Jacobs

1610 North 2nd Street
Suite 201
Milwaukee, Wisconsin 53212
United States
T +1.414.272.2426
F +1.414.272.4408
www.jacobs.com

April 15, 2022

Christopher Black
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 2022)***
Administrative Order on Consent (February 26, 2009)
Tyco Fire Products LP, Stanton Street Facility, Marinette, Wisconsin
WID 006 125 215

Dear Mr. Black:

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. This report covers the period from January 1 through March 31, 2022, 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

Attachment 1 summarizes the operational data for the groundwater collection and treatment system (GWCTS) during the first quarter 2022, and Attachment 2 contains the monthly Discharge Monitoring Reports. 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 in those areas at depths below ground surface that prevent surface flooding of the facility. The overall volume of groundwater extracted and treated by the GWCTS during the reporting period was 517,940 gallons (groundwater recovered from the pump down program [PDP] operations described as follows is not included in this total). Operations continue to include bypassing the first two reaction tanks and the lamella with direct connection of the equalization tank to Reaction Tank 3, then Reaction Tank 4, and then the microfilter. The GWCTS operated continuously except for short-term maintenance or weather-related shutdowns, some weekends and holidays, and two extended maintenance shutdowns that occurred from January 16 to January 25, 2022, and February 8 to February 15, 2022. The January 2022 shutdown was a result of an issue with a check

[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.

valve on the filter press, the part was ordered and installed, and the system was back up and running. The February 2022 shutdown was a result of an acid pump that broke down and was subsequently repaired.

Pump down operations with the pump house system continued through first quarter 2022 in the former Salt Vault and former 8th Street Slip areas. The groundwater generated from the PDP is disposed of offsite at the Waste Management Vickery Deepwell Hazardous Waste disposal facility in Vickery, Ohio, and is managed separately from the GWCTS. Operations continued under management of Endpoint Solutions of Franklin, Wisconsin. Both the former Salt Vault and former 8th Street Slip areas have maintained the target elevation during the reporting period as shown in the manual water level measurements table and hydrographs from transducer data collected as part of the pump house system operations (Attachments 3 and 4, respectively). From January 1 to March 31, 2022, an additional 332,948 gallons of groundwater was extracted and disposed of offsite as part of the PDP. Average daily total pumping rates (which include both areas) ranged from 0 to 9.2 gallons per minute (gpm) and are summarized in Attachment 4. The pump house system was typically operated at a pumping rate of 1 to 2 gpm in each area. The system occasionally had lower or higher average daily pumping rates that would coincide with days when trucks were not available or additional volume was needed to generate the minimum volumes required by the disposal/trucking contractor, respectively. In the future, when the modified GWCTS is in place, a more consistent range of daily average pumping rates is expected. The overall average pumping rate for the reporting period in the former Salt Vault was 1.6 gpm and in the former 8th Street Slip was 0.9 gpm. The overall rate of extraction across the PDP areas for the reporting period was 2.6 gpm for the quarter. Per the Agencies' request at the December 1, 2021, teleconference meeting with EPA, WDNR, Tyco, and Jacobs to discuss the PDP status and the move to post-drawdown monitoring, a follow-up email was sent to the Agencies on February 15, 2022, with a summary of the current PDP operations and monitoring activities.

A teleconference meeting was held on January 26, 2022, with EPA, WDNR, Tyco, and Jacobs to provide a RCRA project summary and update, considering several of the new agency team members on the project.

Tyco is preparing the *2021 Barrier Wall Groundwater Monitoring Annual Report*, which will be submitted in second quarter 2022.

Additional Activities

Follow-on activities as part of the final Wisconsin Pollutant Discharge Elimination System (WPDES) Permit WI-0001040-08-0 (effective January 1, 2021, through December 31, 2025) continued in first quarter 2022 and included the following:

- The design efforts for the GWCTS improvements continued in first quarter 2022. The *Issued for Construction, 2022 Modified Groundwater Treatment System Design* drawings and specifications were submitted to WDNR on January 31, 2022. A meeting was held with WDNR (Water Quality Bureau, Waste Water Section) on February 28, 2022, to review the design documents. The design documents were approved by WDNR on March 8, 2022. Equipment and material procurement continued in first quarter 2022, and construction will begin in second quarter 2022. Procurement activities included and will continue to include actively tracking long-lead items and other potential supply-chain issues that could cause potential construction delays.
- Stormwater improvement (approved by WDNR) planning that will abandon the subsurface stormwater lines and manage stormwater through aboveground surface flow, as needed, continued. Equipment and material procurement continued in first quarter 2022, and construction will begin in late spring or early summer 2022.

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, which operates under WPDES Permit WI-0001040-08-0. Attachment 2 includes the GWCTS monthly WPDES Discharge Monitoring Reports for December 2021 through February 2022. 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 2022 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, respectively (Attachment 4).

Problems Encountered

There were no new problems encountered during this reporting period.

Schedule of Upcoming Activities

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

- Submit the quarterly progress report
- Submit *2021 Barrier Wall Groundwater Monitoring Annual Report*
- Continue PDP operations in the former Salt Vault and former 8th Street Slip areas
- Continue operating the GWCTS
- Complete plantings in May to June 2022 time frame within the Wetlands Area (Zone 4) to replace trees that did not survive periods of recent high river levels in 2019 and 2020
- Continue planning and procurement activities (including actively tracking long-lead items and other potential supply-chain issues that could cause potential construction delays) to implement the GWCTS improvements design and start construction activities by June 30, 2022
- Continue stormwater improvement planning activities and may start construction activities (June to July 2022 time frame)
- Complete the spring barrier wall groundwater monitoring sampling event
- Conduct vertical barrier wall (from land and water sides, above the waterline), tree plot, cover area, and monitoring well inspections
- Conduct vertical barrier wall survey
- 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 first quarter 2022 are summarized in Tables 1 and 2, respectively.

Table 1. Documents Submitted

Quarterly Progress Report (January through March 2022), Tyco Fire Products LP Facility, Marinette, Wisconsin

Description of Submittal	Submitted To	Date Submitted
Quarterly Progress Report (Fourth Quarter 2021)	EPA	January 14, 2022
WPDES Submittal (*Issued for construction, 2022 Modified Groundwater Treatment System Design* Drawings and Specifications)	WDNR	January 31, 2022
Email—Follow-Up: Tyco Long Term PDP Management - Notification of Post-Drawdown Monitoring	EPA	February 15, 2022
Email—Horizontal Wells in Salt Vault, Construction Details	WDNR	February 24, 2022

Table 2. Correspondence from Agency

Quarterly Progress Report (January through March 2022), Tyco Fire Products LP Facility, Marinette, Wisconsin

Description of Correspondence	Submitted By	Date Submitted
Email—Requesting Horizontal Wells in Salt Vault, Construction Details	WDNR	February 4, 2022
Email Approval—January 31, 2022 WPDES Submittal (*Issued for construction, 2022 Modified Groundwater Treatment System Design* Drawings and Specifications)	WDNR	March 8, 2022

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

Attachments

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

3 2022 Pump Down Program Groundwater Elevation Monitoring
4 First Quarter 2022 PDP Pump House System Hydrograph and Pumping Rates

Document Control No.: D3478800.289

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, 2022

The following summarizes groundwater collection and treatment system (GWCTS) operations from January 1 through March 31, 2022, at the Tyco Fire Products LP facility on Stanton Street in Marinette, Wisconsin:

- The GWCTS operated for 15 days in January 2022, 12 days in February 2022, and 25 days in March 2022, for a total of 52 days.
- For the reporting period, the precipitation recorded from the weather station in Marinette, Wisconsin, was 4.71 inches of rain and 18.3 inches of snow and ice (http://www.ncdc.noaa.gov/cdo-web/datasets/GHCND/stations/GHCND:USC00475091/detail).
- An estimated 517,940 gallons of groundwater was extracted (not including volumes extracted as part of the pump down program [PDP]) 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.
- During the reporting period, an estimated 592,497 gallons of water was discharged to the Menominee River as effluent under the Wisconsin Pollutant Discharge Elimination System permit.
- Approximately 209,915 gallons of reject water was produced this reporting period during system operations and subsequently disposed of offsite.

Table 1-1. Extraction Well Data Summary (January through March 2022)

GWCTS Operations, Tyco Fire Products LP Facility, Marinette, Wisconsin

Extraction Well	Gallons Run, First Quarter 2022 (January 1 through March 31, 2022)
EW-1	35,174
EW-2	Not operated in lieu of ongoing PDP
EW-3	Not operated in lieu of ongoing PDP
EW-4	1,833
EW-5	226,514
EW-6	117,018
EW-7	137,401
Total	**517,940**

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: 12/01/2021 - 12/31/2021
Form Due Date: 01/21/2022
Permit Number: 0001040

Date Received:	
DOC:	480395
FIN:	7245
FID:	438039470
Region:	Northeast Region
Permit Drafter:	Trevor J Moen
Reviewer:	Laura A Gerold
Office:	Green Bay

	Sample Point	703	001	001	703	001
	Description	Menominee River Intake	Combined WW to Menominee River	Combined WW to Menominee River	Menominee River Intake	Combined WW to Menominee River
	Parameter	211	211	373	35	374
	Description	Flow Rate	Flow Rate	pH (Maximum)	Arsenic, Total Recoverable	pH (Minimum)
	Units	gpd	MGD	su	ug/L	su
	Sample Type	TOT DAILY	CONTINUOUS	CONTINUOUS	GRAB	CONTINUOUS
	Frequency	DAILY	DAILY	DAILY	MONTHLY	DAILY
Sample Results	Day 1		0.120740	7.4		6.9
	2		0.086180	7.4		7.0
	3		0.066940	7.4		7.1
	4		0.042170	7.4		7.1
	5		0.048960	7.4		6.6
	6		0.100110	7.0		6.7
	7		0.082870	7.0		6.6
	8		0.110680	7.2		6.8
	9		0.097150	7.2		6.6
	10		0.104300	7.1	<2.1	6.8
	11		0.071770	7.1		6.8
	12		0.055850	7.2		7.0
	13		0.115710	7.2		6.7
	14		0.137200	7.0		6.8
	15		0.169340	7.0		6.6
	16		0.097190	6.9		6.7
	17		0.069870	7.2		6.8
	18		0.058250	7.2		7.0
	19		0.056180	7.3		7.0
	20		0.061310	7.1		6.9
	21		0.078950	7.2		7.0
	22		0.098490	7.7		6.8
	23		0.079100	7.7		7.3
	24		0.064780	7.7		6.6
	25		0.024410	7.9		7.3
	26		0.036340	7.8		7.5
	27		0.106620	7.9		7.4
	28		0.097170	7.6		7.3
	29		0.106770	7.5		7.3
	30		0.059300	7.5		7.3
	31		0.019500	7.5		7.4

	Sample Point	703	001	001	703	001
	Description	Menominee River Intake	Combined WW to Menominee River	Combined WW to Menominee River	Menominee River Intake	Combined WW to Menominee River
	Parameter	211	211	373	35	374
	Description	Flow Rate	Flow Rate	pH (Maximum)	Arsenic, Total Recoverable	pH (Minimum)
	Units	gpd	MGD	su	ug/L	su
Summary Values	**Monthly Avg**		0.081425806	7.34516129	0	6.958064516
	Monthly Total					
	Daily Max		0.16934	7.9	<2.1	7.5
	Daily Min		0.0195	6.9	<2.1	6.6
Limit(s) in Effect	**Monthly Avg**					
	Monthly Total					
	Daily Max			9 0		
	Daily Min					6 0
QA/QC Information	**LOD**				2.1	
	LOQ				5	
	QC Exceedance	N	N	N	N	N
	Lab Certification				999580010	

