

April 15, 2020

Jennifer Dodds
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 (January through March 2020)*
Administrative Order on Consent (February 26, 2009)
Tyco Fire Products LP, Stanton Street Facility, Marinette, Wisconsin
*WID 006 125 215***

Dear Ms. Dodds:

In accordance with Section VI, 21, b (Page 10) of the Administrative Order on Consent (AOC), dated February 26, 2009, Tyco Fire Products LP (Tyco) has prepared this quarterly progress report for the U.S. Environmental Protection Agency (EPA) Region 5 and the Wisconsin Department of Natural Resources (WDNR) (collectively referred herein as the Agencies). The 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. This report covers the period from January 1 through March 31, 2020 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

Operation of the groundwater collection and treatment system (GWCTS) continued through first quarter 2020. Attachment 1 summarizes the operational data, and Attachment 2 contains the Discharge Monitoring Reports. In response to the Coronavirus (COVID-19) outbreak, the GWCTS was temporarily shut down between March 19 and March 27, 2020 to allow Tyco to take appropriate steps to ensure the health and well-being of its people as well as the continuity of its business operations.

Pump down operations with the temporary system remained shut down at the start of the first quarter 2020 in the former Salt Vault and former 8th Street Slip areas. Modifications were made to the system to allow the collection and storage system to operate during the winter months in the former Salt Vault area only. Operation of the collection and storage system in the former 8th Street Slip was not conducted as the water levels in the area have historically remained below the target levels during recent winter shut down periods. Startup occurred in the former Salt Vault on January 8, 2020, and operations continued under management of Endpoint Solutions of Franklin, Wisconsin. In response to the COVID-19 outbreak, the pump down program temporary system also was shut down between March 19 and March 27, 2020 to allow Tyco to take appropriate steps to ensure the health and well-being of its people as well as the continuity of its business operations. Details of the pump down operations are reported to the Agencies in biweekly summary reports.

Additional Activities

The draft Wisconsin Pollutant Discharge and Elimination System (WPDES) variance permit was not received from WDNR in first quarter 2020. WDNR has been in contact with Tyco with additional requests (such as additional sampling at the facility wastewater treatment plant) and questions on the operations. The draft WPDES variance permit is anticipated to be received from WDNR in second quarter 2020. Because of the delay in receiving the draft permit from WDNR, steps to move forward with the conveyance system construction work for the permanent pump down program approach would likely be initiated in 2021, and design for the GWCTS improvements could be initiated in fall or winter 2020.

The new ChemDesign building construction and related changes to RCRA remedy components continued in first quarter 2020. Work is anticipated to be completed in fall 2020. Monitoring well MW043M and piezometer PZ-10 were abandoned on March 11, 2020, and the well abandonment logs were submitted to WDNR by the ChemDesign driller. MW043S could not be located, and a monitoring well abandonment exemption request will be submitted under separate cover as further discussed in the Problems Encountered section.

Per the request in EPA's December 18, 2019 comment letter on the September 27, 2019 *Vapor Intrusion Assessment and Work Plan*, the initial Building 14 vapor intrusion sampling event was conducted on February 11, 2020.

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 GWCTS. The GWCTS operates under WPDES Permit WI-0001040-07-0. Attachment 2 includes the GWCTS monthly WPDES Discharge Monitoring Reports for December 2019 through February 2020. Attachment 1 contains additional data on the GWCTS operations.

Groundwater elevation data were collected from monitoring wells in the former 8th Street Slip and former Salt Vault areas in accordance with the pump down program requirements and have been reported to the Agencies in the biweekly summary reports.

The Building 14 vapor intrusion sampling event included collecting five indoor air samples, including one duplicate, and one outdoor air sample at Building 14. The air sample results were nondetect for the analyzed parameters (vinyl chloride; cis-1,2-dichloroethene; and trichloroethene), with reporting limits below applicable indoor air screening levels. Concurrent with the indoor air sampling, the groundwater and wastewater treatment facility influent samples also were nondetect for the same analyzed parameters. Results were submitted on March 3, 2020 in an email to the Agencies.

Problems Encountered

Menomonee River Levels

Menomonee River water levels remained relatively high through first quarter 2020. During the reporting period, the river was iced over but remained above the top of the vertical barrier wall in the Wetlands Area of the site. Water levels did not exceed the weirs in the Main Plant area during the reporting period. Tyco evaluated options to help manage potential high river levels that the U.S. Army Corps of Engineers have predicted for Lake Michigan in 2020.¹

¹ U.S. Army Corps of Engineers. 2020. Monthly Bulletin of Lakes Levels for the Great Lakes. Available online at <https://www.lre.usace.army.mil/Missions/Great-Lakes-Information/Great-Lakes-Water-Levels/Water-Level-Forecast/Monthly-Bulletin-of-Great-Lakes-Water-Levels/>. April.

GWCTS Operations

Although GWCTS average monthly operational run times were similar to the previous reporting period, the overall volume extracted was approximately 309,358 gallons, 3.5 times greater than that reported last quarter. Reject volumes were similar as well, even with the higher extraction rate, and overall performance has improved from the previous reporting period. The vibratory shear-enhanced processing (VSEP) operational improvements are complete. The VSEP units help reduce the amount of time it takes for the reject tank to fill, which in prior reporting periods has limited operational run times.

On January 23 and January 24, 2020, water generated from other site work (decontamination water from frac tanks holding site groundwater) was added to the GWCTS for treatment; however, the excess solids in that water clogged the initial GWCTS tanks and piping and required replacement of a diaphragm pump. These issues were fixed, and the system was running again on January 31, 2020. Although the system was running, the upper two reaction tanks and the lamella continued to be a bottleneck in the system, limiting operations to approximately 10 gallons per minute (gpm) or less. Therefore, adjustments were made to the system, which were completed on February 20, 2020, to bypass the first two reaction tanks and the lamella and connect the equalization tank to Reaction Tank 3, then Reaction Tank 4, and then to the microfilter. This is closer to how the GWCTS operated in 2014 before installing a pretreatment train to help manage the high concentration water coming from the former Salt Vault and former 8th Street Slip and maintains compliance with WPDES permit requirements.

Since EW-2 and EW-3 (two higher concentration extraction wells in the former Salt Vault and former 8th Street Slip) are not running, as the areas associated with these wells are being managed by the temporary pump down program and water is being disposed of offsite, these pretreatment stages are not critical to the overall operations. Most of the piping was still in place, so limited connections and reprogramming was required by Pieper Electric (Pieper) of New Berlin, Wisconsin and Tri-City Plumbing of Marinette, Wisconsin. This change allowed the system to run at a higher rate of approximately 20 gpm, still meet discharge requirements, and allow Tyco to maintain the system more easily, in compliance with its WPDES permit. Between March 3 and March 5, 2020, piping was installed to add a ferric sulfate feed to the first reaction tank (Tank 3) to help with coagulation in the process. A sodium hypochlorite feed also was added to the equalization tank to initiate the oxidation of As⁺³ to As⁺⁵ before reaching the reaction vessels.

Extraction Well Operations

During the week of January 27, 2020, Jacobs Engineering Group Inc. (Jacobs), Pieper, and Coleman Engineering Company (Coleman) of Iron Mountain, Michigan conducted maintenance and repair activities on the Main Plant extraction wells (EW-4, EW-5, EW-6, and EW-7). Extraction wells EW-5, EW-6, and EW-7 were not operational at the beginning of the reporting period, and EW-5 was damaged in December 2019 during clearing activities associated with the ChemDesign building construction. The Main Plant extraction wells were checked and fully operating by January 31, 2020. Water generated during this event was either collected in a tote and added to the pump down program tanks for offsite disposal or was run through the GWCTS.

Upon arrival, EW-4 was in alarm status. After troubleshooting, Pieper determined the alarm was because of a faulty DC power supply and procured and installed a new power supply. After testing the pump, it was discovered that the pump needed to be pulled and cleaned. After Coleman pulled the pump, Jacobs and Pieper disassembled and cleaned the pump, and the pump was installed and tested for flow. Manual running of the motor confirmed a flow rate up to approximately 15 gpm; however, pumping at this rate caused the well to run dry with a delay in recharging of the well. Coleman brushed, surged, and pumped water out of the well over 1 day using the pump on the Geoprobe. Approximately 550 gallons were removed from EW-4, and the final turbidity reading was 17.1 nephelometric turbidity units (NTUs). The original pump was placed back in the well, and manual running of the motor at 25% confirmed flow rates up to approximately 0.5 gpm where the well did not go dry. After increasing the output to 50%, confirmed flow rates of 6 gpm caused the well to go dry. The well took approximately 10 minutes to recharge.

The pump in EW-5 was pulled and Coleman brushed, surged, and pumped water out of the well over 2 days using the Geoprobe pump. The original pump motor and pump were determined to be bad and not working properly even after cleaning. Approximately 800 gallons were removed from EW-5, and the final turbidity reading was 10.4 NTUs. A new pump was installed, and Pieper connected the new polyvinyl chloride (PVC) conduit to the existing underground PVC conduit and reinstalled and completed the electrical hookup to the motor. Pieper and Jacobs determined that the Acromag isolator for EW-5 was bad and replaced it with the isolator from EW-2 at the remote telemetry unit. Jacobs and Pieper then programmed the CU300/motor for EW-5. Manual running of the motor at 100% output confirmed a flow rate of up to 13.2 gpm; output of 75% confirmed a flow rate of 10.7 gpm, 50% confirmed a flow rate of 7.5 gpm, and 25% confirmed a flow rate of 3.5 gpm. A new protective casing was put in place around the extraction well casing, and the protective casing will be concreted in place when ChemDesign installs paving around the new building.

EW-6 previously had faulted out, and initial checks showed that the pump was in “ready” status with no alarms present. During the week of January 27, 2020, EW-6 had no alarms triggered; therefore, no troubleshooting of the previous alarm was completed or needed at that time. EW-6 is operational, and no other work was conducted at EW-6 during this event.

