pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0035581**
Wastewater Type	**Sewage**	APS ID	**1048711**
Facility Type	**SFTF**	Authorization ID	**1371156**

NPDES PERMIT FACT SHEET
INDIVIDUAL SFTF/SRSTP

Applicant, Facility and Project Information

Applicant Name	**PA DOT Maintenance & Operations Bureau**	Facility Name	**PA DOT McKean County Maintenance Building**
Applicant Address	400 North Street, 6th Floor Harrisburg, PA 17120	Facility Address	300 Bingham Road Cyclone, PA 16726
Applicant Contact	Nicholas Sahd (c-nsahd@pa.gov)	Facility Contact	John Hetrick (johetrick@pa.gov)
Applicant Phone	(717) 886-5395	Facility Phone	(814) 772-0038
Client ID	189304	Site ID	450767
SIC Code	4941	Municipality	Lafayette Township
SIC Description	Trans. & Utilities - Water Supply	County	McKean County
Date Application Received	September 29, 2021	WQM Required	No
Date Application Accepted	October 1, 2021	WQM App. No.	-

Project Description: Renewal of a NPDES Permit for an existing discharge from a Small Flow Treatment Facility (SFTF).

Summary of Review

Act 14 - Proof of Notification was submitted and received.

A Part II Water Quality Management permit is not required at this time.

The applicant should be able to meet the limits of this permit, which will protect the uses of the receiving stream.

I. OTHER REQUIREMENTS:

A. AMRs
B. DMRs
C. Depth of Septage and Scum Measurement
D. Septic Tank Pumping
E. Effluent Chlorine Optimization and Minimization
F. Stormwater into sewers
G. Right of way
H. Solids handling
I. Public Sewerage Availability

SPECIAL CONDITIONS: None.

Permitted treatment consists of: (WQM Permits no. 4298401 and 268S001): A grease interceptor, oil/water separator, 3,420 gallon septic tank, a 660 gallon dosing tank, a 2,600 sq. ft. subsurface sand filter, and tablet chlorination and dechlorination with a 1,900 gallon contact tank.

There are no open violations in EFACTS for Client ID 4941 as of 8/2/2022.

Approve	Deny	Signatures	Date
X		Stephen A. McCauley Stephen A. McCauley, E.I.T. / Environmental Engineering Specialist	8/2/2022
X		Adam J. Pesek (Lead Reviewer) *Vacant* / Environmental Engineer Manager	8/09/2022

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.00165
Latitude	41º 48' 9.00"	Longitude	78º 37' 9.00”
Quad Name	-	Quad Code	-
Wastewater Description:	Sewage Effluent		
Receiving Waters	Unnamed Tributary to the Threemile Run	Stream Code	56736
NHD Com ID	112373389	RMI	0.68
Drainage Area	-	Yield (cfs/mi^2)	-
Q_{7-10} Flow (cfs)	-	Q_{7-10} Basis	-
Elevation (ft)	-	Slope (ft/ft)	-
Watershed No.	16-B	Chapter 93 Class.	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	-

Background/Ambient Data		Data Source
pH (SU)	-	-
Temperature (°F)	-	-
Hardness (mg/L)	-	-
Other:	-	-

Nearest Downstream Public Water Supply Intake	Aqua Pennsylvania, Inc. - Emlenton		
PWS Waters	Allegheny River	Flow at Intake (cfs)	1356
PWS RMI	90.0	Distance from Outfall (mi)	133

Public Participation

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

No modeling was performed for this NPDES Permit renewal as septic tank/sand filter systems are capable of meeting CBOD5 and TSS averages of 10 mg/l, which are less than the inputs of the WQ model.

The previous TRC limits were verified using the TRC Spreadsheet, which can be found at the end of this fact sheet.

The previous TSS limits were reduced from 20 mg/l monthly average and 40 mg/l instantaneous maximum to 10 mg/l monthly average and 20 mg/l instantaneous maximum per the SOP.

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	Average Weekly	Minimum	Average Quarterly	Maximum	Instant. Maximum		
Flow (GPD)	Report	XXX	XXX	XXX	XXX	XXX	1/month	Estimate
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/month	Grab
TRC	XXX	XXX	XXX	0.5 Avg Mo	XXX	1.2	1/month	Grab
BOD5	XXX	XXX	XXX	10.0	XXX	20.0	1/quarter	Grab
TSS	XXX	XXX	XXX	10.0	XXX	20.0	1/quarter	Grab
Fecal Coliform (No./100 ml)	XXX	XXX	XXX	200	XXX	XXX	1/quarter	Grab

Compliance Sampling Location: Outfall 001, after disinfection.

Flow is monitor only based on Chapter 92a.61. The limits for pH are technology-based on Chapter 93.7. The limits for Total Residual Chlorine (TRC) are technology based on Chapter 92a.47. The limits for BOD_5, Total Suspended Solids, and Fecal Coliform are technology based on the Department's "Small Flow Treatment Facilities Manual."

TRC EVALUATION

Input appropriate values in A3:A9 and D3:D9

0.11	= Q stream (cfs)	0.5	= CV Daily
0.00165	= Q discharge (MGD)	0.5	= CV Hourly
30	= no. samples	1	= AFC_Partial Mix Factor
0.3	= Chlorine Demand of Stream	1	= CFC_Partial Mix Factor
0	= Chlorine Demand of Discharge	15	= AFC_Criteria Compliance Time (min)
0.5	= BAT/BPJ Value	720	= CFC_Criteria Compliance Time (min)
0	= % Factor of Safety (FOS)	0	=Decay Coefficient (K)

Source	Reference	AFC Calculations	Reference	CFC Calculations
TRC	1.3.2.iii	WLA afc = 13.766	1.3.2.iii	WLA cfc = 13.413
PENTOXSD TRG	5.1a	LTAMULT afc = 0.373	5.1c	LTAMULT cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc= 5.130	5.1d	LTA_cfc = 7.798

Source		Effluent Limit Calculations	
PENTOXSD TRG	5.1f	AML MULT = 1.231	
PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) = 0.500	BAT/BPJ
		INST MAX LIMIT (mg/l) = 1.635	

WLA afc	**(.019/e(-k*AFC_tc)) + [(AFC_Yc*Qs*.019/Qd*e(-k*AFC_tc))...** **...+ Xd + (AFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)**
LTAMULT afc	EXP((0.5*LN(cvh^2+1))-2.326*LN(cvh^2+1)^0.5)
LTA_afc	wla_afc*LTAMULT_afc
WLA_cfc	**(.011/e(-k*CFC_tc) + [(CFC_Yc*Qs*.011/Qd*e(-k*CFC_tc))...** **...+ Xd + (CFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)**
LTAMULT_cfc	EXP((0.5*LN(cvd^2/no_samples+1))-2.326*LN(cvd^2/no_samples+1)^0.5)
LTA_cfc	wla_cfc*LTAMULT_cfc
AML MULT	EXP(2.326*LN((cvd^2/no_samples+1)^0.5)-0.5*LN(cvd^2/no_samples+1))
AVG MON LIMIT	MIN(BAT_BPJ,MIN(LTA_afc,LTA_cfc)*AML_MULT)
INST MAX LIMIT	**1.5*((av_mon_limit/AML_MULT)/LTAMULT_afc)**