pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0030457**
Facility Type	**Non-Municipal**	APS ID	**1110349**
Major / Minor	**Minor**	Authorization ID	**1478474**

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Bauman Family Ltd**	Facility Name	**Thorn Run Rd STP**
Applicant Address	100 Forbes Trail Drive	Facility Address	Thorn Run Road
	Export, PA 15632-2000		Export, PA 15632
Applicant Contact	Lance Remic	Facility Contact	Lance Remic
Applicant Phone	(724) 309-6750	Facility Phone	(724) 309-6750
Client ID	240169	Site ID	243639
Ch 94 Load Status	Not Overloaded	Municipality	Salem Township
Connection Status		County	Westmoreland
Date Application Received	March 27, 2024	EPA Waived?	Yes
Date Application Accepted	March 28, 2024	If No, Reason	

Purpose of Application: Renewal permit application to discharge treated sewage

Summary of Review

This application is for a renewal which was previously issued on November 15, 2017. The plant has an average design discharge flow of 0.045 MGD. The receiving stream is unnamed tributary of Thorn Run, which is classified as HQ-CWF. The secondary receiving stream, Thorn Run, is also classified as HQ-CWF. Thorn Run is a tributary to Beaver Run Reservoir.

The existing treatment process consists of comminutor, splitter box, aeration tanks, sludge returns, skimmers, clarifiers, rapid sand filter, erosion chlorinator, chlorine contact tank, de-chlorination, and blowers. The original of Part II Permit No. 461S140 issued on May 23, 1962, authorized construction of sanitary sewer lines draining to the initial stabilization pond, which provided primary treatment. Part II Permit No. 6571425 issued on October4, 1971, allowed the construction of secondary treatment in the form of extended aeration followed by two polishing ponds. Then Part II Permit no. 658420, issued on April 7, 1982, was for renovation and modification of existing extended aeration sewage treatment plant, which included removal of the polishing ponds approved under Permit No. 6571425.

Public Participation

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

Approve	Deny	Signatures	Date
X		James Vanek James Vanek, P.E. / Environmental Engineer	February 13, 2025
X		 Christopher Kriley, P. E. / Clean Water Program Manager	February 13, 2025

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.045
Latitude	40º 26' 41.95"	Longitude	-79º 34' 38.48"
Quad Name		Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	Unnamed Tributary to Thorn Run (HQ-CWF)	Stream Code	42990
NHD Com ID	125291748	RMI	0.075
Drainage Area	0.28	Yield (cfs/mi^2)	0.016
Q_{7-10} Flow (cfs)	0.045	Q_{7-10} Basis	Previous Fact Sheet
Elevation (ft)		Slope (ft/ft)	
Watershed No.	18-B	Chapter 93 Class.	HQ-CWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	METALS, PH, SILTATION		
Source(s) of Impairment	ACID MINE DRAINAGE		
TMDL Status	Final	Name	Kiskiminetas-Conemaugh River Watersheds TMDL,Thorn Run Watershed

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

Nearest Downstream Public Water Supply Intake		Municipal Authority of Westmoreland County	
PWS Waters	Beaver Run Reservoir	Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	2

Changes Since Last Permit Issuance:

Other Comments:

Treatment Facility Summary

Treatment Facility Name: Thorn Run Rd STP

WQM Permit No.	Issuance Date
6581420	4/7/1982
6571425	10/4/1971

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Tertiary	Activated sludge with sand filtration	Chlorine/De-chlorination	0.045

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.045		Not Overloaded		Other STP

Other Comments:

Compliance History

DMR Data for Outfall 001 (from March 1, 2023 to February 29, 2024)

Parameter	FEB-24	JAN-24	DEC-23	NOV-23	OCT-23	SEP-23	AUG-23	JUL-23	JUN-23	MAY-23	APR-23	MAR-23
Flow (MGD) Average Monthly	0.019	0.015	0.014	0.015	0.015	0.014	0.016	0.014	0.0145	0.015	0.050	0.0146
pH (S.U.) Minimum	7.7	7.8	7.3	7.6	8.1	8.1	7.0	7.2	7.3	6.0	6.9	7.1
pH (S.U.) Maximum	8.3	8.2	7.8	8.6	9.0	9.0	7.7	9.0	8.6	7.7	7.4	7.3
DO (mg/L) Minimum	9.2	9.33	8.8	8.3	7.2	5.7	5.6	5.5	5.8	5.9	7.6	7.7
TRC (mg/L) Average Monthly	0.020	0.075	0.020	0.010	0.020	0.016	0.040	0.040	0.028	0.015	0.018	0.010
TRC (mg/L) Instantaneous Maximum	0.700	0.290	0.060	0.100	0.060	0.070	0.450	0.130	0.090	0.060	0.080	0.020
CBOD5 (mg/L) Average Monthly	3.5	5.6	< 3.0	1.5	< 3.0	< 3.0	< 3.0	0.30	3.5	3.2	4.95	6.4
CBOD5 (mg/L) Instantaneous Maximum	3.9	11.2	< 3.0	< 3.0	< 3.0	3.0	< 3.0	< 3.00	4.1	3.4	9.90	7.2
TSS (mg/L) Average Monthly	6.5	14.5	6.5	7.0	4.5	3.0	< 3	3.0	14	7	9.5	7.5
TSS (mg/L) Instantaneous Maximum	8	16	7.0	11	5.0	3.0	< 3	< 3.0	18	8	10	9
Fecal Coliform (No./100 ml) Geometric Mean	2420	70.28	399	302	52	103	974	107.65	2192	1087	1185	1218
Fecal Coliform (No./100 ml) Instantaneous Maximum	7624	2420	548	> 2420	80	166	1733	9208	> 2420	> 2420	1987	> 2420
Ammonia (mg/L) Average Monthly	0.14	0.23	0.27	0.3	0.3	0.54	1.4	1.7	1.3	0.5	0.33	0.54
Ammonia (mg/L) Instantaneous Maximum	0.15	0.32	0.28	0.4	0.31	0.50	0.79	3.3	1.6	0.6	0.34	0.94

Total Phosphorus (mg/L) Average Monthly	0.7	0.8	1.4	1.2	0.6	0.8	0.7	1.1	2.0	0.9	0.62	0.7
Total Phosphorus (mg/L) Instantaneous Maximum	6.8	1.1	0.73	1.2	0.7	0.84	1.0	1.3	8.6	1.1	0.80	0.7

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .045
Latitude 40º 26' 41.00" **Longitude** -79º 34' 39.00"
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
$CBOD_5$	10	Average Monthly		PA Anti-degradation Policy
Total Suspended Solids	10	Average Monthly		PA Anti-degradation Policy
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

Previous water quality analysis required water quality based effluent limits for TRC of 0.022 mg/l as a monthly average and 0.073 mg/l as an instantaneous maximum.

Best Professional Judgment (BPJ) Limitations

Dissolved oxygen shall be limited at 5.0 mg/l as an instantaneous minimum limit.

Anti-Backsliding

Anti-backsliding was not used in this permit review.

TMDL

This discharge falls within the Kiski-Conemaugh Watershed TMDL. The Kiski-Conemaugh TMDL showed impairment from mining activities. This discharge is not included in any waste-load allocations for the TMDL. Annual monitoring for aluminum, iron, and manganese is needed to ensure the discharge is not significantly contributing to the WLA for aluminum, iron, and manganese.

Phosphorus

The previous fact sheet mentioned that the eutrophication of the Beaver Run reservoir requires Phosphorus limits of 2 mg/l as an average and 4 mg/l as a maximum. There is no evidence that the eutrophication has been abated so the phosphorus limits shall remain in the permit.

TN and TP Monitoring

Nutrient monitoring is required to establish the nutrient load from the wastewater treatment facility and the impacts that load may have on the quality of the receiving stream(s). Sewage discharges with design flows > 2,000 gpd require monitoring, at a minimum, for Total Nitrogen and Total Phosphorus in new and reissued permits. Annual monitoring has been imposed for total nitrogen. Phosphorus has limits because of the eutrophication of Beaver Run reservoir.

E. Coli

In accordance with Section I of DEP's "Standard Operating Procedure for Clean Water Program Establishing Effluent Limitations for Individual Sewage Permits" [SOP No. BCW-PMT-033, Version 1.9, March 22, 2021] and under the authority of 25 Pa. Code § 92a.61(b), annual reporting for *E. coli* will be added to Outfall 001. *E. coli* was recently added to the bacteria water quality criteria in 25 Pa. Code § 93.7(a) and the monitoring will be used to determine if *E. coli* concentrations require additional controls.

Monitoring Frequency Considerations

For pH, Dissolved Oxygen (DO) and TRC, a monitoring frequency of 1/day has been imposed. The daily monitoring frequencies are consistent with current policy and Table 6-3 of DEP's Technical Guidance for the Development and Specification of Effluent Limitations.

Sample Types

For new or expanding facilities with design flows ≥ 0.01 MGD and < 0.10 MGD, grab sampling will be used for conventional and toxic pollutants.

Industrial Customers

The renewal application does not mention any industrial customers.

Disinfection

TRC limits apply because chlorine is used to disinfect the sewage. It is followed with de-chlorination so there should be no issue with achieving the water quality based effluent limits.

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" (386-0400-001), 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 Monthly	Maximum	Instant. Maximum		
Flow (MGD)	0.031	XXX	XXX	XXX	XXX	XXX	2/month	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	5.0 Inst Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.022	XXX	0.073	1/day	Grab
CBOD5	XXX	XXX	XXX	10	XXX	20	2/month	Grab
TSS	XXX	XXX	XXX	10	XXX	20	2/month	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
Total Nitrogen	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab
Ammonia Nov 1 - Apr 30	XXX	XXX	XXX	9.0	XXX	18.0	2/month	Grab
Ammonia May 1 - Oct 31	XXX	XXX	XXX	3.0	XXX	6.0	2/month	Grab
Total Phosphorus	XXX	XXX	XXX	2.0	XXX	4.0	2/month	Grab
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab

Outfall 001, Continued (from Permit Effective Date through Permit Expiration Date)

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Total Aluminum	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab
Total Iron	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab
Total Manganese	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab

Compliance Sampling Location: at outfall 001