EW-7 had water above the electrical fitting attached to the well cap and ultimately was determined that the electrical splice was corroded, causing a fault condition for the well. Coleman pulled the pump and cleaned the pump/motor from EW-7, and Pieper tested and confirmed that the motor was working. Coleman used a small pump to try pumping out the vault and discovered that water was continuing to fill the vault. Pieper installed an electrical junction box on the underside of the vault lid to prevent groundwater from contacting the electrical connections. The well casing and well cap were extended above the water elevation to allow it to dry overnight. Coleman brushed, surged, and pumped water out of the well over 2 days using the pump on the Geoprobe. Approximately 550 gallons were removed from EW-7, and the final turbidity reading was 5.4 NTUs. A new pump was installed at EW-7, and the CU300/motor was programmed. The existing pump/motor was set aside and left with the GWCTS operator to use as a spare. After testing the new pump, it was determined that the flow meter at the GWCTS building for EW-7 was not measuring flow. Pieper and Jacobs disconnected the flow meter for EW-7 and replaced it with the flow meter for EW-2. Manual running of the motor at 100% output confirmed a flow rate up to approximately 16.5 gpm; output of 75% confirmed a flow rate of 13.8 gpm, 50% confirmed a flow rate of 9.5 gpm, and 25% confirmed a flow rate of 4.2 gpm.

Because of high water levels and snow-covered ground, EW-1 in the Wetlands Area was unable to be located and was not inspected. EW-2 and EW-3 in the former 8th Street Slip and former Salt Vault, respectively, are no longer used to manage groundwater because of their low flow rates relative to other (newer) pump down program wells in these areas. As such, EW-2 and EW-3 were not inspected.

Monitoring Well MW043S Abandonment

ChemDesign could not locate monitoring well MW043S when its drilling contractor was onsite to complete the well abandonment within the new ChemDesign building footprint. ChemDesign used coordinates and measurements from existing wells to dig and try to locate the well. A protective pipe/flush-mount well cover was found, but the 2-inch-diameter PVC well casing or concrete was not located. It is believed that either during grubbing/clearing the area or initial grading that the flush-mount well was damaged and displaced. MW043S is a shallow well under the footprint of the building. Tyco will be submitting under separate cover a well abandonment exemption request to WDNR for MW043S.

Schedule of Upcoming Activities

The following is a summary of activities to be conducted during the next reporting period.

- Submit the quarterly progress report
- Continue constructing new ChemDesign building and related changes to RCRA remedy components

- Submit MW043S well abandonment exemption request
- Complete the spring barrier wall groundwater monitoring sampling event
- Conduct 5-year monitoring well survey
- Conduct vertical barrier wall, tree plot, cover area, and monitoring well inspections
- Address inspection findings for the vertical barrier wall, tree plot, cover areas, and monitoring wells
- Continue pump down program operations in the former Salt Vault area and startup operations in the former 8th Street Slip area (startup is anticipated to occur in late April because of timing for procurement of new piping and hoses needed for this area)
- Continue operating the GWCTS
- Conduct project status meeting with EPA and WDNR (note that the April 29, 2020 meeting was cancelled because of COVID-19 and will be rescheduled)
- Receive Agency comments or approval on 2019 annual report, arsenic migration pathways evaluation report, and response to Agency comment on the vapor intrusion assessment and work plan
- Conduct the second trichloroethene indoor air sampling event at Building 14 requested by the Agencies
- Continue WPDES variance permit options for Agency review that will determine path forward on conveyance and GWCTS improvements

List of Key Correspondence and Document Submittals

Table 1. Documents Submitted

*Quarterly Progress Report (January to March 2020)
 Tyco Fire Products LP Facility, Marinette, Wisconsin*

Description of Submittal	Submitted To	Date Submitted
Quarterly Progress Report (includes letter report for 2019 vertical barrier wall inspection as Attachment 4)	EPA	January 15, 2020
Well Installation and Repair Field Activities, June 6 to June 15, 2019	EPA	January 15, 2020
Email Response to EPA with Update on the <i>Arsenic Migration Pathways Evaluation Report</i>	EPA	January 17, 2020
Biweekly Summary Report for Pump Down Program	EPA	February 13, 2020
Response to Agency December 19, 2019 Comments on <i>Vapor Intrusion Assessment and Work Plan</i> dated September 27, 2019	EPA	February 14, 2020
Biweekly Summary Report for Pump Down Program	EPA	February 25, 2020
Email Response – Building 14 Preliminary Vapor Intrusion Sampling Results	EPA	March 3, 2020
<i>Arsenic Migration Pathways Evaluation Report</i>	EPA	March 9, 2020
Biweekly Summary Report for Pump Down Program	EPA	March 12, 2020
<i>2019 Barrier Wall Groundwater Monitoring Annual Report</i>	EPA	March 17, 2020
Financial Assurance Instrument	EPA	March 26, 2020

Table 2. Correspondence from Agency
Quarterly Progress Report (January through March 2020)
Tyco Fire Products LP Facility, Marinette, Wisconsin

Description of Correspondence	Submitted By	Date Submitted
Email – Request for Update on <i>Arsenic Migrations Pathways Evaluation Report</i>	EPA	January 15, 2020
Email – Request for Additional Details in the Annual Report on the High River Levels	EPA	January 16, 2020
Approval Letter – 2020 Financial Assurance Cost Estimate	EPA	February 4, 2020
Email – Request for Update on Vapor Intrusion Activities	EPA	February 5, 2020
Email – Request for Financial Assurance Instrument and Update on Preliminary Data from Building 14 Vapor Intrusion Sampling Activities	EPA	March 3, 2020

If you have any questions or require additional information, please contact me at 262-644-6167 or Jeffrey Danko at 414-524-3344.

Respectfully Yours,

Jacobs Engineering Group Inc.



Heather Ziegelbauer
Project Manager

Attachments

- 1 Groundwater Collection and Treatment System Operation Summary
- 2 Discharge Monitoring Reports for the Groundwater Collection and Treatment System

cc: Angela Carey, WDNR
Ryan Suennen, Tyco Fire Products
Rick Bethel, Johnson Controls
Jeff Danko, Johnson Controls
Mariel Carter, Stephenson Public Library

Document Control No.: D3235600.275

Attachment 1
Groundwater Collection and
Treatment System Operation Summary

Groundwater Collection and Treatment System Operations for Tyco Fire Products LP, Marinette, Wisconsin, January 1 through March 31, 2020

Groundwater collection and treatment system (GWCTS) operations from January 1 through March 31, 2020 at the Tyco facility on Stanton Street in Marinette, Wisconsin are summarized below.

- The GWCTS operated for 6 days in January 2020, 9 days in February 2020, and 16 days in March 2020, for a total of 31 days.
- The precipitation recorded from the weather station in Marinette, Wisconsin was 6.68 inches of rain and 34.8 inches of snow (<http://www.ncdc.noaa.gov/cdo-web/datasets/GHCND/stations/GHCND:USC00475091/detail>).
- An estimated 309,358 gallons of groundwater were extracted (not including volumes extracted as part of the pump down program) from the site during the reporting period. Table 1-1 lists the water volumes extracted from each area of the site for this quarter based on the recorded data.
- An estimated 286,942 gallons of water were discharged to the Menominee River as effluent under the Wisconsin Pollutant Discharge and Elimination System permit.
- Approximately 99,900 gallons of reject water were produced during system operations and subsequently disposed of offsite.

Table 1-1. Extraction Well Data Summary (January through March 2020)

*Groundwater Collection and Treatment System
Tyco Fire Products LP Facility, Marinette, Wisconsin*

Extraction Well	Gallons Run, First Quarter 2020 (January 1 through March 31, 2020)
EW-1	57,252
EW-2	14
EW-3	9
EW-4	1,036
EW-5	88,330
EW-6	84,883
EW-7	77,834
Total	309,358

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: 715-735-7411
 Reporting Period: 12/01/2019 - 12/31/2019
 Form Due Date: 01/21/2020
 Permit Number: 0001040

Date Received:
 DOC: 435997
 FIN: 7245
 FID: 438039470
 Region: Northeast Region
 Permit Drafter: Trevor J Moen
 Reviewer: Nicole E Krueger
 Office: Milwaukee

Sample Point	001	703	001	001	001	
Description	PRIOR TO MENOMINEE RIVER	Intake Water Monitoring	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	
Parameter	211	280	487	374	373	
Description	Flow Rate	Mercury, Total Recoverable	Temperature	pH (Minimum)	pH (Maximum)	
Units	MGD	ng/L	degF	su	su	
Sample Type	CONTINUOUS	GRAB	GRAB	CONTINUOUS	CONTINUOUS	
Frequency	DAILY	MONTHLY	MONTHLY	DAILY	DAILY	
Sample Results	Day 1	0.569700		56	7.1	7.8
	2	0.137530		72	7.3	7.6
	3	0.140450		67	7.4	7.8
	4	0.135540		66	7.3	7.5
	5	0.138050		68	7.3	7.5
	6	0.110410		62	7.4	7.6
	7	0.067290		68	7.4	7.7
	8	0.092560		69	7.2	7.6
	9	0.149540		61	7.1	7.2
	10	0.120880		58	7.4	7.5
	11	0.128640		59	7.3	7.6
	12	0.147440		59	7.2	7.6
	13	0.100380		71	7.4	8.2
	14	0.050140		71	7.6	8.1
	15	0.075590		70	7.3	7.8
	16	0.125410	<0.12	60	7.4	7.8
	17	0.140350		61	7.6	7.7
	18	0.134400		59	7.5	7.7
	19	0.129520		59	7.4	7.6
	20	0.090860		62	7.4	7.5
	21	0.055590		65	7.5	7.6
	22	0.066570		63	7.4	7.6
	23	0.057200		62	7.7	7.8
	24	0.068460		63	7.6	7.8
	25	0.070910		62	7.5	7.7
	26	0.107400		61	7.3	7.7
	27	0.074110		63	7.5	8.1
	28	0.170650		63	7.1	8.0
	29	0.232290		53	7.0	7.7
	30	0.120710		55	7.2	7.5
	31	0.060020		57	7.5	7.9