	Sample Point	001	001	001	001	001
	Description	Combined WW to Menominee River	Combined WW to Menominee River	Combined WW to Menominee River	Combined WW to Menominee River	Combined WW to Menominee River
	Parameter	480	231	35	35	87
	Description	Temperature Maximum	Hardness, Total as CaCO3	Arsenic, Total Recoverable	Arsenic, Total Recoverable	Cadmium, Total Recoverable
	Units	degF	mg/L	ug/L	lbs/day	ug/L
	Sample Type	MEASURE	24 HR FLOW PROP	24 HR FLOW PROP	CALCULATED	24 HR FLOW PROP
	Frequency	WEEKLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Sample Results	**Day 1**	59				
	2	56				
	3	57				
	4	54				
	5	51				
	6	53				
	7	56				
	8	57	280	150	0.138	0.83
	9	55				
	10	53				
	11	48				
	12	49				
	13	58				
	14	55				
	15	52				
	16	55				
	17	54				
	18	50				
	19	49				
	20	51				
	21	49				
	22	49				
	23	51				
	24	49				
	25	49				
	26	49				
	27	51				
	28	49				
	29	50				
	30	49				
	31	49				

	Sample Point	001	001	001	001	001
	Description	Combined WW to Menominee River	Combined WW to Menominee River	Combined WW to Menominee River	Combined WW to Menominee River	Combined WW to Menominee River
	Parameter	480	231	35	35	87
	Description	Temperature Maximum	Hardness, Total as CaCO3	Arsenic, Total Recoverable	Arsenic, Total Recoverable	Cadmium, Total Recoverable
	Units	degF	mg/L	ug/L	lbs/day	ug/L
Summary Values	**Monthly Avg**	52.129032258	280	150	0.138	0.83
	Monthly Total					
	Daily Max	59	280	150	0.138	0.83
	Daily Min	48	280	150	0.138	0.83
Limit(s) in Effect	**Monthly Avg**					57 0
	Monthly Total					
	Daily Max			170 0	0.81 0	57 0
	Daily Min					
QA/QC Information	**LOD**			2.1		0.49
	LOQ			5		1
	QC Exceedance	N	N	N	N	N
	Lab Certification		999580010	999580010		999580010

	Sample Point	001	001	001	001	001
	Description	Combined WW to Menominee River	Combined WW to Menominee River	Combined WW to Menominee River	Combined WW to Menominee River	Combined WW to Menominee River
	Parameter	87	147	147	152	152
	Description	Cadmium, Total Recoverable	Copper, Total Recoverable	Copper, Total Recoverable	Cyanide, Amenable	Cyanide, Amenable
	Units	lbs/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	0.0007636	52	0.04784	55	0.0506
	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	001		001		001		001		001	
	Description	Combined WW to Menominee River		Combined WW to Menominee River		Combined WW to Menominee River		Combined WW to Menominee River		Combined WW to Menominee River	
	Parameter	87		147		147		152		152	
	Description	Cadmium, Total Recoverable		Copper, Total Recoverable		Copper, Total Recoverable		Cyanide, Amenable		Cyanide, Amenable	
	Units	lbs/day		ug/L		lbs/day		ug/L		lbs/day	
Summary Values	**Monthly Avg**	0.0007636		52		0.04784		55		0.0506	
	Monthly Total										
	Daily Max	0.0007636		52		0.04784		55		0.0506	
	Daily Min	0.0007636		52		0.04784		55		0.0506	
Limit(s) in Effect	**Monthly Avg**			69	0			92	0		
	Monthly Total										
	Daily Max	0.27	0	69	0	0.98	0	92	0	0.44	0
	Daily Min										
QA/QC Information	**LOD**			1.7				3.6			
	LOQ			5				5			
	QC Exceedance	N		N		N		N		N	
	Lab Certification			999580010				999580010			

	Sample Point	001	001	001	001	001
	Description	Combined WW to Menominee River	Combined WW to Menominee River	Combined WW to Menominee River	Combined WW to Menominee River	Combined WW to Menominee River
	Parameter	112	280	1352	1353	1353
	Description	Chlorine, Total Residual	Mercury, Total Recoverable	PFOA	PFOS	PFOS
	Units	ug/L	ng/L	ng/L	ng/L	mg/day
	Sample Type	GRAB	GRAB	24 HR FLOW PROP	24 HR FLOW PROP	CALCULATED
	Frequency	MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Sample Results	Day 1					
	2					
	3					
	4					
	5					
	6					
	7					
	8	40		240	21	0.880908
	9					
	10					
	11					
	12					
	13					
	14					
	15					
	16		1.05			
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	001	001	001	001	001
	Description	Combined WW to Menominee River	Combined WW to Menominee River	Combined WW to Menominee River	Combined WW to Menominee River	Combined WW to Menominee River
	Parameter	112	280	1352	1353	1353
	Description	Chlorine, Total Residual	Mercury, Total Recoverable	PFOA	PFOS	PFOS
	Units	ug/L	ng/L	ng/L	ng/L	mg/day
Summary Values	Monthly Avg	40	1.05	240	21	0.880908
	Monthly Total					
	Daily Max	40	1.05	240	21	0.880908
	Daily Min	40	1.05	240	21	0.880908
Limit(s) in Effect	Monthly Avg	38 | 0				
	Monthly Total					
	Daily Max	38 | 0	29 | 0			
	Daily Min					
QA/QC Information	LOD	30	0.16	0.8	0.51	
	LOQ	100	0.5	1.9	1.9	
	QC Exceedance	N	N	N	N	N
	Lab Certification		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	211	373	374	379	376
	Description	Flow Rate	pH (Maximum)	pH (Minimum)	pH Total Exceedance Time Minutes	pH Exceedances Greater Than 60 Minutes
	Units	MGD	su	su	minutes	Number
	Sample Type	CONTINUOUS	CONTINUOUS	CONTINUOUS	CONTINUOUS	CONTINUOUS
	Frequency	DAILY	DAILY	DAILY	DAILY	DAILY
Sample Results	**Day 1**	0.030803	8.2	6.8		
	2	0.018733	8.6	6.4		
	3	0.015840	8.4	6.5		
	4	0.008036	8.9	6.6		
	5	0				
	6	0.037426	7.6	7.0		
	7	0.033421	7.6	6.5		
	8	0.038749	7.4	6.4		
	9	0.025598	8.5	6.4		
	10	0.019859	8.7	6.2		
	11	0				
	12	0				
	13	0.038027	8.4	6.6		
	14	0.030281	7.5	6.6		
	15	0.037447	7.6	6.6		
	16	0.034700	7.4	6.6		
	17	0.022309	7.2	6.6		
	18	0.016214	7.6	6.5		
	19	0				
	20	0.023481	7.8	6.6		
	21	0.018307	7.4	6.4		
	22	0.026952	7.1	7.0		
	23	0.019201	7.5	6.5		
	24	0				
	25	0				
	26	0				
	27	0.031232	7.9	6.6		
	28	0.023174	8.2	6.8		
	29	0.023610	7.4	6.6		
	30	0.014085	8.1	6.7		
	31	0				

	Sample Point	101		101		101		101		101	
	Description	Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent	
	Parameter	211		373		374		379		376	
	Description	Flow Rate		pH (Maximum)		pH (Minimum)		pH Total Exceedance Time Minutes		pH Exceedances Greater Than 60 Minutes	
	Units	MGD		su		su		minutes		Number	
Summary Values	**Monthly Avg**	0.018951129		7.869565217		6.586956522					
	Monthly Total										
	Daily Max	0.038749		8.9		7					
	Daily Min	0		7.1		6.2					
Limit(s) in Effect	**Monthly Avg**										
	Monthly Total							446	0	0	0
	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	457	651	87	147	315
	Description	Suspended Solids, Total	Oil & Grease (Hexane)	Cadmium, Total Recoverable	Copper, Total Recoverable	Nickel, Total Recoverable
	Units	mg/L	mg/L	ug/L	ug/L	ug/L
	Sample Type	24 HR FLOW PROP	GRAB	24 HR FLOW PROP	24 HR FLOW PROP	24 HR FLOW PROP
	Frequency	3/WEEK	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Sample Results	**Day 1**	3.8				
	2	2.0				
	3					
	4					
	5					
	6	3.2		<0.49	6.6	5.9
	7		<1.4			
	8	3.2				
	9	<1.9				
	10					
	11					
	12					
	13	<1.9				
	14					
	15	2.8				
	16	<1.9				
	17					
	18					
	19					
	20	<1.9				
	21					
	22	<1.9				
	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	457		651		87		147		315	
	Description	Suspended Solids, Total		Oil & Grease (Hexane)		Cadmium, Total Recoverable		Copper, Total Recoverable		Nickel, Total Recoverable	
	Units	mg/L		mg/L		ug/L		ug/L		ug/L	
Summary Values	**Monthly Avg**	1.25		0		0		6.6		5.9	
	Monthly Total										
	Daily Max	3.8		<1.4		<0.49		6.6		5.9	
	Daily Min	<1.9		<1.4		<0.49		6.6		5.9	
Limit(s) in Effect	**Monthly Avg**	31	0	26	0	260	0	2070	0	2380	0
	Monthly Total										
	Daily Max	60	0	52	0	690	0	3380	0	3980	0
	Daily Min										
QA/QC Information	**LOD**			1.4		0.49		1.7		1.5	
	LOQ			5.2		1		5		5	
	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	553	507	280	280	35
	Description	Zinc, Total Recoverable	Total Toxic Organics	Mercury, Total Recoverable	Mercury, Total Recoverable	Arsenic, Total Recoverable
	Units	ug/L	ug/L	ng/L	mg/day	ug/L
	Sample Type	24 HR FLOW PROP	24 HR FLOW PROP	GRAB	CALCULATED	24 HR FLOW PROP
	Frequency	MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Sample Results	**Day 1**					
	2					
	3					
	4					
	5					
	6	370				<2.1
	7					
	8					
	9					
	10					
	11					
	12					
	13					
	14					
	15					
	16			0.35	0.0394539	
	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	553		507		280		280		35	
	Description	Zinc, Total Recoverable		Total Toxic Organics		Mercury, Total Recoverable		Mercury, Total Recoverable		Arsenic, Total Recoverable	
	Units	ug/L		ug/L		ng/L		mg/day		ug/L	
Summary Values	**Monthly Avg**	370				0.35		0.0394539		0	
	Monthly Total										
	Daily Max	370				0.35		0.0394539		<2.1	
	Daily Min	370				0.35		0.0394539		<2.1	
Limit(s) in Effect	**Monthly Avg**	1480	0								
	Monthly Total										
	Daily Max	2610	0	2130							
	Daily Min										
QA/QC Information	**LOD**	3.6				0.16				2.1	
	LOQ	10				0.5				5	
	QC Exceedance	N		N		N		N		N	
	Lab Certification	999580010				999580010				999580010	

	Sample Point	101	704	704	704	704
	Description	Metal Finishing Effluent	GWCTS Influent	GWCTS Influent	GWCTS Influent	GWCTS Influent
	Parameter	35	211	35	457	280
	Description	Arsenic, Total Recoverable	Flow Rate	Arsenic, Total Recoverable	Suspended Solids, Total	Mercury, Total Recoverable
	Units	lbs/day	gpd	ug/L	mg/L	ng/L
	Sample Type	CALCULATED	CONTINUOUS	24 HR FLOW PROP	24 HR FLOW PROP	GRAB
	Frequency	MONTHLY	DAILY	WEEKLY	WEEKLY	MONTHLY
Sample Results	Day 1		0			
	2		0			
	3		0			
	4		0			
	5		0			
	6	<0.000651	10144	4100	61	
	7		6530			
	8		0			
	9		8415			
	10		13837			
	11		0			
	12		0			
	13		10157	4000	90	
	14		14014			
	15		13197			
	16		12645			4.49
	17		11034			
	18		5687			
	19		0			
	20		10484	4000	62	
	21		9706			
	22		12931			
	23		11133			
	24		0			
	25		0			
	26		0			
	27		13722	5000	57	
	28		9767			
	29		15176			
	30		14856			
	31		0			

