MW004S	5.78	582.96	5.50	583.24	5.46	583.28	5.63	583.11	5.84	582.90	5.70	583.04	5.53	583.21	5.53	583.21	5.25	583.49	4.82	583.92	4.68	584.06	4.51	584.23	4.08	584.66
MW032M	6.47	581.84	6.46	581.85	6.65	581.66	6.88	581.43	6.69	581.62	6.70	581.61	5.35	582.96	6.55	581.76	6.26	582.05	6.09	582.22	6.01	582.30	5.99	582.32	5.56	582.75
MW032S	5.42	583.07	5.33	583.16	5.30	583.19	5.58	582.91	5.59	582.90	5.49	583.00	6.67	581.81	5.29	583.20	5.04	583.45	4.64	583.85	4.59	583.90	4.46	584.03	3.98	584.51
MW033M	4.60	582.79	4.39	583.00	4.25	583.14	4.53	582.86	4.68	582.71	4.49	582.90	4.32	583.07	4.31	583.08	3.84	583.55	3.72	583.67	3.51	583.88	3.11	584.28	2.83	584.57
MW033S	4.48	582.84	4.12	583.20	4.04	583.28	4.28	583.04	4.37	582.95	4.26	583.06	4.09	583.23	4.11	583.21	4.04	583.28	3.45	583.87	3.24	584.08	3.33	583.99	2.60	584.72
MW039M	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
MW039S	3.08	583.12	2.93	583.27	2.89	583.31	3.05	583.15	3.25	582.95	3.09	583.11	2.95	583.25	2.96	583.24	2.65	583.55	2.24	583.96	2.08	584.12	1.92	584.28	1.50	584.70
MW035M	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
MW035S	5.99	581.66	6.33	581.32	6.49	581.16	6.98	580.67	7.24	580.41	6.94	580.71	6.71	580.94	6.91	580.74	6.28	581.37	5.91	581.74	5.65	582.00	5.64	582.01	5.62	582.03
MW037M	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
MW037S	5.59	581.48	5.67	581.40	5.72	581.35	6.29	580.78	6.57	580.49	6.25	580.82	5.99	581.08	6.21	580.86	5.48	581.59	5.12	581.95	4.91	582.16	4.80	582.27	4.74	582.33
SG4	7.15	580.30	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
Target Elevation Calc SV		576.58		576.94		575.73		575.94		575.64		575.87		575.86		576.32		576.41		576.79		577.06		577.21		577.48
Target Elevation Calc 8SS		576.22		576.26		575.63		575.53		575.64		575.60		575.61		575.59		575.51		576.07		576.56		576.82		577.16
Target Elevation (NAVD88)		577.90		577.90		577.90		577.90		577.90		577.90		577.90		577.90		577.90		577.90		577.90		577.90		577.90
SV Variance		-1.32		-0.96		-2.17		-1.96		-2.26		-2.03		-2.04		-1.58		-1.49		-1.11		-0.84		-0.69		-0.42
8SS Variance		-1.68		-1.64		-2.27		-2.37		-2.26		-2.30		-2.29		-2.31		-2.39		-1.83		-1.34		-1.08		-0.74