	Sample Point	001		703		001		001		001	
	Description	PRIOR TO MENOMINEE RIVER		Intake Water Monitoring		PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER	
	Parameter	211		280		487		374		373	
	Description	Flow Rate		Mercury, Total Recoverable		Temperature		pH (Minimum)		pH (Maximum)	
	Units	MGD		ng/L		degF		su		su	
Summary Values	Monthly Avg	0.124793226		0		62.741935484		7.364516129		7.703225806	
	Monthly Total										
	Daily Max	0.5697		<0.12		72		7.7		8.2	
	Daily Min	0.05014		<0.12		53		7		7.2	
	Rolling 12 Month Avg										
Limit(s) in Effect	Monthly Avg										
	Monthly Total										
	Daily Max									11	0
	Daily Min							4	0		
	Rolling 12 Month Avg										
QA/QC Information	LOD			0.12							
	LOQ			0.39							
	QC Exceedance	N		N		N		N		N	
	Lab Certification			721026460							

	Sample Point	001	001	001	001	001
	Description	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER
	Parameter	379	376	388	231	35
	Description	pH Total Exceedance Time Minutes	pH Exceedances Greater Than 60 Minutes	Phosphorus, Total	Hardness, Total as CaCO3	Arsenic, Total Recoverable
	Units	minutes	Number	mg/L	mg/L	ug/L
	Sample Type	CONTINUOUS	CONTINUOUS	24 HR COMP	24 HR COMP	24 HR COMP
	Frequency	DAILY	DAILY	WEEKLY	MONTHLY	MONTHLY
Sample Results	Day 1					
	2			0.52	320	120
	3					
	4					
	5					
	6					
	7					
	8					
	9			1.5	250	100
	10					
	11					
	12					
	13					
	14					
	15					
	16			0.28	250	91
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26			0.67	330	130
	27					
	28					
	29					
	30					
	31					

	Sample Point	001		001		001		001	
	Description	PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER	
	Parameter	379		376		388		231	
	Description	pH Total Exceedance Time Minutes		pH Exceedances Greater Than 60 Minutes		Phosphorus, Total		Hardness, Total as CaCO3	
	Units	minutes		Number		mg/L		mg/L	
Summary Values	Monthly Avg					0.7425		287.5	
	Monthly Total								
	Daily Max					1.5		330	
	Daily Min					0.28		250	
	Rolling 12 Month Avg					0.3			
Limit(s) in Effect	Monthly Avg								
	Monthly Total	446	0						
	Daily Max			0	0			680	0
	Daily Min								
	Rolling 12 Month Avg					1	0		
QA/QC Information	LOD					0.024		2.1	
	LOQ					0.05		5	
	QC Exceedance	N		N		N		N	
	Lab Certification					999580010		999580010	

	Sample Point	001	001	001	001	001
	Description	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER
	Parameter	35	147	147	87	152
	Description	Arsenic, Total Recoverable	Copper, Total Recoverable	Copper, Total Recoverable	Cadmium, Total Recoverable	Cyanide, Amenable
	Units	lbs/day	ug/L	lbs/day	ug/L	ug/L
	Sample Type	CALCULATED	24 HR COMP	24 HR COMP	24 HR COMP	24 HR COMP
	Frequency	MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Sample Results	Day 1					
	2	0.138	42	0.0483	2.1	<5.0
	3					
	4					
	5					
	6					
	7					
	8					
	9	0.125	27	0.03375	<0.49	
	10					
	11					
	12					
	13					
	14					
	15					
	16	0.09646	34	0.03604	<0.49	
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26	0.117	40	0.036	<0.49	
	27					
	28					
	29					
	30					
	31					

	Sample Point	001		001		001		001	
	Description	PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER	
	Parameter	35		147		147		87	
	Description	Arsenic, Total Recoverable		Copper, Total Recoverable		Copper, Total Recoverable		Cadmium, Total Recoverable	
	Units	lbs/day		ug/L		lbs/day		ug/L	
Summary Values	Monthly Avg	0.119115		35.75		0.0385225		0.525	
	Monthly Total								
	Daily Max	0.138		42		0.0483		2.1	
	Daily Min	0.09646		27		0.03375		<0.49	
	Rolling 12 Month Avg								
Limit(s) in Effect	Monthly Avg								
	Monthly Total								
	Daily Max	12	0	69	0	0.98	0		
	Daily Min								
	Rolling 12 Month Avg								
QA/QC Information	LOD			1.7				0.49	
	LOQ			5				1	
	QC Exceedance	N		N		N		N	
	Lab Certification			999580010				999580010	

	Sample Point	001	001	101	101	101
	Description	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent
	Parameter	112	280	211	457	342
	Description	Chlorine, Total Residual	Mercury, Total Recoverable	Flow Rate	Suspended Solids, Total	Oil & Grease (Freon)
	Units	ug/L	ng/L	MGD	mg/L	mg/L
	Sample Type	GRAB	GRAB	CONTINUOUS	24 HR COMP	GRAB
	Frequency	MONTHLY	MONTHLY	DAILY	DAILY	2/WEEK
Sample Results	Day 1					
	2			0.018959	5.0	<1.5
	3			0.024814	<1.9	<1.5
	4			0.028750	<1.9	
	5			0.031288	<1.9	
	6			0.011554	3.0	
	7			0.012049	3.0	
	8					
	9			0.031881	2.5	1.5
	10			0.021349	3.5	3.0
	11			0.019294	5.0	
	12			0.029937	2.5	
	13			0.011326	6.0	
	14					
	15					
	16	40		0.026159	3.5	<1.3
	17			0.026165	2.0	<1.4
	18			0.028476	3.0	
	19			0.019683	3.5	
	20		2.5	0.011486	3.0	
	21					
	22					
	23					
	24					
	25					
	26			0.011009	4.5	2.1
	27			0.010146	4.5	1.6
	28					
	29					
	30					
	31					

	Sample Point	001		001		101		101		101	
	Description	PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent	
	Parameter	112		280		211		457		342	
	Description	Chlorine, Total Residual		Mercury, Total Recoverable		Flow Rate		Suspended Solids, Total		Oil & Grease (Freon)	
	Units	ug/L		ng/L		MGD		mg/L		mg/L	
Summary Values	Monthly Avg	40		2.5		0.020795833		3.027777778		1.025	
	Monthly Total										
	Daily Max	40		2.5		0.031881		6		3	
	Daily Min	40		2.5		0.010146		<1.9		<1.3	
	Rolling 12 Month Avg										
Limit(s) in Effect	Monthly Avg							31	0	26	0
	Monthly Total										
	Daily Max							60	0	52	0
	Daily Min										
	Rolling 12 Month Avg										
QA/QC Information	LOD	30		0.12						1.3	
	LOQ	100		0.39						5.8	
	QC Exceedance	N		N		N		N		N	
	Lab Certification			721026460				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	87	133	315	553	155
	Description	Cadmium, Total Recoverable	Chromium, Total Recoverable	Nickel, Total Recoverable	Zinc, Total Recoverable	Cyanide, Total
	Units	ug/L	ug/L	ug/L	ug/L	ug/L
	Sample Type	24 HR COMP	24 HR COMP	24 HR COMP	24 HR COMP	GRAB
	Frequency	2/WEEK	MONTHLY	2/WEEK	2/WEEK	MONTHLY
Sample Results	Day 1					
	2	<0.49	10	42	1100	<3.0
	3	<0.49	<2.2	7.9	180	
	4					
	5					
	6					
	7					
	8					
	9	<0.49	<2.2	6.2	76	
	10	<0.49	<2.2	7.2	61	
	11					
	12					
	13					
	14					
	15					
	16	<0.49	<2.2	8.4	130	
	17	<0.49	<2.2	9.5	68	
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26	<0.49	18	64	190	
	27	<0.49	3.5	44	110	
	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	87		133		315		553		155	
	Description	Cadmium, Total Recoverable		Chromium, Total Recoverable		Nickel, Total Recoverable		Zinc, Total Recoverable		Cyanide, Total	
	Units	ug/L		ug/L		ug/L		ug/L		ug/L	
Summary Values	Monthly Avg	0		3.9375		23.65		239.375		0	
	Monthly Total										
	Daily Max	<0.49		18		64		1100		<3	
	Daily Min	<0.49		<2.2		6.2		61		<3	
	Rolling 12 Month Avg										
Limit(s) in Effect	Monthly Avg	260	0	1710	0	2380	0	1480	0	650	0
	Monthly Total										
	Daily Max	690	0	2770	0	3980	0	2610	0	1200	0
	Daily Min										
	Rolling 12 Month Avg										
QA/QC Information	LOD	0.49		2.2		1.5		3.6		3	
	LOQ	1		5		5		10		10	
	QC Exceedance	N		N		N		N		N	
	Lab Certification	999580010		999580010		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	264	430	374	373
	Description	Copper, Total Recoverable	Lead, Total Recoverable	Silver, Total Recoverable	pH (Minimum)	pH (Maximum)
	Units	ug/L	ug/L	ug/L	su	su
	Sample Type	24 HR COMP	24 HR COMP	24 HR COMP	CONTINUOUS	CONTINUOUS
	Frequency	2/WEEK	MONTHLY	MONTHLY	DAILY	DAILY
Sample Results	Day 1					
	2	6.2	<1.3	<1.1	7.3	7.9
	3	3.4	<1.3	<1.1	7.3	8.4
	4				7.2	8.0
	5				6.0	7.8
	6				6.8	8.2
	7				7.3	8.0
	8					
	9	4.1	<1.3	1.6	7.2	7.7
	10	3.6	1.3	<1.1	6.8	7.6
	11				7.0	7.6
	12				7.0	8.0
	13				7.2	8.2
	14					
	15					
	16	5.9	<1.3	1.2	6.8	8.0
	17	7.1	<1.3	<1.1	7.4	8.4
	18				7.2	8.4
	19				7.2	9.0
	20				7.4	8.0
	21					
	22					
	23					
	24					
	25					
	26	25	<1.3	<1.1	7.2	8.4
	27	10	<1.3	<1.1	7.4	8.4
	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		264		430		374		373	
	Description	Copper, Total Recoverable		Lead, Total Recoverable		Silver, Total Recoverable		pH (Minimum)		pH (Maximum)	
	Units	ug/L		ug/L		ug/L		su		su	
Summary Values	Monthly Avg	8.1625		0.1625		0.35		7.094444444		8.111111111	
	Monthly Total										
	Daily Max	25		1.3		1.6		7.4		9	
	Daily Min	3.4		<1.3		<1.1		6		7.6	
	Rolling 12 Month Avg										
Limit(s) in Effect	Monthly Avg	2070	0	430	0	240	0				
	Monthly Total										
	Daily Max	3380	0	690	0	430	0			11	0
	Daily Min							4	0		
	Rolling 12 Month Avg										
QA/QC Information	LOD	1.7		1.3		1.1					
	LOQ	5		2.5		2.5					
	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	379	376	507	40	490
	Description	pH Total Exceedance Time Minutes	pH Exceedances Greater Than 60 Minutes	Total Toxic Organics	Benzene	Tetrachloroethylene
	Units	minutes	Number	ug/L	ug/L	ug/L
	Sample Type	CALCULATED	CALCULATED	24 HR COMP	24 HR COMP	24 HR COMP
	Frequency	DAILY	DAILY	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	101		101		101		101		101	
	Description	Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent	
	Parameter	379		376		507		40		490	
	Description	pH Total Exceedance Time Minutes		pH Exceedances Greater Than 60 Minutes		Total Toxic Organics		Benzene		Tetrachloroethylene	
	Units	minutes		Number		ug/L		ug/L		ug/L	
Summary Values	Monthly Avg										
	Monthly Total										
	Daily Max										
	Daily Min										
	Rolling 12 Month Avg										
Limit(s) in Effect	Monthly Avg										
	Monthly Total	446	0	0	0						
	Daily Max					2130					
	Daily Min										
	Rolling 12 Month Avg										
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	500	561	200	508	285
	Description	Toluene	1,1,1-Trichloro- ethane	Ethylbenzene	Trichloro- ethylene	Methylene chloride
	Units	ug/L	ug/L	ug/L	ug/L	ug/L
	Sample Type	24 HR COMP	24 HR COMP	24 HR COMP	24 HR COMP	24 HR COMP
	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					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	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	500	561	200	508	285
	Description	Toluene	1,1,1-Trichloro- ethane	Ethylbenzene	Trichloro- ethylene	Methylene chloride
	Units	ug/L	ug/L	ug/L	ug/L	ug/L
Summary Values	Monthly Avg					
	Monthly Total					
	Daily Max					
	Daily Min					
	Rolling 12 Month Avg					
Limit(s) in Effect	Monthly Avg					
	Monthly Total					
	Daily Max					
	Daily Min					
	Rolling 12 Month Avg					
QA/QC Information	LOD					
	LOQ					
	QC Exceedance					
	Lab Certification					