	Sample Point	101	704	704	704	704
	Description	Metal Finishing Effluent	GWCTS Influent	GWCTS Influent	GWCTS Influent	GWCTS Influent
	Parameter	35	211	35	457	280
	Description	Arsenic, Total Recoverable	Flow Rate	Arsenic, Total Recoverable	Suspended Solids, Total	Mercury, Total Recoverable
	Units	lbs/day	gpd	ug/L	mg/L	ng/L
Summary Values	**Monthly Avg**	0	6562.419354839	4275	67.5	4.49
	Monthly Total					
	Daily Max	<0.000651	15176	5000	90	4.49
	Daily Min	<0.000651	0	4000	57	4.49
Limit(s) in Effect	**Monthly Avg**					
	Monthly Total					
	Daily Max					
	Daily Min					
QA/QC Information	**LOD**			42		0.16
	LOQ			100		0.5
	QC Exceedance	N	N	N	N	N
	Lab Certification			999580010	999580010	999580010

	Sample Point	107	003	003	003	003
	Description	Mercury Field Blank Results	GWCTS Effluent	GWCTS Effluent	GWCTS Effluent	GWCTS Effluent
	Parameter	280	211	373	374	35
	Description	Mercury, Total Recoverable	Flow Rate	pH (Maximum)	pH (Minimum)	Arsenic, Total Recoverable
	Units	ng/L	MGD	su	su	ug/L
	Sample Type	BLANK	CONTINUOUS	CONTINUOUS	CONTINUOUS	24 HR FLOW PROP
	Frequency	MONTHLY	DAILY	DAILY	DAILY	WEEKLY
Sample Results	Day 1		0			
	2		0			
	3		0			
	4		0			
	5		0			
	6		0.007113	7.5	6.7	35
	7		0.009561	8.6	6.6	
	8		0			
	9		0.008415	8.7	7.4	
	10		0.013837	8.9	6.9	
	11		0			
	12		0			
	13		0.010157	8.6	7.0	24
	14		0.014034	8.5	7.1	
	15		0.013197	8.4	7.3	
	16	<0.16	0.012645	8.9	7.0	
	17		0.011034	7.9	7.1	
	18		0.005687	7.4	6.7	
	19		0			
	20		0.010484	7.9	6.8	33
	21		0.009706	7.7	6.7	
	22		0.012931	7.6	6.7	
	23		0.011133	7.7	6.6	
	24		0			
	25		0			
	26		0			
	27		0.008761	7.1	6.4	39
	28		0.014728	7.9	7.0	
	29		0.015176	7.4	6.9	
	30		0.014856	7.7	7.1	
	31		0			

	Sample Point	107	003	003	003	003
	Description	Mercury Field Blank Results	GWCTS Effluent	GWCTS Effluent	GWCTS Effluent	GWCTS Effluent
	Parameter	280	211	373	374	35
	Description	Mercury, Total Recoverable	Flow Rate	pH (Maximum)	pH (Minimum)	Arsenic, Total Recoverable
	Units	ng/L	MGD	su	su	ug/L
Summary Values	Monthly Avg	0	0.006563065	8.022222222	6.888888889	32.75
	Monthly Total					
	Daily Max	<0.16	0.015176	8.9	7.4	39
	Daily Min	<0.16	0	7.1	6.4	24
Limit(s) in Effect	Monthly Avg					
	Monthly Total					
	Daily Max			9 0		680 0
	Daily Min				6 0	
QA/QC Information	LOD	0.16				2.1
	LOQ	0.5				5
	QC Exceedance	N	N	N	N	N
	Lab Certification	999580010				999580010

	Sample Point	003	003	003	003	003
	Description	GWCTS Effluent	GWCTS Effluent	GWCTS Effluent	GWCTS Effluent	GWCTS Effluent
	Parameter	35	457	280	231	112
	Description	Arsenic, Total Recoverable	Suspended Solids, Total	Mercury, Total Recoverable	Hardness, Total as CaCO3	Chlorine, Total Residual
	Units	lbs/day	mg/L	ng/L	mg/L	ug/L
	Sample Type	CALCULATED	24 HR FLOW PROP	24 HR FLOW PROP	24 HR FLOW PROP	GRAB
	Frequency	WEEKLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Sample Results	**Day 1**					
	2					
	3					
	4					
	5					
	6	0.0020755	<1.9		13	
	7					
	8					
	9					
	10					
	11					
	12					
	13	0.0020328				
	14					
	15					
	16			0.3		
	17					
	18					
	19					
	20	0.0028842				
	21					
	22					
	23					
	24					
	25					
	26					
	27	0.0028509				
	28					10
	29					
	30					
	31					

	Sample Point	003		003		003		003		003	
	Description	GWCTS Effluent		GWCTS Effluent		GWCTS Effluent		GWCTS Effluent		GWCTS Effluent	
	Parameter	35		457		280		231		112	
	Description	Arsenic, Total Recoverable		Suspended Solids, Total		Mercury, Total Recoverable		Hardness, Total as CaCO3		Chlorine, Total Residual	
	Units	lbs/day		mg/L		ng/L		mg/L		ug/L	
Summary Values	**Monthly Avg**	0.00246085		0		0.3		13		10	
	Monthly Total										
	Daily Max	0.0028842		<1.9		0.3		13		10	
	Daily Min	0.0020328		<1.9		0.3		13		10	
Limit(s) in Effect	**Monthly Avg**									38	0
	Monthly Total										
	Daily Max	0.23	0			24	0			38	0
	Daily Min										
QA/QC Information	**LOD**					0.16				30	
	LOQ					0.5				100	
	QC Exceedance	N		N		N		N		N	
	Lab Certification			999580010		999580010		999580010			

	Sample Point	003	003	003	004	004
	Description	GWCTS Effluent	GWCTS Effluent	GWCTS Effluent	Combined Process WW & GW	Combined Process WW & GW
	Parameter	1352	1353	1353	211	373
	Description	PFOA	PFOS	PFOS	Flow Rate	pH (Maximum)
	Units	ng/L	ng/L	mg/day	MGD	su
	Sample Type	24 HR FLOW PROP	24 HR FLOW PROP	CALCULATED	CONTINUOUS	CONTINUOUS
	Frequency	WEEKLY	WEEKLY	WEEKLY	DAILY	DAILY
Sample Results	Day 1					
	2					
	3					
	4					
	5					
	6	33	2.1	0.0566118		
	7					
	8					
	9					
	10					
	11					
	12					
	13	32	1.4	0.053893		
	14					
	15					
	16					
	17					
	18					
	19					
	20	44	1.6	0.0635744		
	21					
	22					
	23					
	24					
	25					
	26					
	27	39	2.1	0.0697284		
	28					
	29					
	30					
	31					

	Sample Point	003	003	003	004	004
	Description	GWCTS Effluent	GWCTS Effluent	GWCTS Effluent	Combined Process WW & GW	Combined Process WW & GW
	Parameter	1352	1353	1353	211	373
	Description	PFOA	PFOS	PFOS	Flow Rate	pH (Maximum)
	Units	ng/L	ng/L	mg/day	MGD	su
Summary Values	**Monthly Avg**	37	1.8	0.0609519		
	Monthly Total					
	Daily Max	44	2.1	0.0697284		
	Daily Min	32	1.4	0.053893		
Limit(s) in Effect	**Monthly Avg**					
	Monthly Total					
	Daily Max					9
	Daily Min					
QA/QC Information	**LOD**	0.8	0.51			
	LOQ	2	2			
	QC Exceedance	N	N	N	N	N
	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	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					
	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	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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	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					
	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**					
	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				
	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				
	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 1/12/2022 8:09:35 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: 01/01/2022 - 01/31/2022
Form Due Date: 02/21/2022
Permit Number: 0001040

Date Received:	
DOC:	485715
FIN:	7245
FID:	438039470
Region:	Northeast Region
Permit Drafter:	Trevor J Moen
Reviewer:	Laura A Gerold
Office:	Green Bay

	Sample Point	703	001	001	703	001
	Description	Menominee River Intake	Combined WW to Menominee River	Combined WW to Menominee River	Menominee River Intake	Combined WW to Menominee River
	Parameter	211	211	373	35	374
	Description	Flow Rate	Flow Rate	pH (Maximum)	Arsenic, Total Recoverable	pH (Minimum)
	Units	gpd	MGD	su	ug/L	su
	Sample Type	TOT DAILY	CONTINUOUS	CONTINUOUS	GRAB	CONTINUOUS
	Frequency	DAILY	DAILY	DAILY	MONTHLY	DAILY
Sample Results	Day 1		0.02040	7.8		7.5
	2		0.02238	7.7		7.5
	3		0.05114	7.7		7.4
	4		0.08851	7.4		6.9
	5		0.11251	7.2		7.0
	6		0.09805	7.3		7.1
	7		0.09333	7.5		7.2
	8		0.05503	7.5		6.9
	9		0.06460	7.3		7.0
	10		0.07932	7.4		7.0
	11		0.10473	7.3		6.9
	12		0.09679	7.4		7.0
	13		0.10245	7.8		7.2
	14		0.09363	7.1		6.9
	15		0.06941	7.1		6.9
	16		0.02158	7.3		7.1
	17		0.04452	7.4		7.2
	18		0.13234	7.4		7.1
	19		0.11994	7.3		7.1
	20		0.11457	7.4		7.0
	21		0.10404	7.2	4.5	7.1
	22		0.07660	7.3		7.1
	23		0.05302	7.6		7.1
	24		0.12492	7.1		6.9
	25		0.10367	7.3		6.9
	26		0.12458	7.3		7.2
	27		0.10887	7.3		7.2
	28		0.09908	7.4		7.2
	29		0.05037	7.5		7.2
	30		0.07719	7.6		7.3
	31		0.13834	7.5		7.2

	Sample Point	703	001	001	703	001
	Description	Menominee River Intake	Combined WW to Menominee River	Combined WW to Menominee River	Menominee River Intake	Combined WW to Menominee River
	Parameter	211	211	373	35	374
	Description	Flow Rate	Flow Rate	pH (Maximum)	Arsenic, Total Recoverable	pH (Minimum)
	Units	gpd	MGD	su	ug/L	su
Summary Values	**Monthly Avg**		0.085351935	7.4	4.5	7.106451613
	Monthly Total					
	Daily Max		0.13834	7.8	4.5	7.5
	Daily Min		0.0204	7.1	4.5	6.9
Limit(s) in Effect	**Monthly Avg**					
	Monthly Total					
	Daily Max			9 0		
	Daily Min					6 0
QA/QC Information	**LOD**				2.1	
	LOQ				5	
	QC Exceedance	N	N	N	N	N
	Lab Certification				999580010	

	Sample Point	001	001	001	001	001
	Description	Combined WW to Menominee River	Combined WW to Menominee River	Combined WW to Menominee River	Combined WW to Menominee River	Combined WW to Menominee River
	Parameter	480	231	35	35	87
	Description	Temperature Maximum	Hardness, Total as CaCO3	Arsenic, Total Recoverable	Arsenic, Total Recoverable	Cadmium, Total Recoverable
	Units	degF	mg/L	ug/L	lbs/day	ug/L
	Sample Type	MEASURE	24 HR FLOW PROP	24 HR FLOW PROP	CALCULATED	24 HR FLOW PROP
	Frequency	WEEKLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Sample Results	**Day 1**	46				
	2	46				
	3	44				
	4	49				
	5	51				
	6	49				
	7	48				
	8	45				
	9	46				
	10	46				
	11	45				
	12	49	400	280	0.2268	0.90
	13	49				
	14	46				
	15	46				
	16	45				
	17	47				
	18	45				
	19	44				
	20	51				
	21	46				
	22	49				
	23	45				
	24	50				
	25	50				
	26	49				
	27	46				
	28	44				
	29	42				
	30	42				
	31	43				

	Sample Point	001	001	001	001	001
	Description	Combined WW to Menominee River	Combined WW to Menominee River	Combined WW to Menominee River	Combined WW to Menominee River	Combined WW to Menominee River
	Parameter	480	231	35	35	87
	Description	Temperature Maximum	Hardness, Total as CaCO3	Arsenic, Total Recoverable	Arsenic, Total Recoverable	Cadmium, Total Recoverable
	Units	degF	mg/L	ug/L	lbs/day	ug/L
Summary Values	**Monthly Avg**	46.548387097	400	280	0.2268	0.9
	Monthly Total					
	Daily Max	51	400	280	0.2268	0.9
	Daily Min	42	400	280	0.2268	0.9
Limit(s) in Effect	**Monthly Avg**					57 | 0
	Monthly Total					
	Daily Max			170 | 1	0.81 | 0	57 | 0
	Daily Min					
QA/QC Information	**LOD**			2.1		0.49
	LOQ			5		1
	QC Exceedance	N	N	Y	N	N
	Lab Certification		999580010	999580010		999580010