Attachment 3. 2023 Pump Down Program Groundwater Elevation Monitoring

Tyco Fire Products LP, Marinette, Wisconsin

Target Elevation	577.9

Well ID	April 11, 2023		April 18, 2023		April 25, 2023		May 3, 2023		May 9, 2023		May 16, 2023		May 23, 2023		May 31, 2023		June 6, 2023		June 15, 2023		June 19, 2023		June 27, 2023	
	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)
Wells Inside Former Salt Vault																								
MW001M	9.56	577.58	9.51	577.63	9.34	577.80	9.29	577.85	9.41	577.73	9.55	577.59	9.73	577.41	9.68	577.46	9.27	577.87	9.72	577.42	10.05	577.09	9.46	577.68
MW001S	9.77	577.44	9.82	577.39	9.58	577.63	9.51	577.70	9.67	577.54	9.78	577.43	9.95	577.26	9.92	577.29	9.50	577.71	9.96	577.25	10.36	576.85	9.67	577.54
MW002M-R	12.91	577.50	12.88	577.53	12.69	577.72	12.71	577.70	12.80	577.61	12.92	577.49	13.12	577.29	13.06	577.35	12.58	577.83	13.07	577.34	13.40	577.00	12.87	577.54
MW002S-R	12.78	577.50	12.78	577.50	12.58	577.70	12.58	577.70	12.68	577.60	12.83	577.45	13.02	577.26	12.92	577.36	12.46	577.82	12.95	577.33	13.32	576.96	12.79	577.49
MW031M	10.30	577.66	10.32	577.64	10.15	577.81	10.04	577.92	10.11	577.85	10.30	577.66	10.43	577.53	10.53	577.43	10.03	577.93	10.49	577.47	10.80	577.16	10.17	577.79
MW031S	11.40	577.47	11.45	577.42	11.25	577.62	11.17	577.70	11.24	577.63	11.42	577.45	11.57	577.30	11.59	577.28	11.12	577.75	11.62	577.25	11.93	576.94	11.31	577.56
MW113S	12.71	577.55	12.73	577.53	12.53	577.73	12.50	577.76	12.61	577.65	12.73	577.53	12.90	577.36	12.86	577.40	12.43	577.83	12.91	577.35	13.23	577.03	12.67	577.59
MW113M	10.65	579.58	10.66	579.57	10.59	579.64	10.56	579.67	10.57	579.66	10.65	579.58	10.82	579.41	10.88	579.35	10.69	579.54	11.01	579.22	11.21	579.02	10.91	579.32
MW115P	9.30	579.77	9.46	579.61	9.37	579.70	9.52	579.55	9.60	579.47	9.98	579.09	10.66	578.41	10.72	578.35	10.60	578.47	10.89	578.18	11.18	577.89	10.91	578.16
MW115S	11.50	577.46	11.51	577.45	11.34	577.62	11.29	577.67	11.44	577.52	11.59	577.37	11.75	577.21	11.70	577.26	11.23	577.73	11.79	577.17	12.12	576.84	11.44	577.52
MW116P	11.10	578.75	11.47	578.38	11.68	578.17	11.61	578.24	11.84	578.01	11.72	578.13	11.80	578.05	11.69	578.16	11.62	578.23	11.43	578.42	11.55	578.30	11.53	578.32
MW116S	12.35	577.48	12.32	577.51	12.17	577.66	12.22	577.61	12.39	577.44	12.54	577.29	12.68	577.15	12.66	577.17	12.10	577.73	12.71	577.12	13.03	576.80	12.36	577.47