	Sample Point	101	106	106	106	107
	Description	Metal Finishing Effluent	Future remedial action ww	Future remedial action ww	Future remedial action ww	Mercury Field Blank Results
	Parameter	167	211	35	457	280
	Description	Di-n-butyl phthalate (dibutyl phthalate)	Flow Rate	Arsenic, Total Recoverable	Suspended Solids, Total	Mercury, Total Recoverable
	Units	ug/L	gpd	ug/L	mg/L	ng/L
	Sample Type	24 HR COMP	CONTINUOUS	24 HR COMP	24 HR COMP	GRAB
	Frequency	MONTHLY	DAILY	WEEKLY	WEEKLY	MONTHLY
Sample Results	Day 1					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10					
	11					
	12					
	13					
	14					
	15					
	16					<0.12
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	101	106	106	106	107
	Description	Metal Finishing Effluent	Future remedial action ww	Future remedial action ww	Future remedial action ww	Mercury Field Blank Results
	Parameter	167	211	35	457	280
	Description	Di-n-butyl phthalate (dibutyl phthalate)	Flow Rate	Arsenic, Total Recoverable	Suspended Solids, Total	Mercury, Total Recoverable
	Units	ug/L	gpd	ug/L	mg/L	ng/L
Summary Values	Monthly Avg					0
	Monthly Total					
	Daily Max					<0.12
	Daily Min					<0.12
	Rolling 12 Month Avg					
Limit(s) in Effect	Monthly Avg					
	Monthly Total					
	Daily Max					
	Daily Min					
	Rolling 12 Month Avg					
QA/QC Information	LOD					0.12
	LOQ					0.39
	QC Exceedance	N	N	N	N	N
	Lab Certification					721026460

	Sample Point	003	003	003	003	003
	Description	Future remedial action dischg	Future remedial action dischg	Future remedial action dischg	Future remedial action dischg	Future remedial action dischg
	Parameter	211	457	35	374	373
	Description	Flow Rate	Suspended Solids, Total	Arsenic, Total Recoverable	pH (Minimum)	pH (Maximum)
	Units	MGD	mg/L	ug/L	su	su
	Sample Type	CONTINUOUS	24 HR COMP	24 HR COMP	CONTINUOUS	CONTINUOUS
	Frequency	DAILY	WEEKLY	WEEKLY	DAILY	DAILY
Sample Results	Day 1					
	2	0.000198			6.2	6.7
	3	0.002137	<1.9	<2.1	6.3	7.2
	4	0.001574			6.2	7.1
	5	0.000697			6.4	7.2
	6	0.001333			6.7	6.9
	7					
	8					
	9					
	10	0.001723			6.2	6.7
	11	0.001504	<1.9	<2.1	6.0	6.8
	12	0.001269			7.2	9.0
	13					
	14					
	15					
	16	0.000582	<1.9	<2.1	8.4	9.0
	17	0.000060			6.0	9.0
	18	0.001025			7.7	8.7
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26	0.001496	<1.9	<2.1	7.2	7.9
	27					
	28					
	29					
	30					
	31					

	Sample Point	003	003	003	003	003	
	Description	Future remedial action dischg	Future remedial action dischg	Future remedial action dischg	Future remedial action dischg	Future remedial action dischg	
	Parameter	211	457	35	374	373	
	Description	Flow Rate	Suspended Solids, Total	Arsenic, Total Recoverable	pH (Minimum)	pH (Maximum)	
	Units	MGD	mg/L	ug/L	su	su	
Summary Values	Monthly Avg	0.001133167	0	0	6.708333333	7.683333333	
	Monthly Total						
	Daily Max	0.002137	<1.9	<2.1	8.4	9	
	Daily Min	6E-05	<1.9	<2.1	6	6.7	
	Rolling 12 Month Avg						
Limit(s) in Effect	Monthly Avg						
	Monthly Total						
	Daily Max			680	0	11	0
	Daily Min				4	0	
	Rolling 12 Month Avg						
QA/QC Information	LOD			2.1			
	LOQ			5			
	QC Exceedance	N	N	N	N	N	
	Lab Certification		999580010	999580010			

	Sample Point	003	003
	Description	Future remedial action dischg	Future remedial action dischg
	Parameter	379	376
	Description	pH Total Exceedance Time Minutes	pH Exceedances Greater Than 60 Minutes
	Units	minutes	Number
	Sample Type	CONTINUOUS	CONTINUOUS
	Frequency	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		
	29		
	30		
	31		

	Sample Point	003		003	
	Description	Future remedial action dischg		Future remedial action dischg	
	Parameter	379		376	
	Description	pH Total Exceedance Time Minutes		pH Exceedances Greater Than 60 Minutes	
	Units	minutes		Number	
Summary Values	Monthly Avg				
	Monthly Total				
	Daily Max				
	Daily Min				
	Rolling 12 Month Avg				
Limit(s) in Effect	Monthly Avg				
	Monthly Total	446	0		
	Daily Max			0	0
	Daily Min				
	Rolling 12 Month Avg				
QA/QC Information	LOD				
	LOQ				
	QC Exceedance	N		N	
	Lab Certification				

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

1. Based on my inquiry of the person or persons directly responsible for managing compliance with the permit limitation for TTO I certify that to the best of my knowledge and belief no dumping of concentrated toxic organics into the wastewaters has
2. occurred since filing of the last discharge monitoring report. I further certify that this facility is implementing the solvent management plan submitted to the department.

General Remarks

Laboratory Quality Control Comments

Submitted by Anne Fleury(afleury16) on 1/14/2020 2:23:51 PM

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: 715-735-7411
 Reporting Period: 01/01/2020 - 01/31/2020
 Form Due Date: 02/21/2020
 Permit Number: 0001040

Date Received:
 DOC: 441349
 FIN: 7245
 FID: 438039470
 Region: Northeast Region
 Permit Drafter: Trevor J Moen
 Reviewer: Laura A Gerold
 Office: Green Bay

Sample Point	001	703	001	001	001	
Description	PRIOR TO MENOMINEE RIVER	Intake Water Monitoring	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	
Parameter	211	280	487	374	373	
Description	Flow Rate	Mercury, Total Recoverable	Temperature	pH (Minimum)	pH (Maximum)	
Units	MGD	ng/L	degF	su	su	
Sample Type	CONTINUOUS	GRAB	GRAB	CONTINUOUS	CONTINUOUS	
Frequency	DAILY	MONTHLY	MONTHLY	DAILY	DAILY	
Sample Results	Day 1	0.04342		63	7.6	8.0
	2	0.16785		61	7.5	7.7
	3	0.12187		58	7.5	7.8
	4	0.08441		54	7.5	8.5
	5	0.06015		61	7.5	8.4
	6	0.14030		59	7.4	7.8
	7	0.15224		57	7.5	7.7
	8	0.13510		57	7.4	7.6
	9	0.13590		57	7.2	7.6
	10	0.08564		56	7.3	7.7
	11	0.00510		57	7.7	7.9
	12	0.05174		64	7.5	8.0
	13	0.14675		57	7.3	7.6
	14	0.15550		57	7.1	7.4
	15	0.14354		58	7.2	7.4
	16	0.13604		57	7.1	7.4
	17	0.10903		57	7.3	7.6
	18	0.07917		55	7.4	8.0
	19	0.01920		62	7.7	8.0
	20	0.06056		64	7.3	7.7
	21	0.12025		64	7.3	8.6
	22	0.15202		63	7.6	8.6
	23	0.14732		62	7.1	7.9
	24	0.14199	<0.12	60	7.0	7.8
	25	0.13812		66	6.7	7.6
	26	0.10855		64	7.0	7.3
	27	0.12592		63	7.0	7.4
	28	0.13095		61	7.2	7.8
	29	0.14632		64	7.4	8.5
	30	0.14822		62	7.3	8.1
	31	0.11812		62	7.6	8.0

