pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0111350**
Facility Type	**Municipal**	APS ID	**500567**
Major / Minor	**Minor**	Authorization ID	**1208907**

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Petersburg Borough Sewer Authority** **Huntingdon County**	Facility Name	**Petersburg STP**
Applicant Address	PO Box 6 316 King Street Petersburg, PA 16669-0006	Facility Address	Route 305 South Juniata Valley Pike Petersburg, PA 16669-0006
Applicant Contact	Cheryl Musser	Facility Contact	Cheryl Musser
Applicant Phone	(814) 699-9312	Facility Phone	(814) 699-9309
Client ID	214799	Site ID	251507
Ch 94 Load Status	Not Overloaded	Municipality	Petersburg Borough
Connection Status	No Limitations	County	Huntingdon
Date Application Received	November 7, 2017	EPA Waived?	Yes
Date Application Accepted	May 18, 2018	If No, Reason	
Purpose of Application	NPDES permit renewal		

Summary of Review

Petersburg Borough Sewer Authority (PBSA) has applied to the Pennsylvania Department of Environmental Protection (DEP) for reissuance of its NPDES permit. The permit was last reissued on October 26, 2012 and became effective on November 1, 2012. The permit expired on October 31, 2017 but the terms and conditions of the permit have been extended since that time.

PBSA owns, operates, and maintains the wastewater treatment plant located in Petersburg Borough, Huntingdon County. The extended aeration secondary treatment plant discharges treated municipal wastewater to Shaver Creek, which is classified for High Quality-Cold Water Fishes (HQ-CWF). The collection system has no combined sewers and serves Petersburg Borough and Logan Township. The facility has a design average annual flow of 0.1 MGD.

The plant upgrade units include an influent fine screen and compactor, two circular clarifiers, a circular digester, and two UV disinfection units. The upgrade project was completed in September 2018.

Changes from the previous permit: Unit of Fecal Coliform changed from CFU/100 ml to No./100 ml. Due to the plant upgraded disinfection from chlorine to UV, replaced TRC limit to record UV Light Transmittance (%).

Based on the review outlined in this fact sheet, it is recommended that the permit be drafted. A public notice of the draft permit will be published in the *Pennsylvania Bulletin* for public comments for 30 days. Any additional information or public review of documents associated with the discharge or the applicant may be available at the PA DEP Southcentral Regional Office (SCRO), 909 Elmerton Avenue, Harrisburg, PA 17110. To make an appointment for file reviews, contact the SCRO File Review Coordinator at 717.705.4700.

Approve	Deny	Signatures	Date
X		Hilary H. Le / Environmental Engineering Specialist	September 19, 2019
		Daniel W. Martin, P.E. / Environmental Engineer Manager	
		Maria D. Bebenek, P.E. / Clean Water Program Manager	

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	0.1
Latitude	40º 34' 3.08"	Longitude	-78º 2' 52.89"
Quad Name	Alexandria	Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	Shaver Creek (HQ-CWF)	Stream Code	15575
NHD Com ID	65605864	RMI	0.3 mile
Drainage Area	62.9 mi.^{2}	Yield (cfs/mi^2)	See comments below
Q_{7-10} Flow (cfs)	See comments below	Q_{7-10} Basis	USGS StreamStats
Elevation (ft)	661.42	Slope (ft/ft)	
Watershed No.	11-B	Chapter 93 Class.	HQ-CWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment			
Source(s) of Impairment			
TMDL Status		Name	
Nearest Downstream Public Water Supply Intake	Mifflintown Borough Municipal Authority, Juniata County		
PWS Waters	Juniata River	Flow at Intake (cfs)	
PWS RMI	37.5 miles	Distance from Outfall (mi)	Approximate 64 miles

Changes Since Last Permit Issuance:

Drainage Area

The discharge is to Shaver Creek at RMI 0.30 mile. A drainage area upstream of the discharge is estimated to be 62.9 mi.^{2}, according to USGS PA StreamStats available at https://streamstats.usgs.gov/ss/.