MW119D	9.35	579.37	9.23	579.49	9.14	579.58	9.08	579.64	9.11	579.61	8.91	579.81	8.85	579.87	8.81	579.91	8.74	579.98	8.74	579.98	8.74	579.98	8.89	579.83
EW-3	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
EW-10	9.36	577.69	9.36	577.69	9.33	577.72	9.32	577.73	9.44	577.61	9.47	577.58	9.63	577.42	9.57	577.48	9.24	577.81	9.65	577.40	9.87	577.18	9.45	577.60
EW-11	8.25	578.43	8.27	578.41	8.17	578.51	8.07	578.61	8.21	578.47	8.25	578.43	8.52	578.16	8.47	578.21	8.17	578.51	8.57	578.11	8.90	577.78	8.43	578.25
EW-13	7.28	577.83	7.34	577.77	7.14	577.97	7.17	577.94	7.99	577.12	7.38	577.73	7.60	577.51	7.55	577.56	7.22	577.89	7.67	577.44	8.05	577.06	7.42	577.69
EW-14	8.34	577.74	8.42	577.66	8.26	577.82	8.34	577.74	8.45	577.63	8.61	577.47	8.77	577.31	8.71	577.37	8.22	577.86	8.79	577.29	9.11	576.96	8.50	577.58
Wells Outside Pump Down Program Area																								
MW034M	11.00	577.22	11.00	577.22	10.84	577.38	10.73	577.49	10.94	577.28	10.82	577.40	10.91	577.31	10.93	577.29	11.05	577.17	11.28	576.94	11.40	576.82	11.25	576.97
MW034S	11.19	576.99	11.12	577.06	10.99	577.19	10.88	577.30	11.09	577.09	10.95	577.23	11.02	577.16	11.04	577.14	11.18	577.00	11.42	576.76	11.55	576.63	11.40	576.78
MW036M	11.11	577.41	10.92	577.60	10.74	577.78	10.62	577.91	11.10	577.42	10.93	577.59	11.13	577.39	11.19	577.33	11.36	577.16	11.69	576.82	11.83	576.68	11.42	577.09
MW036S	10.55	577.70	10.37	577.88	10.16	578.09	10.02	578.23	10.52	577.73	10.36	577.89	10.54	577.71	10.60	577.65	10.78	577.47	11.11	577.14	11.27	576.98	10.90	577.35
MW038M	7.91	578.23	7.66	578.48	7.49	578.65	7.36	578.78	8.05	578.09	7.96	578.18	8.22	577.92	8.32	577.82	8.60	577.54	9.00	577.14	9.16	576.98	8.53	577.61
MW038S	9.54	578.29	9.23	578.60	9.09	578.74	8.99	578.84	9.74	578.09	9.65	578.18	9.90	577.93	10.20	577.63	10.28	577.55	10.72	577.10	10.90	576.92	10.21	577.62
MW120D	8.68	580.11	8.53	580.26	8.35	580.44	8.23	580.56	8.00	580.79	8.21	580.58	7.98	580.81	8.13	580.66	8.01	580.78	8.25	580.54	8.15	580.64	8.22	580.57
MW120M	11.40	577.51	11.33	577.59	11.26	577.66	11.15	577.77	11.33	577.59	11.16	577.76	11.28	577.64	11.25	577.67	11.38	577.54	11.52	577.39	11.69	577.22	11.89	577.02
MW120S	10.52	578.00	10.55	577.97	10.60	577.92	10.47	578.05	10.58	577.94	10.41	578.11	10.60	577.92	10.62	577.90	10.68	577.84	10.78	577.74	10.98	577.54	10.99	577.53
EW-2	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
EW-8	6.60	577.50	5.97	578.13	4.74	579.37	5.61	578.50	8.18	575.92	8.13	575.97	8.37	575.73	8.48	575.62	8.68	575.42	9.19	574.91	9.39	574.71	6.99	577.11