	Sample Point	001	703	001	001	001
	Description	PRIOR TO MENOMINEE RIVER	Intake Water Monitoring	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER
	Parameter	211	280	487	374	373
	Description	Flow Rate	Mercury, Total Recoverable	Temperature	pH (Minimum)	pH (Maximum)
	Units	MGD	ng/L	degF	su	su
Summary Values	Monthly Avg	0.113267419	0	60.064516129	7.329032258	7.851612903
	Monthly Total					
	Daily Max	0.16785	<0.12	66	7.7	8.6
	Daily Min	0.0051	<0.12	54	6.7	7.3
	Rolling 12 Month Avg					
Limit(s) in Effect	Monthly Avg					
	Monthly Total					
	Daily Max					11 0
	Daily Min				4 0	
	Rolling 12 Month Avg					
QA/QC Information	LOD		0.12			
	LOQ		0.39			
	QC Exceedance	N	N	N	N	N
	Lab Certification		721026460			

	Sample Point	001	001	001	001	001
	Description	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER
	Parameter	379	376	388	231	35
	Description	pH Total Exceedance Time Minutes	pH Exceedances Greater Than 60 Minutes	Phosphorus, Total	Hardness, Total as CaCO3	Arsenic, Total Recoverable
	Units	minutes	Number	mg/L	mg/L	ug/L
	Sample Type	CONTINUOUS	CONTINUOUS	24 HR COMP	24 HR COMP	24 HR COMP
	Frequency	DAILY	DAILY	WEEKLY	MONTHLY	MONTHLY
Sample Results	Day 1					
	2			0.35	390	120
	3					
	4					
	5					
	6					
	7					
	8			0.52	330	44
	9					
	10					
	11					
	12					
	13					
	14					
	15			0.40	360	50
	16					
	17					
	18					
	19					
	20					
	21					
	22			0.32	450	62
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	001		001		001		001	
	Description	PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER	
	Parameter	379		376		388		231	
	Description	pH Total Exceedance Time Minutes		pH Exceedances Greater Than 60 Minutes		Phosphorus, Total		Hardness, Total as CaCO3	
	Units	minutes		Number		mg/L		mg/L	
Summary Values	Monthly Avg					0.3975		382.5	
	Monthly Total								
	Daily Max					0.52		450	
	Daily Min					0.32		330	
	Rolling 12 Month Avg					0.4			
Limit(s) in Effect	Monthly Avg								
	Monthly Total	446	0						
	Daily Max			0	0			680	0
	Daily Min								
	Rolling 12 Month Avg					1	0		
QA/QC Information	LOD					0.024		2.1	
	LOQ					0.05		5	
	QC Exceedance	N		N		N		N	
	Lab Certification					999580010		999580010	

	Sample Point	001	001	001	001	001
	Description	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER
	Parameter	35	147	147	87	152
	Description	Arsenic, Total Recoverable	Copper, Total Recoverable	Copper, Total Recoverable	Cadmium, Total Recoverable	Cyanide, Amenable
	Units	lbs/day	ug/L	lbs/day	ug/L	ug/L
	Sample Type	CALCULATED	24 HR COMP	24 HR COMP	24 HR COMP	24 HR COMP
	Frequency	MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Sample Results	Day 1					
	2	0.168	28	0.0392	<0.49	
	3					
	4					
	5					
	6					
	7					
	8	0.04972	23	0.02599	<0.49	<5.0
	9					
	10					
	11					
	12					
	13					
	14					
	15	0.06	22	0.0264	<0.49	
	16					
	17					
	18					
	19					
	20					
	21					
	22	0.07874	43	0.05461	0.59	
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	001		001		001		001	
	Description	PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER	
	Parameter	35		147		147		87	
	Description	Arsenic, Total Recoverable		Copper, Total Recoverable		Copper, Total Recoverable		Cadmium, Total Recoverable	
	Units	lbs/day		ug/L		lbs/day		ug/L	
Summary Values	Monthly Avg	0.089115		29		0.03655		0.1475	
	Monthly Total								
	Daily Max	0.168		43		0.05461		0.59	
	Daily Min	0.04972		22		0.02599		<0.49	
	Rolling 12 Month Avg								
Limit(s) in Effect	Monthly Avg								
	Monthly Total								
	Daily Max	12	0	69	0	0.98	0		
	Daily Min								
	Rolling 12 Month Avg								
QA/QC Information	LOD			1.7				0.49	
	LOQ			5				1	
	QC Exceedance	N		N		N		N	
	Lab Certification			999580010				999580010	

	Sample Point	001	001	101	101	101
	Description	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent
	Parameter	112	280	211	457	342
	Description	Chlorine, Total Residual	Mercury, Total Recoverable	Flow Rate	Suspended Solids, Total	Oil & Grease (Freon)
	Units	ug/L	ng/L	MGD	mg/L	mg/L
	Sample Type	GRAB	GRAB	CONTINUOUS	24 HR COMP	GRAB
	Frequency	MONTHLY	MONTHLY	DAILY	DAILY	2/WEEK
Sample Results	Day 1					
	2			0.028221	2.5	<1.4
	3			0.026275	<1.9	1.4
	4			0.010574	3.5	
	5					
	6			0.031528	3.5	
	7			0.037399	3.0	
	8	40		0.039521	4.0	2.7
	9			0.035046	5.0	2.1
	10			0.026835	3.0	
	11					
	12					
	13			0.031986	5.5	
	14			0.037382	2.0	
	15			0.029633	3.0	<1.4
	16			0.028872	7.5	2.0
	17			0.016202	4.0	
	18			0.009509	10.0	
	19					
	20					
	21			0.019848	7.0	
	22			0.031696	<1.9	2.5
	23			0.032340	4.0	2.0
	24		7.2	0.008558	7.0	
	25			0.010012	6.5	
	26					
	27			0.015165	8.5	
	28			0.013695	4.5	
	29			0.036753	5.0	
	30			0.038672	3.5	
	31			0.015662	3.5	

	Sample Point	001		001		101		101		
	Description	PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		Metal Finishing Effluent		Metal Finishing Effluent		
	Parameter	112		280		211		457		
	Description	Chlorine, Total Residual		Mercury, Total Recoverable		Flow Rate		Suspended Solids, Total		
	Units	ug/L		ng/L		MGD		mg/L		
Summary Values	Monthly Avg	40		7.2		0.025474333		4.416666667		
	Monthly Total									
	Daily Max	40		7.2		0.039521		10		
	Daily Min	40		7.2		0.008558		<1.9		
	Rolling 12 Month Avg									
Limit(s) in Effect	Monthly Avg						31	0	26	0
	Monthly Total									
	Daily Max						60	0	52	0
	Daily Min									
	Rolling 12 Month Avg									
QA/QC Information	LOD	30		0.12				1.3		
	LOQ	100		0.39				5.5		
	QC Exceedance	N		N		N		N		
	Lab Certification			721026460				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	87	133	315	553	155
	Description	Cadmium, Total Recoverable	Chromium, Total Recoverable	Nickel, Total Recoverable	Zinc, Total Recoverable	Cyanide, Total
	Units	ug/L	ug/L	ug/L	ug/L	ug/L
	Sample Type	24 HR COMP	24 HR COMP	24 HR COMP	24 HR COMP	GRAB
	Frequency	2/WEEK	MONTHLY	2/WEEK	2/WEEK	MONTHLY
Sample Results	Day 1					
	2	<0.49	6.2	23	110	
	3	<0.49	11	4.9	45	
	4					
	5					
	6					
	7					
	8	<0.49	2.4	9.4	140	<3.0
	9	<0.49	<2.2	11	32	
	10					
	11					
	12					
	13					
	14					
	15	<0.49	<2.2	9.2	62	
	16	<0.49	4.3	16	56	
	17					
	18					
	19					
	20					
	21					
	22	<0.49	<2.2	6.0	87	
	23	<0.49	<2.2	4.3	60	
	24					
	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	87		133		315		553		155	
	Description	Cadmium, Total Recoverable		Chromium, Total Recoverable		Nickel, Total Recoverable		Zinc, Total Recoverable		Cyanide, Total	
	Units	ug/L		ug/L		ug/L		ug/L		ug/L	
Summary Values	Monthly Avg	0		2.9875		10.475		74		0	
	Monthly Total										
	Daily Max	<0.49		11		23		140		<3	
	Daily Min	<0.49		<2.2		4.3		32		<3	
	Rolling 12 Month Avg										
Limit(s) in Effect	Monthly Avg	260	0	1710	0	2380	0	1480	0	650	0
	Monthly Total										
	Daily Max	690	0	2770	0	3980	0	2610	0	1200	0
	Daily Min										
	Rolling 12 Month Avg										
QA/QC Information	LOD	0.49		2.2		1.5		3.6		3	
	LOQ	1		5		5		10		10	
	QC Exceedance	N		N		N		N		N	
	Lab Certification	999580010		999580010		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	264	430	374	373
	Description	Copper, Total Recoverable	Lead, Total Recoverable	Silver, Total Recoverable	pH (Minimum)	pH (Maximum)
	Units	ug/L	ug/L	ug/L	su	su
	Sample Type	24 HR COMP	24 HR COMP	24 HR COMP	CONTINUOUS	CONTINUOUS
	Frequency	2/WEEK	MONTHLY	MONTHLY	DAILY	DAILY
Sample Results	Day 1					
	2	6.5	<1.3	<1.1	7.2	9.2
	3	2.4	<1.3	<1.1	7.0	7.8
	4				7.4	7.6
	5					
	6				7.0	8.0
	7				7.4	8.0
	8	4.2	<1.3	<1.1	7.4	8.2
	9	3.0	<1.3	<1.1	7.6	8.2
	10				7.4	8.2
	11					
	12					
	13				7.3	8.2
	14				7.4	7.9
	15	2.9	1.9	<1.1	7.4	7.8
	16	2.9	2.2	<1.1	7.2	7.9
	17				6.6	7.8
	18				7.8	8.4
	19				6.8	7.8
	20					
	21				6.8	7.8
	22	5.0	<1.3	<1.1	6.9	7.8
	23	3.4	<1.3	<1.1	7.2	7.8
	24				7.0	8.2
	25				7.4	7.6
	26					
	27				7.2	7.8
	28				7.0	8.0
	29				7.1	8.0
	30				6.7	8.7
	31				6.8	8.4

