

Application Type Renewal
Facility Type Municipal
Major / Minor Minor

**NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE**

Application No. PA0114049
APS ID 990244
Authorization ID 1268034

Applicant and Facility Information

Applicant Name	<u>Lewis Township Municipal Authority</u>	Facility Name	<u>Lewis Township STP</u>
Applicant Address	<u>PO Box 51</u> <u>Millmont, PA 17845-0051</u>	Facility Address	<u>1599 Millmont Road</u> <u>Millmont, PA 17845</u>
Applicant Contact	<u>Donald Shively</u>	Facility Contact	<u></u>
Applicant Phone	<u>(570) 922-4102</u>	Facility Phone	<u></u>
Client ID	<u>44027</u>	Site ID	<u>1186</u>
Ch 94 Load Status	<u>Not Overloaded</u>	Municipality	<u>Lewis Township</u>
Connection Status	<u>No Limitations</u>	County	<u>Union</u>
Date Application Received	<u>April 1, 2019</u>	EPA Waived?	<u>Yes</u>
Date Application Accepted	<u>April 4, 2019</u>	If No, Reason	<u></u>
Purpose of Application	<u>Renewal of existing NPDES permit.</u>		

Summary of Review

The above applicant has submitted an NPDES renewal application for an existing discharge of treated sewage from the Lewis Township Sewage Treatment Plant (STP). The Lewis Township STP serves Lewis Township in Union County. The STP is a 0.0335 MGD sequencing batch reactor (SBR) plant consisting of a wet well, 2 SBR units, 4 marshes, 4 meadows, an erosion chlorinator, chlorine contact tank, a discharge tank, and a sludge holding tank.

Unless otherwise noted, all applicable Department SOPs were followed during the review of this application.

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
		Chad A. Fabian / Project Manager	February 12, 2020
		Nicholas W. Hartranft, P.E. / Environmental Engineer Manager	

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	.0335
Latitude	40° 52' 43.33"	Longitude	-77° 8' 12.94"
Quad Name	Hartleton	Quad Code	1128
Wastewater Description:	Sewage Effluent		
Receiving Waters	Cold Run	Stream Code	18147
NHD Com ID	54963135	RMI	0.17
Drainage Area	2 mi ²	Yield (cfs/mi ²)	0.11
Q ₇₋₁₀ Flow (cfs)	0.233	Q ₇₋₁₀ Basis	Previous permit/watershed comparison
Elevation (ft)	560	Slope (ft/ft)	
Watershed No.	6-A	Chapter 93 Class.	WWF
Existing Use	TSF, MF	Existing Use Qualifier	n/a
Exceptions to Use	None	Exceptions to Criteria	None
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment	n/a		
TMDL Status	n/a	Name	n/a
Nearest Downstream Public Water Supply Intake	Approximately 65 miles downstream on the Susquehanna River		

Changes Since Last Permit Issuance: None

Treatment Facility Summary				
Treatment Facility Name: Lewis Township WWTP				
WQM Permit No.	Issuance Date			
6089415	3/1/1990, amended 10/4/1994			
Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Sequencing Batch Reactor	No Disinfection	0.034
Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.067	112	Not Overloaded	Concentration	Other WWTP

Compliance History	
Summary of DMRs:	The permittee utilizes the Department's eDMR system. No violations have occurred in the past 12 months. See attached summary of eDMR results.
Summary of Inspections:	The last inspection performed by the Department was on 6/11/2020. No violations were found during the inspection. No impact was noted in the receiving stream.

Compliance History

DMR Data for Outfall 001 (from December 1, 2018 to November 30, 2019)

Parameter	NOV-19	OCT-19	SEP-19	AUG-19	JUL-19	JUN-19	MAY-19	APR-19	MAR-19	FEB-19	JAN-19	DEC-18
Flow (MGD) Average Monthly	0.02666 1	0.02835 4	0.02586 2	0.02602 4	0.02606 0	0.02549 8	0.02985 9	0.02856 5	0.02806 4	0.03008 4	0.02865 4	0.03140 6
Flow (MGD) Daily Maximum	0.04527 0	0.05470 1	0.03037 9	0.03115 2	0.03074 0	0.03563 8	0.05349 9	0.04777 6	0.05338 9	0.04346 0	0.03585 5	0.05303 9
pH (S.U.) Minimum	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
pH (S.U.) Maximum	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
DO (mg/L) Minimum	6.0	6.1	5.9	5.8	5.8	5.9	6.0	6.0	5.9	6.0	6.0	6.0
TRC (mg/L) Average Monthly	0.35	0.31	0.34	0.34	0.3	0.30	0.32	0.32	0.34	0.31	0.33	0.31
TRC (mg/L) Instantaneous Maximum	0.8	0.7	0.5	0.9	0.5	0.8	0.9	0.9	0.8	0.8	0.8	0.9
CBOD5 (mg/L) Average Monthly	2.2	< 2.2	< 2.1	< 2.2	< 2.3	< 2.5	< 2.7	4.0	< 2.25	3.00	< 3.00	< 3.00
CBOD5 (mg/L) Weekly Average	< 2.2	< 2.2	< 2.1	< 2.2	< 2.3	< 2.5	< 2.7	4.0	< 2.25	3.00	< 3.00	< 3.00
CBOD5 (mg/L) Instantaneous Maximum	< 2.2	< 2.2	< 2.1	< 2.2	2.4	2.7	3.1	4.1	2.3	3.00	< 3.00	< 3.00
TSS (mg/L) Average Monthly	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	6.0	< 4.00	< 4.00	< 4.50	< 5.00
TSS (mg/L) Weekly Average	< 4.0	< 4.0	4.0	< 4.0	< 4.0	< 4.0	< 4.0	6.0	< 4.00	< 4.00	< 4.50	< 5.00
TSS (mg/L) Instantaneous Maximum	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	8.0	< 4.00	< 4.00	< 4.50	< 5.00
Fecal Coliform (No./100 ml) Average Monthly	< 1.0	< 1.0	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Fecal Coliform (mg/L) Average Monthly	< 1.0	< 1.0	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1

**NPDES Permit Fact Sheet
Lewis Township Sewer System STP**

NPDES Permit No. PA0114049

Fecal Coliform (No./100 ml) Instantaneous Maximum	< 1.0	< 1.0	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Fecal Coliform (mg/L) Instantaneous Maximum	< 1.0	< 1.0	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Total Nitrogen (mg/L) Annual Average												2.39
Ammonia (mg/L) Average Monthly	< 0.7	2.1	2.15	2.2	2.4	1.7	2.0	2.2	2.05	2.1	1.42	2.15
Ammonia (mg/L) Weekly Average			2.15	2.3	2.4	1.7	2.1					
Total Phosphorus (mg/L) Annual Average												0.198

Development of Effluent Limitations

Outfall No.	001	Design Flow (MGD)	.0335
Latitude	40° 52' 53.30"	Longitude	-77° 8' 16.20"
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

A “Reasonable Potential Analysis” was not performed since the facility does not have any industrial users nor does it accept any hauled in wastes. Therefore, the application does not require any toxics to be sampled in the permit renewal application since they are not expected to be present in the discharge.

The Department’s WQM7.0 model allows the Department to evaluate point source discharges of dissolved oxygen (DO), carbonaceous BOD (CBOD₅), and ammonia-nitrogen (NH₃-N) into free-flowing streams and rivers. To accomplish this, the model simulates two basic processes: the mixing and degradation of NH₃-N in the stream and the mixing and consumption of DO in the stream due to the degradation of CBOD₅ and NH₃-N. Since there are not any changes to the receiving water or discharge, the previous modeling will be used to justify the Water Quality-Based Effluent limitations. See the previous model attached.

The previous TRC spreadsheet model can be found attached. The model shows that no water quality based TRC limitations are required.

Chesapeake Bay Requirements

According to the Department’s Supplement to the Phase 2 Chesapeake Bay Watershed Implementation Plan (WIP), the facility is classified as a Phase 5 bay discharger (>0.002 MGD and <0.2 MGD). Phase 5 facilities are required to monitor for total nitrogen and total phosphorus at a rate of 1/year unless the facility has already conducted at least two years of nutrient monitoring and a summary of the results are included in the next permit fact sheet. The following is a summary of the peak values reported over the past two years:

Parameter	Instantaneous Maximum (mg/l)	Total Annual (lbs)
Total Nitrogen (TN)	2.39	487
Total Phosphorus (TP)	0.37	38

Best Professional Judgment (BPJ) Limitations

None

Anti-Backsliding

There is no proposal to relax of any limitations in this permit.

Existing Effluent Limitations and Monitoring Requirements

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) ⁽¹⁾		Concentrations (mg/L)				Minimum ⁽²⁾ Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Average Monthly	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Continuous	Metered
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	4.0 Daily Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.6	1/day	Grab
CBOD5	XXX	XXX	25	40 Wkly Avg	XXX	50	2/month	Grab
TSS	XXX	XXX	30	45 Wkly Avg	XXX	60	2/month	Grab
Fecal Coliform (No./100 ml) Nov 1 - Apr 30	XXX	XXX	XXX	2000	XXX	10000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Oct 31	XXX	XXX	XXX	200	XXX	1000	2/month	Grab
Ammonia Oct 1 - Apr 30	XXX	XXX	XXX	18	XXX	XXX	2/month	Grab
Ammonia May 1 - Sep 30	XXX	XXX	XXX	6	12 Wkly Avg	18	2/month	Grab

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	Daily Maximum	Average Monthly	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Continuous	Metered
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	4.0 Daily Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.6	1/day	Grab
CBOD5	XXX	XXX	25	40 Wkly Avg	XXX	50	2/month	Grab
BOD5 Raw Sewage Influent	Report	Report	XXX	Report	XXX	XXX	2/month	Grab
TSS Raw Sewage Influent	Report	Report	XXX	Report	XXX	XXX	2/month	Grab
TSS	XXX	XXX	30	45 Wkly Avg	XXX	60	2/month	Grab
Fecal Coliform (No./100 ml) Nov 1 - Apr 30	XXX	XXX	XXX	2000	XXX	10000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Oct 31	XXX	XXX	XXX	200	XXX	1000	2/month	Grab
Ammonia Oct 1 - Apr 30	XXX	XXX	XXX	18	XXX	XXX	2/month	Grab
Ammonia May 1 - Sep 30	XXX	XXX	XXX	6	12 Wkly Avg	18	2/month	Grab

Compliance Sampling Location: 001

Other Comments: The only difference between the existing limits to the above proposed limits is the addition of influent raw sewage sampling for BOD₅ and TSS.

It is recommended the permit be drafted as described above.