EW-9	8.51	574.85	9.87	573.49	NM	-	9.40	573.96	9.73	573.63	9.76	573.60	9.81	573.55	9.81	573.55	9.90	573.46	10.21	573.15	10.45	572.91	10.20	573.16
Wells Outside Pump Down Program Area																								
MW004M	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
MW004S	3.72	585.02	3.71	585.03	3.91	584.83	3.85	584.89	3.92	584.82	3.96	584.78	4.30	584.44	4.62	584.12	4.84	583.90	4.91	583.83	5.09	583.65	5.15	583.59
MW032M	5.48	582.83	5.41	582.90	5.58	582.73	5.56	582.75	5.41	582.90	5.48	582.83	5.66	582.65	5.89	582.42	6.02	582.29	4.90	583.42	6.13	582.18	6.13	582.18
MW032S	3.90	584.59	3.98	584.51	4.15	584.34	4.17	584.32	4.10	584.39	4.14	584.35	4.46	584.03	4.80	583.69	4.99	583.50	6.02	582.47	5.11	583.38	5.14	583.35
MW033M	2.38	585.02	2.38	585.02	2.52	584.88	2.55	584.85	2.51	584.89	2.58	584.82	2.95	584.44	3.30	584.09	3.50	583.89	3.52	583.87	3.72	583.67	4.27	583.12
MW033S	2.59	584.73	2.61	584.71	2.78	584.54	2.74	584.58	2.77	584.55	2.83	584.49	3.17	584.15	3.52	583.80	3.72	583.60	3.73	583.59	3.94	583.38	4.03	583.29
MW039M	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
MW039S	1.10	585.10	1.17	585.03	1.37	584.83	1.30	584.90	1.36	584.84	1.42	584.78	1.76	584.44	2.06	584.14	2.29	583.91	2.33	583.87	2.51	583.69	2.57	583.63
MW035M	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
MW035S	5.55	582.10	5.63	582.02	5.71	581.94	5.70	581.95	5.73	581.92	5.81	581.84	5.99	581.66	6.42	581.23	6.93	580.72	6.77	580.88	7.20	580.45	7.14	580.51
MW037M	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
MW037S	4.60	582.47	4.76	582.31	4.85	582.22	4.81	582.26	4.89	582.18	5.00	582.07	5.21	581.86	5.72	581.35	6.35	580.72	6.12	580.95	6.63	580.43	6.57	580.49
SG4	7.65	579.80	7.15	580.30	7.29	580.16	7.15	580.30	6.90	580.55	NM	-	6.90	580.55	6.89	580.56	6.90	580.55	7.11	580.34	7.10	580.35	7.05	580.40
Target Elevation Calc SV		577.72		577.72		577.89		577.93		577.82		577.68		577.52		577.53		577.97		577.49		577.17		577.75
Target Elevation Calc 8SS		577.67		577.80		577.93		578.05		577.65		577.79		577.62		577.55		577.41		577.13		576.97		577.25
Target Elevation (NAVD88)		577.90		577.90		577.90		577.90		577.90		577.90		577.90		577.90		577.90		577.90		577.90		577.90
SV Variance		-0.18		-0.18		-0.01		0.03		-0.08		-0.22		-0.38		-0.37		0.07		-0.41		-0.73		-0.15
8SS Variance		-0.23		-0.10		0.03		0.15		-0.25		-0.11		-0.28		-0.35		-0.49		-0.77		-0.93		-0.65