	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		264		430		374		373	
	Description	Copper, Total Recoverable		Lead, Total Recoverable		Silver, Total Recoverable		pH (Minimum)		pH (Maximum)	
	Units	ug/L		ug/L		ug/L		su		su	
Summary Values	Monthly Avg	3.7875		0.5125		0		7.16		8.044	
	Monthly Total										
	Daily Max	6.5		2.2		<1.1		7.8		9.2	
	Daily Min	2.4		<1.3		<1.1		6.6		7.6	
	Rolling 12 Month Avg										
Limit(s) in Effect	Monthly Avg	2070	0	430	0	240	0				
	Monthly Total										
	Daily Max	3380	0	690	0	430	0			11	0
	Daily Min							4	0		
	Rolling 12 Month Avg										
QA/QC Information	LOD	1.7		1.3		1.1					
	LOQ	5		2.5		2.5					
	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	379	376	507	40	490
	Description	pH Total Exceedance Time Minutes	pH Exceedances Greater Than 60 Minutes	Total Toxic Organics	Benzene	Tetrachloroethylene
	Units	minutes	Number	ug/L	ug/L	ug/L
	Sample Type	CALCULATED	CALCULATED	24 HR COMP	24 HR COMP	24 HR COMP
	Frequency	DAILY	DAILY	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	101		101		101		101		101	
	Description	Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent	
	Parameter	379		376		507		40		490	
	Description	pH Total Exceedance Time Minutes		pH Exceedances Greater Than 60 Minutes		Total Toxic Organics		Benzene		Tetrachloroethylene	
	Units	minutes		Number		ug/L		ug/L		ug/L	
Summary Values	Monthly Avg										
	Monthly Total										
	Daily Max										
	Daily Min										
	Rolling 12 Month Avg										
Limit(s) in Effect	Monthly Avg										
	Monthly Total	446	0	0	0						
	Daily Max					2130					
	Daily Min										
	Rolling 12 Month Avg										
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	500	561	200	508	285
	Description	Toluene	1,1,1-Trichloro- ethane	Ethylbenzene	Trichloro- ethylene	Methylene chloride
	Units	ug/L	ug/L	ug/L	ug/L	ug/L
	Sample Type	24 HR COMP	24 HR COMP	24 HR COMP	24 HR COMP	24 HR COMP
	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					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	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	500	561	200	508	285
	Description	Toluene	1,1,1-Trichloro- ethane	Ethylbenzene	Trichloro- ethylene	Methylene chloride
	Units	ug/L	ug/L	ug/L	ug/L	ug/L
Summary Values	Monthly Avg					
	Monthly Total					
	Daily Max					
	Daily Min					
	Rolling 12 Month Avg					
Limit(s) in Effect	Monthly Avg					
	Monthly Total					
	Daily Max					
	Daily Min					
	Rolling 12 Month Avg					
QA/QC Information	LOD					
	LOQ					
	QC Exceedance					
	Lab Certification					

	Sample Point	101	106	106	106	107
	Description	Metal Finishing Effluent	Future remedial action ww	Future remedial action ww	Future remedial action ww	Mercury Field Blank Results
	Parameter	167	211	35	457	280
	Description	Di-n-butyl phthalate (dibutyl phthalate)	Flow Rate	Arsenic, Total Recoverable	Suspended Solids, Total	Mercury, Total Recoverable
	Units	ug/L	gpd	ug/L	mg/L	ng/L
	Sample Type	24 HR COMP	CONTINUOUS	24 HR COMP	24 HR COMP	GRAB
	Frequency	MONTHLY	DAILY	WEEKLY	WEEKLY	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					<0.12
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	101	106	106	106	107
	Description	Metal Finishing Effluent	Future remedial action ww	Future remedial action ww	Future remedial action ww	Mercury Field Blank Results
	Parameter	167	211	35	457	280
	Description	Di-n-butyl phthalate (dibutyl phthalate)	Flow Rate	Arsenic, Total Recoverable	Suspended Solids, Total	Mercury, Total Recoverable
	Units	ug/L	gpd	ug/L	mg/L	ng/L
Summary Values	Monthly Avg					0
	Monthly Total					
	Daily Max					<0.12
	Daily Min					<0.12
	Rolling 12 Month Avg					
Limit(s) in Effect	Monthly Avg					
	Monthly Total					
	Daily Max					
	Daily Min					
	Rolling 12 Month Avg					
QA/QC Information	LOD					0.12
	LOQ					0.39
	QC Exceedance	N	N	N	N	N
	Lab Certification					721026460

	Sample Point	003	003	003	003	003
	Description	Future remedial action dischg	Future remedial action dischg	Future remedial action dischg	Future remedial action dischg	Future remedial action dischg
	Parameter	211	457	35	374	373
	Description	Flow Rate	Suspended Solids, Total	Arsenic, Total Recoverable	pH (Minimum)	pH (Maximum)
	Units	MGD	mg/L	ug/L	su	su
	Sample Type	CONTINUOUS	24 HR COMP	24 HR COMP	CONTINUOUS	CONTINUOUS
	Frequency	DAILY	WEEKLY	WEEKLY	DAILY	DAILY
Sample Results	Day 1					
	2					
	3					
	4					
	5					
	6					
	7	0.000550			8.0	9.0
	8	0.001636			8.0	9.0
	9	0.000830			7.9	8.9
	10					
	11					
	12					
	13					
	14	0.007354	<1.9	<2.1	7.8	9.0
	15					
	16	0.006420	<1.9	2.6	8.1	8.5
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31	0.013858			6.8	8.2

	Sample Point	003		003		003		003			
	Description	Future remedial action dischg		Future remedial action dischg		Future remedial action dischg		Future remedial action dischg			
	Parameter	211		457		35		374			
	Description	Flow Rate		Suspended Solids, Total		Arsenic, Total Recoverable		pH (Minimum)		pH (Maximum)	
	Units	MGD		mg/L		ug/L		su		su	
Summary Values	Monthly Avg	0.005108		0		1.3		7.766666667		8.766666667	
	Monthly Total										
	Daily Max	0.013858		<1.9		2.6		8.1		9	
	Daily Min	0.00055		<1.9		<2.1		6.8		8.2	
	Rolling 12 Month Avg										
Limit(s) in Effect	Monthly Avg										
	Monthly Total										
	Daily Max					680	0			11	0
	Daily Min							4	0		
	Rolling 12 Month Avg										
QA/QC Information	LOD					2.1					
	LOQ					5					
	QC Exceedance	N		N		N		N		N	
	Lab Certification			999580010		999580010					

	Sample Point	003	003
	Description	Future remedial action dischg	Future remedial action dischg
	Parameter	379	376
	Description	pH Total Exceedance Time Minutes	pH Exceedances Greater Than 60 Minutes
	Units	minutes	Number
	Sample Type	CONTINUOUS	CONTINUOUS
	Frequency	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		
	29		
	30		
	31		

	Sample Point	003		003	
	Description	Future remedial action dischg		Future remedial action dischg	
	Parameter	379		376	
	Description	pH Total Exceedance Time Minutes		pH Exceedances Greater Than 60 Minutes	
	Units	minutes		Number	
Summary Values	Monthly Avg				
	Monthly Total				
	Daily Max				
	Daily Min				
	Rolling 12 Month Avg				
Limit(s) in Effect	Monthly Avg				
	Monthly Total	446	0		
	Daily Max			0	0
	Daily Min				
	Rolling 12 Month Avg				
QA/QC Information	LOD				
	LOQ				
	QC Exceedance	N		N	
	Lab Certification				

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

1. Based on my inquiry of the person or persons directly responsible for managing compliance with the permit limitation for TTO I certify that to the best of my knowledge and belief no dumping of concentrated toxic organics into the wastewaters has
2. occurred since filing of the last discharge monitoring report. I further certify that this facility is implementing the solvent management plan submitted to the department.

General Remarks

OF003 Ground Water system did not run the first week and the last week of the month so there will be no sampling for Arsenic or TSS. mechanical issues and waiting on parts.

