Pennsylvania Department of Environmental Protection

Southwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0254126**
Wastewater Type	**Sewage**	APS ID	**1125854**
Facility Type	**SFTF**	Authorization ID	**1506746**

NPDES PERMIT FACT SHEET INDIVIDUAL SFTF/SRSTP

Applicant, Facility and Project Information

Applicant Name	**Charles & Sarah Hensel**	Facility Name	**Hensel Community STP**
Applicant Address	115 Hamel Lane	Facility Address	115 Hamel Lane
	Johnstown, PA 15905-5312		Johnstown, PA 15905-5312
Applicant Contact	Charles Hensel	Facility Contact	Charles Hensel
Applicant Phone	(814) 241-1420	Facility Phone	(814) 241-1420
Client ID	273005	Site ID	718341
SIC Code	8800	Municipality	Upper Yoder Township
SIC Description	Private Households	County	Cambria
Date Application Received	September 26, 2024	WQM Required	No, renewal
Date Application Accepted		WQM App. No.	

Project Description: NPDES permit renewal application.

Summary of Review

The Pa Department of Environmental Protection (PaDEP/Department) received an NPDES permit renewal application from Sarah and Charles Hensel (permittee) on September 26, 2024 for permittee's Single Residence Sewage Treatment Plant (SRSTP), located in 115 Hamel Lane, Cambria, PA 15905 (Upper Yoder Township, Cambria County). The facility serves two single residences with a combined design flow of 900 GPD. The treated effluent is discharged into an UNT to Dalton Run (HQ-CWF) in state watershed 18-E. The current permit expired on October 31, 2024. The terms and conditions of the current permit is administratively extended since the renewal application wasn't received at least 180 days prior to the expiration date. Renewal NPDES permit application under Clean Water Program are not covered by PADEP's PDG per 021-2100-001. This fact sheet is developed in accordance with 40 CFR §124.56.

Changes to existing permit: Removed: numeric flow value. Facility converted to SFTF from SRSTP.

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
√		Reza H. Chowdhury, E.I.T. / Project Manager	November 13, 2024
X		Pravin Patel Pravin C. Patel, P.E. / Environmental Engineer Manager	11/14/2024

Discharge and Stream Data – 2 - Receiving Waters and PWS

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	0.0009
Latitude	40º 17' 29"	Longitude	-78º 59' 11"
Quad Name	Johnstown	Quad Code	1614
Wastewater Description:	Sewage Effluent		
Receiving Waters	Unnamed Tributary to Dalton Run (HQ-CWF)	Stream Code	45125
NHD Com ID	123720283	RMI	0.79
Watershed No.	18-E	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
Nearest Downstream Public Water Supply Intake	Saltsburg Municipal Waterworks in Saltsburg Boro, Indiana County		
PWS Waters	Conemaugh River	Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	

Changes Since Last Permit Issuance: None

Other Comments: None

Treatment Plant Summary

The Pa Department of Environmental Protection (PaDEP/Department) received an NPDES permit renewal application from Sarah and Charles Hensel (permittee) for permittee's Single Residence Sewage Treatment Plant (SRSTP), located in 115 Hamel Lane, Cambria, PA 15905 (Upper Yoder Township, Cambria County). The facility serves two single residences with a combined design flow of 900 GPD. Since a. the design flow is more than 800 GPD, and b. the facility serves more than 1 single residence, the facility should be considered as a Small Flow Treatment Facility (SFTF). The difference between the SRSTP and SFTS is mostly on sampling frequencies and annual fees. The existing permit has a sampling frequency of 1/quarter (changed from 1/month for sampling cost concerns) which indicates that the facility, in terms of sampling, was historically considered as SFTF. From this permit term, the facility will be considered as SFTF and fee category will be changed.

The existing treatment system consists of 1,250-gallon septic tank, a 1,000-gallon septic tank with a polylok-625 effluent filter, a distribution box, 2-ECOFLO STB-650 biofilters, and UV disinfection system. Premier Tech provided a filtering media analysis report, dated October 2, 2023 which stated the following issues: a. Distribution system's condition: not functional, to be replaced; and b. Filtering media: degraded. Geochemical Testing collected sample on September 12, 2024 and the results are: pH 7.9 S.U., TSS 4 mg/l, CBOD5 <1.7 mg/l, TRC <0.2 mg/l, and Fecal Coliform 298.8 MPN/100 ml. All the results are within the permitted limits, considering the fecal coliform result as IMAX.

An inspection was conducted on May 21, 2021 which noted no violation. The inspection observed a. the system pump would be replaced due to malfunction, and b. alarm was going off due to malfunctioning pump.

Existing Limits

The following limits were applied to Outfall 001 for the period November 1, 2019 through October 31, 2024:

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 Quarterly	Maximum	Instant. Maximum		
Flow (MGD)	0.0009 Avg Qrtly	XXX	XXX	XXX	XXX	XXX	1/quarter	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/quarter	Grab
Dissolved Oxygen	XXX	XXX	7.0 Inst Min	XXX	XXX	XXX	1/quarter	Grab
BOD5	XXX	XXX	XXX	10.0	XXX	20.0	1/quarter	Grab
TSS	XXX	XXX	XXX	10.0	XXX	20.0	1/quarter	Grab
Fecal Coliform (No./100 ml)	XXX	XXX	XXX	200	XXX	1000	1/quarter	Grab
Ammonia Nov 1 - Apr 30	XXX	XXX	XXX	10.5	XXX	21.0	1/quarter	Grab
Ammonia May 1 - Oct 31	XXX	XXX	XXX	3.5	XXX	7.0	1/quarter	Grab

Development of effluent limitations

The following effluent limitations and monitoring requirements, at a minimum, will be established in all new and renewed SFTF permits based on the requirements of DEP's "Standard Operating Procedure (SOP) for Clean Water Program New and Reissuance Small Flow Treatment Facility Individual NPDES Permit Application" (SOP No. BCW-PMT-003, Version 1.8, Final, November 9, 2012, Revised November 9, 2023).