Notes:

Measurements were collected from top of casing (TOC). All depth measurements are in feet.

Elevations are reported in feet relative to the North American Vertical Datum 1988 (NAVD88)

Shaded/Bold = Well part of Target Elevation calculation

- = Information not applicable or not collected

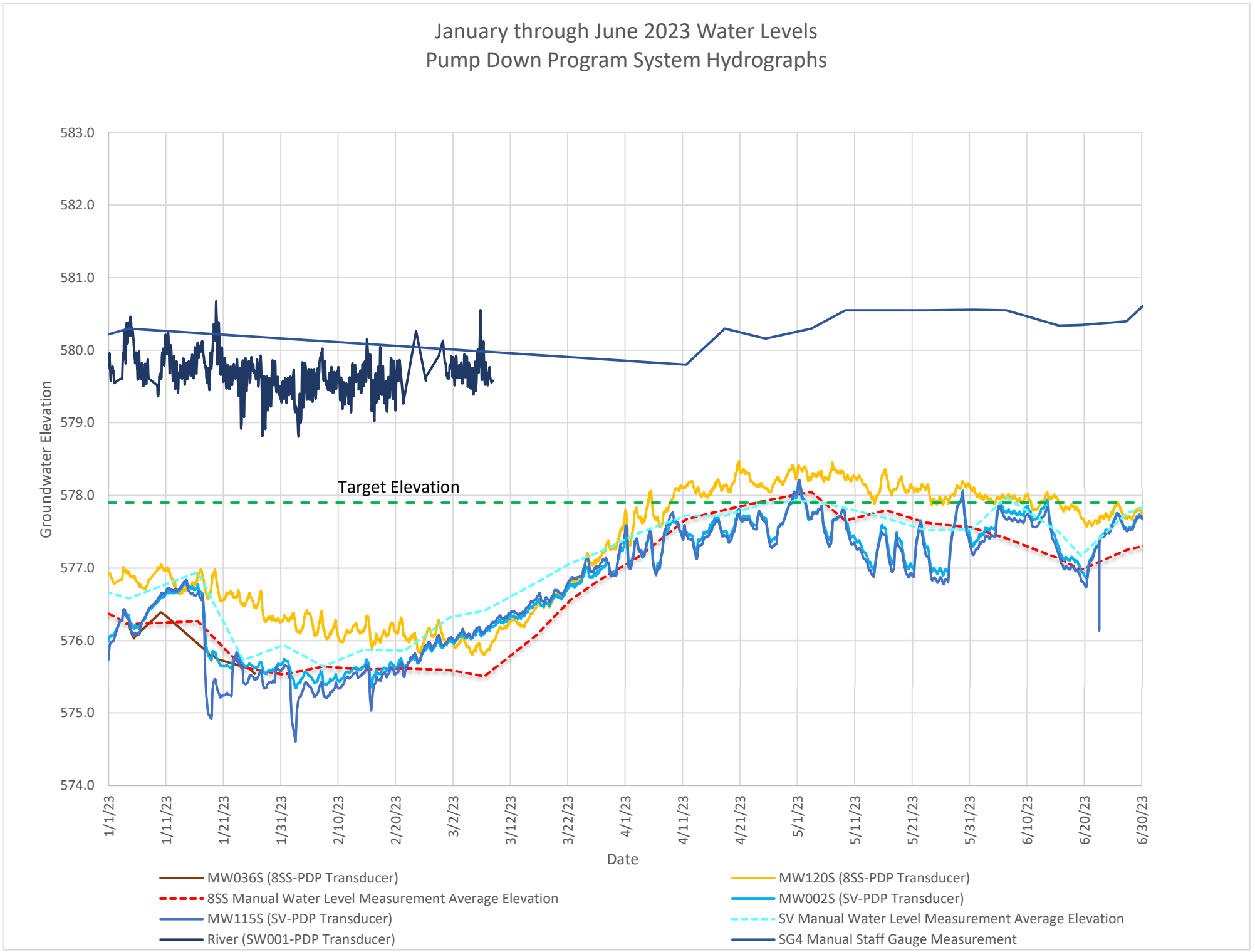
Area Definitions - SV - former Salt Vault, 8SS - former 8th Street Slip