Laboratory Quality Control Comments

Submitted by afleury16 on 02/19/2020 11:37:24 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: 715-735-7411
 Reporting Period: 02/01/2020 - 02/29/2020
 Form Due Date: 03/21/2020
 Permit Number: 0001040

Date Received:
 DOC: 441350
 FIN: 7245
 FID: 438039470
 Region: Northeast Region
 Permit Drafter: Trevor J Moen
 Reviewer: Laura A Gerold
 Office: Green Bay

Sample Point	001	703	001	001	001	
Description	PRIOR TO MENOMINEE RIVER	Intake Water Monitoring	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	
Parameter	211	280	487	374	373	
Description	Flow Rate	Mercury, Total Recoverable	Temperature	pH (Minimum)	pH (Maximum)	
Units	MGD	ng/L	degF	su	su	
Sample Type	CONTINUOUS	GRAB	GRAB	CONTINUOUS	CONTINUOUS	
Frequency	DAILY	MONTHLY	MONTHLY	DAILY	DAILY	
Sample Results	Day 1	0.11372		66	7.4	8.2
	2	0.09784		67	7.4	8.2
	3	0.13894		59	7.3	7.6
	4	0.14745		58	7.2	7.7
	5	0.15461		80	7.0	8.8
	6	0.14502		59	7.2	7.6
	7	0.08778		56	7.1	7.5
	8	0.08597		57	7.0	7.7
	9	0.06910		64	7.5	8.0
	10	0.15245			7.2	7.7
	11	0.14453			7.3	7.4
	12	0.13873	0.13		7.4	7.8
	13	0.14515			7.4	7.7
	14	0.11896		56	7.3	7.4
	15	0.09974		61	7.1	7.7
	16	0.09441		62	7.2	8.0
	17	0.14712		61	7.0	7.2
	18	0.14558		57	7.0	7.1
	19	0.15118		59	6.8	7.2
	20	0.21753		57	6.8	7.7
	21	0.12321		60	7.6	8.3
	22	0.13689		57	7.4	8.0
	23	0.10833		52	7.2	8.1
	24	0.14791		63	7.0	8.2
	25	0.15281		59	6.9	7.5
	26	0.13870		61	7.0	7.7
	27	0.13350		61	7.3	7.8
	28	0.12551		60	7.6	8.0
	29	0.10336		65	7.4	8.4
	30					
	31					

	Sample Point	001	703	001	001	001
	Description	PRIOR TO MENOMINEE RIVER	Intake Water Monitoring	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER
	Parameter	211	280	487	374	373
	Description	Flow Rate	Mercury, Total Recoverable	Temperature	pH (Minimum)	pH (Maximum)
	Units	MGD	ng/L	degF	su	su
Summary Values	Monthly Avg	0.129863103	0.13	60.68	7.206896552	7.8
	Monthly Total					
	Daily Max	0.21753	0.13	80	7.6	8.8
	Daily Min	0.0691	0.13	52	6.8	7.1
	Rolling 12 Month Avg					
Limit(s) in Effect	Monthly Avg					
	Monthly Total					
	Daily Max					11 0
	Daily Min				4 0	
	Rolling 12 Month Avg					
QA/QC Information	LOD		0.12			
	LOQ		0.39			
	QC Exceedance	N	N	N	N	N
	Lab Certification		721026460			

	Sample Point	001	001	001	001	001
	Description	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER
	Parameter	379	376	388	231	35
	Description	pH Total Exceedance Time Minutes	pH Exceedances Greater Than 60 Minutes	Phosphorus, Total	Hardness, Total as CaCO3	Arsenic, Total Recoverable
	Units	minutes	Number	mg/L	mg/L	ug/L
	Sample Type	CONTINUOUS	CONTINUOUS	24 HR COMP	24 HR COMP	24 HR COMP
	Frequency	DAILY	DAILY	WEEKLY	MONTHLY	MONTHLY
Sample Results	Day 1					
	2					
	3			0.28	290	61
	4					
	5					
	6					
	7					
	8					
	9					
	10			0.74	280	76
	11					
	12					
	13					
	14					
	15					
	16					
	17			0.52	240	66
	18					
	19					
	20					
	21					
	22					
	23					
	24			0.77	330	66
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	001		001		001		001	
	Description	PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER	
	Parameter	379		376		388		231	
	Description	pH Total Exceedance Time Minutes		pH Exceedances Greater Than 60 Minutes		Phosphorus, Total		Hardness, Total as CaCO3	
	Units	minutes		Number		mg/L		mg/L	
Summary Values	Monthly Avg					0.5775		285	
	Monthly Total								
	Daily Max					0.77		330	
	Daily Min					0.28		240	
	Rolling 12 Month Avg					0.4			
Limit(s) in Effect	Monthly Avg								
	Monthly Total	446	0						
	Daily Max			0	0			680	0
	Daily Min								
	Rolling 12 Month Avg					1	0		
QA/QC Information	LOD					0.024		3*Footnote	
	LOQ					0.05		10*Footnote	
	QC Exceedance	N		N		N		N	
	Lab Certification					999580010		999580010	

*Footnote: QA/QC Information is not identical for each day, so the value shown is the maximum of all values for LOD/LOQ data or the first Lab found for Lab Cert data.

	Sample Point	001	001	001	001	001
	Description	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER
	Parameter	35	147	147	87	152
	Description	Arsenic, Total Recoverable	Copper, Total Recoverable	Copper, Total Recoverable	Cadmium, Total Recoverable	Cyanide, Amenable
	Units	lbs/day	ug/L	lbs/day	ug/L	ug/L
	Sample Type	CALCULATED	24 HR COMP	24 HR COMP	24 HR COMP	24 HR COMP
	Frequency	MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Sample Results	Day 1					
	2					
	3	0.07076	26	0.03016	<0.49	<5.0
	4					
	5					
	6					
	7					
	8					
	9					
	10	0.09652	28	0.03556	<0.49	
	11					
	12					
	13					
	14					
	15					
	16					
	17	0.08118	27	0.03321	<0.49	
	18					
	19					
	20					
	21					
	22					
	23					
	24	0.10086	30	0.0369	<0.49	
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	001		001		001		001	
	Description	PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER	
	Parameter	35		147		147		87	
	Description	Arsenic, Total Recoverable		Copper, Total Recoverable		Copper, Total Recoverable		Cadmium, Total Recoverable	
	Units	lbs/day		ug/L		lbs/day		ug/L	
Summary Values	Monthly Avg	0.08733		27.75		0.0339575		0	
	Monthly Total								
	Daily Max	0.10086		30		0.0369		<0.49	
	Daily Min	0.07076		26		0.03016		<0.49	
	Rolling 12 Month Avg								
Limit(s) in Effect	Monthly Avg								
	Monthly Total								
	Daily Max	12	0	69	0	0.98	0		
	Daily Min								
	Rolling 12 Month Avg								
QA/QC Information	LOD			1.7				0.49	
	LOQ			5				1	
	QC Exceedance	N		N		N		N	
	Lab Certification			999580010				999580010	

	Sample Point	001	001	101	101	101
	Description	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent
	Parameter	112	280	211	457	342
	Description	Chlorine, Total Residual	Mercury, Total Recoverable	Flow Rate	Suspended Solids, Total	Oil & Grease (Freon)
	Units	ug/L	ng/L	MGD	mg/L	mg/L
	Sample Type	GRAB	GRAB	CONTINUOUS	24 HR COMP	GRAB
	Frequency	MONTHLY	MONTHLY	DAILY	DAILY	2/WEEK
Sample Results	Day 1			0.010959	5.0	
	2					
	3			0.024553	3.5	1.5
	4			0.033468	2.5	<1.4
	5			0.033570	2.5	
	6			0.024027	5.0	
	7			0.012814	2.0	
	8			0.012814	4.5	
	9					
	10			0.031583	5.0	<1.4
	11			0.029125	<1.9	<1.4
	12		3.0	0.022637	<1.9	
	13			0.023308	2.5	
	14			0.012671	3.5	
	15			0.012100	2.0	
	16					
	17			0.027704	2.5	1.6
	18			0.022043	4.0	3.4
	19			0.025728	<1.9	
	20			0.022767	<1.9	
	21			0.009064	3.5	
	22			0.012613	4.0	
	23					
	24	20		0.024524	<1.9	2.2
	25			0.028344	<1.9	2.5
	26			0.015952	3.0	
	27			0.028365	2.5	
	28			0.010087	3.0	
	29			0.008450	2.0	
	30					
	31					

