Pennsylvania Department of Environmental Protection

Northcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0228818**
Facility Type	**Industrial**	APS ID	**1093294**
Major / Minor	**Major**	Authorization ID	**1448183**

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

Applicant and Facility Information

Applicant Name	**First Quality Tissue LLC**	Facility Name	**First Quality Tissue LLC**
Applicant Address	904 Woods Avenue	Facility Address	904 Woods Avenue
	Lock Haven, PA 17745-3348		Lock Haven, PA 17745-3348
Applicant Contact	James Vaiana	Facility Contact	James Vaiana
Applicant Phone	(570) 893-7242	Facility Phone	(570) 893-7242
Client ID	209667	Site ID	269267
SIC Code	2621	Municipality	Castanea Township
SIC Description	Manufacturing - Paper Mills	County	Clinton
Date Application Received	July 21, 2023	EPA Waived?	No
Date Application Accepted	August 4, 2023	If No, Reason	Major Facility

Purpose of Application: Application for the renewal of an existing individual industrial waste 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.

First Quality Tissue, LLC (FQT) is a paper towel and tissue manufacturing facility located in Castanea Township, Clinton County. FQT is proposing the renewal and amendment of the existing National Pollution Discharge Elimination System (NPDES) permit which authorizes the discharge from the onsite Industrial Wastewater Treatment Facility (IWTF).

Approve	Deny	Signatures	Date
X		Jonathan P. Peterman / Project Manager	January 31, 2025
X		Nicholas W. Hartranft, P.E. / Environmental Engineer Manager	February 4, 2025

Discharge, Receiving Waters and Water Supply Information

Outfall No.	003	Design Flow (MGD)	7.4
Latitude	41º 7' 23.40"	Longitude	-77º 26' 49.30"
Quad Name	Mill Hall	Quad Code	1026
Wastewater Description:	IW Process Effluent with ELG		
Receiving Waters	Bald Eagle Creek (WWF)	Stream Code	22412
NHD Com ID	67175040	RMI	3.00
Drainage Area	767	Yield (cfs/mi^2)	0.269
Q_{7-10} Flow (cfs)	206	Q_{7-10} Basis	USGS Gage No. 01548005
Elevation (ft)	545	Slope (ft/ft)	N/A
Watershed No.	9-C	Chapter 93 Class.	WWF
Existing Use	None	Existing Use Qualifier	N/A
Exceptions to Use	None	Exceptions to Criteria	None
Assessment Status	Not Assessed		
Cause(s) of Impairment			
Source(s) of Impairment			
TMDL Status		Name	
Nearest Downstream Public Water Supply Intake	PA-American Water Company at Milton, PA		
PWS Waters	West Branch Susquehanna River	Flow at Intake (cfs)	679.73
PWS RMI	10.66	Distance from Outfall (mi)	60.0

Changes Since Last Permit Issuance: None.

Other Comments: A comparative stream analysis was conducted using an upstream gage (01548005) to determine the Q_{7-10} at the receiving stream. 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*. The Q_{7-10} calculations, which are attached in Appendix A, indicate that the Q_{7-10} at Bald Eagle Creek is 206 cfs.

Treatment Facility Summary

Treatment Facility Name: First Quality IWT

WQM Permit No.	Issuance Date	Comments
1813201 A-1	5/28/19	Addition of Sludge Tank, Screw Presses (2) and Filtrate Tank. Increase to 7.4 MGD.
1813201	6/10/13	Equalization, Chemical Addition, Mixing, Clarification, Sludge Thickening, Sludge Filter Press
1804201	8/27/04	
1803201	7/31/2003	

Water is withdrawn from Bald Eagle Creek via a Cooling Water Intake Structure (CWIS). The intake is comprised of three concrete openings each with a dimension of 9 feet by 10 feet. The intake structure houses a bar screen with ¼ inch bars set ¾ inch apart. The maximum velocity through this screen is 0.08 ft/sec. The long-term average water withdrawal is approximately 7.4 MGD for the paper-making process.

The intake water is then filtered by gravity through sand filter bed filters. This backwash from these filters is reintroduced to the intake water. Water is used in the production of tissue paper and paper towels for process dilution, process clean-up, process heating, process cooling and air pollution control.

The tissue manufacturing operation has process lines designed to make paper towels at a rate of approximately 23,720 dry tons per month. The annual average production over the last 5 years was 173,734 tons (14,477 tons per month) and the anticipated annual production is 268,897 tons (22,408 tons per month). Wastewater from the papermaking process is treated by an on-site IWTF. Process wastewater is conveyed, via lift station, to a circular gravity settling primary clarifier. The settled solids are transferred to a sludge storage tank and then dewatered in two screw presses. Treated water flows by gravity from the clarifier to the (approximately) 70-million gallon aerated sedimentation basin (ASB). Long residence times within the ASB provide for the cooling of the wastewater effluent prior to discharge through Outfall 003 to Bald Eagle Creek. Sludge is dewatered with a filter press.

See Appendix D for facility map and schematic.

Existing Effluent Limitations and Monitoring Requirements

Existing Limits – Stormwater Outfalls 001, 002, and 004

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)					
	Average Monthly	Average Weekly	Minimum	Semi-Annual Average	Maximum	Instant. Maximum	Minimum (2) Measurement Frequency	Required Sample Type
pH (S.U.)	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab
Chemical Oxygen Demand (COD)	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab
Total Suspended Solids	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab

*The existing monitoring requirements for these stormwater outfalls are not based on a design flow.

Existing Limits – Outfall 003

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	Continuous	Metered
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
Dissolved Oxygen	XXX	XXX	Report Inst Min	XXX	XXX	XXX	1/day	Grab
Biochemical Oxygen Demand (BOD5)	4010	8020	XXX	65.0	130.0	160	1/week	24-Hr Composite
Total Suspended Solids	3270	6540	XXX	53.0	105.0	130	1/week	24-Hr Composite
Aluminum, Total	35.02	70.0	XXX	0.92	1.84	2.3	1/week	24-Hr Composite
Iron, Total	20.34	40.69	XXX	0.53	1.07	1.33	1/week	24-Hr Composite
Manganese, Total	5.13	10.27	XXX	0.13	0.27	0.33	1/week	24-Hr Composite

*The existing effluent limits for Outfall 003 were based on a design flow of 7.4 MGD.

Development of Effluent Limitations

Outfall No. 003 **Design Flow (MGD)** 7.4
Latitude 41º 7' 1.00" **Longitude** -77º 26' 50.00"
Wastewater Description: IW Process Effluent without ELG

Technology-Based Limitations

The following effluent standards for industrial waste will 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
pH	6-9 at all times	-		§133.102(c)	§95.2

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 CBOD5, ammonia-N and dissolved oxygen, the Department utilizes the WQM 7.0 v1.0b model and in order to determine limitations for toxics, the Department utilizes the Toxics Management Spreadsheet (TMS).

WQM 7.0 for Windows, Version 1.0b, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen
The model was run using the Q7-10 stream flow, background water quality, average annual design flow, and other discharge characteristics. The effluent limit for BOD_5 (65 mg/l) and (3.0 mg/l) were used as inputs for the modeling. The DO minimum daily average criterion from §93.7 (5.0 mg/L for WWF) was used for the in-stream objective for the model. The summary of the output is as follows:

Parameter	Effluent Limit		
	30 Day Average	Maximum	Minimum
CBOD5	65	N/A	N/A
Ammonia-N	25	6.0	N/A
Dissolved Oxygen	N/A	N/A	3

The model did not recommend water-quality based effluent limitations with regards to BOD5 and dissolved oxygen. The Department assumes that the BOD is composed entirely of CBOD for the purposes of modeling. The tested ammonia-nitrogen concentrations in the effluent are significantly lower than these values and no monitoring is required for this parameter. Refer to the Appendix B for the previous WQM 7.0 inputs and results. The existing effluent limits will remain.

Toxics Management Spreadsheet (TMS)
This model 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.

Sampling for pollutant Groups was submitted with the application. This sampling information and the receiving stream information was entered into the Toxics Management Spreadsheet. The modeling results indicated the following limits and monitoring requirements are needed. The monitoring requirements and effluent limits provided in the table below are proposed by the model. These parameters all had non-detect effluent concentrations. However, 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. Therefore, 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. It is anticipated that the permittee is not discharging these parameters in concentrations above the QL concentration. The permittee will be given the opportunity to resample at the specified QL's and the results will be re-analyzed before the limits are finalized and placed in Part A of the permit. Refer to Appendix C for the Toxics Management Spreadsheet.

	Mass Limits		*Concentration Limits*						
Pollutants	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units	Governing WQBEL	WQBEL Basis	Comments
Total Cadmium	Report	Report	Report	Report	Report	µg/L	3.21	CFC	Discharge Conc > 10% WQBEL (no RP)
Total Silver	Report	Report	Report	Report	Report	µg/L	6.23	AFC	Discharge Conc > 10% WQBEL (no RP)
Vinyl Chloride	0.076	0.12	1.24	1.93	3.09	µg/L	1.24	CRL	Discharge Conc ≥ 50% WQBEL (RP)
Hexachlorobutadiene	0.038	0.06	0.62	0.97	1.55	µg/L	0.62	CRL	Discharge Conc ≥ 50% WQBEL (RP)
1,2,4-Trichlorobenzene	0.051	0.08	0.83	1.3	2.08	µg/L	0.83	THH	Discharge Conc ≥ 50% WQBEL (RP)
2,3,7,8-TCDD	1.91E-08	2.98E-08	0.0003	0.0005	0.0008	ng/L	0.0003	CRL	Discharge Conc ≥ 50% WQBEL (RP)

Comments: None.

Best Professional Judgement (BPJ) Limitations
Comments: None.
Additional Considerations
None.

Effluent Limit Guidelines (ELGs)

Effluent Limit Guidelines (ELGs) are national standards for industrial wastewater discharges to surface waters and publicly owned treatment works (POTWs). The Environmental Protection Agency (EPA) issues Effluent Guidelines for certain categories of existing sources and new sources under Title III of the Clean Water Act (CWA). The standards are technology-based and they are not based on risk or impacts upon receiving waters. The applicable ELGs for FQT are found in 40 CFR § 430; the Pulp, Paper and Paperboard Point Source Category.

Regulatory Sub-Category

The relevant sub-category is *Subpart L – Tissue, Filter, Non-Woven and Paperboard from Purchased Pulp Subcategory*. According to 40 CFR § 430.120, the provisions of this subpart are applicable to discharges resulting from three different

production facility types. This facility is considered a Non-Integrated Mill where tissue papers are produced from purchased pulp.

Since FQT is an existing direct discharging facility, it is subject to the most stringent of the following:

1. Best Practicable Control Technology Currently Available (BPT),
2. Best Conventional Pollutant Control Technology (BCT) and
3. Best Available Technology Economically Available (BAT).

40 CFR § 430.122 defines effluent limitations representing the degree of effluent reduction attainable by the application of the *Best Practicable Control Currently Available* (BPT). Excerpt from EPA's ELGs below:

SUBPART L

[BPT EFFLUENT LIMITATIONS FOR NON-INTEGRATED MILLS WHERE TISSUE PAPERS ARE PRODUCED FROM PURCHASED PULP]

Pollutant or pollutant property	Kg/kkg (or pounds per 1,000 lb) of product		
	Continuous dischargers		Non-continuous dischargers (annual average)
	Maximum for any 1 day	Average of daily values for 30 consecutive days	
BOD5	11.4	6.25	3.49
TSS	10.25	5.0	2.84
pH	[1]	[1]	[1]

[1] *Within the range of 5.0 to 9.0 at all times.*

40 CFR § 430.123 defines effluent limits representing the degree of effluent reduction attainable by the application of *Best Conventional Pollutant Control Technology* (BCT) and indicates that BCT is the same as BPT. Excerpt from EPA's ELGs below:

§ 430.123 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in 40 CFR 401.16) in § 430.122 of this subpart for the best practicable control technology currently available (BPT).

40 CFR § 430.124 defines effluent limitations representing the degree of effluent reduction attainable by the application of the *Best Available Technology Economically Achievable (BAT).* Excerpts from EPA's ELGs below:

SUBPART L

[BAT EFFLUENT LIMITATIONS FOR NON-INTEGRATED MILLS WHERE TISSUE PAPERS ARE PRODUCED FROM PURCHASED PULP]

Pollutant or pollutant property	Maximum for any 1 day	
	Kg/kkg (or pounds per 1,000 lb) of product	Milligrams/liter
Pentachlorophenol	0.0028	(0.029)(22.9)/y
Trichlorophenol	0.00096	(0.010)(22.9)/y
y = wastewater discharged in kgal per ton of product.		

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

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart where chlorophenolic-containing biocides are used must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT). Non-continuous dischargers shall not be subject to the maximum day mass limitations in kg/kkg (lb/1000 lb) but shall be subject to concentration limitations. Concentration limitations are only applicable to non-continuous dischargers. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides:

In an email dated July 17, 2018, the permittee has certified that FQT will not use chlorophenolic biocides in their paper-making process. Because of this, in accordance with 40 CFR § 430.124, FQT will not be subject to the ELGs contained therein.

Production Data

Parameter	Production Years				
	2018	2019	2020	2021	2022
Total Annual Production (tons)	130,716	132,653	184,817	206,933	213,553
Maximum Monthly Production (tons)	11,635	12,071	16,736	19,175	18,886
Month of Maximum Production	July	May	December	January	December
Average Annual Production (tons/day)	XXX	XXX	XXX	XXX	XXX
Average Production Hours/Day	21	21	22	23	22
Average Production Days/Month	27	26	28	29	28

The average production for the past five-year period is listed below:

Parameter	5 Year Average
Total Annual Production (tons)	173,734
Maximum Monthly Production (tons)	19,175
Average Annual Production (tons/day)	14,477
Average Production Hours/Day	22
Average Production Days/Month	28

Effluent limitations will be calculated with annual average values of 14,477 dry tons per month, 173,734 tons per year and a wastewater flow of 7.4 MGD. These are the average annual production numbers for FQT listed in the application.