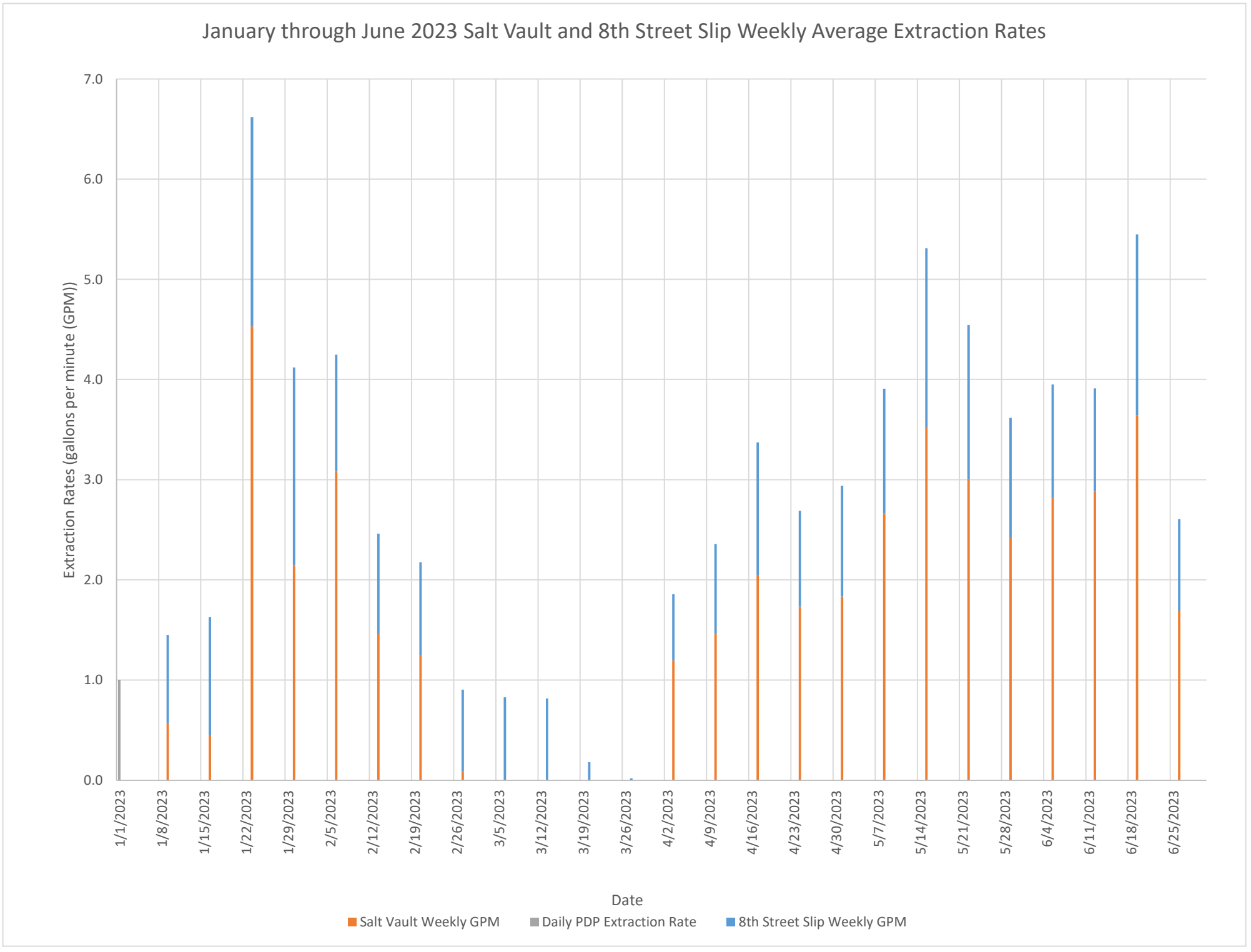
Corrected groundwater elevation is calculated using the 2022 calculated mean conductivity value (from the last 5 years of data)

ID = identification; DTW = depth to water

NM = Not Measured; MW = Monitoring Well

Attachment 4
Second Quarter 2023 PDP Pump House System Hydrograph and Pumping Rates


January through June 2023 Water Levels
Pump Down Program System Hydrographs
583.0
582.0
581.0
580.0
579.0
578.0
577.0
576.0
575.0
574.0
Groundwater Elevation
Target Elevation
1/1/23
1/11/23
1/21/23
1/31/23
2/10/23
2/20/23
3/2/23
3/12/23
3/22/23
4/1/23
4/11/23
4/21/23
5/1/23
5/11/23
5/21/23
5/31/23
6/10/23
6/20/23
6/30/23
Date
MW036S (8SS-PDP Transducer)
MW120S (8SS-PDP Transducer)
8SS Manual Water Level Measurement Average Elevation
MW002S (SV-PDP Transducer)
MW115S (SV-PDP Transducer)
SV Manual Water Level Measurement Average Elevation
River (SW001-PDP Transducer)
SG4 Manual Staff Gauge Measurement


January through June 2023 Salt Vault and 8th Street Slip Weekly Average Extraction Rates
Extraction Rates (gallons per minute (GPM))
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
1/1/2023
1/8/2023
1/15/2023
1/22/2023
1/29/2023
2/5/2023
2/12/2023
2/19/2023
2/26/2023
3/5/2023
3/12/2023
3/19/2023
3/26/2023
4/2/2023
4/9/2023
4/16/2023
4/23/2023
4/30/2023
5/7/2023
5/14/2023
5/21/2023
5/28/2023
6/4/2023
6/11/2023
6/18/2023
6/25/2023
Date
Salt Vault Weekly GPM
Daily PDP Extraction Rate
8th Street Slip Weekly GPM