	Sample Point	001	001	001	001	001
	Description	Combined WW to Menominee River	Combined WW to Menominee River	Combined WW to Menominee River	Combined WW to Menominee River	Combined WW to Menominee River
	Parameter	87	147	147	152	152
	Description	Cadmium, Total Recoverable	Copper, Total Recoverable	Copper, Total Recoverable	Cyanide, Amenable	Cyanide, Amenable
	Units	lbs/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	0.000729	29	0.02349	3.7	0.02997
	13					
	14					
	15					
	16					
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	001		001		001		001		001	
	Description	Combined WW to Menominee River		Combined WW to Menominee River		Combined WW to Menominee River		Combined WW to Menominee River		Combined WW to Menominee River	
	Parameter	87		147		147		152		152	
	Description	Cadmium, Total Recoverable		Copper, Total Recoverable		Copper, Total Recoverable		Cyanide, Amenable		Cyanide, Amenable	
	Units	lbs/day		ug/L		lbs/day		ug/L		lbs/day	
Summary Values	**Monthly Avg**	0.000729		29		0.02349		3.7		0.02997	
	Monthly Total										
	Daily Max	0.000729		29		0.02349		3.7		0.02997	
	Daily Min	0.000729		29		0.02349		3.7		0.02997	
Limit(s) in Effect	**Monthly Avg**			69	0			92	0		
	Monthly Total										
	Daily Max	0.27	0	69	0	0.98	0	92	0	0.44	0
	Daily Min										
QA/QC Information	**LOD**			1.7				3.6			
	LOQ			5				5			
	QC Exceedance	N		N		N		N		N	
	Lab Certification			999580010				999580010			

	Sample Point	001	001	001	001	001
	Description	Combined WW to Menominee River	Combined WW to Menominee River	Combined WW to Menominee River	Combined WW to Menominee River	Combined WW to Menominee River
	Parameter	112	280	1352	1353	1353
	Description	Chlorine, Total Residual	Mercury, Total Recoverable	PFOA	PFOS	PFOS
	Units	ug/L	ng/L	ng/L	ng/L	mg/day
	Sample Type	GRAB	GRAB	24 HR FLOW PROP	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			250	31	1.137173
	13					
	14					
	15					
	16					
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25		1			
	26					
	27	30				
	28					
	29					
	30					
	31					

	Sample Point	001	001	001	001	001
	Description	Combined WW to Menominee River	Combined WW to Menominee River	Combined WW to Menominee River	Combined WW to Menominee River	Combined WW to Menominee River
	Parameter	112	280	1352	1353	1353
	Description	Chlorine, Total Residual	Mercury, Total Recoverable	PFOA	PFOS	PFOS
	Units	ug/L	ng/L	ng/L	ng/L	mg/day
Summary Values	Monthly Avg	30	1	250	31	1.137173
	Monthly Total					
	Daily Max	30	1	250	31	1.137173
	Daily Min	30	1	250	31	1.137173
Limit(s) in Effect	Monthly Avg	38 0				
	Monthly Total					
	Daily Max	38 0	29 0			
	Daily Min					
QA/QC Information	LOD	30	0.16	0.75	0.48	
	LOQ	100	0.5	1.8	1.8	
	QC Exceedance	N	N	N	N	N
	Lab Certification		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	211	373	374	379	376
	Description	Flow Rate	pH (Maximum)	pH (Minimum)	pH Total Exceedance Time Minutes	pH Exceedances Greater Than 60 Minutes
	Units	MGD	su	su	minutes	Number
	Sample Type	CONTINUOUS	CONTINUOUS	CONTINUOUS	CONTINUOUS	CONTINUOUS
	Frequency	DAILY	DAILY	DAILY	DAILY	DAILY
Sample Results	**Day 1**	0				
	2	0				
	3	0				
	4	0.025778	7.9	7.0		
	5	0.035558	7.5	6.6		
	6	0.030267	7.4	6.6		
	7	0.010085	7.2	6.4		
	8	0.009601	8.4	6.5		
	9	0				
	10	0.035668	7.9	6.6		
	11	0.022474	8.7	6.4		
	12	0.025201	7.8	6.4		
	13	0.027366	8.0	6.3		
	14	0.019192	8.7	6.4		
	15	0.012370	8.9	7.3		
	16	0				
	17	0				
	18	0.032964	8.5	7.2		
	19	0.031147	8.9	7.2		
	20	0.027190	8.2	7.4		
	21	0.021563	8.5	6.8		
	22	0.011452	8.4	7.2		
	23	0				
	24	0.028013	7.8	7.2		
	25	0.019927	7.6	7.1		
	26	0.030782	7.8	7.0		
	27	0.023625	8.0	7.2		
	28	0.016710	7.9	6.8		
	29	0.006818	8.0	6.7		
	30	0				
	31	0.034244	8.9	7.0		

	Sample Point	101		101		101		101		101	
	Description	Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent	
	Parameter	211		373		374		379		376	
	Description	Flow Rate		pH (Maximum)		pH (Minimum)		pH Total Exceedance Time Minutes		pH Exceedances Greater Than 60 Minutes	
	Units	MGD		su		su		minutes		Number	
Summary Values	**Monthly Avg**	0.017354677		8.126086957		6.839130435					
	Monthly Total										
	Daily Max	0.035668		8.9		7.4					
	Daily Min	0		7.2		6.3					
Limit(s) in Effect	**Monthly Avg**										
	Monthly Total							446	0	0	0
	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	457	651	87	147	315
	Description	Suspended Solids, Total	Oil & Grease (Hexane)	Cadmium, Total Recoverable	Copper, Total Recoverable	Nickel, Total Recoverable
	Units	mg/L	mg/L	ug/L	ug/L	ug/L
	Sample Type	24 HR FLOW PROP	GRAB	24 HR FLOW PROP	24 HR FLOW PROP	24 HR FLOW PROP
	Frequency	3/WEEK	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Sample Results	**Day 1**					
	2					
	3					
	4	2.0		<0.49	7.1	7.3
	5	<1.9				
	6	<1.9	<1.4			
	7					
	8					
	9					
	10	<1.9				
	11	<1.9				
	12	0.8				
	13					
	14					
	15					
	16					
	17					
	18	<1.9				
	19	<1.9				
	20	<1.9				
	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	457		651		87		147		315	
	Description	Suspended Solids, Total		Oil & Grease (Hexane)		Cadmium, Total Recoverable		Copper, Total Recoverable		Nickel, Total Recoverable	
	Units	mg/L		mg/L		ug/L		ug/L		ug/L	
Summary Values	**Monthly Avg**	0.233333333		0		0		7.1		7.3	
	Monthly Total										
	Daily Max	2		<1.4		<0.49		7.1		7.3	
	Daily Min	0.8		<1.4		<0.49		7.1		7.3	
Limit(s) in Effect	**Monthly Avg**	31	0	26	0	260	0	2070	0	2380	0
	Monthly Total										
	Daily Max	60	0	52	0	690	0	3380	0	3980	0
	Daily Min										
QA/QC Information	**LOD**			1.4		0.49		1.7		1.5	
	LOQ			5.3		1		5		5	
	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	553	507	280	280	35
	Description	Zinc, Total Recoverable	Total Toxic Organics	Mercury, Total Recoverable	Mercury, Total Recoverable	Arsenic, Total Recoverable
	Units	ug/L	ug/L	ng/L	mg/day	ug/L
	Sample Type	24 HR FLOW PROP	24 HR FLOW PROP	GRAB	CALCULATED	24 HR FLOW PROP
	Frequency	MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Sample Results	**Day 1**					
	2					
	3					
	4	250				<2.1
	5					
	6					
	7					
	8					
	9					
	10					
	11					
	12					
	13					
	14					
	15					
	16					
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25			0.29	0.0151046	
	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	553		507		280		280		35	
	Description	Zinc, Total Recoverable		Total Toxic Organics		Mercury, Total Recoverable		Mercury, Total Recoverable		Arsenic, Total Recoverable	
	Units	ug/L		ug/L		ng/L		mg/day		ug/L	
Summary Values	**Monthly Avg**	250				0.29		0.0151046		0	
	Monthly Total										
	Daily Max	250				0.29		0.0151046		<2.1	
	Daily Min	250				0.29		0.0151046		<2.1	
Limit(s) in Effect	**Monthly Avg**	1480	0								
	Monthly Total										
	Daily Max	2610	0	2130							
	Daily Min										
QA/QC Information	**LOD**	3.6				0.16				2.1	
	LOQ	10				0.5				5	
	QC Exceedance	N		N		N		N		N	
	Lab Certification	999580010				999580010				999580010	

	Sample Point	101	704	704	704	704
	Description	Metal Finishing Effluent	GWCTS Influent	GWCTS Influent	GWCTS Influent	GWCTS Influent
	Parameter	35	211	35	457	280
	Description	Arsenic, Total Recoverable	Flow Rate	Arsenic, Total Recoverable	Suspended Solids, Total	Mercury, Total Recoverable
	Units	lbs/day	gpd	ug/L	mg/L	ng/L
	Sample Type	CALCULATED	CONTINUOUS	24 HR FLOW PROP	24 HR FLOW PROP	GRAB
	Frequency	MONTHLY	DAILY	WEEKLY	WEEKLY	MONTHLY
Sample Results	Day 1		0			
	2		0			
	3		0			
	4	<0.000441	16700	4300	22	
	5		16675			
	6		12412			
	7		12127			
	8		6127			
	9		0			
	10		9823	3700	11	
	11		13331			
	12		11727			
	13		12565			
	14		6614			
	15		3003			
	16		0			
	17		0			
	18		0			
	19		0			
	20		0			
	21		0			
	22		0			
	23		0			
	24		0			
	25		0			
	26		2244			
	27		14942	5500	39	1.0
	28		0			
	29		0			
	30		0			
	31		8503			

	Sample Point	101	704	704	704	704
	Description	Metal Finishing Effluent	GWCTS Influent	GWCTS Influent	GWCTS Influent	GWCTS Influent
	Parameter	35	211	35	457	280
	Description	Arsenic, Total Recoverable	Flow Rate	Arsenic, Total Recoverable	Suspended Solids, Total	Mercury, Total Recoverable
	Units	lbs/day	gpd	ug/L	mg/L	ng/L
Summary Values	**Monthly Avg**	0	4735.258064516	4500	24	1
	Monthly Total					
	Daily Max	<0.000441	16700	5500	39	1
	Daily Min	<0.000441	0	3700	11	1
Limit(s) in Effect	**Monthly Avg**					
	Monthly Total					
	Daily Max					
	Daily Min					
QA/QC Information	**LOD**			42		0.079
	LOQ			100		0.5
	QC Exceedance	N	N	N	N	N
	Lab Certification			999580010	999580010	999580010

	Sample Point	107	003	003	003	003
	Description	Mercury Field Blank Results	GWCTS Effluent	GWCTS Effluent	GWCTS Effluent	GWCTS Effluent
	Parameter	280	211	373	374	35
	Description	Mercury, Total Recoverable	Flow Rate	pH (Maximum)	pH (Minimum)	Arsenic, Total Recoverable
	Units	ng/L	MGD	su	su	ug/L
	Sample Type	BLANK	CONTINUOUS	CONTINUOUS	CONTINUOUS	24 HR FLOW PROP
	Frequency	MONTHLY	DAILY	DAILY	DAILY	WEEKLY
Sample Results	Day 1		0			
	2		0			
	3		0			
	4		0.019933	7.4	6.1	55
	5		0.017901	7.8	6.3	
	6		0.015432	7.9	6.5	
	7		0.013920	7.7	6.1	
	8		0.006510	8.9	6.6	
	9		0			
	10		0.011903	8.7	6.7	45
	11		0.013017	8.4	6.7	
	12		0.013927	7.5	7.0	
	13		0.014187	7.1	6.9	
	14		0.008620	7.1	6.5	
	15		0.002424	8.9	6.4	
	16		0			
	17		0			
	18		0			
	19		0			
	20		0			
	21		0			
	22		0			
	23		0			
	24		0			
	25	0.16	0			
	26		0.004700	8.9	6.2	
	27		0.017097	6.7	6.1	43
	28		0			
	29		0			
	30		0			
	31		0.011252	6.7	6.4	

