pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southeast Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET

Application Type	**Renewal**	Application No.	**PA0058041**
Facility Type	**Sewage**	APS ID	**1096941**
Major / Minor	**Minor**	Authorization ID	**1455066**

Applicant and Facility Information

Applicant Name	**Aqua PA Wastewater Inc.**	Facility Name	**Possum Hollow Sewer System & STP**
Applicant Address	762 W Lancaster Avenue	Facility Address	182 Longview Road
	Bryn Mawr, PA 19010-3402		Linfield, PA 19464
Applicant Contact	Todd Duerr	Facility Contact	Kyle Roberts
Applicant Phone	(610) 525-1400	Facility Phone	(610) 277-2402
Client ID	62614	Site ID	556589
SIC Code	4952	Municipality	Limerick Township
SIC Description	Trans. & Utilities - Sewerage Systems	County	Montgomery
Date Application Received	August 24, 2023	EPA Waived?	Yes
Date Application Accepted		If No, Reason	

Purpose of Application .

Summary of Review

The applicant has submitted a renewal application to discharge treated sewage to Schuylkill River through Outfall 001.
The draft permit was issue twice but somehow didn't get published in PA Bulletin. Draft permit was issued on May 10, 2024 and on June 4, 2024 DEP has received a comment from Mr. Mortel (Aqua PA) with following:

- Since the Possum Hollow WWTP is no longer a publicly owned treatment works (POTW), please remove all references to and requirements for POTWs from the permit and the permit reflects the plant's status as a non-municipal sewage treatment system.
- To add a Total Residual Chlorine (TRC) limit. While our primary method of disinfection is UV, we would like to add a TRC limit to allow chlorine (and dechlor) to be fed in the event the UV system fails and to be used at the plant for cleaning. We ask that monitoring only be required when chlorine is used.
- Daily monitoring and recording of ultraviolet (UV) light intensity be replaced with UV transmittance (UVT). We feel that UVT is a better indicator of the effectiveness of the UV system and more typical of what we have seen for regulatory UV disinfection monitoring in other Permits.
- PCB limits be added back into the table under Part A as in the current permit.
- The seasonal requirement for the Fecal Coliform instant maximum be added as a footnote under the table in Part A.

Drafted on May 10, 2024 permit was issued as Authorization To Discharge Under The National Pollutant Discharge Elimination System Discharge Requirements For **Municipal** Sewage Treatment Works which is revised with

Approve	Return	Deny	Signatures	Date
X			Begay Omuralieva Begay Omuralieva / Environmental Engineering Specialist	August 12, 2024
X			Pravin Patel Pravin C. Patel, P.E. / Environmental Engineer Manager	08/12/2024

Summary of Review

Authorization To Discharge Under The National Pollutant Discharge Elimination System Discharge Requirements For **Non-Municipal Sewage Treatment Works** due to the permittee's (Aqua PA) transfer from Limerick Township. Additionally, TRC limits are established as 0.5 mg/l for ave. mo and 1.7 mg/l for IMAX based on the TRC evaluation spreadsheet (see below):

TRC EVALUATION

Input appropriate values in A3:A9 and D3:D9 — Possum Hollow Sewer System & STP PA0058041

286	= Q stream (cfs)	0.5	= CV Daily
0.7	= Q discharge (MGD)	0.5	= CV Hourly
4	= no. samples	1	= AFC_Partial Mix Factor
	= Chlorine Demand of Stream	1	= CFC_Partial Mix Factor
	= 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 = 5.037	1.3.2.iii	WLA cfc = 2.916
PENTOXSD TRG	5.1a	LTAMULT afc = 0.373	5.1c	LTAMULT cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc= 1.877	5.1d	LTA_cfc = 1.695

Source		Effluent Limit Calculations	
PENTOXSD TRG	5.1f	AML MULT = 1.720	
PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) = 0.500	BAT/BPJ
		INST MAX LIMIT (mg/l) = 1.170	

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)**

(0.011/EXP(-K*CFC_tc/1440))+(((CFC_Yc*Qs*0.011)/(1.547*Qd)....
....*EXP(-K*CFC_tc/1440)))+Xd+(CFC_Yc*Qs*Xs/1.547*Qd))*(1-FOS/100)

Also, UV Transmittance is replaced previously proposed UV light Intensity based on the request in the comments.

Finally, PCB requirements and additional footnote regarding to Fecal Coliform seasonal sampling monitoring are added in Part A of the permit as listed below and is proposed to be redrafted:

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	Weekly Average	Daily Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	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	5.0 Inst Min	XXX	XXX	XXX	1/day	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5) Raw Sewage Influent	Report	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
Carbonaceous Biochemical Oxygen Demand (CBOD5)	117	175	XXX	20	30	40	1/week	24-Hr Composite
Biochemical Oxygen Demand (BOD5) Raw Sewage Influent	Report	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
Total Suspended Solids Raw Sewage Influent	Report	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
Total Residual Chlorine	XXX	XXX	XXX	0.5	XXX	1.7	1/day	Grab
Total Suspended Solids	175	263	XXX	30	45	60	1/week	24-Hr Composite
Total Dissolved Solids	XXX	XXX	XXX	1000.0 Avg Qrtly	XXX	2500	1/quarter	24-Hr Composite
Fecal Coliform (No./100 ml)	XXX	XXX	XXX	200 Geo Mean	XXX	1000*	1/week	Grab
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/quarter	Grab
Ultraviolet Transmittance (%)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Recorded
Ammonia-Nitrogen	47	XXX	XXX	8.0	XXX	16	1/week	24-Hr Composite
Total Phosphorus	Report	XXX	XXX	Report	XXX	Report	1/week	24-Hr Composite
Copper, Total	XXX	XXX	XXX	Report Avg Qrtly	XXX	XXX	1/quarter	24-Hr Composite

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) [1]		Concentrations (mg/L)				Minimum [2] Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Daily Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Zinc, Total	XXX	XXX	XXX	Report Avg Qrtly	XXX	XXX	1/quarter	24-Hr Composite
PCBs Dry Weather Analysis (pg/L)	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	24-Hr Composite
PCBs Wet Weather Analysis (pg/L)	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	24-Hr Composite

* Not to exceed 1,000/100 ml as an instantaneous maximum from May 1st through September 30th. Not to exceed 1,000/100 ml in greater than 10 percent of the samples tested from October 1st through April 30th.