pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0233811**
Facility Type	**Industrial**	APS ID	**983852**
Major / Minor	**Minor**	Authorization ID	**1257029**

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

Applicant and Facility Information

Applicant Name	**Ulster Township Municipal Authority Bradford County**	Facility Name	**Ulster Municipal Authority Water System**
Applicant Address	23639 Route 220 PO Box 157	Facility Address	60 Union Avenue 23954 Route 220
	Ulster, PA 18850-7982		Ulster, PA 18850
Applicant Contact	Frank Walker	Facility Contact	
Applicant Phone	(570) 358-3555	Facility Phone	
Client ID	6483	Site ID	259906
SIC Code	4941	Municipality	Ulster Township
SIC Description	Trans. & Utilities - Water Supply	County	Bradford
Date Application Received	December 28, 2018	EPA Waived?	Yes
Date Application Accepted	January 8, 2019	If No, Reason	

Purpose of Application: Renewal of existing NPDES permit

Summary of Review

The above applicant has submitted an NPDES renewal application for one discharge of industrial wastewater to an Unnamed Tributary to the Susquehanna River, also known as Toad Hollow. The facility is a potable water filtration plant that consists of two membrane filtration units. The industrial wastewater discharge is backwash water from the membrane filters. The backwash wastewater is pumped to a holding tank where the liquid supernatant is decanted to the UNT to Susquehanna River. All solids are pumped to an existing drying bed. The drying bed decant is discharged to the UNT to Susquehanna River while the solids are disposed at a landfill.

Unless otherwise specified, all applicable Department Standard Operating Procedures (SOPs) were followed during the review of this application.

Public Participation

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
		Chad A. Fabian / Project Manager	November 15, 2019
		Nicholas W. Hartranft, P.E. / Environmental Engineer Manager	

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	.0072
Latitude	41º 50' 48.29"	Longitude	-76º 30' 4.91"
Quad Name	Ulster	Quad Code	0433
Wastewater Description:	Water Treatment Effluent		
Receiving Waters	Unnamed Tributary to Susquehanna River (WWF) aka Toad Hollow.	Stream Code	30816
NHD Com ID	66397187	RMI	0.26
Drainage Area	2.22	Yield (cfs/mi^2)	0.013
Q_{7-10} Flow (cfs)	0.029	Q_{7-10} Basis	USGS gage 01532000
Elevation (ft)	740	Slope (ft/ft)	n/a
Watershed No.	4-B	Chapter 93 Class.	WWF
Existing Use	n/a	Existing Use Qualifier	n/a
Exceptions to Use	none	Exceptions to Criteria	n/a
Assessment Status	Attaining Use(s)		
Nearest Downstream Public Water Supply Intake	Danville Municipal Water Authority		
PWS Waters	Susquehanna River	Flow at Intake (cfs)	1120
PWS RMI	138.06	Distance from Outfall (mi)	142.47

Changes Since Last Permit Issuance: None

Compliance History	
Summary of DMRs:	The facility utilizes the Department's eDMR system. A review of the file and eDMR data shows there has not been any effluent violation in the past 24 months. A summary of the past 12 months of eDMR data can be found in a table on the next page of this report.
Summary of Inspections:	The last inspection was performed by Steve Puzio (DEP, Clean Water Program, Water Quality Specialist) on 4/16/19. No violations were noted during the inspection. No problems were noted in the receiving stream during the inspection.

Compliance History

DMR Data for Outfall 001 (from October 1, 2018 to September 30, 2019)

Parameter	SEP-19	AUG-19	JUL-19	JUN-19	MAY-19	APR-19	MAR-19	FEB-19	JAN-19	DEC-18	NOV-18	OCT-18
Flow (MGD) Average Monthly	0.00297	0.00383	0.00365	0.00376	0.00306	0.00286	0.00321	0.00343	0.00370	0.00366	0.00244	0.00210
Flow (MGD) Daily Maximum	0.00419	0.00491	0.00456	0.00664	0.00410	0.00406	0.00544	0.00436	0.00544	0.00879	0.00326	0.00280
pH (mg/L) Minimum	6.83	6.89	6.87	6.75	6.91	6.79	6.90	6.94	6.85	6.83	6.85	6.85
pH (mg/L) Instantaneous Maximum	7.07	7.10	7.02	6.99	7.11	7.20	7.05	7.10	7.05	6.97	7.03	6.98
TRC (mg/L) Average Monthly	0.06	0.06	0.09	0.10	0.12	0.13	0.11	0.09	0.09	0.10	0.08	0.07
TRC (mg/L) Instantaneous Maximum	0.07	0.08	0.12	0.21	0.18	0.21	0.17	0.17	0.12	0.18	0.11	0.09
TSS (lbs/day) Average Monthly	0.0285	< 0.0238	0.0437	< 0.0230	< 0.0219	< 0.0215	< 0.0287	< 0.0256	< 0.0289	< 0.0190	< 0.0191	< 0.0216
TSS (lbs/day) Daily Maximum	0.0384	< 0.0254	0.0719	< 0.0247	0.0279	< 0.0348	< 0.0363	< 0.0392	< 0.050	< 0.0252	0.0219	< 0.0282
TSS (mg/L) Average Monthly	1	< 0.800	1.400	< 0.800	< 0.850	< 0.960	< 1.00	< 1.00	< 0.960	< 0.800	< 0.900	< 1.320
TSS (mg/L) Daily Maximum	1.2	< 0.800	2.200	< 0.800	1.00	< 1.60	1.40	< 1.60	< 1.60	< 0.800	1.20	< 1.60
Total Iron (lbs/day) Average Monthly	< 0.00560	< 0.00594	< 0.00618	< 0.00574	< 0.00576	< 0.00674	< 0.00894	< 0.00777	< 0.00897	< 0.00798	< 0.00086	< 0.00066
Total Iron (lbs/day) Daily Maximum	< 0.00641	< 0.00634	< 0.00719	< 0.00617	< 0.00758	< 0.00728	< 0.01361	< 0.00956	< 0.00938	< 0.00974	< 0.00096	< 0.00082
Total Iron (mg/L) Average Monthly	< 0.200	< 0.200	< 0.2000	< 0.2000	< 0.2250	< 0.300	< 0.300	< 0.300	< 0.3000	< 0.35	< 0.0400	< 0.0400
Total Iron (mg/L) Daily Maximum	< 0.200	< 0.200	< 0.2000	< 0.2000	< 0.300	< 0.300	< 0.300	< 0.300	< 0.3000	< 0.40	< 0.0400	< 0.0400
Total Manganese (lbs/day) Average Monthly	< 0.0056	< 0.0006	< 0.0006	< 0.0006	< 0.005	< 0.0004	< 0.0006	< 0.0005	< 0.0006	< 0.0005	< 0.0004	< 0.0003
Total Manganese (lbs/day) Daily Maximum	< 0.0064	< 0.0006	< 0.0007	< 0.0006	< 0.006	< 0.0005	< 0.0009	< 0.0006	< 0.0006	0.00076	< 0.0005	< 0.0004
Total Manganese (mg/L) Average Monthly	< 0.0200	< 0.020	< 0.0200	< 0.0200	< 0.0200	< 0.0200	< 0.0200	< 0.0200	< 0.0200	< 0.0217	< 0.0200	< 0.0200
Total Manganese (mg/L) Daily Maximum	< 0.0200	< 0.020	< 0.0200	< 0.0200	< 0.0200	< 0.0200	< 0.200	< 0.0200	< 0.0200	0.0266	< 0.0200	< 0.0200

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.01

Water Quality-Based Limitations

A "Reasonable Potential Analysis" (Attachment C-Toxics Screening Analysis) determined 3 parameters (zinc, mercury, and selenium) to be candidates for limitations. However, upon further examination of the sample results, mercury and selenium were non-detectable at the Quantitative Limit (QL) used during sampling. The presence of mercury or selenium is not anticipated in this type of facility and effluent. However, modeling for all these parameters was performed using the Department's PENTOXSD water quality model (see attached). These results from the respective model were then input into the reasonable potential spreadsheet to see if any limitations or monitoring should be required. Based on the attached reasonable potential spreadsheet selenium and mercury are parameters recommended for effluent limitations, while zinc is recommended to be monitored.

An analysis of TRC was performed. The attached TRC model shows that the existing TRC limitations are protective of water quality standards.

See the Best Professional Judgement (BPJ) section of this fact sheet for a further explanation of the water quality-based limitations being proposed in this draft permit.

Technology-Based Limitations

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

Parameter	Limit (mg/l)	SBC	Federal Regulation	State Regulation
Total Suspended Solids	30	Monthly Average	n/a	n/a
Total Iron	2	Monthly Average	n/a	n/a
Total Manganese	1	Monthly Average	n/a	n/a
Total Aluminum	4	Monthly Average	n/a	n/a
Total Residual Chlorine (TRC)	0.5	Monthly Average	n/a	n/a
pH	6.0-9.0 std units	Minimum-Maximum	n/a	n/a

Comments: The above technology standards are from the Department's Technology-Based Control Requirements for Water Treatment Plants (DEP Guidance Document (392-2183-003).

Modeling for TRC shows that water quality limits are required for TRC. See attached TRC model.

A WQM Model 6.3 for dissolved oxygen, ammonia, or BOD5 was not run since those parameters are not a concern for the nature of this discharge.

Best Professional Judgement (BPJ) Limitations

As previously stated, mercury and selenium are not expected to be present in the wastewater. The application sample results for these parameters showed non-detectable levels of mercury and selenium. Therefore, limitations for mercury or selenium is not proposed at this time. However, monitoring for zinc is proposed based on the aforementioned reasonable potential analysis. A recommendation of 1/quarter monitoring frequency be implemented for zinc during this permit term to better characterize the presence of zinc in the effluent.

Anti-Backsliding Provisions

No effluent limitations have been relaxed as a result of the review of this application.

Existing Limits Table

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	1/day	Weir
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
TRC	XXX	XXX	XXX	0.26	XXX	0.84	1/day	Grab
TSS	Report	Report	XXX	30	60	75	1/week	24-Hr Composite
Total Iron	Report	Report	XXX	1.5	3.0	3.75	1/week	24-Hr Composite
Total Manganese	Report	Report	XXX	1.0	2.0	2.5	1/week	24-Hr Composite

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 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), SOPs and/or BPJ.

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

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	1/day	Weir
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
TRC	XXX	XXX	XXX	0.26	XXX	0.84	1/day	Grab
TSS	Report	Report	XXX	30	60	75	1/week	24-Hr Composite

Outfall 001 , Continued (from Permit Effective Date through Permit Expiration Date)

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Total Iron	Report	Report	XXX	1.5	3.0	3.75	1/week	24-Hr Composite
Total Manganese	Report	Report	XXX	1.0	2.0	2.5	1/week	24-Hr Composite
Total Zinc	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/quarter	24-Hr Composite

Compliance Sampling Location: 001

It is recommended the permit be drafted as described above.