

Application Type Amendment, Major
 Facility Type Municipal
 Major / Minor Minor

**NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE**

Application No. PA0093211 A-1
 APS ID 1074318
 Authorization ID 1415256

Applicant and Facility Information

Applicant Name	<u>Menallen Township Sewer Authority</u>	Facility Name	<u>Buffington STP</u>
Applicant Address	<u>427 Searights Herbert Road</u> <u>Uniontown, PA 15401-5137</u>	Facility Address	<u>Tex Lane PO Box 576</u> <u>New Salem, PA 15468</u>
Applicant Contact	<u>Sam McVicker</u>	Facility Contact	<u>Randy Brown</u>
Applicant Phone	<u>(724) 493-3440</u>	Facility Phone	<u>(724) 323-4360</u>
Client ID	<u>43759</u>	Site ID	<u>236840</u>
Ch 94 Load Status	<u>Not Overloaded</u>	Municipality	<u>Menallen Township</u>
Connection Status	<u>No Limitations</u>	County	<u>Fayette</u>
Date Application Received	<u>October 21, 2022</u>	EPA Waived?	<u>Yes</u>
Date Application Accepted	<u>March 14, 2023</u>	If No, Reason	<u></u>
Purpose of Application	<u>Replace chlorine disinfection with UV.</u>		


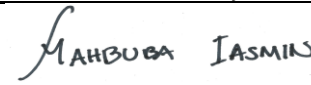
Summary of Review

The PA Department of Environmental Protection (PADEP/Department) received a major NPDES permit amendment application from K2 Engineering (consultant) on October 21, 2022 on behalf of Menallen Township Sewer Authority (permittee) for permittee's Buffington STP. This is a minor sewage treatment facility with average annual flow and hydraulic design capacity of 0.2 MGD and organic loading capacity of 340 lbs. BOD5/day. The facility is a two channel RBC with comminutor, primary and final clarifiers, aerated sludge holding tanks, and chlorine contact tanks. The treated effluent is discharged into Dunlap Creek through Outfall 001. The current permit was issued on July 10, 2020 with effective date on August 1, 2020, which will expire on July 31, 2025. A Part II WQM permit amendment was issued on March 15, 2023 that authorized the treatment plant upgrade under WQM permit number 2683403 A-1. Details of the upgrade was described on the Internal Review and Recommendation accompanying the amended WQM permit. The NPDES amendment will provide details on only the parameters that are being changed (UV instead of TRC) due to this upgrade, per SOP BPNPSM-PMT-029.

Sludge use and disposal description and location(s): Dewatered biosolids are landfilled.

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*

Approve	Deny	Signatures	Date
√		Reza H. Chowdhury, E.I.T. / Project Manager 	March 14, 2023
√		 Mahbuba Iasmin, Ph.D., P.E. / Environmental Engineer Manager	March 20, 2023

Summary of Review

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.

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Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	0.2
Latitude	39° 55' 39.90"	Longitude	-79° 50' 45.95"
Quad Name	New Salem	Quad Code	1907
Wastewater Description: Sewage Effluent			
Receiving Waters	Dunlap Creek (WWF)	Stream Code	40140
NHD Com ID	99414066	RMI	13.5
Drainage Area	4.87 mi ²	Yield (cfs/mi ²)	0.3
Q ₇₋₁₀ Flow (cfs)	1.46	Q ₇₋₁₀ Basis	Previous fact sheet
Elevation (ft)		Slope (ft/ft)	
Watershed No.	19-C	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	SILTATION		
Source(s) of Impairment	CONSTRUCTION, EROSION FROM DERELICT LAND (BARREN LAND), GRAZING IN RIPARIAN OR SHORELINE ZONES,		
TMDL Status		Name	
Background/Ambient Data		Data Source	
pH (SU)			
Temperature (°F)			
Hardness (mg/L)			
Other:			
Nearest Downstream Public Water Supply Intake		Newell Municipal Authority	
PWS Waters	Monongahela River	Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	

Changes Since Last Permit Issuance: Disinfection system upgrade

Other Comments:

Proposed UV unit: The 2023 amendment application is to replace the aged chlorine disinfection unit with an Ultraviolet disinfection. The existing chlorine contact tanks will remain in place and will act as secondary mean of disinfection if primary UV disinfection unit fails or needs maintenance. The proposed UV unit is Calgon Carbon packaged C3500D UV system in one (1) channel, one (1) bank per channel, two (2) rack per bank, two (2) lamps per rack. The system is an automatic in-place cleaning system. The system is designed for a flow of 0.4 MGD and the fecal count in the treated effluent is expected to be at or below 200 Nos/100 ml. Both rack (A and B) are connected in series with each rack is capable of meeting the effluent limit at PIF with other rack out of service, providing 100% redundancy. The permittee is planning to keep both banks on at the same time. UV Transmittance (in %) will be monitored and reported. Per SOP BCW-PMT-033 "Where ultraviolet (UV) disinfection is used, TRC limits are not applicable, but the limits table(s) in Part A will generally contain, at a minimum, routine monitoring of UV transmittance (%), UV dosage (µWs/cm² or mWs/cm² or mjoules/cm²) or UV intensity (µW/cm² or mW/cm²) at the same monitoring frequency that would be used for TRC". The manufacturer's cutsheet that was submitted with the application indicated that the new system could monitor UV transmittance in %. Instantaneous minimum UV transmittance in % will be added in this amendment at daily monitoring frequency.

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Existing TRC limits: The current permit has 0.5 mg/l as average monthly and 1.6 mg/l as IMAX limits for TRC. A discussion with the consultant indicated that the chlorine contact tanks will not be demolished and will remain as a back-up disinfection system in case the UV system needs major repair or for any other reason the UV system is unusable. The limits requirement will be removed from Part A of the permit and a new Part C condition will be added in the permit that will require the permittee to sample and report TRC whenever chlorine is used as a method of disinfection, at a frequency of 1/day, with an IMAX limit of 1.6 mg/l. The sample results may be submitted as an attachment with monthly eDMR. PADEP also should be notified prior to a planned UV outage or within 24-hr for unplanned UV outage.

No other changes are proposed. All other parameters in the current permit will remain in this amendment.

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	Instant. Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	1/week	Metered
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	4.0	XXX	XXX	XXX	1/day	Grab
CBOD5	41.0	60.0	XXX	25.0	38.0	50	1/week	8-Hr Composite
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	8-Hr Composite
TSS	50.0	75.0	XXX	30.0	45.0	60	1/week	8-Hr Composite
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	8-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	1/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	1/week	Grab
UV Transmittance (%)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Recorded
Total Nitrogen	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	8-Hr Composite
Ammonia Nov 1 - Apr 30	41.0	XXX	XXX	25.0	XXX	50	1/week	8-Hr Composite
Ammonia May 1 - Oct 31	14.0	XXX	XXX	8.5	XXX	17	1/week	8-Hr Composite

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	Weekly Average	Instant. Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Total Phosphorus	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	8-Hr Composite

Compliance Sampling Location: At Outfall 001

Other Comments: None