Streamflow

Streamflow will be correlated with past streamflow records taken from the nearby USGS gage station on the Standing Stone Creek. The Q_{7-10} is 6.85 cfs and the drainage area is 133 mi.^{2} (according to USGS PA StreamStats available at https://streamstats.usgs.gov/ss/) which results in a Q_{7-10} low flow yield of 0.05 cfs/mi.^{2}. This information is used to obtain a chronic or 30-day (Q_{30-10}), and an acute or 1-day (Q_{1-10}) exposure stream flow for the discharge point as follows (Guidance No. 391-2000-023):

$$\text{Low Flow Yield} = Q_{7-10gage} / \text{Drainage Area}_{gage} = 6.85 \text{ cfs} / 133 \text{ mi.}^2 = 0.05 \text{ cfs/mi.}^2$$
$$Q_{7-10discharge} = 0.05 \text{ cfs/mi.}^2 * \text{Drainage Area}_{discharge} = 0.05 \text{ cfs/mi.}^2 * 62.9 \text{ mi.}^2 = 3.1 \text{ cfs}$$
$$Q_{30-10} = 1.36 * Q_{7-10discharge} = 1.36 * 3.1 \text{ cfs} = 4.2 \text{ cfs}$$
$$Q_{1-10} = 0.64 * Q_{7-10discharge} = 0.64 * 3.1 \text{ cfs} = 2.0 \text{ cfs}$$

Potable Water Supply Intake

The nearest downstream public water supply intake is the Mifflintown Borough Municipal Authority, Juniata County intake on the Juniata River, approximately 64 miles from the point of discharge. Given the nature and dilution, the discharge is not expected to significantly impact the water supply.

Treatment Facility Summary

Treatment Facility Name: Petersburg STP

WQM Permit No.	Issuance Date
3106403	3/22/2007
3106403 A-1	9/28/2009
3106403 A-2	3/9/2016

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Extended Aeration	UV	0.1

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.1	170	Not Overloaded	Aerobic Digestion	Combination of methods

Changes Since Last Permit Issuance: the disinfection changed from chlorine to UV

Treatment Facility Details

The treatment plant consists of a wet well (1), comminutor (1), bar screen (1), aeration tanks (2), clarifiers (2), UV disinfection units (2), post aeration (1), sludge holding tank (1), sludge digester (1), and discharge.

Compliance History	
Summary of DMRs:	DMRs reported last 12 months from August 1, 2018 to July 31, 2019 are summarized in the Table below.
Summary of Inspections:	11/15/2016: Mr. Clark, DEP WQS, conducted a compliance evaluation inspection. The discharge was clear. The field test results indicated in permit limits. There were no violations indicated during inspection. 11/29/2017: Mr. Clark, DEP WQS, conducted a compliance evaluation inspection. The discharge was clear. The field test results indicated in permit limits. There were no violations indicated during inspection. 11/29/2018: Mr. Clark, DEP WQS, conducted a compliance evaluation inspection. The discharge was clear. The field test results indicated in permit limits. The laboratory results presented report were summarized in the Table below.
Other Comments:	There are no open violations associated with this facility or permittee.

Other Comments:

DMRs for the past 12 months indicate five instances of non-compliance (one exceedance for $CBOD_5$ limit, two exceedances for TSS, and two exceedances for Fecal). The sample dated 11/29/2018 laboratory results report in the Table indicated that they met limits in the permit. The facility appears to be operating satisfactorily.

Date	Flow MDG	pH S.U.	DO mg/L	TRC mg/L	Temp ^0C	$CBOD_5$ mg/L	TSS mg/L	Fecal No./100ml	NH3-N mg/L	TP mg/L	TN mg/L
11/29/2018	0.030	6.91	10.56	0.00	9.9	5.30	25	25	0.19	2.84	0.16

1/21/2016, Authority is under a Consent Order and Agreement (COA) with the Department for construction of the plant upgrade to begin by January 2, 2017, and deadline of December 31, 2018 for substantial completion of the upgrade project. However, the Authority had completed construction activities on 9/2018.

Compliance History

DMR Data for Outfall 001 (from August 1, 2018 to July 31, 2019)

Parameter	JUL-19	JUN-19	MAY-19	APR-19	MAR-19	FEB-19	JAN-19	DEC-18	NOV-18	OCT-18	SEP-18	AUG-18
Flow (MGD) Average Monthly	0.023	0.029	0.032	0.032	0.044	0.046	0.038	0.044	0.049	0.027	0.072	0.046
Flow (MGD) Daily Maximum	0.025	0.057	0.097	0.047	0.068	0.11	0.074	0.098	0.110	0.045	0.529	0.150
pH (S.U.) Minimum	6.04	6.26	6.38	6.64	6.83	6.74	6.57	6.14	6.35	6.10	6.27	6.4
pH (S.U.) Maximum	7.46	7.46	7.41	7.52	7.56	7.42	7.42	7.57	7.57	7.30	7.47	7.72
DO (mg/L) Minimum	8.43	8.25	8.56	10.72	10.83	9.39	10.25	9.6	9.76	8.12	6.48	7.13
TRC (mg/L) Average Monthly	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.001	0.00000	0.0
TRC (mg/L) Instantaneous Maximum	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.001	0.00000	0.0
CBOD5 (lbs/day) Average Monthly	0.7	< 2.0	< 1	2	2.0	< 2	< 1	< 1.0	< 3.0	< 1.0	16	< 4.0
CBOD5 (lbs/day) Weekly Average	0.6	5	2	2	3.0	3	2	< 1.0	6	3	54	8
CBOD5 (mg/L) Average Monthly	< 3.0	< 8.0	< 5	5	5.0	< 6.0	< 4	< 3.0	< 5.0	< 7	9	< 11
CBOD5 (mg/L) Weekly Average	4.2	12.3	8.8	6.9	7.5	8.9	7.6	5.0	7	17	15	18
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	41	66	44	59	67	64	84	83	131	50	78	68
BOD5 (lbs/day) Raw Sewage Influent Daily Maximum	56	96	57	74	97	70	107	118	233	66	105	111
BOD5 (mg/L) Raw Sewage Influent Average Monthly	233	277	186	221	190	208	297	234	223	241	136	148
TSS (lbs/day) Average Monthly	2	7	5	3	2	4	< 3	< 2.0	2	< 2.0	43	7
TSS (lbs/day) Raw Sewage Influent Average Monthly	40	60	198	46	49	49	65	61	83	44	102	97

TSS (lbs/day) Raw Sewage Influent Daily Maximum	58	104	280	55	67	68	82	109	112	51	200	207
TSS (lbs/day) Weekly Average	3	20	9	4	5	8	7	4.0	3	4	156	13
TSS (mg/L) Average Monthly	10	21	20	9	7	14	< 9	< 6.0	3.0	< 8	19	14
TSS (mg/L) Raw Sewage Influent Average Monthly	223	237	48	174	137	161	235	174	158	214	135	181
TSS (mg/L) Weekly Average	12	43	37	12	16	26	24	11	5	19	42	21
Fecal Coliform (CFU/100 ml) Geometric Mean	56	64	< 31	< 36	< 7.0	< 8	< 8	< 7.0	< 9	< 20	208	59
Fecal Coliform (CFU/100 ml) Instantaneous Maximum	683	98	91.2	3265.6	20.0	< 10	20.8	10.0	31	80	1850.0	630
Total Nitrogen (mg/L) Annual Average								27.33				
Total Nitrogen (lbs) Total Annual								3796				
Total Phosphorus (mg/L) Annual Average								4.41				
Total Phosphorus (lbs) Total Annual								550				

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.1
Latitude 40º 34' 2.98" **Longitude** -78º 2' 53.39"
Wastewater Description: Sewage Effluent

Technology-Based Limitations

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

Pollutant	Limit (mg/l)	SBC	Federal Regulation	State Regulation
$CBOD_5$	25	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
	40	Average Weekly	133.102(a)(4)(ii)	92a.47(a)(2)
Total Suspended Solids	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	45	Average Weekly	133.102(b)(2)	92a.47(a)(2)
pH	6.0 – 9.0 S.U.	Min – Max	133.102(c)	95.2(1)
Fecal Coliform (5/1 – 9/30)	200 / 100 ml	Geo Mean	-	92a.47(a)(4)
Fecal Coliform (5/1 – 9/30)	1,000 / 100 ml	IMAX	-	92a.47(a)(4)
Fecal Coliform (10/1 – 4/30)	2,000 / 100 ml	Geo Mean	-	92a.47(a)(5)
Fecal Coliform (10/1 – 4/30)	10,000 / 100 ml	IMAX	-	92a.47(a)(5)
Total Residual Chlorine	0.5	Average Monthly	-	92a.48(b)(2)

Water Quality-Based Limitations

Carbonaceous Biochemical Oxygen Demand ($CBOD_5$):
The attached computer printout of the WQM 7.0 stream model indicates that a monthly average limit of 25 mg/L, or secondary treatment, is adequate to protect the water quality of the stream. However, the existing limits of 25 mg/L monthly average (AML), 40mg/l average weekly limit (AWL), and 50 mg/L instantaneous maximum will remain in the proposed permit as per guidance document 391-2000-014. Recent DMRs and inspection reports show that the facility has been consistently achieving these limits. Mass limits are calculated as follows:

Mass based AML (lb/day) = 25 (mg/L) x 0.1 (MG/day) x 8.34 (lb/MG)(L/mg) = 20.85 lb/day
Mass based AWL (lb/day) = 40 (mg/L) x 0.1 (MG/day) x 8.34 (lb/MG)(L/mg) = 33.36 lb/day

Ammonia (NH_3-N):
NH_3-N calculations were first based on the Department's Implementation Guidance of Section 93.7 Ammonia Criteria, dated 11/4/97 (ID No. 391-2000-013). The following data is necessary to determine the in-stream NH_3-N criteria used in the attached computer model of the stream:

- Discharge pH = 6.5 (Taken from past DMR's from July-Sept)
- Discharge Temperature = 25°C (Default)
- Stream pH = 7.6 (Taken from the WQN station)
- Stream Temperature = 18ºC (on the Little Juniata River)
- Background NH_3-N = 0 (Default)

The attached computer printout of the WQM7.0 stream model shows that no NH_3-N requirements are needed to protect the aquatic life from NH_3-N toxicity. In June 19, 1986 a pollution report prepared by the Harrisburg Regional Office documented that secondary treatment with no NH_3-N requirements are needed to protect Shaver Creek and was consistent with the intended design of the STP. All following permits have agreed with the findings of the June 19, 1986 pollution report. This agrees with previous permits.

Dissolved Oxygen (D.O.):
The existing permit contains a limit of 5 mg/L for D.O. DEP's Technical Guidance for the Development and Specification of Effluent Limitations (362-0400-001, 10/97) suggests that either the adopted minimum stream D.O. criteria for the receiving stream or the effluent level determined through water quality modeling be used for the limit. Since the WQM 7.0 model was run using a minimum D.O. of 5.0 mg/L, this limit will be continued in the renewed permit with a daily monitoring requirement per DEP guidance.

pH:
The effluent discharge pH should remain above 6.0 and below 9.0 standard units according to 25 Pa Code § 95.2(2).

Fecal Coliform:
The recent coliform guidance in 25 PA code § 92a.47.(a)(4) requires a summer technology limit of 200/100 ml as a geometric mean and an instantaneous maximum not greater than 1,000/100 ml and § 92a.47.(a)(5) requires a winter limit of 2,000/100 ml as a geometric mean and an instantaneous maximum not greater than 10,000/100 ml.

Total Residual Chlorine (TRC):
Since this facility upgraded to an ultraviolet disinfection unit, a TRC limit is not necessary. A monitoring requirement for evaluating the effectiveness of the UV bulbs will be placed in the proposed permit.

Total Suspended Solids (TSS):
There is no water quality criterion for TSS. A limit of 30 mg/l AML will be required based on the minimum level of effluent quality attainable by secondary treatment as defined in 40 CFR 133.102b(1) and 25 PA § 92a.47(a)(1), and an AWL of 45mg/l per 40CFR 133.102(b)(2) and 25 PA § 92a.47(a)(2). Mass limits are calculated as follows:

Mass based AML (lb/day) = 30 (mg/L) x 0.1 (MG/day) x 8.34 (lb/MG)(L/mg) = 25.02 lb/day
Mass based AWL (lb/day) = 45 (mg/L) x 0.1 (MG/day) x 8.34 (lb/MG)(L/mg) = 37.53 lb/day

Phosphorus:
No phosphorus permit limitations are necessary for this facility.

Chesapeake Bay Strategy:
The Department formulated a strategy to comply with the EPA and Chesapeake Bay Foundation requirements by reducing point source loadings of Total Nitrogen (TN) and Total Phosphorus (TP). Sewage discharges have been prioritized by Central Office based on their delivered TN loadings to the Bay. The highest priority (Phases I, II, and III) dischargers will receive annual loading caps based on their design flow on August 29, 2005 and concentrations of 6 mg/L TN and 0.8 mg/L TP. These limits may be achieved through a combination of treatment technology, credits, or offsets. Phase IV (0.2 -0.4 MGD) will be required to monitor and report TN and TP during permit renewal monthly and Phase V (below 0.2 MGD) will monitor during current permit renewal once a year. However, any facility in Phases IV and V that undergoes expansion is subjected to cap load right away. This plant is classified as a phase V, will be required to monitor and report TP and TN once a year.

Influent BOD_5 and TSS Monitoring:
The permit will include influent BOD_5 and TSS monitoring at the same frequency as is done for effluent in order to implement Chapter 94.12 and assess percent removal requirements, per DEP policy.

Biosolids Management:
Digested sludge is periodically removed and dewatered by a contractor with a mobile belt filter press prior to final disposal in a landfill.

Stormwater:
There is no stormwater outfall associated with this facility.

Anti-Degradation (93.4)

The effluent limits for this discharge have been developed to ensure that existing instream water uses and the level of water quality necessary to protect the existing uses are maintained and protected. No Exceptional Value Waters are impacted by this discharge. The discharge pre-dates the HQ-CWF classification of the creek.

Class A Wild Trout Fisheries

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

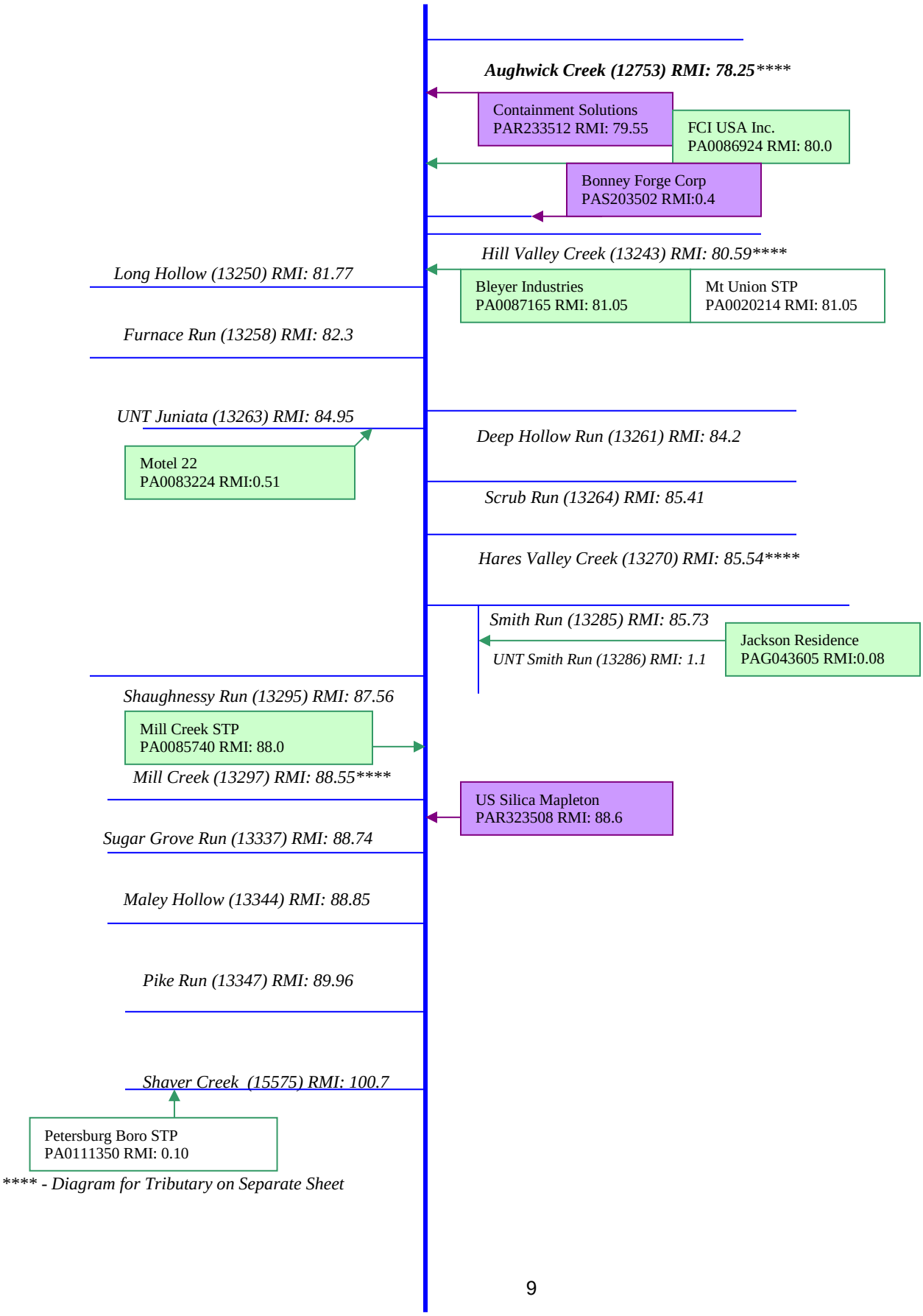
Additional Considerations

Flow Monitoring
The requirement to monitor the volume of effluent will remain in the proposed permit per 40 CFR § 122.44(i)(1)(ii).

Monitoring Frequency and Sample Type
The facility currently is required to collect daily effluent grab samples for D.O., and pH; daily record UV Light Transmittance (%); one-week effluent 24-hr composite samples of $CBOD_5$, and TSS; one-week effluent grab samples of fecal coliform; annually effluent 24-hr composite samples of TP; and annually effluent calculation samples of TN. Based on the best professional judgement of the author, the existing monitoring frequencies are sufficient and necessary. Therefore, the existing monitoring frequencies will remain the same as those specified in the proposed permit.

A. Stick Diagram

Straight Line Diagram – Juniata River in Watershed 12-C



**** - *Diagram for Tributary on Separate Sheet*

WQM 7.0 MODEL INPUT:

1. Outfall 001 on Shaver Creek
    a. Elevation: 661.42 ft
    b. RMI: 0.3 mile
    c. Drainage Area: 62.9 $mi.^2$
    d. Low Flow Yield: 0.05 $cfs/mi.^2$
    e. Discharge Flow: 0.1 MGD
2.
    a. Elevation: 661.27 ft
    b. RMI: 0.090 mile
    c. Drainage Area: 63.0 $mi.^2$
    d. Low Flow Yield: 0.05 $cfs/mi.^2$
    e. Discharge Flow: 0.000 MGD.

Attachment is WQM7.0 data.

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.pdf

Existing Effluent Limitations and Monitoring Requirements

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/day	Grab
Dissolved Oxygen	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
Total Residual Chlorine	XXX	XXX	XXX	0.5	XXX	1.6	1/day	Grab
$CBOD_5$	21	33	XXX	25	40	50	1/week	24-Hr Composite
Total Suspended Solids	25	38	XXX	30	45	60	1/week	24-Hr Composite
Fecal Coliform (CFU/100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1,000	1/week	Grab
Fecal Coliform (CFU/100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2,000 Geo Mean	XXX	10,000	1/week	Grab
Total Nitrogen	Report Annual Total	XXX	XXX	Report Annual Avg	XXX	XXX	1/year	Calculation
Total Phosphorus	Report Annual Total	XXX	XXX	Report Annual Avg	XXX	XXX	1/year	24-Hr Composite

Proposed Effluent Limitations and Monitoring Requirements

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

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

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Total Annual	Daily Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
UV Light Transmittance (%)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Recorded
$CBOD_5$	21.0	33.0	XXX	25.0	40.0	50.0	1/week	24-Hr Composite
BOD_5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	24-Hr Composite
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	24-Hr Composite
TSS	25.0	38.0	XXX	30.0	45.0	60.0	1/week	24-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2,000 Geo Mean	XXX	10,000	1/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1,000	1/week	Grab
Total Nitrogen	XXX	Report	XXX	Report Annl Avg	XXX	XXX	1/year	Calculation
Total Phosphorus	XXX	Report	XXX	Report Annl Avg	XXX	XXX	1/year	24-Hr Composite

Compliance Sampling Location:

Other Comments:

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