Dividing the projected *Monthly Production* (14,477 tons) by the *Average Production Days Per Month* (28) yields 517.06 *Tons Production Per Day*. Converting to pounds calculates to 1,034,131 *Pounds Per Day* which is equivalent to 1,034.13 *1,000-Pounds Product Per Day*. This number is multiplied by the values below to calculate the ELG technology-based effluent limits (TBELs). As a continuous discharger, the non-continuous discharger regulations do not apply to FQT.

40 CFR § 430.122 (pounds per 1,000 pounds of product)	Maximum for any 1 Day		Average of Daily Values for 30 Consecutive Days	
Regulated Parameter	ELG Multiplier	Limit	ELG Multiplier	Limit
BOD_5	*11.40*	**11,789.09**	*6.25*	**6,463.32**
TSS	*10.25*	**10,599.84**	*5.00*	**5,170.66**

The equivalent concentrations at a discharge flow of 7.4 MGD are as follows:

Average of Daily Values for 30 Consecutive Days	
Regulated Parameter	**Limit (mg/L)**
BOD_5	104.28*
TSS	83.78*

*Note: These values are greater than the existing effluent limits.

TMDL Impairment

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

FQT: First Quality Tissue, LLC

First Quality Tissue, LLC (NPDES PA0228818) has one outfall (003) in the West Branch Watershed. This outfall has effluent limits for total iron, total aluminum, and total manganese. The following table (D179) shows the WLA for this discharge.

Table D1179. WLA at First Quality Tissue			
Parameter			
Outfall 001	***Monthly Average Conc. (mg/L)***	***Design Flow (MGD)***	***Allowable Load (lbs/day)***
Fe	.53	4.56	20.34
Mn	.13	4.56	5.14
Al	.92	4.56	35.02

The effluent limits for these metals parameters were calculated in 2012. At that time the wastewater flow was 4.56 MGD and these loads were included in the TMDL. The following values cannot be exceeded, despite the increase in wastewater flow or loading at FQT. The existing limits will remain.

Chesapeake Bay Requirements

Background

The Chesapeake Bay Total Maximum Daily Load (TMDL) was prompted by insufficient progress and continued poor water quality in the Chesapeake Bay and its tidal tributaries. This TMDL, required by the Clean Water Act, identifies the necessary pollution reductions of nitrogen, phosphorus and sediment across Delaware, Maryland, New York, Virginia, West Virginia, District of Columbia and Pennsylvania. It also sets pollution limits necessary to meet applicable water quality standards in the Bay, tidal rivers and embayments.

In order to address the TMDL, DEP has developed its phased TMDL implementation plans in 2004 (i.e. Chesapeake Bay TMDL Strategy), 2011 (Chesapeake Bay Watershed Implementation Plan Phase I), and 2012 (Chesapeake Bay Watershed Implementation Plan Phase II). In 2019, DEP finalized Pennsylvania's Chesapeake Bay Watershed Implementation Plan Phase 3 (i.e., Phase 3 WIP). This Phase 3 WIP to ensure that all practices and controls be in place by 2025 to achieve the nutrient and sediment

Requirements

The initial NPDES permit for this facility was issued in 2005 and classified this facility's discharge 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. No effluent limits were assigned at this time, but nutrient monitoring was required. The 2018 fact sheet indicated that the facility is discharging TN and TP above Chesapeake Bay TMDL nutrient loading thresholds for non-significant dischargers listed above. Additionally, FQT was proposing an increase in production and discharge at that time from 4.56 MGD to 7.4 MGD. According to the Phase III WIP, non-significant IW facilities that propose expansion or production increases and as a result will discharge at least 75 lbs/day TN or 25 lbs/day TP (on an annual average basis), will be classified as Significant IW dischargers and receive Cap Loads in their permits based on existing performance (existing TN/TP concentrations at current average annual flow). In order to determine if FQT is now considered a significant IW, the Department required reporting of the nutrient mass load in both the intake and the effluent over the previous permit term. These results, which are attached in Appendix E, indicated that the facility is discharging TN & TP in excess of 75 lbs/day of TN or 25 lbs/day of TP.

Effluent Net Data
75 lbs/day * 365 days/year = 27,375 lb/year TN. Average annual Effluent Net TN = 27,735 lb/year.
25 lbs/day * 365 days/year = 9,125 lb/year TP. Average annual Effluent Net TP = 15,993 lb/year.

Given that the facility is over these thresholds, they will now be classified as a significant IW discharger and cap loads will be calculated and applied to the permit. The intake data collected over the previous permit term will allow the Department to subtract the influence of the intake mass load from the effluent mass load to determine the net effluent cap loads. While the cap loads will be transferred from the non-significant aggregate reserve, the expansion of nutrient load from the production expansion will not receive additional cap load allowances from the aggregate reserve.

It is to be noted that at the onset of the Department's Chesapeake Bay program, FQT reported annual mass loadings of 66,937 pounds per year TN (approximately 183.39 pounds per day) and 16,476 pounds per year TP (approximately 45.14 pounds per day). These are baseline effluent loads that will be used to determine the cap loads. All of the influent data is attached in Appendix E. The average concentrations of the influent are 1.91 mg/L of TN and 0.10 mg/l of TP. For reference, the Department's Water Quality Network (WQN) has a downstream sampling location not far from the outfall. The average concentrations of the WQN (21PA_WQX-WQN0445) are 1.407 mg/L of TN and 0.038 mg/l of TP. The influent data provided from previous permit term seems appropriate and will be utilized in lieu of the WQN data. The associated mass-based intake loads (lbs/day) were based on the formula: design flow (average annual before increase) (MGD) x concentration limit (mg/L) at design flow x conversion factor (8.34).

Influent Load Calculations
1.91 mg/L x 4.56 MGD x 8.34 = 72.88 lbs/day x 365 days/year = 26,601 lbs/year Influent TN
0.10 mg/L x 4.56 MGD x 8.34 = 3.96 lbs/day x 365 days/year = 1,444 lbs/year Influent TP

Then the cap loads are calculated as follows:

Cap Load Calculations

66,937 lbs/year - 26,601 lbs/year = 40,336 lbs/year Net TN
16,476 lbs/year - 1,444 lbs/year = 15,032 lbs/year Net TP

These net limits will be applied to the permit. Additionally, the Chesapeake Bay language at Part C I of the permit has been revised to reflect the revised WIP.

Proposed Limits - Outfall 003, 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
	Monthly	Annual	Monthly	Monthly Average	Maximum	Instant. Maximum		
Ammonia--N	Report	Report	XXX	Report	XXX	XXX	2/week	24-Hr Composite
Kjeldahl--N	Report	XXX	XXX	Report	XXX	XXX	2/week	24-Hr Composite
Nitrate-Nitrite as N	Report	XXX	XXX	Report	XXX	XXX	2/week	24-Hr Composite
Total Nitrogen	Report	Report	XXX	Report	XXX	XXX	1/month	Calculation
Total Nitrogen INTAKE	Report	XXX	XXX	Report	XXX	XXX	2/week	24-Hr Composite
Total Phosphorus	Report	Report	XXX	Report	XXX	XXX	2/week	24-Hr Composite
Total Phosphorus INTAKE	Report	XXX	XXX	Report	XXX	XXX	2/week	24-Hr Composite
Net Total Nitrogen	Report	**40,336**	XXX	XXX	XXX	XXX	1/month	Calculation
Net Total Phosphorus	Report	**15,032**	XXX	XXX	XXX	XXX	1/month	Calculation

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.

Chapter 316(A)

In accordance with 25 Pa Code §96.6(c), facilities associated with heated wastewater discharges must achieve compliance with the temperature water quality standards specified in 25 Pa Code §93.7 unless alternative effluent limitations for the control of the thermal component of such discharges are considered in accordance with section 316(a) of the CWA in order to necessarily prevent potential adverse impacts on the receiving water. The Department uses the Thermal Discharge Limit Calculation Spreadsheet (v0.5 1/1/04) to calculate the appropriate thermal discharge limits for an NPDES permit. The spreadsheet was run utilizing the Q7-10 flow of the receiving stream, stream classification, discharge case 1 scenario, and default values to determine the assimilative capacity of the stream on a monthly basis. The spreadsheet indicated that based on the facilities discharge volume at a temperature of 110 ºF, the stream has adequate assimilative capacity throughout the year. (Note: The spreadsheet caps the permit limits (expressed as ºF) at 110ºF.) This facility uses submerged/diffused outfalls and the effluent is not at any point accessible to the general public. The facility has a 70-million gallon aerated sedimentation basin (ASB). Long residence times within the ASB (approximately 9.4 days at design flows) provide for the cooling of the wastewater effluent prior to discharge through Outfall 003. It is expected that the discharge temperatures will be close to ambient temperatures. The Department recommends monitoring the discharge temperature over the next permit term on a monthly basis. This will provide the Department with adequate data for any future reviews.

Chapter 316(B)

Section 316(b) of the Clean Water Act requires EPA to ensure that the location, design, construction and capacity of the cooling water intake structures reflects the best technology available (BAT) for minimizing adverse environmental impact. 40 CFR § 125.91 sets forth the applicability for these facilities to meet these requirements. It states that the owner or operator of an existing facility is subject to the requirements at §§ 125.94 through 125.99 if: (1) The facility is a point source; (2) The facility uses or proposes to use one or more cooling water intake structures with a cumulative design intake flow (DIF) of greater than 2 million gallons per day (mgd) to withdraw water from waters of the United States; **and** (3) Twenty-five percent or more of the water the facility withdraws on an actual intake flow basis is used exclusively for cooling purposes. In the current and previous permit applications, FQT certified that the volume of water used in cooling is less than 25% of the total water withdrawn and that the intake structure was not modified in any way when FQT acquired the site and is therefore not considered a new facility as specified in 40 CFR § 125.83. Given that this existing facility utilizes less than 25% for cooling, this facility is not subject to the requirements at §§ 125.94 through 125.99.

Additionally, the facility utilizes the technologies or BMPs that constitute Best Technology Available (BTA) for reducing impingement and entrainment. The facility has a through-screen design velocity of less than 0.5 foot per second (fps) which is considered BTA for impingement. The intake velocity is limited to 0.08 feet per second. The mean annual flow of Bald Eagle Creek is 907 ft^3/s. A withdraw of 7.4 MGD is equivalent to 11.5 ft^3/s. Therefore, the actual intake flow is 1.2% or less of the mean annual flow of the surface waters. This can be considered BTA for entrainment.

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.

Proposed Limits - Outfalls 001, 002, and 004, Effective Period: Permit Effective Date through Permit Expiration Date

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)					
	Average Monthly	Average Weekly	Minimum	Semi-Annual Average	Maximum	Instant. Maximum	Minimum (2) Measurement Frequency	Required Sample Type
pH (S.U.)	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab
Chemical Oxygen Demand (COD)	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab
Total Suspended Solids	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab
Total Nitrogen	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Calculation
Total Phosphorus	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab

*The existing monitoring requirements for these stormwater outfalls are not based on a design flow.

Proposed Limits - Outfall 003, 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	Continuous	Metered
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
Dissolved Oxygen	XXX	XXX	Report Inst Min	XXX	XXX	XXX	1/day	Grab
Biochemical Oxygen Demand (BOD5)	4010	8020	XXX	65.0	130.0	160	1/week	24-Hr Composite
Total Suspended Solids	3270	6540	XXX	53.0	105.0	130	1/week	24-Hr Composite
Aluminum, Total	35.02	70.0	XXX	0.92	1.84	2.3	1/week	24-Hr Composite
Iron, Total	20.34	40.69	XXX	0.53	1.07	1.33	1/week	24-Hr Composite
Manganese, Total	5.13	10.27	XXX	0.13	0.27	0.33	1/week	24-Hr Composite
PFOA (ug/L)	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	Grab
PFOS (ug/L)	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	Grab
PFBS (ug/L)	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	Grab
HFPO-DA (ug/L)	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	Grab
Temperature (deg F) (ºF)	XXX	XXX	XXX	XXX	Report	XXX	1/month	I-S

*The proposed effluent limits for Outfall 001 were based on a design flow of 7.4 MGD.

The existing monitoring frequencies and sample types for the abovementioned parameters are consistent with water treatment plant wastewater discharges and the *Technical Guidance for the Development and Specification of Effluent Limitations* (362-0400-001) Table 6-4. The existing requirements will remain.

Flow
The existing reporting of average monthly and daily max flows is consistent with similar facilities and will remain.

pH
CFR Title 40 §133.102(c) and 25 PA Code §95.2(1) provide the basis of effluent limitations for pH.

Dissolved Oxygen (DO)
Given results of the WQM 7.0 model, a discharge of effluent from this facility with a DO concentration of 3 mg/l would not result in an exceedance of water quality requirements for this stream. The average DO concentrations in the effluent are greater than 3.0 mg/l. Therefore, based on BPJ, only monitoring will be required for this facility.

Biochemical Oxygen Demand (BOD5)
The existing effluent limits are more stringent than the calculated ELG limits. Additionally, the WQM 7.0 model indicates that the existing limits are still protective of water quality. These limits shall remain.

Total Suspended Solids (TSS)
The existing effluent limits are more stringent than the calculated ELG limits and shall remain.

Temperature
A monitoring frequency (1/month) and sample type (I-S) for temperature are recommended. Refer to the 316(a) section above.

Stormwater Requirements

The industrial activities associated with FQT's 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 Codes 2621 (Paper Mills)- Establishments primarily engaged in manufacturing paper from wood pulp and other fiber pulp, and which may also manufacture converted paper products. Establishments primarily engaged in integrated operations of producing pulp and manufacturing paper are included in this industry if primarily shipping paper or paper products. The following stormwater requirements will be incorporated into this permit consistent with Appendix E (Paper and Allied Products) of the PAG-03 General NPDES Permit and anti-backsliding regulations:

DISCHARGE PARAMETER	SAMPLE TYPE	MEASUREMENT FREQUENCY	BENCHMARK VALUES
pH (S.U.)	1 Grab	1/6 months	XXX
Chemical Oxygen Demand (COD) (mg/L)	1 Grab	1/6 months	120
Total Suspended Solids (TSS) (mg/L)	1 Grab	1/6 months	100
Total Nitrogen (mg/L)	Calculation	1/6 months	XXX
Total Phosphorus (mg/L)	1 Grab	1/6 months	XXX

Note: Monitoring for Total Nitrogen and Total Phosphorus in stormwater has been added to all PAG-03 permits and will now be required for this permit. Total Nitrogen is the sum of Total Kjeldahl-N (TKN) plus Nitrite-Nitrate as N (NO2+NO3-N), where TKN and NO2+NO3-N are measured in the same sample. There are no associated ELGs for this facility. These discharge parameters will be applied in part A of the permit for each outfall (001, 002, and 004). Additionally, the permit will contain Part C condition 123A related to Industrial Stormwater Requirements.