	Sample Point	107		003		003		003		003	
	Description	Mercury Field Blank Results		GWCTS Effluent		GWCTS Effluent		GWCTS Effluent		GWCTS Effluent	
	Parameter	280		211		373		374		35	
	Description	Mercury, Total Recoverable		Flow Rate		pH (Maximum)		pH (Minimum)		Arsenic, Total Recoverable	
	Units	ng/L		MGD		su		su		ug/L	
Summary Values	**Monthly Avg**	0.16		0.005510419		7.835714286		6.464285714		47.666666667	
	Monthly Total										
	Daily Max	0.16		0.019933		8.9		7		55	
	Daily Min	0.16		0		6.7		6.1		43	
Limit(s) in Effect	**Monthly Avg**										
	Monthly Total										
	Daily Max					9	0			680	0
	Daily Min							6	0		
QA/QC Information	**LOD**	0.16								2.1	
	LOQ	0.5								5	
	QC Exceedance	N		N		N		N		N	
	Lab Certification	999580010								999580010	

	Sample Point	003	003	003	003	003
	Description	GWCTS Effluent	GWCTS Effluent	GWCTS Effluent	GWCTS Effluent	GWCTS Effluent
	Parameter	35	457	280	231	112
	Description	Arsenic, Total Recoverable	Suspended Solids, Total	Mercury, Total Recoverable	Hardness, Total as CaCO3	Chlorine, Total Residual
	Units	lbs/day	mg/L	ng/L	mg/L	ug/L
	Sample Type	CALCULATED	24 HR FLOW PROP	24 HR FLOW PROP	24 HR FLOW PROP	GRAB
	Frequency	WEEKLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Sample Results	**Day 1**					
	2					
	3					
	4	0.009141	<1.9		3.5	
	5					
	6					
	7					
	8					
	9					
	10	0.0044685				
	11					
	12					
	13					
	14					
	15					
	16					
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26					
	27	0.0061318		0.30		20
	28					
	29					
	30					
	31					

	Sample Point	003		003		003		003		003	
	Description	GWCTS Effluent		GWCTS Effluent		GWCTS Effluent		GWCTS Effluent		GWCTS Effluent	
	Parameter	35		457		280		231		112	
	Description	Arsenic, Total Recoverable		Suspended Solids, Total		Mercury, Total Recoverable		Hardness, Total as CaCO3		Chlorine, Total Residual	
	Units	lbs/day		mg/L		ng/L		mg/L		ug/L	
Summary Values	**Monthly Avg**	0.006580433		0		0.3		3.5		20	
	Monthly Total										
	Daily Max	0.009141		<1.9		0.3		3.5		20	
	Daily Min	0.0044685		<1.9		0.3		3.5		20	
Limit(s) in Effect	**Monthly Avg**									38	0
	Monthly Total										
	Daily Max	0.23	0			24	0			38	0
	Daily Min										
QA/QC Information	**LOD**					0.079				30	
	LOQ					0.5				100	
	QC Exceedance	N		N		N		N		N	
	Lab Certification			999580010		999580010		999580010			

	Sample Point	003	003	003	004	004
	Description	GWCTS Effluent	GWCTS Effluent	GWCTS Effluent	Combined Process WW & GW	Combined Process WW & GW
	Parameter	1352	1353	1353	211	373
	Description	PFOA	PFOS	PFOS	Flow Rate	pH (Maximum)
	Units	ng/L	ng/L	mg/day	MGD	su
	Sample Type	24 HR FLOW PROP	24 HR FLOW PROP	CALCULATED	CONTINUOUS	CONTINUOUS
	Frequency	WEEKLY	WEEKLY	WEEKLY	DAILY	DAILY
Sample Results	Day 1					
	2					
	3					
	4	56	2.5	0.188865		
	5					
	6					
	7					
	8					
	9					
	10	59	2.7	0.1218024		
	11					
	12					
	13					
	14					
	15					
	16					
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26					
	27	37	1.9	0.1231162		
	28					
	29					
	30					
	31					

	Sample Point	003	003	003	004	004
	Description	GWCTS Effluent	GWCTS Effluent	GWCTS Effluent	Combined Process WW & GW	Combined Process WW & GW
	Parameter	1352	1353	1353	211	373
	Description	PFOA	PFOS	PFOS	Flow Rate	pH (Maximum)
	Units	ng/L	ng/L	mg/day	MGD	su
Summary Values	Monthly Avg	50.666666667	2.366666667	0.144594533		
	Monthly Total					
	Daily Max	59	2.7	0.188865		
	Daily Min	37	1.9	0.1218024		
Limit(s) in Effect	Monthly Avg					
	Monthly Total					
	Daily Max					9
	Daily Min					
QA/QC Information	LOD	0.72	0.45			
	LOQ	1.8	1.8			
	QC Exceedance	N	N	N	N	N
	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	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					
	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	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					
	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**										
	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					
	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**					
	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				
	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				
	Lab Certification				

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

General Remarks

OF003 and SP704 did not have 4 weeks of sampling because the system was down for some mechanical issues but running now.

Laboratory Quality Control Comments

When we received the report, Ryan contacted Laura with the results for outfall OF001 for Arsenic levels.

Exceedence Comments

At outfall OF001 we had an exceedance with the Arsenic levels. Ryan Suennen contacted Laura Gerold and told her of the situation. We are waiting on results or February to see if the problem was fixed.

Submitted by Anne Fleury(afleury16) on 2/17/2022 1:58:24 PM

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: 02/01/2022 - 02/28/2022
Form Due Date: 03/21/2022
Permit Number: 0001040

For DNR Use Only

Date Received:	
DOC:	485716
FIN:	7245
FID:	438039470
Region:	Northeast Region
Permit Drafter:	Trevor J Moen
Reviewer:	Laura A Gerold
Office:	Green Bay

	Sample Point	703	001	001	703	001
	Description	Menominee River Intake	Combined WW to Menominee River	Combined WW to Menominee River	Menominee River Intake	Combined WW to Menominee River
	Parameter	211	211	373	35	374
	Description	Flow Rate	Flow Rate	pH (Maximum)	Arsenic, Total Recoverable	pH (Minimum)
	Units	gpd	MGD	su	ug/L	su
	Sample Type	TOT DAILY	CONTINUOUS	CONTINUOUS	GRAB	CONTINUOUS
	Frequency	DAILY	DAILY	DAILY	MONTHLY	DAILY
Sample Results	Day 1		0.14440	7.5		7.1
	2		0.12830	7.3		7.1
	3		0.11977	7.5		7.2
	4		0.11843	7.7		7.3
	5		0.06894	7.5		7.3
	6		0.06356	7.5		7.3
	7		0.14431	7.1		6.8
	8		0.13343	7.3	2.6	7.0
	9		0.13884	7.3		7.1
	10		0.11538	7.3		7.2
	11		0.08167	7.3		7.1
	12		0.04218	7.5		7.2
	13		0.04873	7.6		7.3
	14		0.13964	7.3		7.0
	15		0.14231	7.3		7.1
	16		0.12653	7.2		7.0
	17		0.12507	7.2		7.1
	18		0.09858	7.4		7.1
	19		0.03801	7.5		7.2
	20		0.04677	8.0		7.3
	21		0.14449	7.4		6.9
	22		0.12599	7.4		7.0
	23		0.13154	7.4		7.0
	24		0.14515	7.3		6.9
	25		0.11606	7.0		6.8
	26		0.03530	7.2		7.0
	27		0.04350	7.3		7.0
	28		0.12200	6.8		6.5
	29					
	30					
	31					

	Sample Point	703	001	001	703	001
	Description	Menominee River Intake	Combined WW to Menominee River	Combined WW to Menominee River	Menominee River Intake	Combined WW to Menominee River
	Parameter	211	211	373	35	374
	Description	Flow Rate	Flow Rate	pH (Maximum)	Arsenic, Total Recoverable	pH (Minimum)
	Units	gpd	MGD	su	ug/L	su
Summary Values	**Monthly Avg**		0.104602857	7.360714286	2.6	7.067857143
	Monthly Total					
	Daily Max		0.14515	8	2.6	7.3
	Daily Min		0.0353	6.8	2.6	6.5
Limit(s) in Effect	**Monthly Avg**					
	Monthly Total					
	Daily Max			9 0		
	Daily Min					6 0
QA/QC Information	**LOD**				2.1	
	LOQ				5	
	QC Exceedance	N	N	N	N	N
	Lab Certification				999580010	

	Sample Point	001	001	001	001	001
	Description	Combined WW to Menominee River	Combined WW to Menominee River	Combined WW to Menominee River	Combined WW to Menominee River	Combined WW to Menominee River
	Parameter	480	231	35	35	87
	Description	Temperature Maximum	Hardness, Total as CaCO3	Arsenic, Total Recoverable	Arsenic, Total Recoverable	Cadmium, Total Recoverable
	Units	degF	mg/L	ug/L	lbs/day	ug/L
	Sample Type	MEASURE	24 HR FLOW PROP	24 HR FLOW PROP	CALCULATED	24 HR FLOW PROP
	Frequency	WEEKLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Sample Results	**Day 1**	47	440	180	0.22	<0.49
	2	45				
	3	43				
	4	39				
	5	39				
	6	44				
	7	50				
	8	54				
	9	55				
	10	53				
	11	52				
	12	49				
	13	48				
	14	53				
	15	52				
	16	54				
	17	53				
	18	52				
	19	47				
	20	46				
	21	53				
	22	53				
	23	54				
	24	54				
	25	54				
	26	49				
	27	49				
	28	52				
	29					
	30					
	31					

	Sample Point	001	001	001	001	001
	Description	Combined WW to Menominee River	Combined WW to Menominee River	Combined WW to Menominee River	Combined WW to Menominee River	Combined WW to Menominee River
	Parameter	480	231	35	35	87
	Description	Temperature Maximum	Hardness, Total as CaCO3	Arsenic, Total Recoverable	Arsenic, Total Recoverable	Cadmium, Total Recoverable
	Units	degF	mg/L	ug/L	lbs/day	ug/L
Summary Values	Monthly Avg	49.75	440	180	0.22	0
	Monthly Total					
	Daily Max	55	440	180	0.22	<0.49
	Daily Min	39	440	180	0.22	<0.49
Limit(s) in Effect	Monthly Avg					57 | 0
	Monthly Total					
	Daily Max			170 | 1	0.81 | 0	57 | 0
	Daily Min					
QA/QC Information	LOD			2.1		0.49
	LOQ			5		1
	QC Exceedance	N	N	N	N	N
	Lab Certification		999580010	999580010		999580010

	Sample Point	001	001	001	001	001
	Description	Combined WW to Menominee River	Combined WW to Menominee River	Combined WW to Menominee River	Combined WW to Menominee River	Combined WW to Menominee River
	Parameter	87	147	147	152	152
	Description	Cadmium, Total Recoverable	Copper, Total Recoverable	Copper, Total Recoverable	Cyanide, Amenable	Cyanide, Amenable
	Units	lbs/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**	0	30	0.04	16	0.02
	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	001		001		001		001		001	
	Description	Combined WW to Menominee River		Combined WW to Menominee River		Combined WW to Menominee River		Combined WW to Menominee River		Combined WW to Menominee River	
	Parameter	87		147		147		152		152	
	Description	Cadmium, Total Recoverable		Copper, Total Recoverable		Copper, Total Recoverable		Cyanide, Amenable		Cyanide, Amenable	
	Units	lbs/day		ug/L		lbs/day		ug/L		lbs/day	
Summary Values	**Monthly Avg**	0		30		0.04		16		0.02	
	Monthly Total										
	Daily Max	0		30		0.04		16		0.02	
	Daily Min	0		30		0.04		16		0.02	
Limit(s) in Effect	**Monthly Avg**			69	0			92	0		
	Monthly Total										
	Daily Max	0.27	0	69	0	0.98	0	92	0	0.44	0
	Daily Min										
QA/QC Information	**LOD**			1.7				3.6			
	LOQ			5				5			
	QC Exceedance	N		N		N		N		N	
	Lab Certification			999580010				999580010			

	Sample Point	001	001	001	001	001
	Description	Combined WW to Menominee River	Combined WW to Menominee River	Combined WW to Menominee River	Combined WW to Menominee River	Combined WW to Menominee River
	Parameter	112	280	1352	1353	1353
	Description	Chlorine, Total Residual	Mercury, Total Recoverable	PFOA	PFOS	PFOS
	Units	ug/L	ng/L	ng/L	ng/L	mg/day
	Sample Type	GRAB	GRAB	24 HR FLOW PROP	24 HR FLOW PROP	CALCULATED
	Frequency	MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Sample Results	Day 1			130	12	0.6567
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10					
	11					
	12					
	13					
	14					
	15					
	16					
	17		0.54			
	18					
	19					
	20					
	21					
	22					
	23	60				
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	001	001	001	001	001
	Description	Combined WW to Menominee River	Combined WW to Menominee River	Combined WW to Menominee River	Combined WW to Menominee River	Combined WW to Menominee River
	Parameter	112	280	1352	1353	1353
	Description	Chlorine, Total Residual	Mercury, Total Recoverable	PFOA	PFOS	PFOS
	Units	ug/L	ng/L	ng/L	ng/L	mg/day
Summary Values	**Monthly Avg**	60	0.54	130	12	0.6567
	Monthly Total					
	Daily Max	60	0.54	130	12	0.6567
	Daily Min	60	0.54	130	12	0.6567
Limit(s) in Effect	**Monthly Avg**	38 | 0				
	Monthly Total					
	Daily Max	38 | 0	29 | 0			
	Daily Min					
QA/QC Information	**LOD**	30	0.079	0.8	0.51	
	LOQ	100	0.5	1.9	1.9	
	QC Exceedance	N	N	N	N	N
	Lab Certification		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	211	373	374	379	376
	Description	Flow Rate	pH (Maximum)	pH (Minimum)	pH Total Exceedance Time Minutes	pH Exceedances Greater Than 60 Minutes
	Units	MGD	su	su	minutes	Number
	Sample Type	CONTINUOUS	CONTINUOUS	CONTINUOUS	CONTINUOUS	CONTINUOUS
	Frequency	DAILY	DAILY	DAILY	DAILY	DAILY
Sample Results	**Day 1**	0.035025	7.2	6.8		
	2	0.029681	7.4	6.4		
	3	0.019418	8.4	6.6		
	4	0.019375	8.5	6.6		
	5	0.007790	8.4	6.8		
	6	0				
	7	0.043050	7.8	6.6		
	8	0.031514	7.3	6.7		
	9	0.035926	7.2	6.8		
	10	0.027774	7.4	6.8		
	11	0.013591	7.5	6.7		
	12	0.008739	7.9	6.6		
	13	0				
	14	0.039982	7.1	6.4		
	15	0.035721	7.4	6.8		
	16	0.028888	7.4	6.9		
	17	0.027841	7.6	6.8		
	18	0.018322	7.2	6.5		
	19	0.003281	7.1	6.6		
	20	0				
	21	0.027896	7.3	7.0		
	22	0.024774	7.2	6.8		
	23	0.029714	7.4	6.6		
	24	0.037044	7.3	6.6		
	25	0.032162	7.3	6.7		
	26	0.007096	7.8	6.4		
	27	0				
	28	0.037812	7.1	6.8		
	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	211		373		374		379		376	
	Description	Flow Rate		pH (Maximum)		pH (Minimum)		pH Total Exceedance Time Minutes		pH Exceedances Greater Than 60 Minutes	
	Units	MGD		su		su		minutes		Number	
Summary Values	**Monthly Avg**	0.022229143		7.508333333		6.679166667					
	Monthly Total										
	Daily Max	0.04305		8.5		7					
	Daily Min	0		7.1		6.4					
Limit(s) in Effect	**Monthly Avg**										
	Monthly Total							446	0	0	0
	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	457	651	87	147	315
	Description	Suspended Solids, Total	Oil & Grease (Hexane)	Cadmium, Total Recoverable	Copper, Total Recoverable	Nickel, Total Recoverable
	Units	mg/L	mg/L	ug/L	ug/L	ug/L
	Sample Type	24 HR FLOW PROP	GRAB	24 HR FLOW PROP	24 HR FLOW PROP	24 HR FLOW PROP
	Frequency	3/WEEK	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Sample Results	**Day 1**	2.2	<1.7	<0.49	4.8	5.6
	2	<1.9				
	3	<1.9				
	4					
	5					
	6					
	7					
	8	<1.9				
	9	<1.9				
	10	<1.9				
	11					
	12					
	13					
	14					
	15	<1.9				
	16	<1.9				
	17	2.7				
	18					
	19					
	20					
	21					
	22	3.1				
	23	2.6				
	24	3.8				
	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	457		651		87		147		315	
	Description	Suspended Solids, Total		Oil & Grease (Hexane)		Cadmium, Total Recoverable		Copper, Total Recoverable		Nickel, Total Recoverable	
	Units	mg/L		mg/L		ug/L		ug/L		ug/L	
Summary Values	**Monthly Avg**	1.2		0		0		4.8		5.6	
	Monthly Total										
	Daily Max	3.8		<1.7		<0.49		4.8		5.6	
	Daily Min	<1.9		<1.7		<0.49		4.8		5.6	
Limit(s) in Effect	**Monthly Avg**	31	0	26	0	260	0	2070	0	2380	0
	Monthly Total										
	Daily Max	60	0	52	0	690	0	3380	0	3980	0
	Daily Min										
QA/QC Information	**LOD**			1.7		0.49		1.7		1.5	
	LOQ			6.4		1		5		5	
	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	553	507	280	280	35
	Description	Zinc, Total Recoverable	Total Toxic Organics	Mercury, Total Recoverable	Mercury, Total Recoverable	Arsenic, Total Recoverable
	Units	ug/L	ug/L	ng/L	mg/day	ug/L
	Sample Type	24 HR FLOW PROP	24 HR FLOW PROP	GRAB	CALCULATED	24 HR FLOW PROP
	Frequency	MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Sample Results	**Day 1**	74				<2.1
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10					
	11					
	12					
	13					
	14					
	15					
	16					
	17			0.26	0.0274	
	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	553		507		280		280		35	
	Description	Zinc, Total Recoverable		Total Toxic Organics		Mercury, Total Recoverable		Mercury, Total Recoverable		Arsenic, Total Recoverable	
	Units	ug/L		ug/L		ng/L		mg/day		ug/L	
Summary Values	**Monthly Avg**	74				0.26		0.0274		0	
	Monthly Total										
	Daily Max	74				0.26		0.0274		<2.1	
	Daily Min	74				0.26		0.0274		<2.1	
Limit(s) in Effect	**Monthly Avg**	1480	0								
	Monthly Total										
	Daily Max	2610	0	2130							
	Daily Min										
QA/QC Information	**LOD**	3.6				0.079				2.1	
	LOQ	10				0.5				5	
	QC Exceedance	N		N		N		N		N	
	Lab Certification	999580010				999580010				999580010	

	Sample Point	101	704	704	704	704
	Description	Metal Finishing Effluent	GWCTS Influent	GWCTS Influent	GWCTS Influent	GWCTS Influent
	Parameter	35	211	35	457	280
	Description	Arsenic, Total Recoverable	Flow Rate	Arsenic, Total Recoverable	Suspended Solids, Total	Mercury, Total Recoverable
	Units	lbs/day	gpd	ug/L	mg/L	ng/L
	Sample Type	CALCULATED	CONTINUOUS	24 HR FLOW PROP	24 HR FLOW PROP	GRAB
	Frequency	MONTHLY	DAILY	WEEKLY	WEEKLY	MONTHLY
Sample Results	Day 1	<0.000609	13102	4500	70	
	2		4498			
	3		0			
	4		0			
	5		0			
	6		0			
	7		10034			
	8		0			
	9		0			
	10		0			
	11		0			
	12		0			
	13		0			
	14		0			
	15		0			
	16		18025	4500	45	
	17		7725			1.3
	18		0			
	19		0			
	20		0			
	21		0			
	22		4515	3200	18	
	23		14033			
	24		17220			
	25		12345			
	26		5568			
	27		0			
	28		18384			
	29					
	30					
	31					

	Sample Point	101	704	704	704	704
	Description	Metal Finishing Effluent	GWCTS Influent	GWCTS Influent	GWCTS Influent	GWCTS Influent
	Parameter	35	211	35	457	280
	Description	Arsenic, Total Recoverable	Flow Rate	Arsenic, Total Recoverable	Suspended Solids, Total	Mercury, Total Recoverable
	Units	lbs/day	gpd	ug/L	mg/L	ng/L
Summary Values	**Monthly Avg**	0	4480.321428571	4066.666666667	44.333333333	1.3
	Monthly Total					
	Daily Max	<0.000609	18384	4500	70	1.3
	Daily Min	<0.000609	0	3200	18	1.3
Limit(s) in Effect	**Monthly Avg**					
	Monthly Total					
	Daily Max					
	Daily Min					
QA/QC Information	**LOD**			42		0.079
	LOQ			100		0.5
	QC Exceedance	N	N	N	N	N
	Lab Certification			999580010	999580010	999580010

	Sample Point	107	003	003	003	003
	Description	Mercury Field Blank Results	GWCTS Effluent	GWCTS Effluent	GWCTS Effluent	GWCTS Effluent
	Parameter	280	211	373	374	35
	Description	Mercury, Total Recoverable	Flow Rate	pH (Maximum)	pH (Minimum)	Arsenic, Total Recoverable
	Units	ng/L	MGD	su	su	ug/L
	Sample Type	BLANK	CONTINUOUS	CONTINUOUS	CONTINUOUS	24 HR FLOW PROP
	Frequency	MONTHLY	DAILY	DAILY	DAILY	WEEKLY
Sample Results	Day 1		0.014729	6.9	6.5	59
	2		0.008438	6.7	6.2	
	3		0			
	4		0			
	5		0			
	6		0			
	7		0.007566	8.9	6.2	
	8		0			
	9		0			
	10		0			
	11		0			
	12		0			
	13		0			
	14		0			
	15		0			
	16		0.019318	8.9	6.5	55
	17	0.10	0.004619	6.6	6.2	
	18		0			
	19		0			
	20		0			
	21		0			
	22		0.006061	6.9	6.1	37
	23		0.014499	7.7	6.6	
	24		0.015469	8.0	7.1	
	25		0.014185	8.7	7.3	
	26		0.007172	8.9	7.4	
	27		0			
	28		0.014278	8.4	7.1	
	29					
	30					
	31					

	Sample Point	107	003	003	003	003
	Description	Mercury Field Blank Results	GWCTS Effluent	GWCTS Effluent	GWCTS Effluent	GWCTS Effluent
	Parameter	280	211	373	374	35
	Description	Mercury, Total Recoverable	Flow Rate	pH (Maximum)	pH (Minimum)	Arsenic, Total Recoverable
	Units	ng/L	MGD	su	su	ug/L
Summary Values	**Monthly Avg**	0.1	0.004511929	7.872727273	6.654545455	50.333333333
	Monthly Total					
	Daily Max	0.1	0.019318	8.9	7.4	59
	Daily Min	0.1	0	6.6	6.1	37
Limit(s) in Effect	**Monthly Avg**					
	Monthly Total					
	Daily Max			9 0		680 0
	Daily Min				6 0	
QA/QC Information	**LOD**	0.079				2.1
	LOQ	0.5				5
	QC Exceedance	N	N	N	N	N
	Lab Certification	999580010				999580010

	Sample Point	003	003	003	003	003
	Description	GWCTS Effluent	GWCTS Effluent	GWCTS Effluent	GWCTS Effluent	GWCTS Effluent
	Parameter	35	457	280	231	112
	Description	Arsenic, Total Recoverable	Suspended Solids, Total	Mercury, Total Recoverable	Hardness, Total as CaCO3	Chlorine, Total Residual
	Units	lbs/day	mg/L	ng/L	mg/L	ug/L
	Sample Type	CALCULATED	24 HR FLOW PROP	24 HR FLOW PROP	24 HR FLOW PROP	GRAB
	Frequency	WEEKLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Sample Results	Day 1	0.0070	<1.9			
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10					
	11					
	12					
	13					
	14					
	15					
	16	0.0088			5.6	
	17			0.24		30
	18					
	19					
	20					
	21					
	22	0.0018				
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	003		003		003		003		003	
	Description	GWCTS Effluent		GWCTS Effluent		GWCTS Effluent		GWCTS Effluent		GWCTS Effluent	
	Parameter	35		457		280		231		112	
	Description	Arsenic, Total Recoverable		Suspended Solids, Total		Mercury, Total Recoverable		Hardness, Total as CaCO3		Chlorine, Total Residual	
	Units	lbs/day		mg/L		ng/L		mg/L		ug/L	
Summary Values	**Monthly Avg**	0.005866667		0		0.24		5.6		30	
	Monthly Total										
	Daily Max	0.0088		<1.9		0.24		5.6		30	
	Daily Min	0.0018		<1.9		0.24		5.6		30	
Limit(s) in Effect	**Monthly Avg**									38	0
	Monthly Total										
	Daily Max	0.23	0			24	0			38	0
	Daily Min										
QA/QC Information	**LOD**					0.079				30	
	LOQ					0.5				100	
	QC Exceedance	N		N		N		N		N	
	Lab Certification			999580010		999580010		999580010			

	Sample Point	003	003	003	004	004
	Description	GWCTS Effluent	GWCTS Effluent	GWCTS Effluent	Combined Process WW & GW	Combined Process WW & GW
	Parameter	1352	1353	1353	211	373
	Description	PFOA	PFOS	PFOS	Flow Rate	pH (Maximum)
	Units	ng/L	ng/L	mg/day	MGD	su
	Sample Type	24 HR FLOW PROP	24 HR FLOW PROP	CALCULATED	CONTINUOUS	CONTINUOUS
	Frequency	WEEKLY	WEEKLY	WEEKLY	DAILY	DAILY
Sample Results	Day 1	52	2.2	0.1228106		
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10					
	11					
	12					
	13					
	14					
	15					
	16	49	2.1	0.1537515		
	17					
	18					
	19					
	20					
	21					
	22	52	2.5	0.0574275		
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	003	003	003	004	004
	Description	GWCTS Effluent	GWCTS Effluent	GWCTS Effluent	Combined Process WW & GW	Combined Process WW & GW
	Parameter	1352	1353	1353	211	373
	Description	PFOA	PFOS	PFOS	Flow Rate	pH (Maximum)
	Units	ng/L	ng/L	mg/day	MGD	su
Summary Values	**Monthly Avg**	51	2.266666667	0.111329867		
	Monthly Total					
	Daily Max	52	2.5	0.1537515		
	Daily Min	49	2.1	0.0574275		
Limit(s) in Effect	**Monthly Avg**					
	Monthly Total					
	Daily Max					9
	Daily Min					
QA/QC Information	**LOD**	0.75	0.48			
	LOQ	1.8	1.8			
	QC Exceedance	N	N	N	N	N
	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	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					
	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	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					
	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**										
	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					
	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**					
	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				
	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				
	Lab Certification				

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

General Remarks

The GW system did not run during the second week of sampling due to mechanical issues so, there are no results for OF003 and SP704 during that time.

Laboratory Quality Control Comments

For outfall OF001 the Arsenic levels were above the 170 limit. Ryan Suennen did contact he DNR to let them know.

Exceedence Comments

Ryan Suennen did contact the DNR representative for us about the situation.

Submitted by Anne Fleury(afleury16) on 3/18/2022 6:34:34 AM

Attachment 3
2022 Pump Down Program Groundwater Elevation Monitoring

Attachment 3. 2022 Pump Down Program Groundwater Elevation Monitoring

Tyco Fire Products LP, Marinette, Wisconsin

Target Elevation	577.9

Well ID	January 6, 2022		January 13, 2022		January 20, 2022		January 27, 2022		February 8, 2022		February 17, 2022		February 22, 2022		March 1, 2022		March 8, 2022		March 15, 2022		March 22, 2022		March 29, 2022		April 5, 2022	
	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)
MW001M	10.18	576.94	10.29	576.83	11.29	575.82	11.34	575.77	10.83	576.28	11.49	575.62	11.34	575.77	11.36	575.75	11.16	575.95	11.12	575.99	11.28	575.83	10.94	576.17	10.51	576.61
MW001S	10.38	576.82	10.53	576.67	11.49	575.71	11.53	575.67	11.06	576.14	11.70	575.50	11.56	575.64	11.61	575.59	11.44	575.76	11.30	575.90	11.54	575.66	11.23	575.97	10.77	576.43
MW002M-R	13.50	576.90	13.59	576.81	14.35	576.05	14.57	575.83	14.09	576.31	14.65	575.74	14.60	575.79	14.67	575.72	14.54	575.86	14.45	575.95	14.53	575.87	14.26	576.14	13.92	576.48
MW002S-R	13.47	576.80	13.54	576.73	14.30	575.97	14.53	575.74	14.07	576.20	14.62	575.65	14.58	575.69	14.64	575.63	14.48	575.79	14.43	575.84	14.46	575.81	14.23	576.04	13.83	576.44
MW031M	10.89	577.11	11.02	576.98	12.13	575.86	12.12	575.87	11.55	576.45	12.47	575.52	12.06	575.93	12.08	575.91	11.94	576.06	11.85	576.15	12.07	575.92	11.68	576.32	11.27	576.73
MW031S	12.03	576.84	12.17	576.70	13.37	575.50	13.30	575.57	12.70	576.17	13.58	575.29	13.24	575.63	13.22	575.65	13.08	575.79	12.97	575.90	13.29	575.58	12.83	576.04	12.43	576.44
MW113S	13.37	576.90	13.43	576.84	14.32	575.95	14.38	575.89	13.95	576.32	14.47	575.80	14.47	575.80	14.51	575.76	14.37	575.90	14.30	575.97	14.35	575.92	14.14	576.13	13.77	576.50
MW113M	11.42	578.85	11.57	578.70	12.18	578.09	12.22	578.05	12.02	578.25	12.44	577.83	12.32	577.95	12.38	577.89	12.28	577.99	12.19	578.08	11.99	578.28	11.78	578.49	11.33	578.94
MW115P	11.82	577.25	11.96	577.11	12.84	576.23	12.90	576.17	12.59	576.48	13.37	575.70	13.16	575.91	13.23	575.84	13.09	575.98	13.09	575.98	13.23	575.84	12.89	576.18	11.08	577.99
MW115S	12.12	576.84	12.27	576.69	13.55	575.41	13.43	575.53	12.78	576.18	13.65	575.31	13.34	575.62	13.37	575.59	13.17	575.79	13.11	575.85	13.38	575.58	12.91	576.05	12.44	576.52
MW116P	12.63	577.22	12.65	577.20	12.82	577.03	12.86	576.99	12.98	576.87	12.96	576.89	12.98	576.87	12.95	576.90	12.98	576.87	12.95	576.90	12.98	576.87	11.52	578.34	11.21	578.65
MW116S	13.00	576.86	13.14	576.72	14.02	575.83	14.33	575.52	13.59	576.26	14.36	575.49	14.19	575.66	14.18	575.67	14.02	575.83	13.98	575.87	14.18	575.67	13.69	576.16	13.22	576.64
MW119D	8.59	580.13	8.68	580.04	8.76	579.96	8.82	579.90	8.92	579.80	8.96	579.76	8.99	579.73	9.03	579.69	9.09	579.63	9.13	579.59	9.17	579.55	9.12	579.60	9.12	579.60
EW-3	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
EW-10	10.28	576.77	10.28	576.77	11.23	575.82	11.33	575.72	10.82	576.23	11.62	575.43	11.32	575.73	11.38	575.67	11.23	575.82	11.76	575.29	10.78	576.27	10.07	576.98	9.84	577.21
EW-11	9.08	577.60	9.18	577.50	10.03	576.65	10.08	576.60	9.82	576.86	9.40	577.28	10.23	576.45	10.26	576.42	10.06	576.62	10.85	575.83	9.83	576.85	9.65	577.03	9.24	577.44
EW-13	8.19	576.92	8.23	576.88	9.41	575.69	9.37	575.73	8.87	576.24	9.80	575.30	9.42	575.68	9.48	575.62	9.36	575.74	9.25	575.86	9.19	575.92	8.92	576.19	8.28	576.83
EW-14	9.20	576.87	9.22	576.85	10.38	575.69	10.35	575.72	9.82	576.25	10.84	575.23	10.42	575.65	10.38	575.69	10.33	575.74	10.23	575.84	9.16	576.91	9.83	576.24	8.89	577.18
MW034M	10.85	577.37	11.54	576.68	11.71	576.51	12.14	576.08	11.98	576.24	11.99	576.23	11.59	576.63	12.38	575.84	12.48	575.74	12.65	575.57	12.54	575.68	11.62	576.60	11.42	576.80
MW034S	11.06	577.12	11.65	576.53	12.02	576.16	12.32	575.86	11.67	576.51	12.36	575.82	11.87	576.31	12.65	575.53	12.79	575.39	12.95	575.23	12.87	575.31	11.98	576.20	11.61	576.57
MW036M	11.95	576.63	11.84	576.74	12.44	576.13	12.73	575.83	12.39	576.18	13.11	575.45	12.53	576.04	12.74	575.82	12.83	575.73	12.89	575.67	12.83	575.73	12.64	575.93	12.06	576.52
MW036S	11.38	576.87	11.28	576.97	11.86	576.39	12.16	576.09	11.89	576.36	12.13	576.12	11.86	576.39	12.17	576.08	12.31	575.94	12.41	575.84	12.32	575.93	12.05	576.20	11.48	576.77
MW038M	9.47	576.67	9.12	577.02	9.90	576.24	10.28	575.86	9.76	576.38	9.90	576.24	9.74	576.40	9.89	576.25	9.99	576.15	10.09	576.05	9.97	576.17	9.82	576.32	9.01	577.13
MW038S	11.19	576.63	10.80	577.02	11.63	576.19	12.00	575.82	11.42	576.40	11.65	576.17	11.48	576.34	11.60	576.22	11.74	576.08	11.84	575.98	11.69	576.13	11.56	576.26	10.79	577.03
MW120D	8.14	580.65	8.52	580.27	8.76	580.03	8.99	579.79	8.65	580.14	8.92	579.86	8.48	580.31	8.73	580.06	8.63	580.16	8.79	580.00	8.28	580.51	8.69	580.10	8.17	580.62
MW120M	11.63	577.28	11.81	577.10	12.30	576.60	12.43	576.47	12.45	576.45	12.75	576.14	12.54	576.36	12.88	576.01	12.98	575.91	13.12	575.77	13.03	575.86	12.51	576.39	11.84	577.07
MW120S	11.15	577.37	11.17	577.35	11.76	576.76	11.76	576.76	11.99	576.53	12.26	576.26	12.04	576.48	12.29	576.23	12.45	576.07	12.58	575.94	12.58	575.94	12.13	576.39	10.98	577.54
EW-2	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
EW-8	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	8.00	576.11	8.08	576.03	NM	-	8.02	576.09	9.62	574.48	8.44	575.66
EW-9	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	10.94	572.42	11.33	572.03	NM	-	11.62	571.74	7.13	576.24	9.42	573.94
MW004M	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
MW004S	6.00	582.74	6.23	582.51	6.51	582.23	6.57	582.17	6.78	581.96	6.87	581.87	6.88	581.86	6.97	581.77	6.72	582.02	6.58	582.16	5.88	582.86	5.24	583.50	5.52	583.22
MW032M	6.72	581.63	6.94	581.41	7.35	581.00	7.14	581.21	7.29	581.06	7.45	580.90	7.34	581.01	7.36	580.99	7.18	581.17	7.19	581.16	6.62	581.74	6.27	582.09	5.64	582.72
MW032S	6.01	582.48	6.18	582.31	6.59	581.89	6.53	581.95	6.63	581.85	6.85	581.63	6.62	581.86	6.76	581.72	6.32	582.17	6.38	582.10	5.48	583.01	5.08	583.41	4.50	583.99
MW033M	4.89	582.85	5.12	582.61	5.41	582.32	5.47	582.26	5.64	582.08	5.72	582.00	5.78	581.94	5.81	581.91	5.55	582.17	5.43	582.30	4.69	583.05	4.07	583.68	3.47	584.29
MW033S	4.63	582.69	4.89	582.43	5.17	582.15	5.21	582.11	5.42	581.90	5.50	581.82	5.49	581.83	5.61	581.71	5.34	581.98	5.29	582.03	4.47	582.85	NM	-	3.52	583.80
MW039M	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
MW039S	3.46	582.74	3.68	582.52	3.96	582.24	4.02	582.18	4.23	581.97	4.31	581.89	4.32	581.88	4.39	581.81	4.10	582.10	4.02	582.18	3.93	582.27	2.66	583.54	1.91	584.29
MW035M	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
MW035S	6.38	581.27	6.79	580.86	7.16	580.49	7.35	580.30	7.54	580.11	7.68	579.97	7.58	580.07	7.81	579.84	5.82	581.83	6.13	581.52	5.46	582.19	5.63	582.02	5.39	582.26
MW037M	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
MW037S	5.67	581.40	6.11	580.96	6.47	580.60	6.69	580.37	6.93	580.13	7.10	579.96	7.01	580.05	7.21	579.85	6.99	580.07	6.10	580.97	NM	-	NM	-	NM	-
SG4	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
Rough Target Elevation Calc SV*	578.96		576.97		576.02		575.95		576.46		575.78		575.95		575.92		576.07		576.15		576.01		576.35		576.77	
Rough Target Elevation Calc 8S*	574.47		576.93		576.37		576.10		576.38		576.05		576.37		576.00		575.88		575.76		575.84		576.29		576.93	
Target Elevation (NAVD88)	577.90		577.9		577.9		577.9		577.90		577.90		577.90		577.90		577.90		577.90		577.90		577.90		577.90	
SV Variance	1.06		-0.93		-1.88		-1.95		-1.44		-2.12		-1.95		-1.98		-1.83		-1.75		-1.89		-1.55		-1.13	
8S Variance	-3.43		-0.97		-1.53		-1.80		-1.52		-1.85		-1.53		-1.90		-2.02		-2.14		-2.06		-1.61		-0.97	

Notes:

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

Elevations are reported in feet above mean sea level (AMSL) relative top the North American Vertical Datum 1988 (NAVD88)

Shaded = Well part of evaluation during Drawdown and Interim Phases

Bold = Well part of Target Elevation calculation

- = Information not applicable or not collected

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

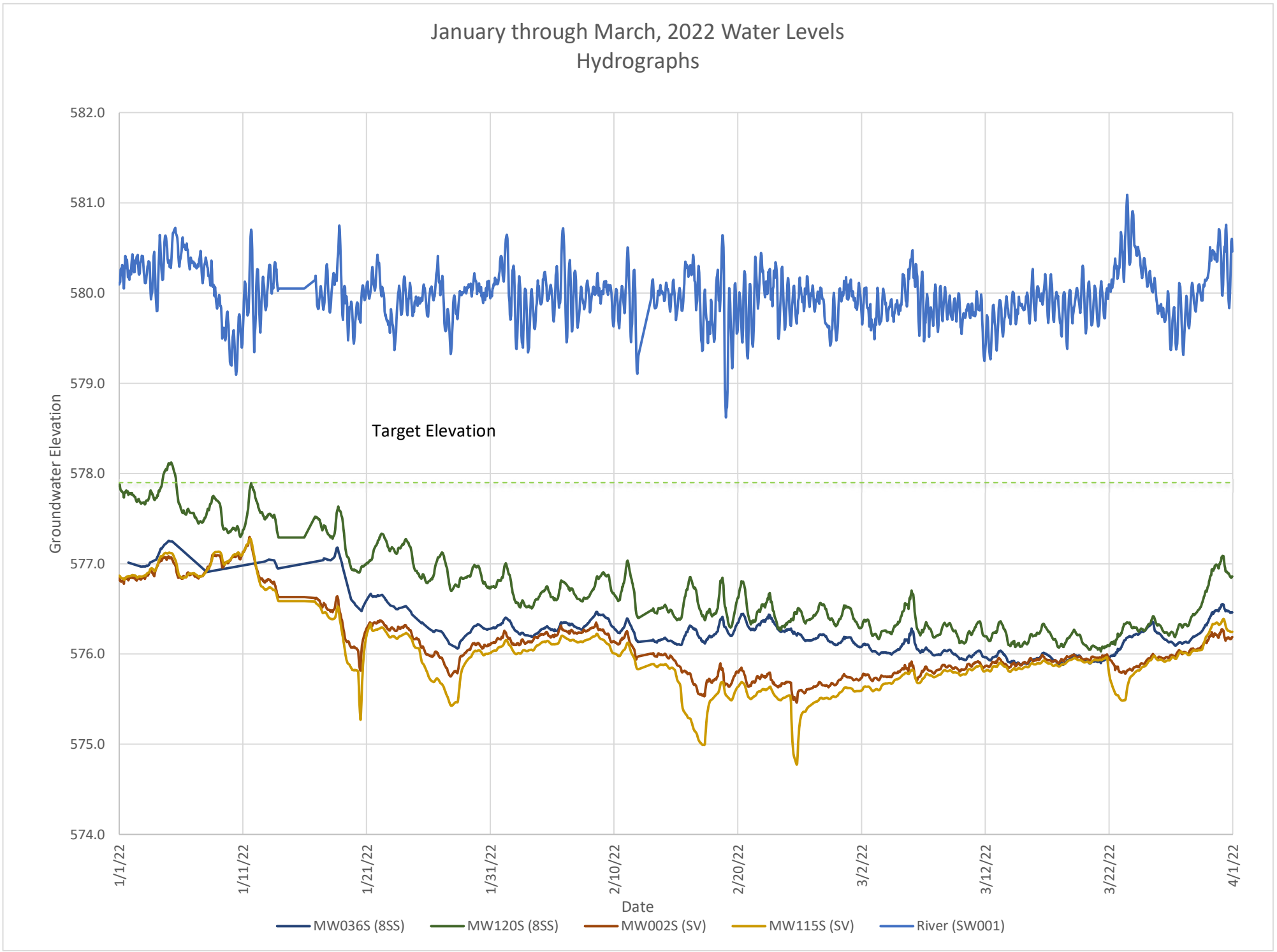
*Wells identified for target elevation calculation are for during the drawdown and interim phases. Only wells outside the steepest portion of the cone of depression will be included in the calculation of the average elevations. The average elevation of all suitable measured wells will be considered the calculated elevation to compare against the target elevation. The number of post-drawdown phase wells used for this calculation may be reduced and will be determined based on results observed during the drawdown phase.

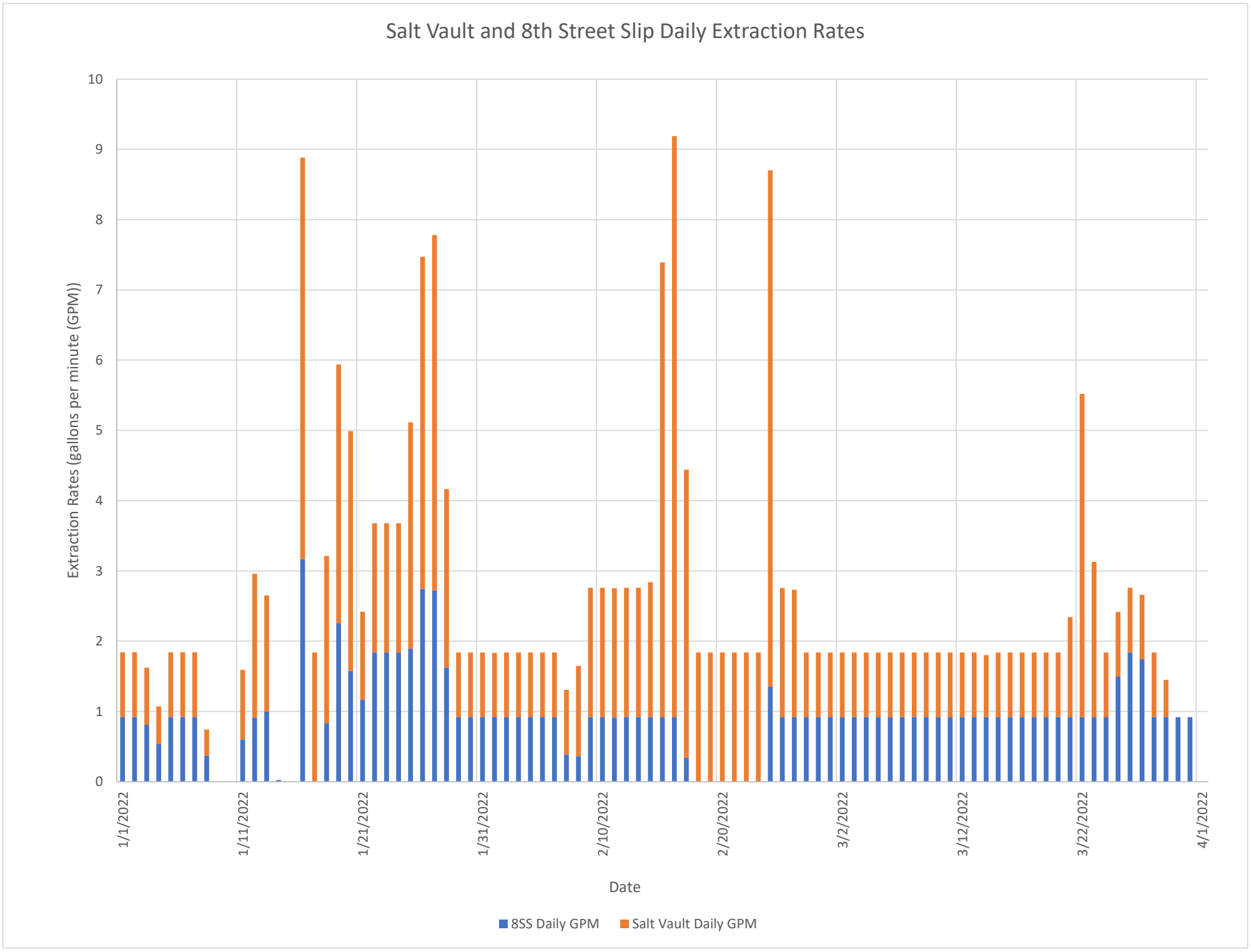
Corrected groundwater elevation is calculated using the 2021 calculated mean conductivity value (typically from the last 5 years of data)

ID = identification; DTW = depth to water

NM = Not Measured; MW = Monitoring Well

Attachment 4
First Quarter 2022 PDP Pump House System Hydrograph and Pumping Rates


January through March, 2022 Water Levels
Hydrographs
582.0
581.0
580.0
579.0
578.0
577.0
576.0
575.0
574.0
Groundwater Elevation
Target Elevation
1/1/22
1/11/22
1/21/22
1/31/22
2/10/22
2/20/22
3/2/22
3/12/22
3/22/22
4/1/22
Date
MW036S (8SS)
MW120S (8SS)
MW002S (SV)
MW115S (SV)
River (SW001)


Salt Vault and 8th Street Slip Daily Extraction Rates
Extraction Rates (gallons per minute (GPM))
10
9
8
7
6
5
4
3
2
1
0
1/1/2022
1/11/2022
1/21/2022
1/31/2022
2/10/2022
2/20/2022
3/2/2022
3/12/2022
3/22/2022
4/1/2022
Date
8SS Daily GPM
Salt Vault Daily GPM