Parameter	Avg	IMAX	Sample Type	Frequency: SFTFs	Frequency: SRSTPs
Flow (GPD)	Report	XXX	Estimate (SRSTPs) Measured (SFTFs)	1/month	1/year
CBOD5 (mg/L)	10	20	Grab	1/month	1/year
TSS (mg/L)	10	20	Grab	1/month	1/year
TRC (mg/L) *	Report for SRSTPs; Use TRC Spreadsheet to determine WQBELs or 0.02 mg/L for SFTFs		Grab	1/month	1/year
Fecal Coliform (No./100 ml)	200 Geometric Mean (SFTFs) / Average (SRSTPs)		Grab	1/month	1/year

* This is an SFTF with UV disinfection. The facility will not be required to measure TRC nor will be required to report UV dosage/intensity/transmittance.

The following ABACT limits are recommended based on DEP's "Water Quality Antidegradation Implementation Guidance" (Doc. No. 391-0300-002, November 29, 2003):

Parameter	Treatment Process Performance Expectations (mg/L)		
	<2,000 gpd	2,000-50,000 gpd	>50,000 gpd
$CBOD_5$ (May 1 – Oct. 31)	**10**	10	10
$CBOD_5$ (Nov. 1 – Apr. 30)	**20**	20	10
Suspended Solids	**20**	10	10

NH_3-N (May 1 – Oct. 31)	**5.0**	3.0	1.5
NH_3-N (Nov. 1 – Apr. 30)	**15.0**	9.0	4.5
Effective disinfection	Disinfection should be accomplished using a method that leaves no detectable residual. Disinfection using ultra-violet light or other non-chlorine based systems is encouraged and must be considered.		
Other parameters, as needed	*Determined by the size and characteristics of the proposed discharge, may include – NO_2/NO_3-N, Total Phosphorus, Copper, Lead, Zinc*		

In addition, water quality modeling was conducted in previous permit though WQAM63 due to the discharge being into special protection water. The following WQBEL limits were determined through modeling:

Parameter	Limit (mg/l)	SBC	Model
NH3-N	3.5	Average Monthly	WQAM63
Dissolved Oxygen	7.0	Average Monthly	WQAM63

The applicable final limits will be most stringent among ABACT, TBEL, and WQBEL.

Flow monitoring:
Current permit has 0.0009 MGD as average quarterly. This numeric value will be replaced by "Report", per SOP. The reporting frequency will remain unchanged.

Carbonaceous Biochemical Oxygen Demand ($CBOD_5$)
An average quarterly $CBOD_5$ limit of 10 mg/l and IMAX limit of 20 mg/l will be placed in this permit. These limits are consistent with the SOP and are more stringent than antidegradation guidance. The current permit has BOD5 which will be replaced by CBOD5 to be consistent with SOP and ABACT.

Total Suspended Solids (TSS)
An average quarterly TSS limit of 10 mg/l and IMAX limit of 20 mg/l will be continued in this permit. These limits are consistent with the SOP and are more stringent than the antidegradation ABACT.

Fecal Coliform:
A year-round average quarterly limit of 200 No./100 ml will be continued in this permit. This limit is consistent with the SOP and antidegradation ABACT. The current permit has IMAX limit of 1,000 No./100 ml which will also be continued.

Ammonia Nitrogen:
The SOP for SFTFs does not require monitoring of Ammonia-Nitrogen. Antidegradation ABACT sets a limit of 5.0 mg/L in summer months, and 15.0 mg/L in winter months. The WQBEL for Ammonia-Nitrogen is 3.5 mg/l as average quarterly and 7.0 mg/l as IMAX. WQBEL limits are more stringent and will be carried over.

pH:
The TBEL for pH is above 6.0 and below 9.0 S.U. (40 CFR §133.102(c) and Pa Code 25 §§ 95.2(1), 92a.47) which are existing limits and will be carried over.

Dissolved Oxygen:
The current permit has a DO limit of 7.0 mg/l as instantaneous minimum. The rationale to apply minimum DO limit, per previous permit fact sheet, was that a WQAM63 model in the past recommended the limit due to the receiving stream being a special protection water. Existing limit will be carried over.

UV:
The SOP indicates that it is not necessary to require UV intensity or transmittance monitoring in the permit for SRSTPs/SFTFs. This is also consistent with Antidegradation ABACT requirements for effective disinfection.

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	Average Weekly	Minimum	Average Quarterly	Maximum	Instant. Maximum		
Flow (MGD)	Report Avg Qrtly	XXX	XXX	XXX	XXX	XXX	1/quarter	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/quarter	Grab
Dissolved Oxygen	XXX	XXX	7.0 Inst Min	XXX	XXX	XXX	1/quarter	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5)	XXX	XXX	XXX	10.0	XXX	20.0	1/quarter	Grab
Total Suspended Solids	XXX	XXX	XXX	10.0	XXX	20.0	1/quarter	Grab
Fecal Coliform (No./100 ml)	XXX	XXX	XXX	200	XXX	1000	1/quarter	Grab
Ammonia-Nitrogen Nov 1 - Apr 30	XXX	XXX	XXX	10.5	XXX	21.0	1/quarter	Grab
Ammonia-Nitrogen May 1 - Oct 31	XXX	XXX	XXX	3.5	XXX	7.0	1/quarter	Grab

Compliance Sampling Location: At Outfall 001

Other Comments: None