	Sample Point	001		001		101		101		101	
	Description	PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent	
	Parameter	112		280		211		457		342	
	Description	Chlorine, Total Residual		Mercury, Total Recoverable		Flow Rate		Suspended Solids, Total		Oil & Grease (Freon)	
	Units	ug/L		ng/L		MGD		mg/L		mg/L	
Summary Values	Monthly Avg	20		3		0.0207708		2.5		1.4	
	Monthly Total										
	Daily Max	20		3		0.03357		5		3.4	
	Daily Min	20		3		0.00845		<1.9		<1.4	
	Rolling 12 Month Avg										
Limit(s) in Effect	Monthly Avg							31	0	26	0
	Monthly Total										
	Daily Max							60	0	52	0
	Daily Min										
	Rolling 12 Month Avg										
QA/QC Information	LOD	30		0.12						5.2	
	LOQ	100		0.39						1.5	
	QC Exceedance	N		N		N		N		N	
	Lab Certification			721026460				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	87	133	315	553	155
	Description	Cadmium, Total Recoverable	Chromium, Total Recoverable	Nickel, Total Recoverable	Zinc, Total Recoverable	Cyanide, Total
	Units	ug/L	ug/L	ug/L	ug/L	ug/L
	Sample Type	24 HR COMP	24 HR COMP	24 HR COMP	24 HR COMP	GRAB
	Frequency	2/WEEK	MONTHLY	2/WEEK	2/WEEK	MONTHLY
Sample Results	Day 1	<0.49	<2.2	5.8	46	
	2					
	3	<0.49	<2.2	4.5	65	<3.0
	4					
	5					
	6					
	7	<0.49	<2.2	18	50	
	8	<0.49	<2.2	33	88	
	9					
	10					
	11					
	12					
	13					
	14					
	15	<0.49	<2.2	12	170	
	16					
	17	<0.49	<2.2	4.3	71	
	18					
	19					
	20					
	21					
	22					
	23					
	24	<0.49	<2.2	19	110	
	25	<0.49	<2.2	16	75	
	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	87		133		315		553		155	
	Description	Cadmium, Total Recoverable		Chromium, Total Recoverable		Nickel, Total Recoverable		Zinc, Total Recoverable		Cyanide, Total	
	Units	ug/L		ug/L		ug/L		ug/L		ug/L	
Summary Values	Monthly Avg	0		0		14.075		84.375		0	
	Monthly Total										
	Daily Max	<0.49		<2.2		33		170		<3	
	Daily Min	<0.49		<2.2		4.3		46		<3	
	Rolling 12 Month Avg										
Limit(s) in Effect	Monthly Avg	260	0	1710	0	2380	0	1480	0	650	0
	Monthly Total										
	Daily Max	690	0	2770	0	3980	0	2610	0	1200	0
	Daily Min										
	Rolling 12 Month Avg										
QA/QC Information	LOD	0.49		2.2		1.5		3.6		3	
	LOQ	1		5		5		10		10	
	QC Exceedance	N		N		N		N		N	
	Lab Certification	999580010		999580010		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	264	430	374	373
	Description	Copper, Total Recoverable	Lead, Total Recoverable	Silver, Total Recoverable	pH (Minimum)	pH (Maximum)
	Units	ug/L	ug/L	ug/L	su	su
	Sample Type	24 HR COMP	24 HR COMP	24 HR COMP	CONTINUOUS	CONTINUOUS
	Frequency	2/WEEK	MONTHLY	MONTHLY	DAILY	DAILY
Sample Results	Day 1	2.4	<1.3	<1.1	7.2	8.1
	2					
	3	3.9	<1.3	<1.1	7.2	7.8
	4				7.2	8.7
	5				7.0	8.3
	6				7.0	8.0
	7	4.0	<1.3	<1.1	6.8	7.4
	8	5.2	3.5	<1.1	7.6	8.0
	9					
	10				7.3	7.9
	11				7.1	8.1
	12				7.2	7.9
	13				7.0	8.0
	14				7.0	8.2
	15	3.3	<1.3	<1.1	7.1	9.0
	16					
	17	3.8	<1.3	<1.1	6.7	7.5
	18				6.9	7.6
	19				6.9	7.8
	20				7.0	7.7
	21				6.8	7.6
	22				7.1	7.8
	23					
	24	5.2	1.3	<1.1	7.0	8.2
	25	3.7	1.6	<1.1	7.0	8.1
	26				7.2	8.1
	27				6.4	7.9
	28				6.6	8.2
	29				7.2	8.2
	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		264		430		374		373	
	Description	Copper, Total Recoverable		Lead, Total Recoverable		Silver, Total Recoverable		pH (Minimum)		pH (Maximum)	
	Units	ug/L		ug/L		ug/L		su		su	
Summary Values	Monthly Avg	3.9375		0.8		0		7.02		8.004	
	Monthly Total										
	Daily Max	5.2		3.5		<1.1		7.6		9	
	Daily Min	2.4		<1.3		<1.1		6.4		7.4	
	Rolling 12 Month Avg										
Limit(s) in Effect	Monthly Avg	2070	0	430	0	240	0				
	Monthly Total										
	Daily Max	3380	0	690	0	430	0			11	0
	Daily Min							4	0		
	Rolling 12 Month Avg										
QA/QC Information	LOD	1.7		1.3		1.1					
	LOQ	5		2.5		2.5					
	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	379	376	507	40	490
	Description	pH Total Exceedance Time Minutes	pH Exceedances Greater Than 60 Minutes	Total Toxic Organics	Benzene	Tetrachloroethylene
	Units	minutes	Number	ug/L	ug/L	ug/L
	Sample Type	CALCULATED	CALCULATED	24 HR COMP	24 HR COMP	24 HR COMP
	Frequency	DAILY	DAILY	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	101		101		101		101		101	
	Description	Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent	
	Parameter	379		376		507		40		490	
	Description	pH Total Exceedance Time Minutes		pH Exceedances Greater Than 60 Minutes		Total Toxic Organics		Benzene		Tetrachloroethylene	
	Units	minutes		Number		ug/L		ug/L		ug/L	
Summary Values	Monthly Avg										
	Monthly Total										
	Daily Max										
	Daily Min										
	Rolling 12 Month Avg										
Limit(s) in Effect	Monthly Avg										
	Monthly Total	446	0	0	0						
	Daily Max					2130					
	Daily Min										
	Rolling 12 Month Avg										
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	500	561	200	508	285
	Description	Toluene	1,1,1-Trichloro- ethane	Ethylbenzene	Trichloro- ethylene	Methylene chloride
	Units	ug/L	ug/L	ug/L	ug/L	ug/L
	Sample Type	24 HR COMP	24 HR COMP	24 HR COMP	24 HR COMP	24 HR COMP
	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					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	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	500	561	200	508	285
	Description	Toluene	1,1,1-Trichloro- ethane	Ethylbenzene	Trichloro- ethylene	Methylene chloride
	Units	ug/L	ug/L	ug/L	ug/L	ug/L
Summary Values	Monthly Avg					
	Monthly Total					
	Daily Max					
	Daily Min					
	Rolling 12 Month Avg					
Limit(s) in Effect	Monthly Avg					
	Monthly Total					
	Daily Max					
	Daily Min					
	Rolling 12 Month Avg					
QA/QC Information	LOD					
	LOQ					
	QC Exceedance					
	Lab Certification					

	Sample Point	101	106	106	106	107
	Description	Metal Finishing Effluent	Future remedial action ww	Future remedial action ww	Future remedial action ww	Mercury Field Blank Results
	Parameter	167	211	35	457	280
	Description	Di-n-butyl phthalate (dibutyl phthalate)	Flow Rate	Arsenic, Total Recoverable	Suspended Solids, Total	Mercury, Total Recoverable
	Units	ug/L	gpd	ug/L	mg/L	ng/L
	Sample Type	24 HR COMP	CONTINUOUS	24 HR COMP	24 HR COMP	GRAB
	Frequency	MONTHLY	DAILY	WEEKLY	WEEKLY	MONTHLY
Sample Results	Day 1					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10					
	11					
	12					<0.12
	13					
	14					
	15					
	16					
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	101	106	106	106	107
	Description	Metal Finishing Effluent	Future remedial action ww	Future remedial action ww	Future remedial action ww	Mercury Field Blank Results
	Parameter	167	211	35	457	280
	Description	Di-n-butyl phthalate (dibutyl phthalate)	Flow Rate	Arsenic, Total Recoverable	Suspended Solids, Total	Mercury, Total Recoverable
	Units	ug/L	gpd	ug/L	mg/L	ng/L
Summary Values	Monthly Avg					0
	Monthly Total					
	Daily Max					<0.12
	Daily Min					<0.12
	Rolling 12 Month Avg					
Limit(s) in Effect	Monthly Avg					
	Monthly Total					
	Daily Max					
	Daily Min					
	Rolling 12 Month Avg					
QA/QC Information	LOD					0.12
	LOQ					0.39
	QC Exceedance	N	N	N	N	N
	Lab Certification					721026460

	Sample Point	003	003	003	003	003
	Description	Future remedial action dischg	Future remedial action dischg	Future remedial action dischg	Future remedial action dischg	Future remedial action dischg
	Parameter	211	457	35	374	373
	Description	Flow Rate	Suspended Solids, Total	Arsenic, Total Recoverable	pH (Minimum)	pH (Maximum)
	Units	MGD	mg/L	ug/L	su	su
	Sample Type	CONTINUOUS	24 HR COMP	24 HR COMP	CONTINUOUS	CONTINUOUS
	Frequency	DAILY	WEEKLY	WEEKLY	DAILY	DAILY
Sample Results	Day 1					
	2					
	3					
	4	0.001601	<1.9	48	7.2	8.4
	5					
	6					
	7					
	8					
	9					
	10					
	11					
	12					
	13					
	14					
	15					
	16					
	17					
	18					
	19					
	20	0.014558	2.5	220	6.8	9.0
	21	0.009619			7.3	7.8
	22	0.003243			7.3	7.8
	23					
	24	0.010245	<1.9	59	7.1	8.8
	25	0.009470			7.2	8.2
	26	0.013883			7.1	8.3
	27	0.012760			6.8	8.4
	28	0.001523			7.1	8.0
	29					
	30					
	31					

	Sample Point	003	003	003	003	003	
	Description	Future remedial action dischg	Future remedial action dischg	Future remedial action dischg	Future remedial action dischg	Future remedial action dischg	
	Parameter	211	457	35	374	373	
	Description	Flow Rate	Suspended Solids, Total	Arsenic, Total Recoverable	pH (Minimum)	pH (Maximum)	
	Units	MGD	mg/L	ug/L	su	su	
Summary Values	Monthly Avg	0.008544667	0.8333333333	109	7.1	8.3	
	Monthly Total						
	Daily Max	0.014558	2.5	220	7.3	9	
	Daily Min	0.001523	<1.9	48	6.8	7.8	
	Rolling 12 Month Avg						
Limit(s) in Effect	Monthly Avg						
	Monthly Total						
	Daily Max			680	0	11	0
	Daily Min				4	0	
	Rolling 12 Month Avg						
QA/QC Information	LOD			2.1			
	LOQ			5			
	QC Exceedance	N	N	N	N	N	
	Lab Certification		999580010	999580010			

	Sample Point	003	003
	Description	Future remedial action dischg	Future remedial action dischg
	Parameter	379	376
	Description	pH Total Exceedance Time Minutes	pH Exceedances Greater Than 60 Minutes
	Units	minutes	Number
	Sample Type	CONTINUOUS	CONTINUOUS
	Frequency	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		
	29		
	30		
	31		

	Sample Point	003		003	
	Description	Future remedial action dischg		Future remedial action dischg	
	Parameter	379		376	
	Description	pH Total Exceedance Time Minutes		pH Exceedances Greater Than 60 Minutes	
	Units	minutes		Number	
Summary Values	Monthly Avg				
	Monthly Total				
	Daily Max				
	Daily Min				
	Rolling 12 Month Avg				
Limit(s) in Effect	Monthly Avg				
	Monthly Total	446	0		
	Daily Max			0	0
	Daily Min				
	Rolling 12 Month Avg				
QA/QC Information	LOD				
	LOQ				
	QC Exceedance	N		N	
	Lab Certification				

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

1. Based on my inquiry of the person or persons directly responsible for managing compliance with the permit limitation for TTO I certify that to the best of my knowledge and belief no dumping of concentrated toxic organics into the wastewaters has
2. occurred since filing of the last discharge monitoring report. I further certify that this facility is implementing the solvent management plan submitted to the department.

General Remarks

During the second week of sampling the Ground water system did not run due to maintenance issue so, there were no results for OF003 for Arsenic or TSS.
For OF001 temperatures the chart had a malfunction so, it had no readings on 2/10/20 - 2/13/20

Laboratory Quality Control Comments

Submitted by Anne Fleury(afleury16) on 3/10/2020 12:40:36 PM