Pennsylvania Department of Environmental Protection

Southwest Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0204161**
Facility Type	**Non-Municipal**	APS ID	**1109438**
Major / Minor	**Minor**	Authorization ID	**1476774**

Applicant and Facility Information

Applicant Name	**Valley School of Ligonier**	Facility Name	**Valley School of Ligonier**
Applicant Address	PO Box 616	Facility Address	153 Lupine Lane
	Ligonier, PA 15658-0616		Rector, PA 15677-1005
Applicant Contact	Richard Kanuch	Facility Contact	
Applicant Phone	(724) 238-6652	Facility Phone	
Client ID	64611	Site ID	257486
Ch 94 Load Status	Not Overloaded	Municipality	Ligonier Township
Connection Status	No Limitations	County	Westmoreland
Date Application Received	March 12, 2024	EPA Waived?	Yes
Date Application Accepted	March 21, 2024	If No, Reason	
Purpose of Application	Renewal application to discharge treated sewage		

Summary of Review

This review is in response to a renewal application received on March 12, 2024. The Valley School of Ligonier owns and operates a sewage treatment plant in Ligonier Township, Westmoreland County. The sewage plant receives wastewater from the school's water treatment plant's filter backwash, three private residences on the property, and the school itself. Sewage is treated with comminution, flow equalization, aeration, clarification, intermittent sand filtration, tablet chlorination, tablet de-chlorination and aerated sludge holding tank. Treated effluent is discharged to an unnamed tributary of Loyalhanna Creek through outfall 001.

Sludge use and disposal description and location(s): disposed at another sewage plant.

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	December 20, 2024
X		Mahbuba Iasmin Mahbuba Iasmin, Ph.D. / Environmental Engineering Manager	December 23, 2024

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.0031
Latitude	40º 11' 18.54"	Longitude	-79º 14' 46.73"
Quad Name	Ligonier	Quad Code	1712
Wastewater Description:	Sewage Effluent		
Receiving Waters	Unnamed Tributary of Loyalhanna Creek (HQ-CWF)	Stream Code	43796
NHD Com ID	125294223	RMI	1.52
Drainage Area	9.65	Yield (cfs/mi^2)	0.06
Q_{7-10} Flow (cfs)	0.579	Q_{7-10} Basis	Previous fact sheet
Elevation (ft)		Slope (ft/ft)	0.0136
Watershed No.	18-C	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	Final	Name	Kiskiminetas-Conemaugh River Watersheds TMDL

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

Nearest Downstream Public Water Supply Intake		Latrobe Municipal Authority	
PWS Waters	Loyalhanna Creek	Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	

Changes Since Last Permit Issuance:

Other Comments:

Treatment Facility Summary				
Treatment Facility Name: Valley School Of Ligonier STP				
WQM Permit No.	**Issuance Date**			
6590402	May 22, 1990			
Waste Type	**Degree of Treatment**	**Process Type**	**Disinfection**	**Avg Annual Flow (MGD)**
Sewage	Secondary with ammonia reduction	Extended Aeration	Chlorine	0.0031
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**
0.0031	5.17	Not Overloaded	Aerated holding	Other stp

Changes Since Last Permit Issuance: none

Compliance History

DMR Data for Outfall 001 (from November 1, 2023 to October 31, 2024)

Parameter	OCT-24	SEP-24	AUG-24	JUL-24	JUN-24	MAY-24	APR-24	MAR-24	FEB-24	JAN-24	DEC-23	NOV-23
Flow (MGD) Average Monthly	0.0010	0.0010	0.0009	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0002	0.0010	0.0010
pH (S.U.) Instantaneous Minimum	7.21	7.31	7.17	7.21	7.28	7.39	7.32	7.41	7.3	7.1	7.27	7.04
pH (S.U.) Instantaneous Maximum	8.27	8.26	8.42	8.43	8.05	8.76	7.98	8.04	8.37	8.76	8.3	7.95
DO (mg/L) Instantaneous Minimum	8.1	6.69	7.82	7.42	7.36	6.92	9.44	9.24	9.3	10.32	10.2	9.04
TRC (mg/L) Average Monthly	0.07	< 0.04	< 0.02	< 0.03	< 0.03	< 0.03	0.01	< 0.01	< 0.01	< 0.02	< 0.02	< 0.048

TRC (mg/L) Instantaneous Maximum	0.60	0.2	0.1	0.1	0.10	0.2	0.03	0.06	0.03	0.10	0.10	0.20
CBOD5 (mg/L) Average Monthly	< 3.8	< 3.0	< 3	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.7	< 3.0
CBOD5 (mg/L) Instantaneous Maximum	5.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	4.3	< 3.0
TSS (mg/L) Average Monthly	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
TSS (mg/L) Instantaneous Maximum	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	3.0
Fecal Coliform (No./100 ml) Geometric Mean	< 1.0	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1	< 1.0	< 1.0	< 1.0	< 1.0
Fecal Coliform (No./100 ml) Instantaneous Maximum	1.0	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1	< 1.0	< 1.0	< 1.0	< 1.0
Total Nitrogen (mg/L) Daily Maximum											< 1.0	
Ammonia (mg/L) Average Monthly	< 0.10	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.1	< 0.12	< 0.10	< 0.10	< 0.10
Ammonia (mg/L) Instantaneous Maximum	< 0.10	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.1	0.14	< 0.10	< 0.10	< 0.10
Total Phosphorus (mg/L) Daily Maximum											2.85	
Total Aluminum (mg/L) Daily Maximum											< 0.10	
Total Iron (mg/L) Daily Maximum											0.04	
Total Manganese (mg/L) Daily Maximum											< 0.02	

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.0031
Latitude 40º 11' 1.00" **Longitude** -79º 14' 16.00"
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
$CBOD_5$	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)

Comments:

Water Quality-Based Limitations

Water quality analysis was done in the past using a “measurable change analysis” because the receiving stream is a high quality stream. Measurable change analysis involved checking the in-stream ammonia concentration and performing analyses to show the discharge will not change the in-stream ammonia nitrogen concentration by 0.01 mg/l. Over the years the ammonia nitrogen criteria changed. Water quality analysis was performed using secondary limits. The results of the analysis shows that water quality limits are not necessary.

Best Professional Judgment (BPJ) Limitations

Dissolved oxygen is limited at 4.0 mg/l as an instantaneous minimum.

Anti-Backsliding

The effluent limits for all polutants will remain the same as the limits in the previous permit due to anti-backsliding 40 CFR 122.44(l).

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)	0.0031	XXX	XXX	XXX	XXX	XXX	1/week	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	5/week	Grab
DO	XXX	XXX	5.0 Inst Min	XXX	XXX	XXX	5/week	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.6	5/week	Grab
CBOD5	XXX	XXX	XXX	25	XXX	50	2/month	Grab
TSS	XXX	XXX	XXX	30	XXX	60	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
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab
Total Nitrogen	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab
Ammonia Nov 1 - Apr 30	XXX	XXX	XXX	10.0	XXX	20.0	2/month	Grab
Ammonia May 1 - Oct 31	XXX	XXX	XXX	4.0	XXX	8.0	2/month	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 Phosphorus	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab
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

Other Comments:

References

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
18C	43796	LINN RUN	**1.520**	1500.00	9.65	0.01360	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	0.060	0.00	0.00	0.000	0.000	10.0	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
valley school	PA0204161	0.0031	0.0031	0.0031	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	25.00	2.00	0.00	1.50
Dissolved Oxygen	4.00	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
18C	43796	LINN RUN	**0.520**	1428.00	12.00	0.01360	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	0.00	0.000	0.000	10.0	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	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	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