Chemical Additives

A chemical additive is a chemical product in a waste stream that is used for cleaning, disinfecting, or maintenance and which may be detected in effluent discharged to waters of the Commonwealth. This term generally excludes chemicals used for neutralization of waste streams, the production of goods, and treatment of wastewater.

First Quality Tissue has listed 16 products in their chemical additive usage sheet provided with the application. The following chemical additives are listed on the usage sheet and on the approved chemical additive list: Cortrol OS5300, Steamate PAS4010, CL41, CL5639, SolusAP24, Cortrol IS105, CL2212, CL2250, Carus C-1100, Floquat FL 2449, Polyclear APE, Polydear CPS, CL450, CL6855, Cl6033, and Cl5660.

The following chemical additives were approved after the submission of the permit application: Foamtrol AF3561, Spectrus NX1100, ECO Film EF258,2 Corrshield BT4301, ECO Film EF2602, and Corrshield MD4103 were approved in an email dated 1/24/25. Optisperse ADJ5050 and Optisperse ADJ560 were approved in an email dated 11/15/24.

Part "C" condition C 118 is placed in the permit to address chemical additives.

Per- and Polyfluoroalkyl Substances (PFAS)

Scientific studies have shown that exposure to some Per- and Polyfluoralkyl Substances (PFAS) in the environment is linked to harmful health effects in humans and animals. As part of DEP's initiative to collect more data pertaining to PFAS, quarterly monitoring for PFAS-related compounds PFOA, PFOS, HFPO-DA, and PFBS has been proposed. This screening was not conducted during the application process. (This updated application requirement was introduced after the application was submitted.) The following footnote will be included in part A of the permit: The permittee may discontinue monitoring for PFOA, PFOS, HFPO-DA, and PFBS if the results in 4 consecutive monitoring periods indicate non-detect results at or below Quantitation Limits of 4.0 ng/L for PFOA, 3.7 ng/L for PFOS, 3.5 ng/L for PFBS and 6.4 ng/L for HFPO-DA. When monitoring is discontinued, permittees must enter a No Discharge Indicator (NODI) Code of "GG" on DMRs.

Compliance History

Summary of Inspections -The last inspection of the facility was conducted on 10/17/23 by the Department which reveals that there were no issues and the facility was operating normally.

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 violation for this client.

eDMRs Summary - Upon review of the eDMR's, the facility has generally been in compliance with the existing effluent limits with the exception of 1 BOD exceedance.

Compliance History

DMR Data for Outfall 001 (from December 1, 2023 to November 30, 2024)

Parameter	NOV-24	OCT-24	SEP-24	AUG-24	JUL-24	JUN-24	MAY-24	APR-24	MAR-24	FEB-24	JAN-24	DEC-23
pH (S.U.) Semi-Annual Average						8.1						8.2
COD (mg/L) Semi-Annual Average						68.1						< 25.0
TSS (mg/L) Semi-Annual Average						315						16

DMR Data for Outfall 002 (from December 1, 2023 to November 30, 2024)

Parameter	NOV-24	OCT-24	SEP-24	AUG-24	JUL-24	JUN-24	MAY-24	APR-24	MAR-24	FEB-24	JAN-24	DEC-23
pH (S.U.) Semi-Annual Average						7.9						8.3
COD (mg/L) Semi-Annual Average						< 25.0						< 25.0
TSS (mg/L) Semi-Annual Average						11.0						< 4.0

DMR Data for Outfall 003 (from December 1, 2023 to November 30, 2024)

Parameter	NOV-24	OCT-24	SEP-24	AUG-24	JUL-24	JUN-24	MAY-24	APR-24	MAR-24	FEB-24	JAN-24	DEC-23
Flow (MGD) Average Monthly	4.89	4.73	4.93	5.07	5.47	5.06	5.26	5.25	4.98	5.23	5.20	5.35
Flow (MGD) Daily Maximum	6.04	5.76	5.73	7.05	7.02	6.86	6.39	6.38	6.50	7.23	6.68	6.29
pH (S.U.) Instantaneous Minimum	6.79	6.52	6.96	6.98	6.56	6.89	6.53	6.63	6.47	6.2	6.17	6.51
pH (S.U.) Instantaneous Maximum	7.37	7.26	7.42	7.59	7.65	7.69	7.29	7.18	7.11	7.13	7.15	7.05
DO (mg/L) Instantaneous Minimum	3.29	3.11	3.19	3.00	3.25	2.29	1.4	2.07	3.83	5.55	4.45	4.83
BOD5 (lbs/day) Average Monthly	< 1171	1291	1045	679	739	826	1226	1937	869.0	1476	1455	1264

BOD5 (lbs/day) Daily Maximum	1848	1779	1227	1028	1151	937	1862	2761	1697.0	1942	1869	1517
BOD5 (mg/L) Average Monthly	< 31.0	33.0	27.0	15.0	16.0	19.0	28.0	43.0	21.0	37.0	34.0	32.0
BOD5 (mg/L) Daily Maximum	46.1	50.3	31.9	17.8	23.4	22.5	41.0	54.7	37.0	51.0	44.0	39.8
TSS (lbs/day) Average Monthly	761	578	792	1050	982	1020	1005	531	582	526	349	424
TSS (lbs/day) Daily Maximum	985	855	864	1559	1456	1182	1347	783	780	798	488	610
TSS (mg/L) Average Monthly	19.0	15.0	21.0	24.0	21.0	24.0	23.0	12.0	15.0	13.0	9.0	11.0
TSS (mg/L) Daily Maximum	20.0	18.0	24.0	27.0	30.0	26.0	30.0	16.0	17.0	17.0	11.0	16.0
Nitrate-Nitrite (mg/L) Average Monthly	< 0.1	< 0.1	< 0.13	< 0.11	< 0.1	< 0.17	< 0.13	< 0.11	< 0.1	< 0.1	< 0.17	< 0.17
Nitrate-Nitrite (lbs) Total Monthly	< 127.7	< 132	< 167.2	< 140.5	< 147.4	< 220.3	< 174.8	< 134.7	< 123.0	< 145.6	< 224.1	< 228.2
Total Nitrogen (mg/L) Average Monthly	< 3.69	< 3.49	< 2.82	< 2.99	< 3.03	< 2.5	< 2.57	< 3.33	< 3.15	< 3.8	< 3.08	< 3.32
Total Nitrogen (mg/L) Intake Average Monthly	< 1.23	< 1.33	< 1.05	< 0.9	< 1.03	< 1.15	< 0.98	< 1.13	< 1.46	< 2.03	< 1.91	< 2.21
Total Nitrogen (lbs) Effluent Net Total Monthly	< 2982.5	< 2604.6	< 2197.7	< 2738.0	< 3029.2	< 1776.9	< 2108.7	< 2773.4	< 2144.3	< 3019.2	< 1552.9	< 1520.4
Total Nitrogen (lbs) Intake Total Monthly	< 1520	< 1578	< 1325	< 1152	< 1436	< 1447	< 1282	< 1437.0	< 1760	< 2512	< 2498	< 2842.0
Total Nitrogen (lbs) Total Monthly	< 4502.5	< 4182.6	< 3522.7	< 3890	< 4465.2	< 3223.9	< 3390.7	< 4210.4	< 3904.3	< 5531.2	< 4050.9	< 4362.4
Total Nitrogen (lbs) Effluent Net Total Annual			< 29561.1									
Total Nitrogen (lbs) Total Annual			< 49071.5									
Ammonia (mg/L) Average Monthly	< 0.1	< 0.1	< 0.1	< 0.24	0.48	< 0.15	< 0.12	< 0.57	< 0.34	< 0.1	< 0.1	< 0.12
Ammonia (lbs) Total Monthly	< 123.4	< 121	< 128.2	< 319.1	707.4	< 187.3	< 154.3	< 723.8	< 380.4	< 145.6	< 1179.2	< 161.4
Ammonia (lbs) Total Annual			< 3040.2									
TKN (mg/L) Average Monthly	3.58	3.37	< 2.68	2.89	2.93	< 2.33	< 2.43	3.22	3.05	3.7	< 2.9	< 3.2

TKN (lbs) Total Monthly	4374.8	< 4050.6	< 3355.5	3749.5	4317.9	< 3003.6	< 3215.9	4075.7	3781.3	5385.6	< 3826.8	< 4134.2
Total Phosphorus (mg/L) Average Monthly	1.29	1.43	< 1.48	1.36	0.5	< 1.28	< 0.96	1.12	1.07	0.98	< 0.9	< 0.97
Total Phosphorus (mg/L) Intake Average Monthly	< 0.1	< 0.1	< 0.16	< 0.13	< 0.2	< 1.26	< 0.31	< 0.1	< 0.09	< 0.03	< 0.16	< 0.15
Total Phosphorus (lbs) Effluent Net Total Monthly	< 1441.9	< 1614.0	< 1665.1	< 1555.8	< 459.8	< 110.2	< 827.1	< 1287.9	< 1213.4	< 1389.5	< 967.2	< 1061.2
Total Phosphorus (lbs) Intake Total Monthly	< 122	< 120.0	< 203	< 171	< 277	< 1373	< 420.0	< 127	< 102	< 37.0	< 212	< 198
Total Phosphorus (lbs) Total Monthly	1563.9	1734	< 1868.1	1726.8	736.8	< 1483.2	< 1247.1	1414.9	1315.4	1426.5	< 1179.2	< 1259.2
Total Phosphorus (lbs) Effluent Net Total Annual			< 13473.1									
Total Phosphorus (lbs) Total Annual			< 16370.6									
Total Aluminum (lbs/day) Average Monthly	3.98	2.46	4.69	4.09	3.93	4.13	2.55	1.36	1.22	1.56	1.60	1.67
Total Aluminum (lbs/day) Daily Maximum	6.0	5.00	6.0	5.0	6.00	5.00	6.00	2.00	2.00	2.0	2.00	3.0
Total Aluminum (mg/L) Average Monthly	0.10	0.06	0.12	0.09	0.09	0.10	0.06	0.03	0.03	0.04	0.04	0.04
Total Aluminum (mg/L) Daily Maximum	0.16	0.11	0.14	0.11	0.13	0.10	0.13	0.04	0.04	0.05	0.05	0.07
Total Iron (lbs/day) Average Monthly	4.13	4.46	5.46	4.70	4.78	5.73	5.39	3.62	3.56	4.00	3.58	3.86
Total Iron (lbs/day) Daily Maximum	5.42	6.65	6.54	6.65	7.40	8.74	9.80	4.89	4.59	5.63	4.37	5.33
Total Iron (mg/L) Average Monthly	0.10	0.11	0.14	0.11	0.10	0.13	0.13	0.09	0.09	0.10	0.08	0.10
Total Iron (mg/L) Daily Maximum	0.13	0.14	0.17	0.14	0.16	0.21	0.23	0.10	0.10	0.12	0.096	0.14
Total Manganese (lbs/day) Average Monthly	1.95	1.80	1.75	1.90	2.30	2.61	1.80	0.90	1.11	0.90	1.06	1.29

Total Manganese (lbs/day) Daily Maximum	2.46	2.24	1.99	2.89	3.44	3.45	2.56	1.01	1.38	1.41	1.38	1.52
Total Manganese (mg/L) Average Monthly	0.05	0.05	0.05	0.04	0.05	0.06	0.04	0.02	0.03	0.02	0.03	0.03
Total Manganese (mg/L) Daily Maximum	0.05	0.06	0.05	0.05	0.07	0.07	0.06	0.02	0.03	0.03	0.03	0.04

DMR Data for Outfall 004 (from December 1, 2023 to November 30, 2024)

Parameter	NOV-24	OCT-24	SEP-24	AUG-24	JUL-24	JUN-24	MAY-24	APR-24	MAR-24	FEB-24	JAN-24	DEC-23
pH (S.U.) Semi-Annual Average						7.5						8.3
COD (mg/L) Semi-Annual Average						59.0						38.6
TSS (mg/L) Semi-Annual Average						18.0						4.0

Compliance History

Effluent Violations for Outfall 003, from: January 1, 2024 To: November 30, 2024

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
BOD5	11/30/24	Avg Mo	27051	lbs/day	4010	lbs/day
BOD5	11/30/24	Daily Max	103474	lbs/day	8020	lbs/day
BOD5	11/30/24	Avg Mo	555.0	mg/L	65.0	mg/L
BOD5	11/30/24	Daily Max	2100.0	mg/L	130.0	mg/L

Tools and References Used to Develop Permit	
☒	WQM for Windows Model (see Attachment **B**)
☒	Toxics Management Spreadsheet (see Attachment **C**)
☐	TRC Model Spreadsheet (see Attachment)
☐	Temperature Model Spreadsheet (see Attachment)
☒	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
☒	Technical Guidance for the Development and Specification of Effluent Limitations, 386-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 386-2000-019, 3/98.
☐	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 386-2000-018, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 386-2183-001, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 386-2183-002, 12/97.
☐	Pennsylvania CSO Policy, 386-2000-002, 9/08.
☒	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 386-2000-008, 4/97.
☒	Determining Water Quality-Based Effluent Limits, 386-2000-004, 12/97.
☐	Implementation Guidance Design Conditions, 386-2000-007, 9/97.
☒	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 386-2000-016, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 386-2000-012, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 386-2000-009, 3/99.
☒	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 386-2000-015, 5/2004.
☐	Implementation Guidance for Section 93.7 Ammonia Criteria, 386-2000-022, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 386-2000-013, 4/2008.
☐	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 386-2000-011, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 386-2000-001, 4/09.
☐	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 386-2000-021, 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, 386-2000-020, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 386-2000-005, 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, 386-2000-010, 3/1999.
☒	Design Stream Flows, 386-2000-003, 9/98.
☐	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 386-2000-006, 10/98.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 386-3200-001, 6/97.
☒	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☐	SOP:
☐	Other:

APPENDIX A

STREAM DATA AND Q^{7-10} ANALYSIS

Table 1. List of U.S. Geological Survey streamgage locations in and near Pennsylvania with updated streamflow statistics.—Continued

[Latitude and Longitude in decimal degrees; mi², square miles]

Streamgage number	Streamgage name	Latitude	Longitude	Drainage area (mi²)	Regulated[1]
01541303	West Branch Susquehanna River at Hyde, Pa.	41.005	-78.457	474	Y
01541308	Bradley Run near Ashville, Pa.	40.509	-78.584	6.77	N
01541500	Clearfield Creek at Dimeling, Pa.	40.972	-78.406	371	Y
01542000	Moshannon Creek at Osceola Mills, Pa.	40.850	-78.268	68.8	N
01542500	WB Susquehanna River at Karthaus, Pa.	41.118	-78.109	1,462	Y
01542810	Waldy Run near Emporium, Pa.	41.579	-78.293	5.24	N
01543000	Driftwood Branch Sinnemahoning Creek at Sterling Run, Pa.	41.413	-78.197	272	N
01543500	Sinnemahoning Creek at Sinnemahoning, Pa.	41.317	-78.103	685	N
01544000	First Fork Sinnemahoning Creek near Sinnemahoning, Pa.	41.402	-78.024	245	Y
01544500	Kettle Creek at Cross Fork, Pa.	41.476	-77.826	136	N
01545000	Kettle Creek near Westport, Pa.	41.320	-77.874	233	Y
01545500	West Branch Susquehanna River at Renovo, Pa.	41.325	-77.751	2,975	Y
01545600	Young Womans Creek near Renovo, Pa.	41.390	-77.691	46.2	N
01546000	North Bald Eagle Creek at Milesburg, Pa.	40.942	-77.794	119	N
01546400	Spring Creek at Houserville, Pa.	40.834	-77.828	58.5	N
01546500	Spring Creek near Axemann, Pa.	40.890	-77.794	87.2	N
01547100	Spring Creek at Milesburg, Pa.	40.932	-77.786	142	N
01547200	Bald Eagle Creek below Spring Creek at Milesburg, Pa.	40.943	-77.786	265	N
01547500	Bald Eagle Creek at Blanchard, Pa.	41.052	-77.604	339	Y
01547700	Marsh Creek at Blanchard, Pa.	41.060	-77.606	44.1	N
01547800	South Fork Beech Creek near Snow Shoe, Pa.	41.024	-77.904	12.2	N
01547950	Beech Creek at Monument, Pa.	41.112	-77.702	152	N
01548005	Bald Eagle Creek near Beech Creek Station, Pa.	41.081	-77.549	562	Y
01548500	Pine Creek at Cedar Run, Pa.	41.522	-77.447	604	N
01549000	Pine Creek near Waterville, Pa.	41.313	-77.379	750	N
01549500	Blockhouse Creek near English Center, Pa.	41.474	-77.231	37.7	N
01549700	Pine Creek below Little Pine Creek near Waterville, Pa.	41.274	-77.324	944	Y
01550000	Lycoming Creek near Trout Run, Pa.	41.418	-77.033	173	N
01551500	WB Susquehanna River at Williamsport, Pa.	41.236	-76.997	5,682	Y
01552000	Loyalsock Creek at Loyalsockville, Pa.	41.325	-76.912	435	N
01552500	Muncy Creek near Sonestown, Pa.	41.357	-76.535	23.8	N
01553130	Sand Spring Run near White Deer, Pa.	41.059	-77.077	4.93	N
01553500	West Branch Susquehanna River at Lewisburg, Pa.	40.968	-76.876	6,847	Y
01553700	Chillisquaque Creek at Washingtonville, Pa.	41.062	-76.680	51.3	N
01554000	Susquehanna River at Sunbury, Pa.	40.835	-76.827	18,300	Y
01554500	Shamokin Creek near Shamokin, Pa.	40.810	-76.584	54.2	N
01555000	Penns Creek at Penns Creek, Pa.	40.867	-77.048	301	N
01555500	East Mahantango Creek near Dalmatia, Pa.	40.611	-76.912	162	N
01556000	Frankstown Branch Juniata River at Williamsburg, Pa.	40.463	-78.200	291	N
01557500	Bald Eagle Creek at Tyrone, Pa.	40.684	-78.234	44.1	N
01558000	Little Juniata River at Spruce Creek, Pa.	40.613	-78.141	220	N
01559000	Juniata River at Huntingdon, Pa.	40.485	-78.019	816	LF
01559500	Standing Stone Creek near Huntingdon, Pa.	40.524	-77.971	128	N
01559700	Sulphur Springs Creek near Manns Choice, Pa.	39.978	-78.619	5.28	N
01560000	Dunning Creek at Belden, Pa.	40.072	-78.493	172	N

Table 2. Selected low-flow statistics for streamgage locations in and near Pennsylvania.—Continued

[ft³/s; cubic feet per second; —, statistic not computed; <, less than]

Streamgage number	Period of record used in analysis[1]	Number of years used in analysis	1-day, 10-year (ft³/s)	7-day, 10-year (ft³/s)	7-day, 2-year (ft³/s)	30-day, 10-year (ft³/s)	30-day, 2-year (ft³/s)	90-day, 10-year (ft³/s)
01546000	1912–1934	17	1.8	2.2	6.8	3.7	12.1	11.2
01546400	1986–2008	23	13.5	14.0	19.6	15.4	22.3	18.7
01546500	1942–2008	67	26.8	29.0	41.3	31.2	44.2	33.7
01547100	1969–2008	40	102	105	128	111	133	117
01547200	1957–2008	52	99.4	101	132	106	142	115
01547500	[2]1971–2008	38	28.2	109	151	131	172	153
01547500	[3]1956–1969	14	90.0	94.9	123	98.1	131	105
01547700	1957–2008	52	.5	.6	2.7	1.1	3.9	2.2
01547800	1971–1981	11	1.6	1.8	2.4	2.1	2.9	3.5
01547950	1970–2008	39	12.1	13.6	28.2	17.3	36.4	23.8
01548005	[2]1971–2000	25	142	151	206	178	241	223
01548005	[3]1912–1969	58	105	114	147	125	165	140
01548500	1920–2008	89	21.2	24.2	50.1	33.6	68.6	49.3
01549000	1910–1920	11	26.0	32.9	78.0	46.4	106	89.8
01549500	1942–2008	67	.6	.8	2.5	1.4	3.9	2.6
01549700	1959–2008	50	33.3	37.2	83.8	51.2	117	78.4
01550000	1915–2008	94	6.6	7.6	16.8	11.2	24.6	18.6
01551500	[2]1963–2008	46	520	578	1,020	678	1,330	919
01551500	[3]1901–1961	61	400	439	742	523	943	752
01552000	1927–2008	80	20.5	22.2	49.5	29.2	69.8	49.6
01552500	1942–2008	67	.9	1.2	3.1	1.7	4.4	3.3
01553130	1969–1981	13	1.0	1.1	1.5	1.3	1.8	1.7
01553500	[2]1968–2008	41	760	838	1,440	1,000	1,850	1,470
01553500	[3]1941–1966	26	562	619	880	690	1,090	881
01553700	1981–2008	28	9.1	10.9	15.0	12.6	17.1	15.2
01554000	[2]1981–2008	28	1,830	1,990	3,270	2,320	4,210	3,160
01554000	[3]1939–1979	41	1,560	1,630	2,870	1,880	3,620	2,570
01554500	1941–1993	53	16.2	22.0	31.2	25.9	35.7	31.4
01555000	1931–2008	78	33.5	37.6	58.8	43.4	69.6	54.6
01555500	1931–2008	78	4.9	6.5	18.0	9.4	24.3	16.6
01556000	1918–2008	91	43.3	47.8	66.0	55.1	75.0	63.7
01557500	1946–2008	63	2.8	3.2	6.3	4.2	8.1	5.8
01558000	1940–2008	69	56.3	59.0	79.8	65.7	86.2	73.7
01559000	1943–2008	66	104	177	249	198	279	227
01559500	1931–1958	28	9.3	10.5	15.0	12.4	17.8	15.8
01559700	1963–1978	16	.1	.1	.2	.1	.3	.2
01560000	1941–2008	68	8.5	9.4	15.6	12.0	20.2	16.2
01561000	1932–1958	27	.4	.5	1.6	.8	2.5	1.7
01562000	1913–2008	96	64.1	67.1	106	77.4	122	94.5
01562500	1931–1957	27	1.1	1.6	3.8	2.3	5.4	3.7
01563200	[2]1974–2008	35	—	—	—	112	266	129
01563200	[3]1948–1972	25	10.3	28.2	86.1	64.5	113	95.5
01563500	[2]1974–2008	35	384	415	519	441	580	493
01563500	[3]1939–1972	34	153	242	343	278	399	333
01564500	1940–2008	69	3.6	4.2	10.0	6.2	14.4	10.6

Table 5. Selected mean-flow and flow-duration statistics for streamgage locations in and near Pennsylvania.—Continued

[ft³/s; cubic feet per second; --, statistic not computed; <, less than]

Streamgage number	Period of record used in analysis[1]	Number of years used in analysis	Mean annual flow (ft³/s)	Harmonic mean (ft³/s)	99-percent exceedance (ft³/s)	95-percent exceedance (ft³/s)	90-percent exceedance (ft³/s)	85-percent exceedance (ft³/s)	80-percent exceedance (ft³/s)
01546000	1911–1934	18	210	27.5	2.3	5.5	12.5	18.6	25.0
01546400	1985–2008	23	69.1	42.3	16.0	19.0	22.0	25.0	28.0
01546500	1941–2008	67	95.6	68.3	25.0	35.0	41.0	45.0	48.0
01547100	1968–2008	40	232	191	104	120	129	137	143
01547200	1956–2008	52	411	242	92.6	121	135	146	157
01547500	[2]1970–2008	38	507	288	114	138	159	174	188
01547500	[3]1955–1969	14	389	220	91.6	110	121	133	144
01547700	1956–2008	52	60.2	8.1	.8	2.1	3.4	4.8	6.6
01547800	1970–1981	11	23.6	9.1	2.0	3.0	3.8	4.8	5.9
01547950	1969–2008	39	266	88.6	15.0	23.0	34.0	47.0	60.0
01548005	[2]1970–2000	26	907	473	154	193	232	268	301
01548005	[3]1911–1969	58	769	339	117	142	160	181	201
01548500	1919–2008	89	851	184	30.0	47.0	66.0	89.0	118
01549000	1909–1920	11	1,140	264	42.9	67.4	99.2	134	176
01549500	1941–2008	67	58.8	9.8	1.1	2.4	3.7	5.5	7.7
01549700	1958–2008	50	1,410	309	43.0	75.0	112	156	205
01550000	1914–2008	94	290	66.1	9.5	17.0	25.0	35.0	46.0
01551500	[2]1962–2008	46	9,240	3,230	624	913	1,250	1,660	2,100
01551500	[3]1900–1961	61	8,920	2,520	485	724	960	1,230	1,570
01552000	1926–2008	81	767	184	26.0	44.6	70.0	103	137
01552500	1941–2008	67	48.6	11.1	1.5	2.7	4.4	6.4	8.8
01553130	1968–1981	13	9.1	4.0	1.1	1.6	2.0	2.2	2.5
01553500	[3]1940–1966	27	10,200	--	647	909	1,170	1,440	1,790
01553500	[2]1967–2008	27	11,300	--	903	1,350	1,810	2,350	2,900
01553700	1980–2008	28	72.9	32.0	12.1	14.8	17.1	18.8	20.5
01554000	[2]1980–2008	28	27,800	10,600	2,240	3,120	4,130	5,330	6,780
01554000	[3]1938–1979	41	26,800	8,980	1,800	2,700	3,620	4,690	5,840
01554500	1940–2001	54	85.2	61.2	22.1	29.7	34.8	39.4	43.0
01555000	1930–2008	78	447	166	40.0	55.0	68.0	83.0	99.0
01555500	1930–2008	78	230	56.6	7.6	15.0	23.0	32.0	41.0
01556000	1917–2008	91	400	159	48.0	63.0	73.0	81.0	93.0
01557500	1945–2008	63	76.0	20.5	3.6	5.2	7.0	9.0	12.0
01558000	1939–2008	69	379	178	64.0	74.0	83.0	92.0	103
01559000	1942–2008	66	1,110	540	173	228	266	297	330
01559500	1930–1958	28	148	44.5	12.1	15.7	18.7	21.7	25.8
01559700	1962–1978	16	5.5	.7	.1	.2	.3	.4	.4
01560000	1940–2008	68	235	53.5	11.0	16.0	20.0	25.0	31.0
01561000	1930–1958	28	45.3	6.1	.4	1.5	2.6	3.6	4.7
01562000	1912–2008	96	927	281	68.0	98.0	118	140	163
01562500	1930–1957	27	95.0	13.8	1.6	3.3	4.9	6.6	8.9
01563200	[2]1973–2008	35	1,210	375	111	171	207	223	239
01563200	[3]1947–1972	25	1,080	194	18.1	68.0	115	142	176
01563500	[2]1973–2008	35	2,750	1,240	428	503	562	630	728
01563500	[3]1938–1972	34	2,390	876	227	327	395	454	529
01564500	1939–2008	69	246	37.9	5.4	9.8	14.0	19.0	24.0

APPENDIX B

WQM 7.0 MODEL RESULTS

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
09C	22412	BALD EAGLE CREEK	**2.940**	547.00	767.00	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.100	0.00	206.00	0.000	0.000	0.0	0.00	0.00	20.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
First Quality	PA0228818	7.4000	7.4000	7.4000	0.000	25.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	65.00	2.00	0.00	1.50
Dissolved Oxygen	3.00	8.24	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
09C	22412	BALD EAGLE CREEK	**0.100**	534.00	770.00	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.100	0.00	207.00	0.000	0.000	0.0	0.00	0.00	20.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
		0.0000	0.0000	0.0000	0.000	0.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	3.00	8.24	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
09C	22412	BALD EAGLE CREEK

RMI	Stream Flow (cfs)	PWS With (cfs)	Net Stream Flow (cfs)	Disc Analysis Flow (cfs)	Reach Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Reach Trav Time (days)	Analysis Temp (°C)	Analysis pH
Q7-10 Flow												
2.940	206.00	0.00	206.00	11.4478	0.00087	1.127	235.45	208.9	0.82	0.212	20.26	7.00
Q1-10 Flow												
2.940	193.64	0.00	193.64	11.4478	0.00087	NA	NA	NA	0.79	0.219	20.28	7.00
Q30-10 Flow												
2.940	241.02	0.00	241.02	11.4478	0.00087	NA	NA	NA	0.89	0.195	20.23	7.00

WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	☑
WLA Method	EMPR	Use Inputted W/D Ratio	☐
Q1-10/Q7-10 Ratio	0.94	Use Inputted Reach Travel Times	☐
Q30-10/Q7-10 Ratio	1.17	Temperature Adjust Kr	☑
D.O. Saturation	90.00%	Use Balanced Technology	☑
D.O. Goal	5		

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
09C	22412	BALD EAGLE CREEK

NH3-N Acute Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
2.940	First Quality	16.38	50	16.38	50	0	0

NH3-N Chronic Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
2.940	First Quality	1.86	25	1.86	25	0	0

Dissolved Oxygen Allocations

RMI	Discharge Name	CBOD5		NH3-N		Dissolved Oxygen		Critical Reach	Percent Reduction
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)		
2.94	First Quality	65	65	25	25	3	3	0	0

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
09C	22412	BALD EAGLE CREEK

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
2.940	7.400	20.263	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
235.447	1.127	208.895	0.819
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
5.32	0.909	1.32	0.714
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
7.967	3.334	Tsivoglou	5
Reach Travel Time (days)			
0.212			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.021	5.21	1.30	7.81
0.042	5.11	1.28	7.67
0.064	5.01	1.26	7.54
0.085	4.92	1.24	7.42
0.106	4.82	1.22	7.32
0.127	4.73	1.20	7.22
0.148	4.64	1.18	7.14
0.169	4.55	1.17	7.07
0.191	4.46	1.15	7.00
0.212	4.38	1.13	6.95

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
09C	22412	BALD EAGLE CREEK

RMI	Name	Permit Number	Disc Flow (mgd)	Parameter	Effl. Limit 30-day Ave. (mg/L)	Effl. Limit Maximum (mg/L)	Effl. Limit Minimum (mg/L)
2.940	First Quality	PA0228818	7.400	CBOD5	65		
				NH3-N	25	50	
				Dissolved Oxygen			3

APPENDIX C

TOXICS MANAGEMENT SPREADSHEET

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.3, March 2021

Discharge Information

Instructions | Discharge | Stream

Facility: **First Qualiy Tissue** NPDES Permit No.: **PA0228818** Outfall No.: **003**

Evaluation Type: **Major Sewage / Industrial Waste** Wastewater Description: **IW Process Effluent**

Discharge Characteristics								
Design Flow (MGD)*	Hardness (mg/l)*	pH (SU)*	Partial Mix Factors (PMFs)				Complete Mix Times (min)	
			AFC	CFC	THH	CRL	Q_{7-10}	Q_h
7.4	100	7						

					0 if left blank		*0.5 if left blank*		*0 if left blank*			*1 if left blank*	
	Discharge Pollutant	Units	Max Discharge Conc		Trib Conc	Stream Conc	Daily CV	Hourly CV	Stream CV	Fate Coeff	FOS	Criteria Mod	Chem Transl
Group 1	Total Dissolved Solids (PWS)	mg/L		223									
	Chloride (PWS)	mg/L											
	Bromide	mg/L	<	0.093									
	Sulfate (PWS)	mg/L		34.7									
	Fluoride (PWS)	mg/L											
Group 2	Total Aluminum	µg/L		83.5									
	Total Antimony	µg/L	<	0.5									
	Total Arsenic	µg/L	<	2.5									
	Total Barium	µg/L		32.9									
	Total Beryllium	µg/L	<	0.5									
	Total Boron	µg/L	<	50									
	Total Cadmium	µg/L	<	0.5									
	Total Chromium (III)	µg/L	<	0.5									
	Hexavalent Chromium	µg/L	<	2.5									
	Total Cobalt	µg/L	<	2.5									
	Total Copper	µg/L	<	2.5									
	Free Cyanide	µg/L											
	Total Cyanide	µg/L	<	0.01									
	Dissolved Iron	µg/L		113									
	Total Iron	µg/L		176									
	Total Lead	µg/L	<	0.5									
	Total Manganese	µg/L		52.3									
	Total Mercury	µg/L	<	0.2									
	Total Nickel	µg/L	<	2.5									
	Total Phenols (Phenolics) (PWS)	µg/L	<	2.5									
	Total Selenium	µg/L	<	2.5									
	Total Silver	µg/L	<	2.5									
	Total Thallium	µg/L	<	0.5									
	Total Zinc	µg/L	<	6.9									
	Total Molybdenum	µg/L	<	2.8									
	Acrolein	µg/L	<	1									
	Acrylamide	µg/L	<	1									
	Acrylonitrile	µg/L	<	1									
	Benzene	µg/L	<	1									
	Bromoform	µg/L	<	1									

Group 3	Carbon Tetrachloride	µg/L	<	1										
	Chlorobenzene	µg/L	<	1										
	Chlorodibromomethane	µg/L	<	1										
	Chloroethane	µg/L	<	1										
	2-Chloroethyl Vinyl Ether	µg/L	<	1										
	Chloroform	µg/L		0.99										
	Dichlorobromomethane	µg/L	<	1										
	1,1-Dichloroethane	µg/L	<	1										
	1,2-Dichloroethane	µg/L	<	1										
	1,1-Dichloroethylene	µg/L	<	1										
	1,2-Dichloropropane	µg/L	<	1										
	1,3-Dichloropropylene	µg/L	<	1										
	1,4-Dioxane	µg/L	<	1										
	Ethylbenzene	µg/L	<	1										
	Methyl Bromide	µg/L	<	1										
	Methyl Chloride	µg/L												
	Methylene Chloride	µg/L	<	1										
	1,1,2,2-Tetrachloroethane	µg/L	<	1										
	Tetrachloroethylene	µg/L	<	1										
	Toluene	µg/L	<	1										
	1,2-trans-Dichloroethylene	µg/L	<	1										
	1,1,1-Trichloroethane	µg/L	<	1										
	1,1,2-Trichloroethane	µg/L	<	1										
	Trichloroethylene	µg/L	<	1										
	Vinyl Chloride	µg/L	<	1										
Group 4	2-Chlorophenol	µg/L	<	1										
	2,4-Dichlorophenol	µg/L	<	1										
	2,4-Dimethylphenol	µg/L	<	1										
	4,6-Dinitro-o-Cresol	µg/L	<	1										
	2,4-Dinitrophenol	µg/L	<	1										
	2-Nitrophenol	µg/L	<	1										
	4-Nitrophenol	µg/L	<	1										
	p-Chloro-m-Cresol	µg/L	<	1										
	Pentachlorophenol	µg/L	<	1										
	Phenol	µg/L	<	1										
	2,4,6-Trichlorophenol	µg/L	<	1										
Group 5	Acenaphthene	µg/L	<	1										
	Acenaphthylene	µg/L	<	1										
	Anthracene	µg/L	<	1										
	Benzidine	µg/L	<	1										
	Benzo(a)Anthracene	µg/L	<	1										
	Benzo(a)Pyrene	µg/L	<	1										
	3,4-Benzofluoranthene	µg/L	<	1										
	Benzo(ghi)Perylene	µg/L	<	1										
	Benzo(k)Fluoranthene	µg/L	<	1										
	Bis(2-Chloroethoxy)Methane	µg/L	<	1										
	Bis(2-Chloroethyl)Ether	µg/L	<	1										
	Bis(2-Chloroisopropyl)Ether	µg/L	<	1										
	Bis(2-Ethylhexyl)Phthalate	µg/L	<	1										
	4-Bromophenyl Phenyl Ether	µg/L	<	1										
	Butyl Benzyl Phthalate	µg/L	<	2.5										
	2-Chloronaphthalene	µg/L	<	1										
	4-Chlorophenyl Phenyl Ether	µg/L	<	1										
	Chrysene	µg/L	<	1										
	Dibenzo(a,h)Anthrancene	µg/L	<	1										
	1,2-Dichlorobenzene	µg/L	<	1										
	1,3-Dichlorobenzene	µg/L	<	1										
	1,4-Dichlorobenzene	µg/L	<	1										
	3,3-Dichlorobenzidine	µg/L	<	1										
	Diethyl Phthalate	µg/L	<	1										
	Dimethyl Phthalate	µg/L	<	1										
	Di-n-Butyl Phthalate	µg/L	<	1										
	2,4-Dinitrotoluene	µg/L	<	2.5										

	2,6-Dinitrotoluene	µg/L	<	1									
	Di-n-Octyl Phthalate	µg/L	<	1									
	1,2-Diphenylhydrazine	µg/L	<	1									
	Fluoranthene	µg/L	<	1									
	Fluorene	µg/L	<	1									
	Hexachlorobenzene	µg/L	<	1									
	Hexachlorobutadiene	µg/L	<	1									
	Hexachlorocyclopentadiene	µg/L	<	1									
	Hexachloroethane	µg/L	<	1									
	Indeno(1,2,3-cd)Pyrene	µg/L	<	1									
	Isophorone	µg/L	<	1									
	Naphthalene	µg/L	<	2.5									
	Nitrobenzene	µg/L	<	1									
	n-Nitrosodimethylamine	µg/L	<	1									
	n-Nitrosodi-n-Propylamine	µg/L	<	1									
	n-Nitrosodiphenylamine	µg/L	<	1									
	Phenanthrene	µg/L	<	1									
	Pyrene	µg/L	<	1									
	1,2,4-Trichlorobenzene	µg/L	<	1									
Group 6	Aldrin	µg/L	<	0.025									
	alpha-BHC	µg/L	<	0.025									
	beta-BHC	µg/L	<	0.025									
	gamma-BHC	µg/L	<	0.025									
	delta BHC	µg/L	<	0.025									
	Chlordane	µg/L	<	0.025									
	4,4-DDT	µg/L	<	0.05									
	4,4-DDE	µg/L	<	0.05									
	4,4-DDD	µg/L	<	0.05									
	Dieldrin	µg/L	<	0.05									
	alpha-Endosulfan	µg/L	<	0.05									
	beta-Endosulfan	µg/L	<	0.05									
	Endosulfan Sulfate	µg/L	<	0.05									
	Endrin	µg/L	<	0.05									
	Endrin Aldehyde	µg/L	<	0.05									
	Heptachlor	µg/L	<	0.05									
	Heptachlor Epoxide	µg/L	<	0.05									
	PCB-1016	µg/L	<	0.025									
	PCB-1221	µg/L	<	0.025									
	PCB-1232	µg/L	<	0.025									
	PCB-1242	µg/L	<	0.025									
	PCB-1248	µg/L	<	0.025									
	PCB-1254	µg/L	<	0.025									
	PCB-1260	µg/L	<	0.025									
	PCBs, Total	µg/L											
	Toxaphene	µg/L	<	0.025									
	2,3,7,8-TCDD	ng/L	<	0.05									
Group 7	Gross Alpha	pCi/L											
	Total Beta	pCi/L											
	Radium 226/228	pCi/L											
	Total Strontium	µg/L											
	Total Uranium	µg/L											
	Osmotic Pressure	mOs/kg											

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.3, March 2021

Stream / Surface Water Information

First Qualiy Tissue, NPDES Permit No. PA0228818, Outfall 003

Instructions | Discharge | *Stream*

Receiving Surface Water Name: _____ No. Reaches to Model: 1

- (•) Statewide Criteria
- ( ) Great Lakes Criteria
- ( ) ORSANCO Criteria

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi^2)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	022412	2.94	547	767			Yes
End of Reach 1	022412	0.01	534	770			Yes

$Q_{7\text{-}10}$

Location	RMI	LFY (cfs/mi^2)*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness*	pH*	Hardness	pH
Point of Discharge	2.94	0.1	206									100	7		
End of Reach 1	0.01	0.1	207												

Q_h

Location	RMI	LFY (cfs/mi^2)	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness	pH	Hardness	pH
Point of Discharge	2.94														
End of Reach 1	0.01														

4,4-DDD	0	0		0	0.0001	0.0001	0.006	
Dieldrin	0	0		0	0.000001	0.000001	0.00006	
alpha-Endosulfan	0	0		0	N/A	N/A	N/A	
beta-Endosulfan	0	0		0	N/A	N/A	N/A	
Endosulfan Sulfate	0	0		0	N/A	N/A	N/A	
Endrin	0	0		0	N/A	N/A	N/A	
Endrin Aldehyde	0	0		0	N/A	N/A	N/A	
Heptachlor	0	0		0	0.000006	0.000006	0.0004	
Heptachlor Epoxide	0	0		0	0.00003	0.00003	0.002	
Toxaphene	0	0		0	0.0007	0.0007	0.043	
2,3,7,8-TCDD	0	0		0	5E-09	5.00E-09	3.09E-07	

☑ ***Recommended WQBELs & Monitoring Requirements***

No. Samples/Month: 4

	Mass Limits		*Concentration Limits*						
Pollutants	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units	Governing WQBEL	WQBEL Basis	Comments
Total Cadmium	Report	Report	Report	Report	Report	µg/L	3.21	CFC	Discharge Conc > 10% WQBEL (no RP)
Total Silver	Report	Report	Report	Report	Report	µg/L	6.23	AFC	Discharge Conc > 10% WQBEL (no RP)
Vinyl Chloride	0.076	0.12	1.24	1.93	3.09	µg/L	1.24	CRL	Discharge Conc ≥ 50% WQBEL (RP)
Hexachlorobutadiene	0.038	0.06	0.62	0.97	1.55	µg/L	0.62	CRL	Discharge Conc ≥ 50% WQBEL (RP)
1,2,4-Trichlorobenzene	0.051	0.08	0.83	1.3	2.08	µg/L	0.83	THH	Discharge Conc ≥ 50% WQBEL (RP)
2,3,7,8-TCDD	1.91E-08	2.98E-08	0.0003	0.0005	0.0008	ng/L	0.0003	CRL	Discharge Conc ≥ 50% WQBEL (RP)

☑ ***Other Pollutants without Limits or Monitoring***

The following pollutants do not require effluent limits or monitoring based on water quality because reasonable potential to exceed water quality criteria was not determined and the discharge concentration was less than thresholds for monitoring, or the pollutant was not detected and a sufficiently sensitive analytical method was used (e.g., <= Target QL).

Pollutants	Governing WQBEL	Units	Comments
Total Dissolved Solids (PWS)	N/A	N/A	PWS Not Applicable
Bromide	N/A	N/A	No WQS
Sulfate (PWS)	N/A	N/A	PWS Not Applicable
Total Aluminum	1,235	µg/L	Discharge Conc ≤ 10% WQBEL
Total Antimony	N/A	N/A	Discharge Conc < TQL
Total Arsenic	N/A	N/A	Discharge Conc < TQL
Total Barium	28,507	µg/L	Discharge Conc ≤ 10% WQBEL
Total Beryllium	N/A	N/A	No WQS
Total Boron	13,343	µg/L	Discharge Conc < TQL
Total Chromium (III)	1,024	µg/L	Discharge Conc < TQL
Hexavalent Chromium	26.8	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cobalt	156	µg/L	Discharge Conc ≤ 10% WQBEL

Total Copper	23.1	µg/L	Discharge Conc < TQL
Total Cyanide	N/A	N/A	No WQS
Dissolved Iron	3,563	µg/L	Discharge Conc ≤ 10% WQBEL
Total Iron	28,492	µg/L	Discharge Conc ≤ 10% WQBEL
Total Lead	37.8	µg/L	Discharge Conc < TQL
Total Manganese	11,878	µg/L	Discharge Conc ≤ 10% WQBEL
Total Mercury	0.59	µg/L	Discharge Conc < TQL
Total Nickel	620	µg/L	Discharge Conc < TQL
Total Phenols (Phenolics) (PWS)		µg/L	Discharge Conc < TQL
Total Selenium	59.3	µg/L	Discharge Conc < TQL
Total Thallium	2.85	µg/L	Discharge Conc < TQL
Total Zinc	197	µg/L	Discharge Conc ≤ 10% WQBEL
Total Molybdenum	N/A	N/A	No WQS
Acrolein	4.94	µg/L	Discharge Conc < TQL
Acrylamide	4.33	µg/L	Discharge Conc ≤ 25% WQBEL
Acrylonitrile	3.71	µg/L	Discharge Conc < TQL
Benzene	35.9	µg/L	Discharge Conc ≤ 25% WQBEL
Bromoform	433	µg/L	Discharge Conc ≤ 25% WQBEL
Carbon Tetrachloride	24.7	µg/L	Discharge Conc ≤ 25% WQBEL
Chlorobenzene	1,188	µg/L	Discharge Conc ≤ 25% WQBEL
Chlorodibromomethane	49.5	µg/L	Discharge Conc ≤ 25% WQBEL
Chloroethane	N/A	N/A	No WQS
2-Chloroethyl Vinyl Ether	29,652	µg/L	Discharge Conc < TQL
Chloroform	67.7	µg/L	Discharge Conc ≤ 25% WQBEL
Dichlorobromomethane	58.8	µg/L	Discharge Conc ≤ 25% WQBEL
1,1-Dichloroethane	N/A	N/A	No WQS
1,2-Dichloroethane	612	µg/L	Discharge Conc ≤ 25% WQBEL
1,1-Dichloroethylene	392	µg/L	Discharge Conc ≤ 25% WQBEL
1,2-Dichloropropane	55.7	µg/L	Discharge Conc ≤ 25% WQBEL
1,3-Dichloropropylene	16.7	µg/L	Discharge Conc ≤ 25% WQBEL
1,4-Dioxane	N/A	N/A	No WQS
Ethylbenzene	808	µg/L	Discharge Conc ≤ 25% WQBEL
Methyl Bromide	906	µg/L	Discharge Conc ≤ 25% WQBEL
Methylene Chloride	1,237	µg/L	Discharge Conc ≤ 25% WQBEL
1,1,2,2-Tetrachloroethane	12.4	µg/L	Discharge Conc ≤ 25% WQBEL
Tetrachloroethylene	619	µg/L	Discharge Conc ≤ 25% WQBEL
Toluene	677	µg/L	Discharge Conc ≤ 25% WQBEL
1,2-trans-Dichloroethylene	1,188	µg/L	Discharge Conc ≤ 25% WQBEL
1,1,1-Trichloroethane	4,942	µg/L	Discharge Conc ≤ 25% WQBEL
1,1,2-Trichloroethane	34.0	µg/L	Discharge Conc ≤ 25% WQBEL
Trichloroethylene	37.1	µg/L	Discharge Conc ≤ 25% WQBEL
2-Chlorophenol	356	µg/L	Discharge Conc < TQL
2,4-Dichlorophenol	119	µg/L	Discharge Conc < TQL
2,4-Dimethylphenol	1,087	µg/L	Discharge Conc < TQL
4,6-Dinitro-o-Cresol	23.8	µg/L	Discharge Conc < TQL

2,4-Dinitrophenol	119	µg/L	Discharge Conc < TQL
2-Nitrophenol	13,179	µg/L	Discharge Conc < TQL
4-Nitrophenol	3,789	µg/L	Discharge Conc < TQL
p-Chloro-m-Cresol	264	µg/L	Discharge Conc < TQL
Pentachlorophenol	1.86	µg/L	Discharge Conc < TQL
Phenol	47,512	µg/L	Discharge Conc < TQL
2,4,6-Trichlorophenol	92.8	µg/L	Discharge Conc < TQL
Acenaphthene	137	µg/L	Discharge Conc < TQL
Acenaphthylene	N/A	N/A	No WQS
Anthracene	3,563	µg/L	Discharge Conc < TQL
Benzidine	0.006	µg/L	Discharge Conc < TQL
Benzo(a)Anthracene	0.062	µg/L	Discharge Conc < TQL
Benzo(a)Pyrene	0.006	µg/L	Discharge Conc < TQL
3,4-Benzofluoranthene	0.062	µg/L	Discharge Conc < TQL
Benzo(ghi)Perylene	N/A	N/A	No WQS
Benzo(k)Fluoranthene	0.62	µg/L	Discharge Conc < TQL
Bis(2-Chloroethoxy)Methane	N/A	N/A	No WQS
Bis(2-Chloroethyl)Ether	1.86	µg/L	Discharge Conc < TQL
Bis(2-Chloroisopropyl)Ether	2,376	µg/L	Discharge Conc < TQL
Bis(2-Ethylhexyl)Phthalate	19.8	µg/L	Discharge Conc < TQL
4-Bromophenyl Phenyl Ether	445	µg/L	Discharge Conc < TQL
Butyl Benzyl Phthalate	1.19	µg/L	Discharge Conc < TQL
2-Chloronaphthalene	9,502	µg/L	Discharge Conc < TQL
4-Chlorophenyl Phenyl Ether	N/A	N/A	No WQS
Chrysene	7.42	µg/L	Discharge Conc < TQL
Dibenzo(a,h)Anthrancene	0.006	µg/L	Discharge Conc < TQL
1,2-Dichlorobenzene	1,351	µg/L	Discharge Conc ≤ 25% WQBEL
1,3-Dichlorobenzene	83.1	µg/L	Discharge Conc ≤ 25% WQBEL
1,4-Dichlorobenzene	1,203	µg/L	Discharge Conc ≤ 25% WQBEL
3,3-Dichlorobenzidine	3.09	µg/L	Discharge Conc < TQL
Diethyl Phthalate	6,589	µg/L	Discharge Conc < TQL
Dimethyl Phthalate	4,118	µg/L	Discharge Conc < TQL
Di-n-Butyl Phthalate	181	µg/L	Discharge Conc < TQL
2,4-Dinitrotoluene	3.09	µg/L	Discharge Conc < TQL
2,6-Dinitrotoluene	3.09	µg/L	Discharge Conc < TQL
Di-n-Octyl Phthalate	N/A	N/A	No WQS
1,2-Diphenylhydrazine	1.86	µg/L	Discharge Conc < TQL
Fluoranthene	238	µg/L	Discharge Conc < TQL
Fluorene	594	µg/L	Discharge Conc < TQL
Hexachlorobenzene	0.005	µg/L	Discharge Conc < TQL
Hexachlorocyclopentadiene	8.24	µg/L	Discharge Conc < TQL
Hexachloroethane	6.19	µg/L	Discharge Conc < TQL
Indeno(1,2,3-cd)Pyrene	0.062	µg/L	Discharge Conc < TQL
Isophorone	404	µg/L	Discharge Conc < TQL
Naphthalene	231	µg/L	Discharge Conc ≤ 25% WQBEL

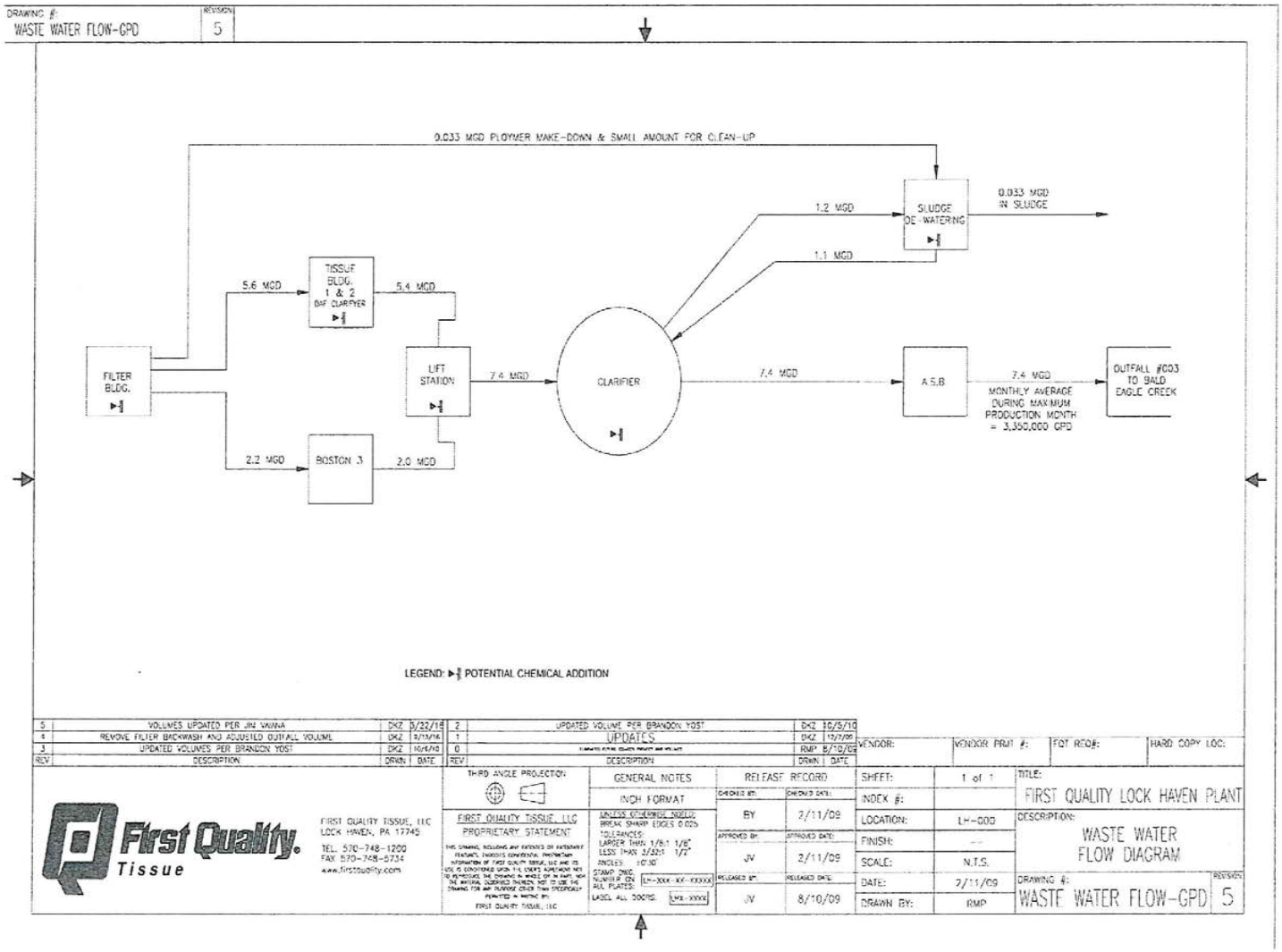
Nitrobenzene	119	µg/L	Discharge Conc < TQL
n-Nitrosodimethylamine	0.043	µg/L	Discharge Conc < TQL
n-Nitrosodi-n-Propylamine	0.31	µg/L	Discharge Conc < TQL
n-Nitrosodiphenylamine	204	µg/L	Discharge Conc < TQL
Phenanthrene	8.24	µg/L	Discharge Conc < TQL
Pyrene	238	µg/L	Discharge Conc < TQL
Aldrin	0.00005	µg/L	Discharge Conc < TQL
alpha-BHC	0.025	µg/L	Discharge Conc < TQL
beta-BHC	0.49	µg/L	Discharge Conc < TQL
gamma-BHC	1.56	µg/L	Discharge Conc < TQL
delta BHC	N/A	N/A	No WQS
Chlordane	0.019	µg/L	Discharge Conc < TQL
4,4-DDT	0.002	µg/L	Discharge Conc < TQL
4,4-DDE	0.001	µg/L	Discharge Conc < TQL
4,4-DDD	0.006	µg/L	Discharge Conc < TQL
Dieldrin	0.00006	µg/L	Discharge Conc < TQL
alpha-Endosulfan	0.36	µg/L	Discharge Conc < TQL
beta-Endosulfan	0.36	µg/L	Discharge Conc < TQL
Endosulfan Sulfate	238	µg/L	Discharge Conc < TQL
Endrin	0.14	µg/L	Discharge Conc < TQL
Endrin Aldehyde	11.9	µg/L	Discharge Conc < TQL
Heptachlor	0.0004	µg/L	Discharge Conc < TQL
Heptachlor Epoxide	0.002	µg/L	Discharge Conc < TQL
PCB-1016	N/A	N/A	No WQS
PCB-1221	N/A	N/A	No WQS
PCB-1232	N/A	N/A	No WQS
PCB-1242	N/A	N/A	No WQS
PCB-1248	N/A	N/A	No WQS
PCB-1254	N/A	N/A	No WQS
PCB-1260	N/A	N/A	No WQS
Toxaphene	0.002	µg/L	Discharge Conc < TQL

APPENDIX D

FACILITY MAP AND SCHEMATIC

Name: MILL HALL
Date: 5/6/2005
Scale: 1 inch equals 4000 feet

Location: 041° 07' 22.3" N 077° 27' 04.1" W
Caption: First Quality Tissue, LLC
Lock Haven Site


DRAWING #:
WASTE WATER FLOW-GPD
REVISION
5
0.033 MGD POLYMER MAKE-DOWN & SMALL AMOUNT FOR CLEAN-UP
1.2 MGD
SLUDGE DE WATERING
0.033 MGD IN SLUDGE
1.1 MGD
5.6 MGD
TISSUE BLDG. 1 & 2 DAF CLARIFYER
5.4 MGD
FILTER BLDG.
LIFT STATION
7.4 MGD
CLARIFIER
7.4 MGD
A.S.B
7.4 MGD
MONTHLY AVERAGE DURING MAXIMUM PRODUCTION MONTH = 3,350,000 GPD
OUTFALL #003 TO BALD EAGLE CREEK
2.2 MGD
BOSTON 3
2.0 MGD
LEGEND: POTENTIAL CHEMICAL ADDITION
5 VOLUMES UPDATED PER JIM VIANNA DKZ 9/22/10
4 REMOVE FILTER BACKWASH AND ADJUSTED OUTFALL VOLUME DKZ 9/13/10
3 UPDATED VOLUMES PER BRANDON YOST DKZ 10/6/10
2 UPDATED VOLUME PER BRANDON YOST DKZ 10/5/10
1 UPDATES DKZ 12/7/09
0 RMP 8/10/09
REV DESCRIPTION DRWN DATE
VENDOR: VENDOR PRJT #: FOT REQ#: HARD COPY LOC:
First Quality. Tissue
FIRST QUALITY TISSUE, LLC
LOCK HAVEN, PA 17745
TEL. 570-748-1200
FAX 570-748-5734
www.firstquality.com
THIRD ANGLE PROJECTION
GENERAL NOTES
INCH FORMAT
FIRST QUALITY TISSUE, LLC
PROPRIETARY STATEMENT
UNLESS OTHERWISE SPECIFIED:
BREAK SHARP EDGES 0.025
TOLERANCES:
LARGER THAN 1/8:1 1/8"
LESS THAN 3/32:1 1/2"
ANGLES ±0.30
STAND. DWG. NUMBER (IF ON ALL PLATES): LH-XXX-XX-XXXXX
LABEL ALL DOORS: LH2-XXXX
RELEASE RECORD
CHECKED BY: BY CHECKED DATE: 2/11/09
APPROVED BY: JV APPROVED DATE: 2/11/09
RELEASED BY: JV RELEASED DATE: 8/10/09
SHEET: 1 of 1
INDEX #:
LOCATION: LH-000
FINISH: --
SCALE: N.T.S.
DATE: 2/11/09
DRAWN BY: RMP
TITLE: FIRST QUALITY LOCK HAVEN PLANT
DESCRIPTION: WASTE WATER FLOW DIAGRAM
DRAWING #: WASTE WATER FLOW-GPD
REVISION 5

APPENDIX E

CHESAPEAKE BAY MONITORING RESULTS

TN&TP EFFLUENT NET RESULTS

PERMIT	AUTH ID	PF NAME	MONITORING ST	MONITORING EN	REPORT FREQUE	OUTFALL	MONITORING LOCA	PARAMETER	LOAD 2VALUE	LOAD 2LIMIT	LOAD 2SBC	SAMPLE FR	SAMPLE TY
Total Nitrogen													
PA0228818	1226152	FIRST QUA	10/01/2019	09/30/2020	Annually	003	Effluent Net	Total Nitrogen (	26418.6	Monitor and Re	Total Annual	1/year	Calculation
PA0228818	1226152	FIRST QUA	10/01/2020	09/30/2021	Annually	003	Effluent Net	Total Nitrogen (	34715.5	Monitor and Re	Total Annual	1/year	Calculation
PA0228818	1316620	FIRST QUA	10/01/2021	09/30/2022	Annually	003	Effluent Net	Total Nitrogen (	23695.8	Monitor and Re	Total Annual	1/year	Calculation
PA0228818	1316620	FIRST QUA	10/01/2022	09/30/2023	Annually	003	Effluent Net	Total Nitrogen (	24307.5	Monitor and Re	Total Annual	1/year	Calculation
PA0228818	1316620	FIRST QUA	10/01/2023	09/30/2024	Annually	003	Effluent Net	Total Nitrogen (	29561.1	Monitor and Re	Total Annual	1/year	Calculation
PA0228818	1226152	FIRST QUA	10/01/2019	09/30/2020	Annually	003	Final Effluent	Total Nitrogen (	58793	Monitor and Re	Total Annual	1/year	Calculation
PA0228818	1226152	FIRST QUA	10/01/2020	09/30/2021	Annually	003	Final Effluent	Total Nitrogen (	68875	Monitor and Re	Total Annual	1/year	Calculation
PA0228818	1316620	FIRST QUA	10/01/2021	09/30/2022	Annually	003	Final Effluent	Total Nitrogen (	66318	Monitor and Re	Total Annual	1/year	Calculation
PA0228818	1316620	FIRST QUA	10/01/2022	09/30/2023	Annually	003	Final Effluent	Total Nitrogen (	59447	Monitor and Re	Total Annual	1/year	Calculation
PA0228818	1316620	FIRST QUA	10/01/2023	09/30/2024	Annually	003	Final Effluent	Total Nitrogen (	49071.5	Monitor and Re	Total Annual	1/year	Calculation
Total Phosphorus													
PA0228818	1226152	FIRST QUA	10/01/2019	09/30/2020	Annually	003	Effluent Net	Total Phosphor	16381.5	Monitor and Re	Total Annual	1/year	Calculation
PA0228818	1226152	FIRST QUA	10/01/2020	09/30/2021	Annually	003	Effluent Net	Total Phosphor	17213.3	Monitor and Re	Total Annual	1/year	Calculation
PA0228818	1316620	FIRST QUA	10/01/2021	09/30/2022	Annually	003	Effluent Net	Total Phosphor	15995.8	Monitor and Re	Total Annual	1/year	Calculation
PA0228818	1316620	FIRST QUA	10/01/2022	09/30/2023	Annually	003	Effluent Net	Total Phosphor	16904	Monitor and Re	Total Annual	1/year	Calculation
PA0228818	1316620	FIRST QUA	10/01/2023	09/30/2024	Annually	003	Effluent Net	Total Phosphor	13473.1	Monitor and Re	Total Annual	1/year	Calculation
PA0228818	1226152	FIRST QUA	10/01/2019	09/30/2020	Annually	003	Final Effluent	Total Phosphor	17414	Monitor and Re	Total Annual	1/year	Calculation
PA0228818	1226152	FIRST QUA	10/01/2020	09/30/2021	Annually	003	Final Effluent	Total Phosphor	18070	Monitor and Re	Total Annual	1/year	Calculation
PA0228818	1316620	FIRST QUA	10/01/2021	09/30/2022	Annually	003	Final Effluent	Total Phosphor	18196	Monitor and Re	Total Annual	1/year	Calculation
PA0228818	1316620	FIRST QUA	10/01/2022	09/30/2023	Annually	003	Final Effluent	Total Phosphor	18911	Monitor and Re	Total Annual	1/year	Calculation
PA0228818	1316620	FIRST QUA	10/01/2023	09/30/2024	Annually	003	Final Effluent	Total Phosphor	16370.6	Monitor and Re	Total Annual	1/year	Calculation

TN INFLUENT RESULTS

PERMIT	AUTH CLIE	MONITORING S	MONITORING E	REPORT FR	OUTFALL	MONITORI	PARAMETER	CONCUNIT	CONC 2VA	CONC 2LIN	CONC 2SB	CONC 3VA	SAMPLE FR	SAMPLE TYPE
PA022881	FIRST QUA	02/01/2019	02/28/2019	Monthly	003	Intake	Total Nitrogen	mg/L	2.3	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	03/01/2019	03/31/2019	Monthly	003	Intake	Total Nitrogen	mg/L	2.43	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	04/01/2019	04/30/2019	Monthly	003	Intake	Total Nitrogen	mg/L	1.82	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	05/01/2019	05/31/2019	Monthly	003	Intake	Total Nitrogen	mg/L	1.63	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	06/01/2019	06/30/2019	Monthly	003	Intake	Total Nitrogen	mg/L	1.66	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	07/01/2019	07/31/2019	Monthly	003	Intake	Total Nitrogen	mg/L	1.76	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	08/01/2019	08/31/2019	Monthly	003	Intake	Total Nitrogen	mg/L	1.82	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	09/01/2019	09/30/2019	Monthly	003	Intake	Total Nitrogen	mg/L	1.77	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	10/01/2019	10/31/2019	Monthly	003	Intake	Total Nitrogen	mg/L	1.58	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	11/01/2019	11/30/2019	Monthly	003	Intake	Total Nitrogen	mg/L	1.67	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	12/01/2019	12/31/2019	Monthly	003	Intake	Total Nitrogen	mg/L	1.5	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	01/01/2020	01/31/2020	Monthly	003	Intake	Total Nitrogen	mg/L	2.32	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	02/01/2020	02/29/2020	Monthly	003	Intake	Total Nitrogen	mg/L	2.06	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	03/01/2020	03/31/2020	Monthly	003	Intake	Total Nitrogen	mg/L	2.15	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	04/01/2020	04/30/2020	Monthly	003	Intake	Total Nitrogen	mg/L	1.57	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	05/01/2020	05/31/2020	Monthly	003	Intake	Total Nitrogen	mg/L	1.56	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	06/01/2020	06/30/2020	Monthly	003	Intake	Total Nitrogen	mg/L	1.76	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	07/01/2020	07/31/2020	Monthly	003	Intake	Total Nitrogen	mg/L	2.4	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	08/01/2020	08/31/2020	Monthly	003	Intake	Total Nitrogen	mg/L	2.26	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	09/01/2020	09/30/2020	Monthly	003	Intake	Total Nitrogen	mg/L	2.49	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	10/01/2020	10/31/2020	Monthly	003	Intake	Total Nitrogen	mg/L	1.8	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	11/01/2020	11/30/2020	Monthly	003	Intake	Total Nitrogen	mg/L	1.88	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	12/01/2020	12/31/2020	Monthly	003	Intake	Total Nitrogen	mg/L	1.84	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	01/01/2021	01/31/2021	Monthly	003	Intake	Total Nitrogen	mg/L	2.66	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	02/01/2021	02/28/2021	Monthly	003	Intake	Total Nitrogen	mg/L	2.8	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	03/01/2021	03/31/2021	Monthly	003	Intake	Total Nitrogen	mg/L	2.09	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	04/01/2021	04/30/2021	Monthly	003	Intake	Total Nitrogen	mg/L	1.46	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	05/01/2021	05/31/2021	Monthly	003	Intake	Total Nitrogen	mg/L	2.8	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	06/01/2021	06/30/2021	Monthly	003	Intake	Total Nitrogen	mg/L	2	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	07/01/2021	07/31/2021	Monthly	003	Intake	Total Nitrogen	mg/L	1.77	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	08/01/2021	08/31/2021	Monthly	003	Intake	Total Nitrogen	mg/L	1.49	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	09/01/2021	09/30/2021	Monthly	003	Intake	Total Nitrogen	mg/L	1.4	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	10/01/2021	10/31/2021	Monthly	003	Intake	Total Nitrogen	mg/L	1.65	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	11/01/2021	11/30/2021	Monthly	003	Intake	Total Nitrogen	mg/L	1.14	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	12/01/2021	12/31/2021	Monthly	003	Intake	Total Nitrogen	mg/L	1.95	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	01/01/2022	01/31/2022	Monthly	003	Intake	Total Nitrogen	mg/L	1.95	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	02/01/2022	02/28/2022	Monthly	003	Intake	Total Nitrogen	mg/L	2.44	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	03/01/2022	03/31/2022	Monthly	003	Intake	Total Nitrogen	mg/L	1.59	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	04/01/2022	04/30/2022	Monthly	003	Intake	Total Nitrogen	mg/L	1.92	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	05/01/2022	05/31/2022	Monthly	003	Intake	Total Nitrogen	mg/L	2.84	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	06/01/2022	06/30/2022	Monthly	003	Intake	Total Nitrogen	mg/L	3.02	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	06/01/2022	06/30/2022	Monthly	003	Intake	Total Nitrogen	mg/L	3.04	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	07/01/2022	07/31/2022	Monthly	003	Intake	Total Nitrogen	mg/L	2.74	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	08/01/2022	08/31/2022	Monthly	003	Intake	Total Nitrogen	mg/L	3.55	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	09/01/2022	09/30/2022	Monthly	003	Intake	Total Nitrogen	mg/L	2.14	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	10/01/2022	10/31/2022	Monthly	003	Intake	Total Nitrogen	mg/L	1.27	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	11/01/2022	11/30/2022	Monthly	003	Intake	Total Nitrogen	mg/L	2.26	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	12/01/2022	12/31/2022	Monthly	003	Intake	Total Nitrogen	mg/L	2.27	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	01/01/2023	01/31/2023	Monthly	003	Intake	Total Nitrogen	mg/L	1.91	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	02/01/2023	02/28/2023	Monthly	003	Intake	Total Nitrogen	mg/L	2.18	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	03/01/2023	03/31/2023	Monthly	003	Intake	Total Nitrogen	mg/L	1.69	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	04/01/2023	04/30/2023	Monthly	003	Intake	Total Nitrogen	mg/L	1.71	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	05/01/2023	05/31/2023	Monthly	003	Intake	Total Nitrogen	mg/L	3.02	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	06/01/2023	06/30/2023	Monthly	003	Intake	Total Nitrogen	mg/L	2.33	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	07/01/2023	07/31/2023	Monthly	003	Intake	Total Nitrogen	mg/L	1.89	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	08/01/2023	08/31/2023	Monthly	003	Intake	Total Nitrogen	mg/L	1.54	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	09/01/2023	09/30/2023	Monthly	003	Intake	Total Nitrogen	mg/L	1.55	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	10/01/2023	10/31/2023	Monthly	003	Intake	Total Nitrogen	mg/L	1.97	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	11/01/2023	11/30/2023	Monthly	003	Intake	Total Nitrogen	mg/L	1.6	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	12/01/2023	12/31/2023	Monthly	003	Intake	Total Nitrogen	mg/L	2.21	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	01/01/2024	01/31/2024	Monthly	003	Intake	Total Nitrogen	mg/L	1.91	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	02/01/2024	02/29/2024	Monthly	003	Intake	Total Nitrogen	mg/L	2.03	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	03/01/2024	03/31/2024	Monthly	003	Intake	Total Nitrogen	mg/L	1.46	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	04/01/2024	04/30/2024	Monthly	003	Intake	Total Nitrogen	mg/L	1.13	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	05/01/2024	05/31/2024	Monthly	003	Intake	Total Nitrogen	mg/L	0.98	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	06/01/2024	06/30/2024	Monthly	003	Intake	Total Nitrogen	mg/L	1.15	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	07/01/2024	07/31/2024	Monthly	003	Intake	Total Nitrogen	mg/L	1.03	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	08/01/2024	08/31/2024	Monthly	003	Intake	Total Nitrogen	mg/L	0.9	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	09/01/2024	09/30/2024	Monthly	003	Intake	Total Nitrogen	mg/L	1.05	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	10/01/2024	10/31/2024	Monthly	003	Intake	Total Nitrogen	mg/L	1.33	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	11/01/2024	11/30/2024	Monthly	003	Intake	Total Nitrogen	mg/L	1.23	Monitor ar	Average Monthly		2/week	24-Hr Composite
									1.916479	Average Intake Concentration				
									72.88446	lb/day @ 4.56 MGD				
									26602.83	lb/yr @ 4.56 MGD				

TP INFLUENT RESULTS

PERMIT	AUTH CLIE	MONITORING S	MONITORING E	REPORT FR	OUTFALL	MONITORI	PARAMETER	CONCUNIT	CONC 2VA	CONC 2LIN	CONC 2SB	CONC 3VA	SAMPLE FF	SAMPLE TYPE
PA022881	FIRST QUA	02/01/2019	02/28/2019	Monthly	003	Intake	Total Phosphorus	mg/L	0.07	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	03/01/2019	03/31/2019	Monthly	003	Intake	Total Phosphorus	mg/L	0.04	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	04/01/2019	04/30/2019	Monthly	003	Intake	Total Phosphorus	mg/L	0.04	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	05/01/2019	05/31/2019	Monthly	003	Intake	Total Phosphorus	mg/L	0.03	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	06/01/2019	06/30/2019	Monthly	003	Intake	Total Phosphorus	mg/L	0.02	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	07/01/2019	07/31/2019	Monthly	003	Intake	Total Phosphorus	mg/L	0.04	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	08/01/2019	08/31/2019	Monthly	003	Intake	Total Phosphorus	mg/L	0.03	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	09/01/2019	09/30/2019	Monthly	003	Intake	Total Phosphorus	mg/L	0.05	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	10/01/2019	10/31/2019	Monthly	003	Intake	Total Phosphorus	mg/L	0.03	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	11/01/2019	11/30/2019	Monthly	003	Intake	Total Phosphorus	mg/L	0.03	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	12/01/2019	12/31/2019	Monthly	003	Intake	Total Phosphorus	mg/L	0.02	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	01/01/2020	01/31/2020	Monthly	003	Intake	Total Phosphorus	mg/L	0.13	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	02/01/2020	02/29/2020	Monthly	003	Intake	Total Phosphorus	mg/L	0.03	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	03/01/2020	03/31/2020	Monthly	003	Intake	Total Phosphorus	mg/L	0.04	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	04/01/2020	04/30/2020	Monthly	003	Intake	Total Phosphorus	mg/L	0.037	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	05/01/2020	05/31/2020	Monthly	003	Intake	Total Phosphorus	mg/L	0.04	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	06/01/2020	06/30/2020	Monthly	003	Intake	Total Phosphorus	mg/L	0.03	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	07/01/2020	07/31/2020	Monthly	003	Intake	Total Phosphorus	mg/L	0.11	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	08/01/2020	08/31/2020	Monthly	003	Intake	Total Phosphorus	mg/L	0.12	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	09/01/2020	09/30/2020	Monthly	003	Intake	Total Phosphorus	mg/L	0.13	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	10/01/2020	10/31/2020	Monthly	003	Intake	Total Phosphorus	mg/L	0.08	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	11/01/2020	11/30/2020	Monthly	003	Intake	Total Phosphorus	mg/L	0.21	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	12/01/2020	12/31/2020	Monthly	003	Intake	Total Phosphorus	mg/L	0.06	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	01/01/2021	01/31/2021	Monthly	003	Intake	Total Phosphorus	mg/L	0.03	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	02/01/2021	02/28/2021	Monthly	003	Intake	Total Phosphorus	mg/L	0.03	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	03/01/2021	03/31/2021	Monthly	003	Intake	Total Phosphorus	mg/L	0.03	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	04/01/2021	04/30/2021	Monthly	003	Intake	Total Phosphorus	mg/L	0.04	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	05/01/2021	05/31/2021	Monthly	003	Intake	Total Phosphorus	mg/L	0.04	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	06/01/2021	06/30/2021	Monthly	003	Intake	Total Phosphorus	mg/L	0.04	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	07/01/2021	07/31/2021	Monthly	003	Intake	Total Phosphorus	mg/L	0.03	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	08/01/2021	08/31/2021	Monthly	003	Intake	Total Phosphorus	mg/L	0.03	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	09/01/2021	09/30/2021	Monthly	003	Intake	Total Phosphorus	mg/L	0.03	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	10/01/2021	10/31/2021	Monthly	003	Intake	Total Phosphorus	mg/L	0.16	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	11/01/2021	11/30/2021	Monthly	003	Intake	Total Phosphorus	mg/L	0.67	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	12/01/2021	12/31/2021	Monthly	003	Intake	Total Phosphorus	mg/L	0.13	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	01/01/2022	01/31/2022	Monthly	003	Intake	Total Phosphorus	mg/L	0.02	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	02/01/2022	02/28/2022	Monthly	003	Intake	Total Phosphorus	mg/L	0.03	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	03/01/2022	03/31/2022	Monthly	003	Intake	Total Phosphorus	mg/L	0.02	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	04/01/2022	04/30/2022	Monthly	003	Intake	Total Phosphorus	mg/L	0.06	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	05/01/2022	05/31/2022	Monthly	003	Intake	Total Phosphorus	mg/L	0.08	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	06/01/2022	06/30/2022	Monthly	003	Intake	Total Phosphorus	mg/L	0.05	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	06/01/2022	06/30/2022	Monthly	003	Intake	Total Phosphorus	mg/L	0.07	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	07/01/2022	07/31/2022	Monthly	003	Intake	Total Phosphorus	mg/L	0.04	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	08/01/2022	08/31/2022	Monthly	003	Intake	Total Phosphorus	mg/L	0.13	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	09/01/2022	09/30/2022	Monthly	003	Intake	Total Phosphorus	mg/L	0.05	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	10/01/2022	10/31/2022	Monthly	003	Intake	Total Phosphorus	mg/L	0.06	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	11/01/2022	11/30/2022	Monthly	003	Intake	Total Phosphorus	mg/L	0.09	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	12/01/2022	12/31/2022	Monthly	003	Intake	Total Phosphorus	mg/L	0.16	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	01/01/2023	01/31/2023	Monthly	003	Intake	Total Phosphorus	mg/L	0.09	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	02/01/2023	02/28/2023	Monthly	003	Intake	Total Phosphorus	mg/L	0.06	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	03/01/2023	03/31/2023	Monthly	003	Intake	Total Phosphorus	mg/L	0.09	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	04/01/2023	04/30/2023	Monthly	003	Intake	Total Phosphorus	mg/L	0.15	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	05/01/2023	05/31/2023	Monthly	003	Intake	Total Phosphorus	mg/L	0.4	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	06/01/2023	06/30/2023	Monthly	003	Intake	Total Phosphorus	mg/L	0.08	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	07/01/2023	07/31/2023	Monthly	003	Intake	Total Phosphorus	mg/L	0.04	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	08/01/2023	08/31/2023	Monthly	003	Intake	Total Phosphorus	mg/L	0.06	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	09/01/2023	09/30/2023	Monthly	003	Intake	Total Phosphorus	mg/L	0.03	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	10/01/2023	10/31/2023	Monthly	003	Intake	Total Phosphorus	mg/L	0.03	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	11/01/2023	11/30/2023	Monthly	003	Intake	Total Phosphorus	mg/L	0.03	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	12/01/2023	12/31/2023	Monthly	003	Intake	Total Phosphorus	mg/L	0.15	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	01/01/2024	01/31/2024	Monthly	003	Intake	Total Phosphorus	mg/L	0.16	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	02/01/2024	02/29/2024	Monthly	003	Intake	Total Phosphorus	mg/L	0.03	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	03/01/2024	03/31/2024	Monthly	003	Intake	Total Phosphorus	mg/L	0.09	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	04/01/2024	04/30/2024	Monthly	003	Intake	Total Phosphorus	mg/L	0.1	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	05/01/2024	05/31/2024	Monthly	003	Intake	Total Phosphorus	mg/L	0.31	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	06/01/2024	06/30/2024	Monthly	003	Intake	Total Phosphorus	mg/L	1.26	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	07/01/2024	07/31/2024	Monthly	003	Intake	Total Phosphorus	mg/L	0.2	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	08/01/2024	08/31/2024	Monthly	003	Intake	Total Phosphorus	mg/L	0.13	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	09/01/2024	09/30/2024	Monthly	003	Intake	Total Phosphorus	mg/L	0.16	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	10/01/2024	10/31/2024	Monthly	003	Intake	Total Phosphorus	mg/L	0.1	Monitor ar	Average Monthly		2/week	24-Hr Composite
PA022881	FIRST QUA	11/01/2024	11/30/2024	Monthly	003	Intake	Total Phosphorus	mg/L	0.1	Monitor ar	Average Monthly		2/week	24-Hr Composite

0.104042 Average Intake Concentration
3.956769 lb/day @ 4.56 MGD
1444.221 lb/yr @ 4.56 MGD

APPENDIX F

TEMPERATURE MODEL RESULTS

Thermal Discharge Recommended Permit Limits

Warm Water Fishes (WWF) Stream

Facility: **First Quality Tissue**
Permit Number: PA0228818
Stream: Bald Eagle Creek

	WWF Ambient Stream Temperature (ºF) (Default)	Ambient Stream Temperature (ºF) (Site-specific data)	Target Maximum Stream Temp.[1] (ºF)	WWF Daily WLA[2] (Million BTUs/day)	WWF Daily WLA[3] (ºF)	at Discharge Flow (MGD)	PMF
Jan 1-31	35	0	40	17,155	110.0	7.4	1.00
Feb 1-29	35	0	40	19,431	110.0	7.4	1.00
Mar 1-31	40	0	46	43,303	110.0	7.4	1.00
Apr 1-15	47	0	52	49,743	110.0	7.4	1.00
Apr 16-30	53	0	58	49,743	110.0	7.4	1.00
May 1-15	58	0	64	33,843	110.0	7.4	1.00
May 16-31	62	0	72	56,405	110.0	7.4	1.00
Jun 1-15	67	0	80	42,726	110.0	7.4	1.00
Jun 16-30	71	0	84	42,726	110.0	7.4	1.00
Jul 1-31	75	0	87	18,121	110.0	7.4	1.00
Aug 1-15	74	0	87	20,064	110.0	7.4	1.00
Aug 16-31	74	0	87	20,064	110.0	7.4	1.00
Sep 1-15	71	0	84	15,589	110.0	7.4	1.00
Sep 16-30	65	0	78	15,589	110.0	7.4	1.00
Oct 1-15	60	0	72	17,055	110.0	7.4	1.00
Oct 16-31	54	0	66	17,055	110.0	7.4	1.00
Nov 1-15	48	0	58	20,097	110.0	7.4	1.00
Nov 16-30	42	0	50	16,078	110.0	7.4	1.00
Dec 1-31	37	0	42	16,655	110.0	7.4	1.00

[1] This is the maximum of the WWF WQ criterion or the ambient temperature. The ambient temperature may be either the design (median) temperature for WWF, or the ambient stream temperature based on site-specific data entered by the user. A minimum of 1ºF above ambient stream temperature is allocated.
[2] The WLA expressed in Million BTUs/day is valid for Case 1 scenarios, and disabled for Case 2 scenarios.
[3] The WLA expressed in ºF is valid only if the limit is tied to a daily discharge flow limit (may be used for Case 1 or Case 2). WLAs greater than 110ºF are displayed as 110ºF.

First qual Thermal Discharge Limit Calc

1/24/2025