pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0008575**
Facility Type	**Industrial**	APS ID	**999050**
Major / Minor	**Minor**	Authorization ID	**1283268**

NPDES PERMIT FACT SHEET INDIVIDUAL INDUSTRIAL WASTE (IW) AND IW STORMWATER

Applicant and Facility Information

Applicant Name	**Wirerope Works Inc.**	Facility Name	**Wirerope Works Inc. IW System**
Applicant Address	100 Maynard Street	Facility Address	100 Maynard Street
	Williamsport, PA 17701-5809		Williamsport, PA 17701-5809
Applicant Contact	Virgil Probasco	Facility Contact	Glenroy Marks
Applicant Phone	(570) 327-4239	Facility Phone	(570) 327-4233
Client ID	227262	Site ID	458714
SIC Code	3315	Municipality	Williamsport City
SIC Description	Manufacturing - Steel Wire and Related Products	County	Lycoming
Date Application Received	August 1, 2019	EPA Waived?	Yes
Date Application Accepted	August 15, 2019	If No, Reason	

Purpose of Application: Application for the renewal of the existing Individual NPDES permit.

Summary of Review

DEP will publish notice of the receipt of the NPDES permit application and a tentative decision to issue the individual NPDES permit in the *Pennsylvania Bulletin* in accordance with 25 Pa. Code § 92a.82. Upon publication in the *Pennsylvania Bulletin*, DEP will accept written comments from interested persons for a 30-day period (which may be extended for one additional 15-day period at DEP's discretion), which will be considered in making a final decision on the application. Any person may request or petition for a public hearing with respect to the application. A public hearing may be held if DEP determines that there is significant public interest in holding a hearing. If a hearing is held, notice of the hearing will be published in the *Pennsylvania Bulletin* at least 30 days prior to the hearing and in at least one newspaper of general circulation within the geographical area of the discharge.

Approve	Deny	Signatures	Date
X		*Jonathan P. Peterman* Jonathan P. Peterman / Project Manager	July 14, 2020
X		*Nicholas W. Hartranft* Nicholas W. Hartranft, P.E. / Environmental Engineer Manager	July 15, 2020

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.05
Latitude	41º 14' 29.77"	Longitude	-77º 0' 10.00"
Quad Name	Williamsport	Quad Code	0929
Wastewater Description:	IW Process Effluent with ELG		
Receiving Waters	West Branch Susquehanna River	Stream Code	18668
NHD Com ID	66915507	RMI	39.9
Drainage Area	5,682	Yield (cfs/mi^2)	0.1017
Q_{7-10} Flow (cfs)	578	Q_{7-10} Basis	Gage No. 01551500
Elevation (ft)	480	Slope (ft/ft)	0.0003
Watershed No.	10-B	Chapter 93 Class.	WWF
Existing Use	WWF	Existing Use Qualifier	N/A
Exceptions to Use	None	Exceptions to Criteria	N/A
Assessment Status	Impaired. See TMDL section below.		
Cause(s) of Impairment	Metals and pH.		
Source(s) of Impairment	AMD		
TMDL Status	Final, 12/3/2011	Name	West Branch Susquehanna River TMDL
Nearest Downstream Public Water Supply Intake	PA American Water in Milton, PA		
PWS Waters	West Branch Susquehanna River	Flow at Intake (cfs)	728
PWS RMI	10.5	Distance from Outfall (mi)	29.4

Changes Since Last Permit Issuance: The updated Q_{7-10} data was obtained from the updated stream gage information obtained from *Stuckey, M.H., and Roland, M.A., 2011, Selected Streamflow Statistics for Streamgage Locations In and Near Pennsylvania*. A comparative analysis was not conducted given that a stream gage (01551500) is located immediately downstream of the discharge location. The associated stream data is attached in Appendix A.

Other Comments: None.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	002	Design Flow (MGD)	N/A
Latitude	41º 14' 14.94"	Longitude	-76º 59' 58.87"
Quad Name	Williamsport	Quad Code	0929
Wastewater Description:	Stormwater		
Receiving Waters	West Branch Susquehanna River	Stream Code	18668
NHD Com ID	66915507	RMI	39.9
Drainage Area	5,682	Yield (cfs/mi^2)	0.1017
Q_{7-10} Flow (cfs)	578	Q_{7-10} Basis	Gage No. 01551500
Elevation (ft)	480	Slope (ft/ft)	0.0003
Watershed No.	10-B	Chapter 93 Class.	WWF
Existing Use	WWF	Existing Use Qualifier	N/A
Exceptions to Use	None	Exceptions to Criteria	N/A
Assessment Status	Impaired. See TMDL section below.		
Cause(s) of Impairment	Metals and pH.		
Source(s) of Impairment	AMD		
TMDL Status	Final, 12/3/2011	Name	West Branch Susquehanna River TMDL
Nearest Downstream Public Water Supply Intake	PA American Water in Milton, PA		
PWS Waters	West Branch Susquehanna River	Flow at Intake (cfs)	728
PWS RMI	10.5	Distance from Outfall (mi)	29.4

Changes Since Last Permit Issuance: None.

Other Comments: None.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	003	Design Flow (MGD)	N/A
Latitude	41º 13' 47.57"	Longitude	-77º 0' 53.63"
Quad Name	Williamsport	Quad Code	0929
Wastewater Description:	Stormwater		
Receiving Waters	West Branch Susquehanna River (WWF)	Stream Code	18668
NHD Com ID	66915845	RMI	39.9
Drainage Area	5,682	Yield (cfs/mi^2)	0.1017
Q_{7-10} Flow (cfs)	578	Q_{7-10} Basis	Gage No. 01551500
Elevation (ft)	480	Slope (ft/ft)	0.0003
Watershed No.	10-B	Chapter 93 Class.	WWF
Existing Use	WWF	Existing Use Qualifier	N/A
Exceptions to Use	None	Exceptions to Criteria	N/A
Assessment Status	Impaired. See TMDL section below.		
Cause(s) of Impairment	Metals and pH.		
Source(s) of Impairment	AMD		
TMDL Status	Final, 12/3/2011	Name	West Branch Susquehanna River TMDL
Nearest Downstream Public Water Supply Intake	PA American Water in Milton, PA		
PWS Waters	West Branch Susquehanna River	Flow at Intake (cfs)	728
PWS RMI	10.5	Distance from Outfall (mi)	29.4

Changes Since Last Permit Issuance: None.

Other Comments: None.

TMDL Impairment

-The Department's Geographic Information System (GIS) shows that the West Branch Susquehanna River is impaired and a TMDL exists for the stream segment for metals and pH due to AMD. The TMDL addresses the three primary metals associated with abandoned mine drainage (iron, aluminum, and manganese) and acidity. A Waste Load Allocation (WLA) was developed for Wirerope Works, Inc. in the TMDL as follows:

Additional WLA for WBSR 1.0

The WBSR 1.0 site incorporates a WLA of 0.15 lbs/day of iron, and 0.03 lbs/day of manganese. This WLA is intended to cover a number of permitted discharges. Information on known discharges for this WLA can be found in Table 187.

Table D187. WLA for WBSR 1.0

Company	*Permit(s)*	*Effluent limits (mg/L)*	*Design Flow*	*WLAs*
Wirerope Works Inc. (2-outfalls)	PA0008575	Fe – 0.03	0.05	Fe – 0.02

This TMDL contains a Waste Load Allocation (WLA) for Wirerope Works, Inc. of 0.02 lb/day (Iron) based on "Effluent Limits" of 0.03 mg/L. This WLA was previously incorporated into the permit. However, no previous testing for Iron was conducted at this facility and the previous permit did not contain any effluent limits for iron. The permittee was not able to comply with this limit. Upon further review of the TMDL, it was determined that it is unclear where this data originated from and the TMDL indicates that WBSR 1.0 does not need a load reduction.

Without the waste load allocation in place, an evaluation to determine effluent limits is required for iron. A Toxics Screening Analysis is used to identify pollutants of concern. Sampling data submitted on the most recent DMRs indicates that the highest instantaneous maximum concentration for Iron was 0.43 mg/L. This value was input into the Toxics Screening Analysis v2.7 spreadsheet to determine if Iron was a candidate for PENTOXSD modeling (pollutant of concern). This "Reasonable Potential Analysis" (See Appendix B) determined that the Iron was not a pollutant of concern and no monitoring or limitations will be required. Given this information, the effluent limit for iron will remain "Report" in order to collect more data and ensure that the facility is not contributing to the impairment. It is anticipated that the TMDL will be modified in the future to account for this error. The collected data will assist in this process. In the interim, it is not expected that the facility will contribute to an in-stream excursion above water quality criteria.

In the attached correspondence with William Brown, it was verified that this was an error in the TMDL and continued monitoring is an acceptable approach.

Anti-Backsliding

In accordance with 40 CFR 122.44(l)(1) and (2), this permit does not contain effluent limitations, standards, or conditions that are less stringent than the previous permit.

Treatment Facility Summary

Treatment Facility Name: Wirerope Works, Inc. IW System.
Basic System Process: Equalization, Mixing, Chemical Precipitation, Flocculation, Sedimentation, Rapid Sand Filtration, Sludge Gravity Thickening, Sludge Pressure Dewatering, and the Disposal of Sludge at Landfill.

Treatment System Components (See Appendix D for Plant Process Flow Diagram):
- One (1) Raw Waste Tank.
- One (1) Equalization Holding Tank.
- Two (2) pH Adjustment Tanks with pH Probes.
- One (1) Flocculation Tank.
- One (1) Gravity Settling Tank with Baffles.
- Three (3) Sand Filters (2 active, one back-up).

- One (1) Effluent Composite Sampler.
- One (1) Flow Meter.
- Three (3) pH, Conductivity, and Turbidity Meters.

- Two (2) Sludge Settling Tanks.
- One (1) Plate Frame Press

Changes Since Last Permit Issuance: None.

Chesapeake Bay Requirements

This facility is classified as a "non-significant" IW given that the gross effluent discharges do not exceed 75 lbs/day of TN or 25 lbs/day of TP. The permittee will be not be required to monitor and report TN and TP throughout the permit term in accordance with the Phase II WIP Chesapeake Bay Strategy for non-significant industrial waste facilities. Non-significant IW dischargers should receive monitoring requirements in permits if there is any possibility of a net increase in nutrients as a result of facility processes, and monitoring frequencies should be established using the general guidance in the Phase II WIP Supplement. It was determined that there is no potential that the associated facility processes could create a net increase in TP.

Existing Effluent Limitations and Monitoring Requirements

Outfall 001 - Existing Limits

	Limitations							
	Mass (lb/day)		Concentration (mg/L)				Monitoring	
Discharge Parameter	Monthly Average	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instantaneous Maximum	Minimum Frequency	Sample Type
Flow (MGD)	Report	Report					Continuous	Metered
pH (S.U.)			6.0		9.0 Max		1/day	Grab
TSS	12	25		31.0	60.0		2/month	24-Hr Comp.
Oil and Grease	6	12		15.0	30.0	30	2/month	Grab
Total Cadmium	0.10	0.28		0.26	0.69		2/month	24-Hr Comp.
Total Chromium	0.71	1.15		1.71	2.77		2/month	24-Hr Comp.
Total Copper	0.86	1.40		2.07	3.38		2/month	24-Hr Comp.
Total Cyanide	0.27	0.50		0.65	1.20		2/month	24-Hr Comp.
Total Iron	Report			Report			2/month	24-Hr Comp.
Total Lead	0.17	0.28		0.43	0.69		2/month	24-Hr Comp.
Total Nickel	0.99	1.66		2.38	3.98		2/month	24-Hr Comp.
Total Silver	0.10	0.17		0.24	0.43		2/month	24-Hr Comp.
Total Zinc	0.61	1.08		1.48	2.61		2/month	24-Hr Comp.
Total Toxic Organics					2.13		Upon Request	8-Hr Comp.

The existing effluent limits for Outfall 001 were based on a design flow of 0.050 MGD.

Outfall 002 - Existing Limits

	Limitations							
	Mass (lb/day)		Concentration (mg/L)				Monitoring	
Discharge Parameter	Monthly Average	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instantaneous Maximum	Minimum Frequency	Sample Type
pH (S.U.)					Report		1/6 months	Grab
CBOD5					Report		1/6 months	Grab
COD					Report		1/6 months	Grab
TSS					Report		1/6 months	Grab
Oil and Grease					Report		1/6 months	Grab
Total Arsenic					Report		1/6 months	Grab
Total Cadmium					Report		1/6 months	Grab
Total Chromium					Report		1/6 months	Grab
Total Copper					Report		1/6 months	Grab
Total Cyanide					Report		1/6 months	Grab
Dissolved Iron					Report		1/6 months	Grab
Total Iron					Report		1/6 months	Grab
Total Lead					Report		1/6 months	Grab
Total Nickel					Report		1/6 months	Grab
Total Silver					Report		1/6 months	Grab
Total Zinc					Report		1/6 months	Grab

The existing effluent limits for Outfall 002 were not based on a design flow.

Outfall 003 - Existing Limits

	Limitations							
	Mass (lb/day)		Concentration (mg/L)				Monitoring	
Discharge Parameter	Monthly Average	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instantaneous Maximum	Minimum Frequency	Sample Type
pH (S.U.)					Report		1/6 months	Grab
CBOD5					Report		1/6 months	Grab
COD					Report		1/6 months	Grab
TSS					Report		1/6 months	Grab
Oil and Grease					Report		1/6 months	Grab
Total Arsenic					Report		1/6 months	Grab
Total Cadmium					Report		1/6 months	Grab
Total Chromium					Report		1/6 months	Grab
Total Copper					Report		1/6 months	Grab
Total Cyanide					Report		1/6 months	Grab
Dissolved Iron					Report		1/6 months	Grab
Total Iron					Report		1/6 months	Grab
Total Lead					Report		1/6 months	Grab
Total Nickel					Report		1/6 months	Grab
Total Silver					Report		1/6 months	Grab
Total Zinc					Report		1/6 months	Grab

The existing effluent limits for Outfall 003 were not based on a design flow.

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.05
Latitude 41º 14' 6.11" **Longitude** -77º 0' 41.53"
Wastewater Description: IW Process Effluent with ELG

Technology-Based Limitations

The following technology-based limitations apply, subject to water quality analysis and BPJ where applicable:

Parameter	Limit (mg/l) (Average Monthly)	Limit (mg/l) (Daily Maximum)	Limit (mg/l) (Inst. Maximum)	Federal Regulation	State Regulation
Oil & Grease	15	-	30	-	95.2(2)(ii)
pH	6-9 at all times	-		§133.102(c)	§95.2

Effluent Limits Guidelines (ELGs) and Monitoring Frequencies

Previously, a BPJ determination based on more descriptive information that was provided by the permittee was made. The determination indicates that the effluent values from §433.13 and §433.14 are to be used in lieu of the mass-based requirements in Section 420.

The Effluent Limitations Guidelines in subparts §433.13 and §433.14 are concentration-based limits provided in the exerted tables below which are not production based. These tables are shown below. The pH limitations in these sections coincide with the standard limitations issued under 25 PA Code §95.2 (1) which provides the basis of effluent limitations for pH. The effluent limitations for all parameters were derived from the more stringent of the BPT and BAT tables provided below. The BPT and BAT limits are identical in this case. The BPT limits do not include Oil and Grease, TSS, and pH. The associated mass-based limits (lbs/day) were based on the formula: Concentration [mg/l] x Design Flow [mgd] x 8.34 [Conversion Factor] = Mass Based Limit [lb/Day]. These limits were then rounded down in accordance with the rounding rules established in the *Technical Guidance for the Development and Specification of Effluent Limitations (362-0400-001)*, Chapter 5 - Specifying Effluent Limitations in NPDES Permits. See Appendix A for these calculations. The existing monitoring frequency (2/ Month) and sample type (24-hr composite) are appropriate for this facility and will remain.

As stipulated in §433.12, in lieu of requiring monitoring for TTO, the Department may allow dischargers to make the following certification statement: “Based on my inquiry of the person or persons directly responsible for managing compliance with the permit limitation [or pretreatment standard] for total toxic organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since filing of the last discharge monitoring report. I further certify that this facility is implementing the toxic organic management plan submitted to the permitting [or control] authority.” Since this facility is a direct discharger, this statement will be included as a “comment” on the Discharge Monitoring Report required by 40 CFR 122.44(i), formerly 40 CFR 122.62(i). A monitoring frequency of (Upon Reuest) and sample type of (8-hr composite) will be inserted into the permit. The abovementioned statement will be inserted into the comments section of the DMRs in lieu of monitoring. If monitoring is necessary to measure compliance with the TTO standard, the industrial discharger need analyse for only those pollutants which would reasonably be expected to be present. Furthermore, testing for the TTO parameters will be required at each permit renewal and a reasonable potential analysis will be conducted accordingly. Standard conditions in Parts C12 and C127 will be included the permit.

Browse Previous | Browse Next

Title 40: Protection of Environment
PART 433—METAL FINISHING POINT SOURCE CATEGORY
Subpart A—Metal Finishing Subcategory

§433.13 Effluent limitations representing the degree of effluent reduction attainable by applying the best practicable control technology currently available (BPT).

(a) Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by applying the best practicable control technology currently available (BPT):

BPT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
Cadmium (T)	0.69	0.26
Chromium (T)	2.77	1.71
Copper (T)	3.38	2.07
Lead (T)	0.69	0.43
Nickel (T)	3.98	2.38
Silver (T)	0.43	0.24
Zinc (T)	2.61	1.48
Cyanide (T)	1.20	0.65
TTO	2.13	
Oil & Grease	52	26
TSS	60	31
pH	([1])	([1])

[1]Within 6.0 to 9.0.

Title 40 → Chapter I → Subchapter N → Part 433 → Subpart A → §433.14

Browse Previous | Browse Next

Title 40: Protection of Environment
PART 433—METAL FINISHING POINT SOURCE CATEGORY
Subpart A—Metal Finishing Subcategory

§433.14 Effluent limitations representing the degree of effluent reduction attainable by applying the best available technology economically achievable (BAT).

(a) Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by applying the best available technology economically achievable (BAT):

BAT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
Cadmium (T)	0.69	0.26
Chromium (T)	2.77	1.71
Copper (T)	3.38	2.07
Lead (T)	0.69	0.43
Nickel (T)	3.98	2.38
Silver (T)	0.43	0.24
Zinc (T)	2.61	1.48
Cyanide (T)	1.20	0.65
TTO	2.13	

Water Quality-Based Limitations

To establish whether or not water-quality based effluent limitations (WQBELs) are required, the Department models in-stream conditions. In order to determine limitations for toxics, the Department utilizes the PENTOXSD v2.0d model.

PENTOXSD for Windows Version 2.0d
PENTOXSD V2.0d is a single discharge wasteload allocation program for toxics that uses a mass-balance water quality analysis to determine recommended water quality-based effluent limits. The model incorporates consideration for mixing, first-order decay and other factors to computes a Wasteload Allocation (WLA) for each applicable criterion. Finally, the model determines a maximum water quality-based effluent limitation (WQBEL) for each parameter and outputs the more stringent of the WQBEL or the input concentration. The output of which is the recommends average monthly and maximum daily effluent limitations.

In order to determine which parameters are required to be analyzed in the PENTOXSD model, a Toxics Screening Analysis is used to identify toxic pollutants of concern. In this particular case, sampling for pollutant Groups 1 through 6 was submitted with the application. This is required by the application given the types of industrial users connected to the collection system. These values were input into the Toxics Screening Analysis v2.7 spreadsheet to determine if each pollutant was a candidate for PENTOXSD modeling (pollutant of concern). Refer to Appendix B for the Toxics Screening Analysis v2.7.

The Toxics Screening Analysis v2.7 determines pollutants of concern using the following logic:

- All toxic pollutants whose maximum concentrations, as reported in the permit application or on DMRs, that are greater than the most stringent applicable water quality criterion were considered to be pollutants of concern.
- Also, where the maximum reported value in an application for a pollutant is less than the detection limit using the most sensitive analytical method listed in Chapter 16, the parameter is not a parameter of concern, even if the maximum reported value exceeds the applicable Chapter 93 criterion.
- Where the maximum reported values in an application for a parameter is less than the detection limit for some analytical method other than the most sensitive analytical method listed in Chapter 16, the parameter is a pollutant of concern if the maximum reported value exceeds the Chapter 93 criterion, even if the value is reported as “non-detect.”

The PENTOXSD model was then run for all parameters of concern to evaluate reasonable potential (RP) for other toxic pollutants to cause an excursion above water quality standards. See Appendix C for the PENTOXSD model input/output. The most stringent WQBEL recommended by the model was then entered back into the same Toxics Screening Analysis v2.7 spreadsheet in order to determine which action to take regarding the pollutant. The permit recommendations of Monitor, Establish Limits, or to take no action (-) are established in the Toxics Screening Analysis v2.7 spreadsheet for each pollutant based off of the following logic:

- Establish average monthly and IMAX limits in the draft permit where the maximum reported concentration exceeds 50% of the WQBEL.
- For non-conservative pollutants, establish monitoring requirements where the maximum reported concentration is between 25% - 50% of the WQBEL.
- For conservative pollutants, establish monitoring requirements where the maximum reported concentration is between 10% - 50% of the WQBEL.

A “Reasonable Potential Analysis” (See Appendix B) determined that the following parameters were candidates for monitoring or limitations shown below:

Parameter	Effluent Limit (µg/l)	Governing Criterion	Max Daily Limit (µg/l)	WQBEL (µg/l)	WQBEL Criterion	Permit Recommendation
Benzidine	0.763	CRL	1.191	0.763	CRL	Establish Limits
Benzo(a)Anthracene	9.9	INPUT	15.446	33.723	CRL	Monitor
Benzo(a)Pyrene	9.9	INPUT	15.446	33.723	CRL	Monitor
3,4-Benzofluoranthene	9.9	INPUT	15.446	33.723	CRL	Monitor
Benzo(k)Fluoranthene	9.9	INPUT	15.446	33.723	CRL	Monitor
Chrysene	9.9	INPUT	15.446	33.723	CRL	Monitor
Dibenzo(a,h)Anthracene	9.9	INPUT	15.446	33.723	CRL	Monitor
Hexachlorobenzene	2.485	CRL	3.877	2.485	CRL	Establish Limits
Indeno(1,2,3-cd)Pyrene	9.9	INPUT	15.446	33.723	CRL	Monitor

n-Nitrosodimethylamine	6.123	CRL	9.553	6.123	CRL	Establish Limits

Comments: Since the applicants and their laboratories did not achieve QLs that achieve or approach the lowest Detection Limits identified in 25 Pa. Code Chapter 16, Tables 2A and 2B, it can be assumed that the pollutant is present in the effluent at the QL concentration. This has resulted in a finding of "reasonable potential" to exceed water quality standards and the establishment of effluent limitations and/or monitoring requirements for the abovementioned parameters.

The applicant will be given the opportunity to re-test for these parameters to the Department's established QLs during the comment period. The results will then be incorporated into the fact sheet addendum.

Best Professional Judgement (BPJ) Limitations
Comments: None.

Additional Considerations
None

Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst the abovementioned technology, water quality, and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001) and/or BPJ.

Outfall 001, Effective Period: Permit Effective Date through Permit Expiration Date

Outfall 001 - Proposed Limits

	Limitations							
	Mass (lb/day)		Concentration (mg/L)				Monitoring	
Discharge Parameter	Monthly Average	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instantaneous Maximum	Minimum Frequency	Sample Type
Flow (MGD)	Report	Report					Continuous	Metered
pH (S.U.)			6.0		9.0 Max		1/day	Grab
TSS	12	25		31.0	60.0		2/month	24-Hr Comp.
Oil and Grease	6	12		15.0	30.0	30	2/month	Grab
Total Cadmium	0.10	0.28		0.26	0.69		2/month	24-Hr Comp.
Total Chromium	0.71	1.15		1.71	2.77		2/month	24-Hr Comp.
Total Copper	0.86	1.40		2.07	3.38		2/month	24-Hr Comp.
Total Cyanide	0.27	0.50		0.65	1.20		2/month	24-Hr Comp.
Total Iron	Report			Report			2/month	24-Hr Comp.
Total Lead	0.17	0.28		0.43	0.69		2/month	24-Hr Comp.
Total Nickel	0.99	1.66		2.38	3.98		2/month	24-Hr Comp.
Total Silver	0.10	0.17		0.24	0.43		2/month	24-Hr Comp.
Total Zinc	0.61	1.08		1.48	2.61		2/month	24-Hr Comp.
Total Toxic Organics					2.13		Upon Request	8-Hr Comp.
Benzidine (µg/l)	0.0003	0.0006		0.76	1.52	1.90	1/year	24-Hr Comp.b
Benzo(a)Anthracene (µg/l)	Report	Report		Report	Report		1/year	24-Hr Comp.
Benzo(a)Pyrene (µg/l)	Report	Report		Report	Report		1/year	24-Hr Comp.
3,4-Benzofluoranthene (µg/l)	Report	Report		Report	Report		1/year	24-Hr Comp.
Benzo(k)Fluoranthene (µg/l)	Report	Report		Report	Report		1/year	24-Hr Comp.
Chrysene (µg/l)	Report	Report		Report	Report		1/year	24-Hr Comp.
Dibenzo(a,h)Anthracene (µg/l)	Report	Report		Report	Report		1/year	24-Hr Comp.

Hexachlorobenzene (µg/l)	0.001	0.002		2.48	4.97	6.21	1/year	24-Hr Comp.
Indeno(1,2,3-cd)Pyrene (µg/l)	Report	Report		Report	Report		1/year	24-Hr Comp.
n-Nitrosodimethylamine (µg/l)	0.002	0.005		6.12	12.24	15.30	1/year	24-Hr Comp.

The proposed effluent limits for Outfall 001 were based on a design flow of 0.050 MGD.

Outfall 002 - Proposed Limits

	Limitations							
	Mass (lb/day)		Concentration (mg/L)				Monitoring	
Discharge Parameter	Monthly Average	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instantaneous Maximum	Minimum Frequency	Sample Type
pH (S.U.)					Report		1/6 months	Grab
CBOD5					Report		1/6 months	Grab
COD					Report		1/6 months	Grab
TSS					Report		1/6 months	Grab
Oil and Grease					Report		1/6 months	Grab
Total Arsenic					Report		1/6 months	Grab
Total Cadmium					Report		1/6 months	Grab
Total Chromium					Report		1/6 months	Grab
Total Copper					Report		1/6 months	Grab
Total Cyanide					Report		1/6 months	Grab
Dissolved Iron					Report		1/6 months	Grab
Total Iron					Report		1/6 months	Grab
Total Lead					Report		1/6 months	Grab
Total Nickel					Report		1/6 months	Grab
Total Silver					Report		1/6 months	Grab
Total Zinc					Report		1/6 months	Grab
Total Aluminum					Report		1/6 months	Grab

The proposed effluent limits for Outfall 003 were not based on a design flow.

Outfall 003 - Proposed Limits

	Limitations							
	Mass (lb/day)		Concentration (mg/L)				Monitoring	
Discharge Parameter	Monthly Average	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instantaneous Maximum	Minimum Frequency	Sample Type
pH (S.U.)					Report		1/6 months	Grab
CBOD5					Report		1/6 months	Grab
COD					Report		1/6 months	Grab
TSS					Report		1/6 months	Grab
Oil and Grease					Report		1/6 months	Grab
Total Arsenic					Report		1/6 months	Grab
Total Cadmium					Report		1/6 months	Grab
Total Chromium					Report		1/6 months	Grab
Total Copper					Report		1/6 months	Grab
Total Cyanide					Report		1/6 months	Grab
Dissolved Iron					Report		1/6 months	Grab
Total Iron					Report		1/6 months	Grab
Total Lead					Report		1/6 months	Grab
Total Nickel					Report		1/6 months	Grab
Total Silver					Report		1/6 months	Grab
Total Zinc					Report		1/6 months	Grab
Total Aluminum					Report		1/6 months	Grab

The proposed effluent limits for Outfall 003 were not based on a design flow.

General Information
The associated mass-based limits (lbs/day) for all parameters were based on the formula: design flow (average annual) (MGD) x concentration limit (mg/L) at design flow x conversion factor (8.34). All effluent limits were then rounded down in accordance with the rounding rules established in the *Technical Guidance for the Development and Specification of Effluent Limitations (362-0400-001)*, Chapter 5 - Specifying Effluent Limitations in NPDES Permits. The existing monitoring frequencies and sample types for these parameters generally correspond with the *Technical Guidance for the Development and Specification of Effluent Limitations* (362-0400-001) Table 6-4 and will remain.

Flow
Reporting of maximum daily flow and monthly average is appropriate for this type of facility and consistent with similar facility types.

pH
The existing permit limits for pH were implemented in accordance with 25 PA Code §95.2(1), which provide the basis of effluent limitations for pH, and shall remain. Additionally, the applicable ELGs for this facility (40 CFR Sections *§420.92 and §420.93)* are identical to the state requirements.

All of the limits proposed above are consistent with permits issued for similar facilities in the region.

Other Comments: None.

Stormwater Requirements

The industrial activities associated with Wirerope Works, Inc. facility are identified in 40 CFR 122.26(b)(14)(ix) and thus the facility required to obtain an NPDES permit to discharge stormwater into waters of the Commonwealth of Pennsylvania. The facility is classified under SIC Code 3315- Steel Wiredrawing and Steel Nails and Spikes. Establishments primarily engaged in drawing wire from purchased iron or steel rods, bars, or wire and which may be engaged in the further manufacture of products made from wire; establishments primarily engaged in manufacturing steel nails and spikes from purchased materials are also included in this industry. SIC code major group 3315 is under the coverage of Appendix B. For that reason, General Stormwater (PAG-03) Appendix B (Primary Metal Industry Facilities) Monitoring Requirements and Best Management Practices (BMPs) have been assigned.

The permittee must monitor and report monitoring results for the water quality parameters listed below in accordance with the General Permit requirements and BPJ. The measurement frequencies listed below are the minimum required by DEP as well as the ELG parameters and TMDL requirements. Additional sampling is optional.

DISCHARGE PARAMETER	UNITS	SAMPLE TYPE	MEASUREMENT FREQUENCY
pH (S.U.)	mg/L	1 Grab	1/6 months
CBOD5	mg/L	1 Grab	1/6 months
COD	mg/L	1 Grab	1/6 months
TSS	mg/L	1 Grab	1/6 months
Oil and Grease	mg/L	1 Grab	1/6 months
Total Arsenic	mg/L	1 Grab	1/6 months
Total Cadmium	mg/L	1 Grab	1/6 months
Total Chromium	mg/L	1 Grab	1/6 months
Total Copper	mg/L	1 Grab	1/6 months
Total Cyanide	mg/L	1 Grab	1/6 months
Dissolved Iron	mg/L	1 Grab	1/6 months
Total Iron	mg/L	1 Grab	1/6 months
Total Lead	mg/L	1 Grab	1/6 months
Total Nickel	mg/L	1 Grab	1/6 months
Total Silver	mg/L	1 Grab	1/6 months
Total Zinc	mg/L	1 Grab	1/6 months
Total Aluminum	mg/L	1 Grab	1/6 months

Part C of the permit will contain following requirements for this stormwater facility:

1. Applicable Discharges
2. Preparedness, Prevention and Contingency (PPC) Plan
3. Minimum Required BMPs
4. Annual Inspection and Compliance Evaluation
5. Stormwater Sampling Requirements

Compliance History

Summary of Inspections -The last facility inspection was conducted on 3/11/19 by the Department which reveals that there were no major issues and the facility was operating normally. A minor issue with sampling locations was noted.

WMS Query Summary – A WMS Query was run at *Reports - Violations & Enforcements – Open Violations for Client Report* to determine whether there are any unresolved violations associated with the client that will affect issuance of the permit (per CSL Section 609). This query revealed no open violations.

Summary of e-DMR- A review of the e-DMR data over the previous year reveals no effluent violations listed in the compliance section below.

Attachments

Appendices

TMDL Correspondence

Compliance History

DMR Data for Outfall 001 (from May 1, 2019 to April 30, 2020)

Parameter	APR-20	MAR-20	FEB-20	JAN-20	DEC-19	NOV-19	OCT-19	SEP-19	AUG-19	JUL-19	JUN-19	MAY-19
Flow (MGD) Average Monthly	0.01	0.16	0.12	0.17	0.09	0.18	0.16	0.16	0.15	0.14	0.19	0.20
Flow (MGD) Daily Maximum	0.01	0.42	0.33	0.42	0.25	0.50	0.08	0.42	0.42	0.42	0.50	0.42
pH (S.U.) Minimum	8.0	8.9	8.6	8.6	8.4	8.10	8.5	8.74	8.60	8.6	8.7	8.7
pH (S.U.) Maximum	8.9	8.4	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9
TSS (lbs/day) Average Monthly	4.00	1.04	0.83	0.83	0.50	1.83	0.50	0.50	0.83	0.92	1.33	0.83
TSS (lbs/day) Daily Maximum	4.00	1.67	1.33	1.00	0.67	2.34	0.67	0.67	1.33	1.50	1.33	1.00
TSS (mg/L) Average Monthly	0.50	4.50	4.00	4.00	4.00	5.50	4.00	4.00	4.00	5.00	4.00	4.00
TSS (mg/L) Daily Maximum	0.67	5.0	4.00	4.00	4.00	7.00	4.00	4.00	4.00	6.00	4.00	4.00
Oil and Grease (lbs/day) Average Monthly	2.90	1.20	0.40	1.00	0.60	1.42	0.60	0.60	1.00	0.80	1.60	0.91
Oil and Grease (lbs/day) Daily Maximum	4.80	2.002	0.40	1.20	0.80	1.60	0.80	0.80	1.60	1.20	1.60	1.20
Oil and Grease (mg/L) Average Monthly	0.44	4.80	3.00	4.80	4.80	4.25	4.80	4.80	4.80	4.80	4.80	4.25
Oil and Grease (mg/L) Daily Maximum	0.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.84	< 4.80
Total Cadmium (lbs/day) Average Monthly	0.003	0.006	0.0006	0.0006	0.0004	0.001	0.0004	0.0004	0.0006	0.0005	0.001	0.0006
Total Cadmium (lbs/day) Daily Maximum	0.003	0.013	0.0010	0.0008	0.0005	0.001	0.0005	0.0008	0.0010	0.0008	0.001	0.0008
Total Cadmium (mg/L) Average Monthly	0.003	0.017	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003
Total Cadmium (mg/L) Daily Maximum	0.005	0.030	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003

Total Chromium (lbs/day) Average Monthly	0.110	0.001	0.0009	0.0004	0.0001	0.0003	0.0001	0.0002	0.0002	0.0002	0.0014	0.0002
Total Chromium (lbs/day) Daily Maximum	0.220	0.001	0.0017	0.0006	0.0002	0.0004	0.0002	0.0003	0.0003	0.0003	0.0027	0.0003
Total Chromium (mg/L) Average Monthly	0.0092	0.005	0.003	0.002	0.0013	0.001	0.001	0.001	0.0008	0.001	0.004	0.001
Total Chromium (mg/L) Daily Maximum	0.0183	0.009	0.005	0.003	0.002	0.001	0.001	0.002	0.001	0.001	0.008	0.002
Total Copper (lbs/day) Average Monthly	0.093	0.002	0.001	0.001	0.0006	0.001	0.0005	0.0007	0.0009	0.001	0.0011	0.001
Total Copper (lbs/day) Daily Maximum	0.180	0.003	0.0017	0.001	0.0008	0.001	0.0007	0.0010	0.0017	0.00018	0.0015	0.0013
Total Copper (mg/L) Average Monthly	0.008	0.006	0.005	0.006	0.005	0.003	0.004	0.005	0.003	0.005	0.0034	0.004
Total Copper (mg/L) Daily Maximum	0.015	0.007	0.001	0.008	0.005	0.003	0.004	0.006	0.005	0.007	0.0046	0.0050
Total Cyanide (lbs/day) Average Monthly	0.009	0.003	0.005	0.032	0.001	0.003	0.006	0.0019	0.003	0.002	0.0028	0.001
Total Cyanide (lbs/day) Daily Maximum	0.010	0.004	0.0103	0.050	0.001	0.003	0.009	0.0030	0.003	0.0025	0.0033	0.0013
Total Cyanide (mg/L) Average Monthly	0.001	0.019	0.005	0.145	0.013	0.010	0.002	0.014	0.016	0.010	0.0085	0.008
Total Cyanide (mg/L) Daily Maximum	0.002	0.028	0.0310	0.200	0.017	0.010	0.110	0.018	0.0021	0.010	0.007	0.0077
Total Iron (lbs/day) Average Monthly	0.185	0.045	0.020	0.014	0.016	0.023	0.009	0.009	0.036	0.012	0.098	0.065
Total Iron (mg/L) Average Monthly	0.022	0.137	0.086	0.069	0.135	0.070	0.070	0.070	0.135	0.070	0.295	0.31
Total Lead (lbs/day) Average Monthly	0.005	0.001	0.001	0.0008	0.0006	0.002	0.0006	0.0006	0.0010	0.0008	0.00167	0.0009
Total Lead (lbs/day) Daily Maximum	0.005	0.002	0.0017	0.0008	0.0008	0.002	0.0008	0.0008	0.0017	0.0013	0.0017	0.0013
Total Lead (mg/L) Average Monthly	0.0006	0.004	0.005	0.004	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.004
Total Lead (mg/L) Daily Maximum	0.0008	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Total Nickel (lbs/day) Average Monthly	0.026	0.013	0.010	0.009	0.002	0.004	0.001	0.0029	0.004	0.004	0.029	0.005

Total Nickel (lbs/day) Daily Maximum	0.036	0.021	0.0167	0.013	0.002	0.005	0.001	0.0050	0.005	0.007	0.040	0.0068
Total Nickel (mg/L) Average Monthly	0.004	0.051	0.040	0.043	0.013	0.011	0.012	0.020	0.033	0.024	0.087	0.027
Total Nickel (mg/L) Daily Maximum	0.006	0.051	0.050	0.051	0.013	0.015	0.015	0.030	0.058	0.029	0.120	0.041
Total Silver (lbs/day) Average Monthly	0.006	0.002	0.001	0.001	0.001	0.002	0.0008	0.0008	0.001	0.001	0.002	0.0013
Total Silver (lbs/day) Daily Maximum	0.006	0.003	0.0020	0.002	0.001	0.002	0.0010	0.0010	0.002	0.0015	0.002	0.0015
Total Silver (mg/L) Average Monthly	0.001	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006
Total Silver (mg/L) Daily Maximum	0.001	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006
Total Zinc (lbs/day) Average Monthly	0.180	0.147	0.034	0.038	0.048	0.028	0.026	0.020	0.046	0.018	0.0817	0.0236
Total Zinc (lbs/day) Daily Maximum	0.190	0.279	0.060	0.045	0.062	0.040	0.045	0.017	0.080	0.023	0.817	0.0250
Total Zinc (mg/L) Average Monthly	0.002	0.425	0.136	0.185	0.395	0.085	0.180	0.185	0.195	0.095	0.245	0.120
Total Zinc (mg/L) Daily Maximum	0.028	0.670	0.180	0.190	0.420	0.120	0.045	0.270	0.240	0.096	0.330	0.150
Total Toxic Organics (mg/L) Daily Maximum	A	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG

DMR Data for Outfall 002 (from May 1, 2019 to April 30, 2020)

Parameter	APR-20	MAR-20	FEB-20	JAN-20	DEC-19	NOV-19	OCT-19	SEP-19	AUG-19	JUL-19	JUN-19	MAY-19
pH (S.U.) Daily Maximum					7.9						8.0	
CBOD5 (mg/L) Daily Maximum					2.6						2.5	
COD (mg/L) Daily Maximum					39.2						26.3	
TSS (mg/L) Daily Maximum					134						510	
Oil and Grease (mg/L) Daily Maximum					< 4.8						< 4.8	
Total Arsenic (mg/L) Daily Maximum					< 5.0						0.0107	
Total Cadmium (mg/L) Daily Maximum					< 3.0						< 0.003	

Total Chromium (mg/L) Daily Maximum					9.4						0.0336	
Total Copper (mg/L) Daily Maximum					21.2						0.085	
Total Cyanide (mg/L) Daily Maximum					0.014						< 0.010	
Dissolved Iron (mg/L) Daily Maximum					< 70.0						0.088	
Total Iron (mg/L) Daily Maximum					8040						34.2	
Total Lead (mg/L) Daily Maximum					47.7						0.175	
Total Nickel (mg/L) Daily Maximum					< 10.0						0.0391	
Total Silver (mg/L) Daily Maximum					6.0						< 0.006	
Total Zinc (mg/L) Daily Maximum					130						0.532	

DMR Data for Outfall 003 (from May 1, 2019 to April 30, 2020)

Parameter	APR-20	MAR-20	FEB-20	JAN-20	DEC-19	NOV-19	OCT-19	SEP-19	AUG-19	JUL-19	JUN-19	MAY-19
pH (S.U.) Daily Maximum					7.5						0.005	
CBOD5 (mg/L) Daily Maximum					2.9						0.0025	
COD (mg/L) Daily Maximum					< 25.0						< 0.025	
TSS (mg/L) Daily Maximum					211						0.51	
Oil and Grease (mg/L) Daily Maximum					< 4.8						< 0.0048	
Total Arsenic (mg/L) Daily Maximum					< 5.0						< 0.005	
Total Cadmium (mg/L) Daily Maximum					< 3.0						< 0.003	
Total Chromium (mg/L) Daily Maximum					< 5.0						< 0.005	
Total Copper (mg/L) Daily Maximum					8.8						0.0089	
Total Cyanide (mg/L) Daily Maximum					0.013						< 0.010	

Dissolved Iron (mg/L) Daily Maximum					< 70.0						< 0.070	
Total Iron (mg/L) Daily Maximum					1140						0.947	
Total Lead (mg/L) Daily Maximum					10.5						0.0072	
Total Nickel (mg/L) Daily Maximum					< 10.0						< 0.010	
Total Silver (mg/L) Daily Maximum					< 6.0						< 0.006	
Total Zinc (mg/L) Daily Maximum					82.4						0.135	

Tools and References Used to Develop Permit	
☒	Q7-10 Analysis and Stream Data (see Appendix **A**)
☐	WQM 7.0 Model Input/Output (see Appendix)
☒	Toxics Screening Analysis v2.4 (see Appendix B)
☒	PENTOXSD v2.0d Model Input/Output (see Appendix C)
☒	Facility Map and Schematic (see Appendix **D**)
☐	TRC Evaluation Spreadsheet (see Appendix)
☐	Lake Model Output (see Appendix)
☐	WETT Spreadsheet (see Appendix)
☒	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
☒	Technical Guidance for the Development and Specification of Effluent Limitations, 362-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 362-2000-003, 3/98.
☒	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 362-2000-008, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 362-2183-003, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 362-2183-004, 12/97.
☐	Pennsylvania CSO Policy, 385-2000-011, 9/08.
☐	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 391-2000-002, 4/97.
☒	Determining Water Quality-Based Effluent Limits, 391-2000-003, 12/97.
☐	Implementation Guidance Design Conditions, 391-2000-006, 9/97.
☐	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 391-2000-007, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 391-2000-008, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 391-2000-010, 3/99.
☒	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 391-2000-011, 5/2004.
☒	Implementation Guidance for Section 93.7 Ammonia Criteria, 391-2000-013, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 391-2000-014, 4/2008.
☒	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 391-2000-015, 11/1994.
☒	Implementation Guidance for Temperature Criteria, 391-2000-017, 4/09.
☐	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 391-2000-018, 10/97.
☐	Implementation Guidance for Application of Section 93.5(e) for Potable Water Supply Protection Total Dissolved Solids, Nitrite-Nitrate, Non-Priority Pollutant Phenolics and Fluorides, 391-2000-019, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 391-2000-021, 3/99.
☐	Implementation Guidance for the Determination and Use of Background/Ambient Water Quality in the Determination of Wasteload Allocations and NPDES Effluent Limitations for Toxic Substances, 391-2000-022, 3/1999.
☒	Design Stream Flows, 391-2000-023, 9/98.
☐	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 391-2000-024, 10/98.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 391-3200-013, 6/97.
☒	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☐	Other: