pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southeast Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0013285**
Facility Type	**Industrial**	APS ID	**981706**
Major / Minor	**Minor**	Authorization ID	**1253264**

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

Applicant and Facility Information

Applicant Name	**Aqua Pennsylvania, Inc.**	Facility Name	**Pickering Creek Water Treatment Plant**
Applicant Address	762 W Lancaster Avenue	Facility Address	1050 Valley Forge Road
	Bryn Mawr, PA 19010-3402		Phoenixville, PA 19460
Applicant Contact	Curt R. Steffy	Facility Contact	Curt R. Steffy
Applicant Phone	(610) 525-1400	Facility Phone	(610) 525-1400
Client ID	309251	Site ID	250033
SIC Code	4941	Municipality	Schuylkill Township
SIC Description	Trans. & Utilities - Water Supply	County	Chester
Date Application Received	October 26, 2018	EPA Waived?	Yes
Date Application Accepted	November 28, 2018	If No, Reason	
Purpose of Application	Permit Renewal.		

Summary of Review

The PA Department of Environmental Protection (PADEP/Department) received the NPDES permit renewal application East Latitude, LLC (consultant) on behalf of Aqua Pennsylvania, Inc. (permittee/Aqua) on October 26, 2018 for Aqua's Pickering Creek Water Treatment Plant (facility). This is a Minor IW facility without ELG (MIIW1) located in Schuylkill Township, Chester County. The discharges are in Pickering Creek, a WWF/MF, in state watershed 3-D. The existing permit was expired on April 30, 2019. The terms and conditions of the permit were automatically extended since the renewal application was received at least 180 days prior to the permit expiration date. Renewal NPDES permit applications under Clean Water program are not covered by DEP's PDG, per 021-2100-001.

This fact sheet is prepared per 40 CFR §124.56.

Changes in this renewal:
Mass based monitoring requirements for TSS, Total Aluminum, Total Iron, Total Manganese, and CBOD5 are added. Daily Maximum Special Effluent limit for Total Manganese (4.0 mg/l) is changed to Final Effluent limit (2 mg/l). Turbidity limit is added in Part A of the permit. Sampling type is updated from 8-hr composite to 24-hr composite.

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
√		Reza H. Chowdhury, E.I.T. / Environmental Engineering Specialist	September 5, 2019,
		Pravin C. Patel, P.E. / Environmental Engineer Manager	

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	002	Design Flow (MGD)	2.1
Latitude	40º 7' 26.42"	Longitude	-75º 29' 30.92"
Quad Name	Valley Forge	Quad Code	1842
Wastewater Description:	Filter backwash, sedimentation basin cleaning wash water, filter press filtrate, and thickener decant/overflow		
Receiving Waters	Pickering Creek (WWF, MF)	Stream Code	01508
NHD Com ID	26003282	RMI	0.19
Drainage Area	38.9 mi^2	Yield (cfs/mi^2)	0.125
Q_{7-10} Flow (cfs)	4.86	Q_{7-10} Basis	Please see below
Elevation (ft)	104.51'	Slope (ft/ft)	
Watershed No.	3-D	Chapter 93 Class.	WWF, MF
Existing Use		Existing Use Qualifier	
Exceptions to Use	None	Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	POLYCHLORINATED BIPHENYLS (PCBS)		
Source(s) of Impairment	SOURCE UNKNOWN		
TMDL Status	Final	Name	Schuylkill River PCB TMDL

Background/Ambient Data		Data Source
pH (SU)	7.3	Application data
Temperature (°F)	80.6	Application data
Hardness (mg/L)	100 mg/l	Default
Other:		

Nearest Downstream Public Water Supply Intake	PA American Water Co Norristown District		
PWS Waters	Schuylkill River	Flow at Intake (cfs)	
PWS RMI	24.77	Distance from Outfall (mi)	10.56

Changes Since Last Permit Issuance: None

Drainage Area:
The discharge from Outfall 002 is into Pickering Creek at RMI 0.14. The drainage area upstream of the point of discharge is 38.9 mi^2 according to USGS PA StreamStats, accessible at https://streamstats.usgs.gov/ss/

Stream Flow:
The nearest USGS Streamgage is 01473500 on Schuylkill River at Norristown, PA which is approximately 10.79 miles downstream of the discharge point at RMI 25.05. Recent stream flow retrievals resulted in a Q_{7-10}, Q_{1-10}, and Q_{30-10} of 220 cfs, 182 cfs, and 247 cfs, respectively, at this gage for record period of 1929-2008. These values were obtained from the latest USGS streamflow report (1). The drainage area is reported to be 1,760 mi^2 at the gage station. The drainage area at DP is found to be 38.9 mi^2 from USGS StreamStats Version 3.0, accessed on June 17, 2019. The flow calculations are shown below:

Q_{7-10} runoff rate (yield) = 220/1760 = 0.125 cfs/mi^2.
Q_{30-10}: Q_{7-10} = 247/220 = 1.12:1
Q_{1-10}: Q_{7-10} = 182/220 = 0.83:1
Q_{7-10} = 0.125*38.9 = 4.86 cfs

(1) Stuckey, M.H., Roland, M.A., 2011, Selected streamflow statistics for streamgage locations in and near Pennsylvania: U.S. Geological Survey Scientific Investigations Report 2011-1070, 10p, 23p.

PWS Intake:
The nearest downstream public water supply is PA American Water Co Norristown District on Schuylkill River at RMI 24.77. It is approximately 10.56 miles downstream of the discharge. Due to the distance, dilution, and effluent limits the discharge is not expected to impact the water supply. The distance is calculated as below:

+ Discharge Point RMI at Pickering Creek (01508) ---------- 0.19 mile
+ RMI at Schuylkill River (00833) at confluence with Pickering Creek ---------- 35.14 mile
- RMI at PWS intake ---------- 24.77 mile

Total = 10.56 mile

Wastewater Characteristics:
A median pH of 7.48 S.U. during July through September for the reporting years 2017-2018 from daily eDMR, an average discharge temperature of 81.08^{0}F, and total hardness of 113 mg/l from application will be used for modeling, if needed.

Background/Ambient Stream Data:
The application provided some stream background data which are listed in page 2 of this report.

303d Listed Streams:
The discharge from this facility is in Pickering Creek at 0.19 RMI in state watershed 3-D which is aquatic life impaired for water/flow variability from upstream impoundment. The secondary receiving stream, Schuylkill River, has a final TMDL for PCB. The discharge from this facility will not contribute to receiving stream impairment or the watershed TMDL.

Antidegradation (93.4):
The effluent limits for this discharge have been developed to ensure that existing in-stream water uses and the level of water quality necessary to protect the existing uses are maintained and protected. No High-Quality Waters are impacted by this discharge. No Exceptional Value Waters are impacted by this discharge.

Class A Wild Trout Fisheries:
No Class A Wild Trout Fisheries are impacted by this discharge.

Treatment Facility Summary

Treatment Facility Name: Pickering Creek Water Treatment Plant

WQM Permit No.	Issuance Date
1508201	03/12/2009

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Industrial	Primary	Gravity thickener and belt filter press		2.1

Hydraulic Capacity (MGD)	Organic Capacity (lbs./day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal

Changes Since Last Permit Issuance: None

Other Comments:
Aqua owns and operates a Water Treatment Plant named Pickering Creek Water Filtration Plant (Plant) located in Schuylkill Township, Chester County which discharges under the NPDES permit number PA0013285. Aqua requests renewal of the NPDES permit for a discharge of 2.1 MGD from residual lagoons which receive filter backwash, sedimentation basin cleaning wash water, belt filter press filtrate, and discharge from thickeners decant/overflow. The long-term average discharge rate from January 1, 2013 to October 1, 2018 is 0.804 MGD as average monthly, 1.64 MGD as maximum monthly, and 7.594 MGD as daily maximum (application data). The discharge is through Outfall 002 to Pickering Creek at RMI 0.19 mile to Schuylkill River, below Rt. 23 bridge crossing. Outfalls 003, 004, 005, and 006 are for

emergency discharges of finished water and there has been no discharge from any of the outfalls during the previous five years. Outfalls 007, 008, and 009 are for discharges of groundwater due to high water table. Outfall 010 is for the discharge of washwater from the Pickering Creek traveling intake screen. There are no traveling screens in Schuylkill River or Perkiomen Creek.

The plant has two treatment trains for the treatment of potable water, namely the east and west facilities.

1. The east facility: The east facility withdraws up to 5.5 MGD of water from Perkiomen Creek and up to 6.6 MGD from the Schuylkill River. Water treatment chemicals such as carbon, chlorine, lime, and alum are added for taste and odor control. The water goes through flocculation and sedimentation, followed by filtration. Ammonia, polymer, carbon, and chlorine are added prior to filtration. Filters are washed based on time and/or pressure loss. Filter backwash water then goes to a common pit where it comingles with flow from west waster transfer pit. Polymer is added in the common pit. Flow from the common pit goes through a series of lagoons for settling the solids. The clarified supernatant then goes either to the head of the plant or is discharged to Pickering Creek through Outfall 002. Solids are collected to a sludge collection pit and sent through thickeners which also receives solids from west sludge transfer pump station. Polymer PolluTreat CL-455 is added at a rate of 33 lbs./day and sent through a belt filter press. Solids are sent to monofill and filtrate is pumped to the lagoons and sludge thickener decant/overflow is either recycled back to the head of the plant or discharged to the stream.

2. The west facility: The west facility withdraws 5.62 MGD from Pickering Creek. The raw water, which can be combined with water from the Perkiomen Creek (15.06 MGD maximum) and the Schuylkill River (13.99 MGD maximum) intake lines, goes through similar treatment as the east side of the facility. Up to 10 MGD of the flow can be directed to the sedimentation basin, followed by filtration. The remaining 24.67 MGD is rapidly mixed and goes through 2 stage flocculation and sedimentation/clarifier with plate settler from which the flow stream mixes with flow from sedimentation basin. Similar chemical treatment is used as on the east side. The waste streams (filter backwash and solids) are sent to the residual lagoons and sludge thickeners/filter press on the east side of the plant.

On an as needed basis, solids accumulated in the sedimentation basins are removed by dewatering the basins. The water from the basins are sent to a series of lagoons for settling and discharge. The discharge is infrequent and lasts a few days. Part C of the permit will include language related to the sedimentation basin cleaning operation. Since chlorine is used as a mean of disinfection of the drinking water prior to any treatment, residual chlorine may be present in the effluent. TRC_Spreadsheet will be utilized to see if the existing limits are still protective.

A process flow diagram is attached at Appendix.

Planned upgrade during the next permit cycle:

1. Replace floc basin gates
2. Upgrade lime system

Discharge, Receiving Waters and Water Supply Information

Outfall No.	003	Design Flow (MGD)	.0
Latitude	40º 7' 17.53"	Longitude	-75º 29' 33.49"
Quad Name	Valley Forge	Quad Code	1842
Wastewater Description:	Surge Relief Chamber 1		
Receiving Waters	Pickering Creek (HQ-TSF)	Stream Code	01508

Discharge, Receiving Waters and Water Supply Information

Outfall No.	004	Design Flow (MGD)	.0
Latitude	40º 7' 18.01"	Longitude	-75º 29' 32.97"
Quad Name	Valley Forge	Quad Code	1842
Wastewater Description:	Surge Relief Chamber 2		
Receiving Waters	Pickering Creek (WWF)	Stream Code	01508

Discharge, Receiving Waters and Water Supply Information

Outfall No.	005	Design Flow (MGD)	.0
Latitude	40º 7' 18.41"	Longitude	-75º 29' 32.73"
Quad Name	Valley Forge	Quad Code	1842
Wastewater Description:	Wash Water Tank		
Receiving Waters	Pickering Creek (HQ-TSF)	Stream Code	01508

Discharge, Receiving Waters and Water Supply Information

Outfall No.	006	Design Flow (MGD)	.0
Latitude	40º 7' 19.15"	Longitude	-75º 29' 31.86"
Quad Name	Valley Forge	Quad Code	1842
Wastewater Description:	High Lift Station Drain		
Receiving Waters	Pickering Creek (WWF)	Stream Code	01508

Other comments: These outfalls receive finished chlorinated water from various structures within the plant. These are emergency discharges only and there has been no discharge from any of the outfalls during the previous five years. Outfall 003 is the emergency 16” surge relief line from Chamber #1, Outfall 004 is the emergency 16” surge relief line from Chamber #2, Outfall 005 is the emergency 16” washwater tank discharge, and Outfall 006 is the emergency 6” drain line from the high lift station.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	007	Design Flow (MGD)	.0
Latitude	40º 7' 17.53"	Longitude	-75º 29' 33.49"
Quad Name	Valley Forge	Quad Code	1842
Wastewater Description:	Groundwater / Spring Discharge from Chamber #1		
Receiving Waters	Pickering Creek (HQ-TSF)	Stream Code	01508

Discharge, Receiving Waters and Water Supply Information

Outfall No.	008	Design Flow (MGD)	.0
Latitude	40º 7' 18.01"	Longitude	-75º 29' 32.97"
Quad Name	Valley Forge	Quad Code	1842
Wastewater Description:	Groundwater / Spring Discharge from Chamber #2		
Receiving Waters	Pickering Creek (WWF)	Stream Code	01508

Discharge, Receiving Waters and Water Supply Information

Outfall No.	009	Design Flow (MGD)	.0
Latitude	40º 7' 22.23"	Longitude	-75º 29' 31.81"
Quad Name	Valley Forge	Quad Code	1842
Wastewater Description:	Groundwater / Spring Discharge from Chamber #3		
Receiving Waters	Pickering Creek (WWF, MF)	Stream Code	01508

Other Comments: Due to high water table, groundwater is pumped and discharged through these outfalls. Outfall 007 is a 30” groundwater ejector line from Chamber #1, Outfall 008 is a 16” groundwater ejector line from Chamber #2, and outfall 009 is the 12” groundwater ejector line from chamber #3.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	010	Design Flow (MGD)	.001
Latitude	40º 7' 12.13"	Longitude	-75º 29' 38"
Quad Name	Valley Forge	Quad Code	1842
Wastewater Description:	Traveling screen washwater discharge		
Receiving Waters	Pickering Creek (HQ-TSF)	Stream Code	01508

Other Comments: This is the washwater discharge of untreated water from the traveling screen at the Pickering Creek intake.

Compliance History

DMR Data for Outfall 002 (from May 1, 2018 to April 30, 2019)

Parameter	APR-19	MAR-19	FEB-19	JAN-19	DEC-18	NOV-18	OCT-18	SEP-18	AUG-18	JUL-18	JUN-18	MAY-18
Flow (MGD) Average Monthly	0.93113	1.0507	1.15032	1.51288	1.18187	1.01038	0.77004	0.82136	1.07031	1.09923	1.155816	1.635687
Flow (MGD) Daily Maximum	1.19306	1.2483	1.6525	1.765543	1.47943	1.45139	0.92039	1.12257	1.21261	1.45064	1.625924	2.947294
pH (S.U.) Instantaneous Minimum	7.09	6.76	7.14	6.63	6.83	7.08	7.21	7.21	7.03	7.21	7.36	7.08
pH (S.U.) IMAX	7.56	7.51	7.9	7.51	7.46	7.64	7.71	7.68	7.86	7.86	7.76	7.67
TRC (mg/L) Average Monthly	0.02	0.002	0.005	0.003	0.01	0.005	0.02	0.02	0.05	0.02	0.01	0.006
TRC (mg/L) Instantaneous Maximum	0.05	0.05	0.05	0.05	0.08	0.05	0.1	0.2	0.2	0.1	0.1	0.05
CBOD5 (mg/L) Average Monthly	< 2.0	< 2	< 2	1	< 2	< 2	2	2	1	0.0	1	2
CBOD5 (mg/L) Daily Maximum	< 2.0	< 2	< 2	4	< 2	< 2	5.4	5.6	2.2	2.3	2.6	7.1
TSS (mg/L) Average Monthly	2	4	4	4	3	4	3	6	4	3	2	2
TSS (mg/L) Daily Maximum	3.6	4.8	5.6	7.2	4.4	4.4	4	12	4.8	7.2	2.4	2.8
TDS (mg/L) Daily Maximum					200							
Ammonia (mg/L) Daily Maximum					< 0.1							
Total Aluminum (mg/L) Average Monthly	0.3	0.4	0.4	0.6	0.4	0.3	0.3	0.4	0.3	0.4	0.3	0.2
Total Aluminum (mg/L) Daily Maximum	0.41	0.5	0.6	1.0	0.45	0.43	0.4	1.0	0.53	0.84	0.34	0.26
Total Iron (mg/L) Average Monthly	< 0.01	< 0.01	< 0.01	0.04	0.03	< 0.10	< 0.10	0.04	0.0	0.03	0.0	0.0
Total Iron (mg/L) Daily Maximum	< 0.01	< 0.01	< 0.01	0.12	0.1	< 0.10	< 0.10	0.16	0.0	0.15	0.0	0.0
Total Manganese (mg/L) Average Monthly	0.1	0.05	0.1	0.1	0.2	0.4	0.1	0.3	0.4	0.3	0.3	0.2
Total Manganese (mg/L) Daily Maximum	0.25	0.09	0.12	0.06	0.71	0.6	0.26	0.58	0.48	0.59	0.49	0.3

Other comments: No eDMR violation was noted from the review of last 12 months data.

Compliance History	
Summary of Inspections:	No inspection was conducted for this facility during the last permit term (May 1, 2014 to April 30, 2019.) A discussion with the assigned inspector for this facility indicated that the facility is well maintained and the facility notifies the Department during each sedimentation basin cleanup.

Existing Effluent Limitations and Monitoring Requirements

For Outfall 002

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) [1]		Concentrations (mg/L)				Minimum [2] Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Instant. Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	1/day	Calculation
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/week*	Grab
Total Residual Chlorine	XXX	XXX	XXX	0.5	XXX	1.0	1/week*	Grab
CBOD5	XXX	XXX	XXX	25	40	50	1/week*	8-Hr Composite
Total Suspended Solids	XXX	XXX	XXX	30	60	75	1/week*	8-Hr Composite
Total Aluminum	XXX	XXX	XXX	4.0	8.0	10.0	1/week*	8-Hr Composite
Total Iron	XXX	XXX	XXX	2.0	4.0	5.0	1/week*	8-Hr Composite
Total Manganese	XXX	XXX	XXX	1.0	2.0	2.5	1/week	8-Hr Composite
Total Manganese (Basin Cleaning)	XXX	XXX	XXX	XXX	4.0	XXX	Daily when Discharging	24-Hr Composite

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Instant. Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Total Dissolved Solids	XXX	XXX	XXX	XXX	Report	XXX	1/year	8-Hr Composite
Ammonia-Nitrogen	XXX	XXX	XXX	XXX	Report	XXX	1/year	8-Hr Composite

Existing Effluent Limitations and Monitoring Requirements

For Outfalls 003, 004, 005, and 006

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Average Monthly		Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	When Discharging	Estimate
Total Residual Chlorine	XXX	XXX	XXX	1.0	XXX	1.0	When Discharging	Grab

For Outfalls 007, 008, and 009: No limits but the following narrative criteria:

Based on the anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply (see also Additional Requirements and Footnotes):

a. This discharge shall consist solely of groundwater.

b. There shall be no discharge of floating solids or visible foam in other than trace amount.

For Outfall 010: No limits but the following narrative criteria:

Based on the anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply (see also Additional Requirements and Footnotes).

a. The materials (solids and other debris) physically or mechanically removed during backwash operations shall not be returned to surface waters. The disposal of these materials shall prevent any discharge of removed substances to the surface waters.

b. There shall be no discharge of floating solids or visible foam in other than trace amount.

Development of Effluent Limitations

Outfall No.	002	**Design Flow (MGD)**	2.1
Latitude	40º 7' 26.42"	**Longitude**	-75º 29' 30.92"

Wastewater Description: Filter backwash, sedimentation basin cleaning wash water, filter press filtrate, and thickener decant/overflow

Technology-Based Limitations

A majority of industrial wastewaters generated from this water treatment plant from Filter backwash, sedimentation basin cleaning wash water, filter press filtrate, and thickener decant/overflow. DEP's technical guidance no. 362-2183-003 addresses technology-based control requirements along with the following recommended Best Practicable Control Technology Currently Available (BPT) effluent requirements for WTP sludge and filter backwash:

Parameter	Limit (mg/l)	SBC
Suspended Solids	30	Average Monthly
	60	Daily Maximum
Iron, Total	2.0	Average Monthly
	4.0	Daily Maximum
Aluminum, Total	4.0	Average Monthly
	8.0	Daily Maximum
Manganese, Total	1.0	Average Monthly
	2.0	Daily Maximum
Flow	Monitor	Average Monthly
pH	6.0	Minimum
	9.0	Maximum
Total Residual Chlorine	0.5	Average Monthly
	1.0	Daily Maximum

Water Quality-Based Limitations

DEP's SOP no. BCW-PMT-037 recommends the average monthly flow during production or operation as a design flow in water quality modeling unless a different flow is determined to be more representative of site-specific conditions. The volume of effluent discharged from facilities such as water treatment plants is heavily depended upon the quality of source water as more backwashing is needed to maintain acceptable filter performance if the intake water quality is poor. Past five-year effluent flow data were analyzed. The average of the data was 0.8799 MGD with the 90th percentile of 1.1899 MGD and daily maximum of 7.594 MGD. The long-term average flow value of 0.8799 MGD will be used in the water quality modeling.

WQM 7.0

Since the facility injects ammonia prior to filtration, the WQM 7.0 was utilized. The following data were used in the attached computer model of the stream:

- Discharge pH 7.48 (median July-Sep, 2017-2018, daily eDMR data)
- Discharge Temperature 27°C (Application data)
- Discharge Hardness 113 mg/l (Application data)
- Stream pH 7.3 (Application data)
- Stream Temperature 27°C (Application data)
- Stream Hardness 100 mg/l (Default)

The following three nodes were used in modeling:

Node 1: Outfall 002 at Pickering Creek (01508)
Elevation: 104.51 ft (USGS TNM viewer, 06/19/2019)
Drainage Area: 38.9 mi^2 (StreamStat Version 3.0, 06/19/2019)
River Mile Index: 0.19 mile (PA DEP eMapPA)
Low Flow Yield: 0.125 cfs/mi^2
Discharge Flow: 0.88 MGD

Node 2: At the confluence with Schuylkill River (00833)
Elevation: 74.39 ft (USGS TNM 2.0 viewer, 06/19/2019)
Drainage Area: 38.91 mi^2 (StreamStat Version 3.0, 06/19/2019)
River Mile Index: 0.0 (PA DEP eMapPA)
Low Flow Yield: 0.125 cfs/mi^2
Discharge Flow: 0.00 MGD

NH_3-N
The WQM 7.0 suggested NH_3-N limit of 4.82 mg/l as average monthly and 9.64 mg/l as instantaneous maximum limit during summer to protect water quality standards. A review of eDMR data for last 5 years indicated an average NH_3-N daily maximum discharge concentration of <0.21 and maximum of 0.74 mg/l. These values are much lower than the suggested limits by WQM 7.0, therefore, it is recommended that the existing annual monitoring requirement be carried over in this renewal.

$CBOD_5$:
The WQM 7.0 model suggests a monthly average $CBOD_5$ limit of 25 mg/l which is the same as in the existing permit. Existing limits will be carried over in this renewal.

Total Residual Chlorine
Chlorine is used for source water disinfection, injected at the headworks, after flocculation/sedimentation, and after filtration in both east and west side. Since chlorine is introduced prior to flocculation/sedimentation and filtration, residual chlorine is expected to be present in the effluent discharged via Outfall 002. Accordingly, Total Residual Chlorine (TRC) effluent concentrations must be monitored and regulated per 25 Pa Code §92a.48(b). DEP's TRC_CALC worksheet was utilized to determine if existing TBELs are still appropriate under the flow of 0.88 MGD. The worksheet showed that the existing TBEL is still adequate.

Toxics
Based on the monitoring data (maximum concentrations) reported on the application, DEP utilizes Toxics Screening Analysis and PENTOXSD to (1) evaluate reasonable potential for toxic pollutants to cause or contribute to an excursion above the water quality standards and (2) develop WQBELs for those such toxic pollutants (i.e., 40 CFR § 122.44(d)(1)(i)). It is noteworthy that some of these pollutants that were reported as "non-detect", but still exceeded the criteria, were determined to be candidates for modeling because the method detection levels used to analyze those pollutants were higher than target QLs and/or the most stringent Chapter 93 criteria. The model then recommended the most stringent WQBELs for these pollutants (see Table 1).

Table 1. PENTOXSD ver. 2.0d

Pollutant	Effluent Limit, *µg/L*	Governing Criterion	Max. Daily Limit, *µg/L*	Most Stringent WQBEL, *µg/L*	Most Stringent WQBEL Criterion
Cadmium, Total	1.263	CFC	1.97	1.263	CFC
Copper, Total	42.104	AFC	65.688	42.104	AFC
Manganese, Total	4569.96	THH	7129.872	4569.96	THH

CFC: Chronic Fish Criteria, AFC: Acute Fish Criteria, THH: Threshold Human Health

Following PENTOXSD modeling, the most stringent WQBELs for each pollutant listed on Table 1 were then entered into Toxic Screening Analysis. As shown on Table 2, the analysis then recommends an appropriate action for each pollutant in the permit (i.e., No Limits/Monitoring, Establish Limits, or Monitor) based on the following logic specified in DEP's Standard Operating Procedure (SOP) (1):

Table 2. Toxic Screening Analysis Recommendation

Pollutant	Reported Value, *µg/L*	Target QL, *µg/L*	Most Stringent WQBEL, *µg/L*	Screening Recommendation
Cadmium, Total	<1	0.2	1.263	Establish Limits
Copper, Total	<40	4	42.104	Establish Limits
Manganese, Total	1300	2	4569.96	Monitor

(1) Establishing Water Quality-Based Effluent Limitations (WQBELs) and Permit Conditions for Toxic Pollutants in NPDES Permits for Existing Dischargers, SOP No. BCW-PMT-037, revised April 24, 2019

1. In general, establish limits in the draft permit where the maximum reported concentration equals or exceeds 50% of the WQBEL (i.e., RP is demonstrated). Use the average monthly and maximum daily limits for the permit as recommended by PENTOXSD (or, if appropriate, use a multiplier of 2 times the average monthly limit for the maximum daily limit). Establish an instantaneous maximum (IMAX) limit at 2.5 times the average monthly limit.

NOTE 7 – The discharge concentration in PENTOXSD may need to be increased in order to determine the appropriate WQBEL if PENTOXSD determines that the discharge concentration is the limit.

2. For non-conservative pollutants, in general, establish monitoring requirements where the maximum reported concentration is between 25% - 50% of the WQBEL.

3. For conservative pollutants, in general, establish monitoring requirements where the maximum reported concentration is between 10% - 50% of the WQBEL.

Total Manganese has a numeric limit of 1.0 mg/l as Average Monthly, 2.0 mg/l as Daily Maximum, and 2.5 mg/l as IMAX limit in current permit for discharges not related to basin cleaning operations. During the basin cleaning operations, the Daily Maximum limit becomes 4.0 mg/l. Since the limits are based on BPT, they will be carried over in this renewal without any changes. The Target QLs for Total Cadmium and Total Copper are lower than the reported QL used by the laboratory analysis. Since for both of the parameters, the reported maximum sample result came as non-detect at a QL higher than TQL, it is still unclear if these two metals are actually pollutants of concern. Therefore, the permittee is requested to submit sample results for at least three (3) samples for both metals using DEP's TQL. On August 13, 2019, the permittee submitted the laboratory analysis results via email as presented below:

Sample date	Parameter	Result (µg/l)	TQL (µg/l)
July 16, 2019	Cadmium	<0.2	0.2
	Copper	2	1
July 23, 2019	Cadmium	<0.2	0.2
	Copper	2	1
July 30, 2019	Cadmium	<0.2	0.2
	Copper	2	1

The maximum values for each parameter was re-entered into the screening analysis. As recommended by the Toxic Screening Analysis, none of the parameters are candidate for PENTOXSD modeling. The screening recommendation is attached in the Appendix. No effluent limitations/monitoring requirement will be applied for Total Cadmium or Total Copper be applied in this renewal.

Additional Considerations

Flow Monitoring

Flow monitoring will remain in the permit and is required by 40 CFR § 122.44(i)(1)(ii).

Total Dissolved Solids (TDS)

TDS and its associated solids including Bromide, Chloride, and Sulfate have become statewide pollutants of concern. The requirement to monitor these pollutants must be considered under the criteria specified in 25 Pa. Code § 95.10 and the following recommendation from SOP (BCW-PMT-032):

1. Where the concentration of TDS in the discharge exceeds 1,000 mg/L, or the net TDS load from a discharge exceeds 20,000 lbs./day, and the discharge flow exceeds 0.1 MGD, establish a monitoring requirement for TDS, sulfate, chloride, and bromide. For discharges of 0.1 MGD or less establish a monitoring requirement for TDS, sulfate, chloride, and bromide if the concentration of TDS in the discharge exceeds 5,000 mg/L.

2. Where the concentration of bromide in a discharge exceeds 1 mg/L and the discharge flow exceeds 0.1 MGD or where concentration of bromide exceeds 10 mg/L for discharges of 0.1 MGD or less, establish a monitoring requirement for bromide.

3. Where the concentration of 1,4-dioxane (CAS 123-91-1) in a discharge exceeds 10 µg/L and the discharge flow exceeds 0.1 MGD or where the concentration exceeds 100 µg/L for a discharge of 0.1 MGD or less, establish a monitoring requirement for 1,4-dioxane.

The application reported the maximum effluent TDS concentration of 316 mg/L, average concentration of 213 mg/l, mass load of 2,193 lbs./day, Bromide of < 2.5 mg/L. The concentration value is less than criteria. Existing annual monitoring

requirement for TDS will be adequate to check compliance with DRBC's basin-wide effluent limit of 1,000 mg/l. The maximum Bromide concentration is higher than the criteria, however, the QL used for analysis was higher than TQL and all three results were reported as non-detect. Therefore, the permittee was asked to conduct additional tests for Bromide. The permittee submitted additional three sample results for Bromide via email on August 13, 2019. All three re-sample results reported a value of <0.2 mg/l, which is less than the criteria. Therefore, no limits or monitoring requirements will be applied for Bromide in this renewal. The permit application form for Minor IW facilities (MIIW1) doesn't require to sample for 1,4-dioxane. In absence of any data, no RP analysis was performed for 1,4-dioxane.

Total Phosphorus:
The maximum reported Total Phosphorus was <6.3 lbs. which is below threshold value of 25 lbs./day (per BCW-PMT-032), therefore, no monitoring or limits requirement is applicable during this renewal.

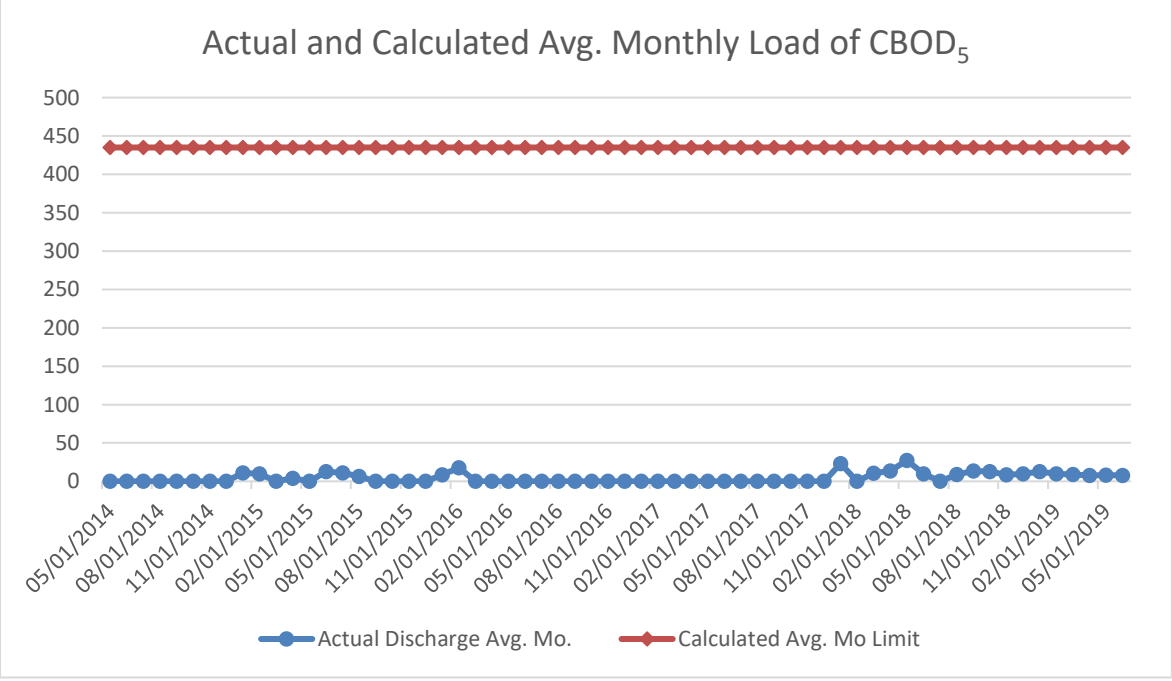
Total Nitrogen:
The maximum reported Total Nitrogen (calculated as sum of TKN and Nitrate-Nitrite-Nitrogen) was <34 lbs./day which is less than the threshold value as specified in BCW-PMT-032. Therefore, no TN limit or monitoring requirement will be added in this permit term.

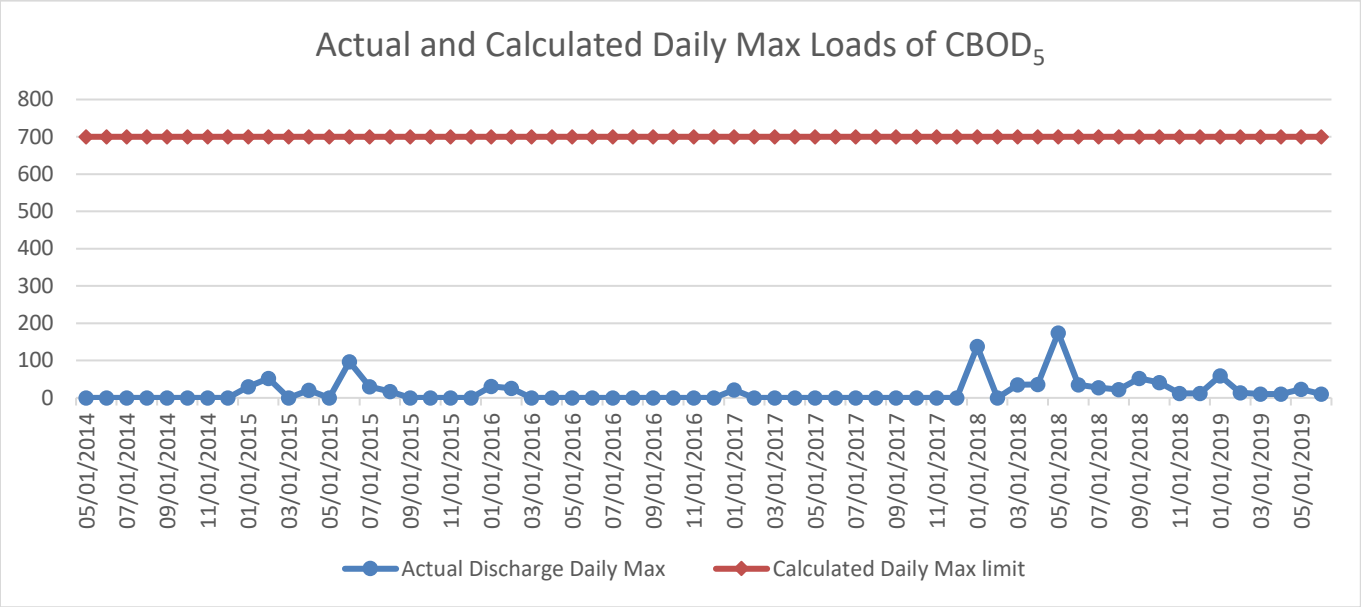
Mass Loading Effluent Limitations
The current permit requires no monitoring of mass loadings for those pollutants that have technology-based concentration limits. DEP's technical guidance no. 362-0400-001 table 5-2 recommends mass loading effluent limits for those pollutants that have water quality-based limits and monitoring requirements for those that have technology-based concentration limits. Accordingly, mass loading monitoring requirements are recommended for Total Suspended Solids, Total Iron, Total Manganese, and Total Aluminum. The mass based limits for $CBOD_5$ were calculated as following:

Average monthly load = 25 mg/l * 8.34 * 2.1 MGD = 437.85 lbs./day, rounded down* to 435 lbs./day
Daily Maximum load = 40 mg/l * 8.34 * 2.1 MGD = 700.56 lbs./day, rounded down* to 700 lbs./day.

* the values were rounded down per 362-0400-001

The monthly discharge data was analyzed for CBOD5 from May 1, 2014 through June 30, 2019. The concentration data were converted to mass loading for each month for both average monthly load and daily maximum load as presented in below graphs. As can be seen from the graphs, both the average monthly and daily maximum actual discharges are much lower compared to calculated loads. Therefore, it is the opinion of the Department that mass based reporting in place of limits will be applied for $CBOD_5$.





Anti-Degradation requirements
The effluent limits for this discharge have been developed to ensure the existing in-stream uses and the level of water quality necessary to protect the existing uses are maintained and protected. No High-Quality stream is impacted by this discharge. No Exceptional-Value stream is impacted by this discharge.

Anti-Backsliding Requirements
Unless stated otherwise in this fact sheet, all proposed effluent limits have developed for this permit renewal are at least as stringent as effluent limits developed for the previous permit renewal. Therefore, anti-backsliding provision is not applicable.

Sedimentation Basin Cleaning:
The Part C of the existing permit includes a special condition regarding the basin cleaning notification and sampling requirements. An additional stage titled “Special Effluent Gross” is created in WMS for the infrequent basin cleaning discharge. All parameters for “Final Effluent” stage are applicable to this stage but the sampling frequency is “daily when discharging” compared to “1/week” in final effluent stage. The existing permit has a relaxed Total Manganese limit of 4.0 mg/l as daily maximum which is contradictory with the BPT requirements. Therefore, it is recommended that this limit will be changed to 2.0 mg/l as daily maximum. Part C of the existing permit has 2/hr. turbidity reporting requirement which is translated to Part A of the permit for Special Effluent Gross stage.

Sampling Type:
The existing permit has 8-hr composite sampling for outfall 002 for final effluent stage. The Table 6-4 of the Permit Writer’s Manual (362-0400-001) requires 24-hr composite sampling. The permittee is already performing 24-hr composite sampling during sedimentation basin cleaning operation. It is recommended that the sampling type for final effluent be updated to 24-hr composite sampling to be in compliance with the manual.

Development of Effluent Limitations

Outfall No. 003 **Design Flow (MGD)** 0.0
Latitude 40º 7' 17.53" **Longitude** -75º 29' 33.49"
Wastewater Description: Surge Relief Chamber 1

Development of Effluent Limitations

Outfall No. 004 **Design Flow (MGD)** 0.0
Latitude 40º 7' 18.01" **Longitude** -75º 29' 32.97"
Wastewater Description: Surge Relief Chamber 2

Development of Effluent Limitations

Outfall No. 005 **Design Flow (MGD)** 0.0
Latitude 40º 7' 18.41" **Longitude** -75º 29' 32.73"
Wastewater Description: Wash Water Tank

Development of Effluent Limitations

Outfall No. 006 **Design Flow (MGD)** 0.0
Latitude 40º 7' 19.15" **Longitude** -75º 29' 31.86"
Wastewater Description: High Lift Station Drain

Existing permit has average monthly and daily maximum flow monitoring requirements for these outfalls. It also has TRC average monthly and IMAX limit of 1.0 mg/l which will be carried over in this renewal.

Development of Effluent Limitations

Outfall No. 007 **Design Flow (MGD)** 0.0
Latitude 40º 7' 17.53" **Longitude** -75º 29' 33.49"
Wastewater Description: Groundwater / Spring Discharge from Chamber #1

Development of Effluent Limitations

Outfall No. 008 **Design Flow (MGD)** 0.0
Latitude 40º 7' 18.01" **Longitude** -75º 29' 32.97"
Wastewater Description: Groundwater / Spring Discharge from Chamber #2

Development of Effluent Limitations

Outfall No. 009 **Design Flow (MGD)** 0.0
Latitude 40º 7' 22.23" **Longitude** -75º 29' 31.81"
Wastewater Description: Groundwater / Spring Discharge from Chamber #3

No numeric limits apply to these outfalls. Narrative criteria will be added in the permit.

Development of Effluent Limitations

Outfall No. 010 **Design Flow (MGD)** 0.0
Latitude 40º 7' 12.13" **Longitude** -75º 29' 38"
Wastewater Description: Traveling screen washwater discharge

No numeric limits apply to this outfall. Narrative criteria will be added in the permit.

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 002, 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	Calculation
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/week	Grab
Total Residual Chlorine (TRC)	XXX	XXX	XXX	0.5	XXX	1.0	1/week	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5)	Report	Report	XXX	25.0	40.0	50	1/week	24-Hr Composite
Total Suspended Solids	Report	Report	XXX	30.0	60.0	75	1/week	24-Hr Composite
Total Dissolved Solids	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	24-Hr Composite
Ammonia-Nitrogen	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	24-Hr Composite
Aluminum, Total	Report	Report	XXX	4.0	8.0	10	1/week	24-Hr Composite
Iron, Total	Report	Report	XXX	2.0	4.0	5	1/week	24-Hr Composite
Manganese, Total	Report	Report	XXX	1.0	2.0	2.5	1/week	24-Hr Composite

Compliance Sampling Location: At Outfall 002

Other Comments: 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 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 002, 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		
pH (S.U.) Special Effluent Gross	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	Daily when Discharging	Grab
Total Residual Chlorine (TRC) Special Effluent Gross	XXX	XXX	XXX	0.5	XXX	1.0	Daily when Discharging	Grab
Turbidity (NTU)	XXX	XXX	XXX	100	100	XXX	See permit	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5) Special Effluent Gross	Report	Report	XXX	25.0	40.0	50	Daily when Discharging	24-Hr Composite
Total Suspended Solids Special Effluent Gross	Report	Report	XXX	30.0	60.0	75	Daily when Discharging	24-Hr Composite
Aluminum, Total Special Effluent Gross	Report	Report	XXX	4.0	8.0	10	Daily when Discharging	24-Hr Composite
Iron, Total Special Effluent Gross	Report	Report	XXX	2.0	4.0	5	Daily when Discharging	24-Hr Composite
Manganese, Total Special Effluent Gross	Report	Report	XXX	XXX	2.0	XXX	Daily when Discharging	24-Hr Composite

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

at Outfall 002 for Special Effluent Gross

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 003, 004, 005, 006 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	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Daily when Discharging	Estimate
TRC	XXX	XXX	XXX	1.0	XXX	1.0	Daily when Discharging	Grab

Compliance Sampling Location: At Outfalls 003, 004, 005, and 006

Other Comments: 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 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 007, 008, 009 Effective Period: Permit Effective Date through Permit Expiration Date.

No numeric limits are proposed. Narrative conditions for these outfalls will be placed in the permit, which will read:

1. The permittee is authorized to discharge during the period from Permit Effective Date to Permit Expiration Date
2. Based on the anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply:
   a. This discharge shall consist solely of groundwater
   b. There shall be no discharge of floating solids or visible foam in other than trace amount.

Compliance Sampling Location(s): Not monitored

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 010 Effective Period: Permit Effective Date through Permit Expiration Date.

No numeric limits are proposed. Narrative conditions for these outfalls will be placed in the permit, which will read:

1. The permittee is authorized to discharge during the period from Permit Effective Date to Permit Expiration Date
2. Based on the anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply:
   a. The materials (solids and other debris) physically or mechanically removed during backwash operations shall not be returned to surface waters. The disposal of these materials shall prevent any discharge of removed substances to the surface waters.
   b. There shall be no discharge of floating solids or visible foam in other than trace amount.

Compliance Sampling Location(s): Not monitored

Appendix

Tools and References Used to Develop Permit	
☒	WQM for Windows Model (see Attachment)
☒	PENTOXSD for Windows Model (see Attachment)
☒	TRC Model Spreadsheet (see Attachment)
☐	Temperature Model Spreadsheet (see Attachment)
☒	Toxics Screening Analysis Spreadsheet (see Attachment)
☐	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.
☒	SOP: BCW-PMT-032
☐	Other: