pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northwest Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0101851**
Facility Type	**Non-Municipal**	APS ID	**996305**
Major / Minor	**Minor**	Authorization ID	**1278536**

Applicant and Facility Information

Applicant Name	**Sisters of Humility of Mary Inc.**	Facility Name	**Villa Maria Community Center**
Applicant Address	PO Box 906 - 288 Villa Drive	Facility Address	228 Villa Drive
	Villa Maria, PA 16155-0906		Villa Maria, PA 16155
Applicant Contact	Warren Chapella	Facility Contact	
Applicant Phone	(724) 964-8861	Facility Phone	
Applicant E Mail	wchapella@humilityofmary.org	Facility E Mail	
Client ID	24291	Site ID	244023
Municipality	Pulaski Township	County	Lawrence
Ch 94 Load Status	Not Overloaded	Connection Status	**NA**
Application Received	June 10, 2019	EPA Waived?	Yes
Application Accepted	July 3, 2019	If No, Reason	

Purpose of Application: Treated sewage NPDES permit renewal.

Summary of Review

No violations reported for the ending permit term.

Proposed is increasing the minimum daily DO from 3.0-mg/L to 5.0-mg/L and increasing the DO, pH and UV radiation monitoring to daily.

Nutrient monitoring is not changed from that previously permitted.

Disinfection is UV radiation. Previously UV reporting was not required.

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		William H Mentzer William H. Mentzer, P.E. Environmental Engineering Specialist	May 20, 2020
X		Justin C. Dickey Justin C. Dickey, P.E. Environmental Engineer Manager	June 25, 2020

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.03
Latitude NHD	41º 4' 30.56"	Longitude NHD	-80º 30' 21.89"
Latitude DP	41º 4' 30.00"	Longitude DP	-80º 30' 22.22"
Quad Name	Campbell	Quad Code	1001
Wastewater:	Community Center and other domestic wastes.		

Receiving Waters	Unnamed Tributary to Coffee Run	Stream Code	35470
NHD Com ID	125562122	RMI	0.54
Drainage Area	0.31	Yield (cfs/mi^2)	0
Q_{7-10} Flow (cfs)	0	Q_{7-10} Basis	0
Elevation (ft)	1070.23	Slope (ft/ft)	0.00203
Watershed No.	20-B	Chapter 93 Class.	WWF
Existing Use	statewide	Existing Use Qualifier	none
Exceptions to Use	none	Exceptions to Criteria	none
Comments	Coffee Run is tributary to the Mahoning River		

Assessment Status	Attaining Use(s)		
Cause(s) of Impairment			
Source(s) of Impairment			
TMDL Status		Name	

Background/Ambient Data		Data Source
pH (SU)	7.5	default
Dry Stream BOD5 (mg/L)	0	default
Dry Stream Amm (mg/L)	0	default
Stream BOD5 (mg/L)	2.0	default
Stream Amm (mg/L)	0.1	default

Nearest Downstream Public Water Supply Intake	Beaver Falls Mun Auth		
PWS Waters	Beaver River	Flow at Intake (cfs)	NA
PWS RMI	5.4	Distance from Outfall (mi)	29

Changes Since Last Permit Issuance: none

Treatment Facility Summary

Treatment Facility Name: Villa Maria Comm Center

WQM Permit No.	Issuance Date
3799404	October 19, 1999

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary With Ammonia Reduction	Activated Sludge	Ultraviolet	0.02

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.03	70	Not Overloaded	Aerobic Digestion	landfill

Changes Since Last Permit Issuance: none

Other Comments: WQM permit 3799404 replaced facilities covered under WQM permits 1895-S and 8535-S.

Treatment: comminution with by-pass bar screen, aerated flow equalization, extended aeration with clarification, surface sand filtration, UV disinfection and aerobic sludge digestion. Air supply is two rotary blowers.

According to an outfall picture attached to an August 2, 2006 inspection report by Bruce Leidy the outfall is not rip-rapped and is just above the receiving stream water surface and outside of the stream channel were significant reaeration may not occur. This outfall may be part of WQM permits 1895-S and 8535-S.

Planning (6-99-052) approval is dated July 2, 1999.

Compliance History

DMR Data for Outfall 001 (from June 1, 2018 to May 31, 2019)

Parameter	MAY-19	APR-19	MAR-19	FEB-19	JAN-19	DEC-18	NOV-18	OCT-18	SEP-18	AUG-18	JUL-18	JUN-18
Flow (MGD) Average Monthly	0.021	0.016	0.022	0.023	0.019	0.017	0.0176	0.017	0.022	0.015	0.014	0.02
Flow (MGD) Daily Maximum	0.049	0.05	0.035	0.053	0.038	0.033	0.029	0.045	0.08	0.04	0.019	0.033
pH (S.U.) Minimum	6.95	7.2	7.37	7.39	7.51	7.53	7.23	7.41	7.19	6.95	7.02	7.43
pH (S.U.) Maximum	7.86	7.73	7.65	7.66	8.23	8.3	7.77	7.85	7.83	7.95	8.12	8.37
DO (mg/L) Minimum	6.54	8.56	9.1	11.06	9.83	7.25	8.71	7.63	5.94	6.96	6.0	6.49
CBOD5 (mg/L) Average Monthly	< 4	< 4.0	< 4	< 4.0	< 4.0	< 4	< 4.0	< 4	< 3	< 4	< 4	< 4
TSS (mg/L) Average Monthly	< 5.0	< 5	< 5	< 5.0	< 5	< 5	< 5	< 6	< 6	< 5	< 6	< 5.0
F Coliform (#/100 ml) Geometric Mean	< 1	< 17	< 1	< 2.0	< 1	< 1	7	10	51	< 1	< 1	26
F Coliform (#/100 ml) Instant Maximum	< 1	32	< 1	< 2.0	< 1	< 1	50	99	**870**	< 1	2	**579**
Total Nitrogen (mg/L) Average Monthly	< 10	14.79	< 11.29	< 10.63	< 12	< 14	< 14	< 15	< 14	< 17	< 18	< 13.0
Ammonia (mg/L) Average Monthly	< 0.3	< 0.3	< 0.3	< 0.43	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 3.0	< 1.0	< 0.3
Total Phosphorus (mg/L) Ave Monthly	1.068	1.51	2.39	1.133	1.108	1.67	2.44	2.12	1.66	2.23	2.26	2.0

Compliance History

No noncompliance reported

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .03
Latitude 41º 4' 30.00" **Longitude** -80º 30' 22.00"
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)
DO	4.0	minimum		BPJ
UV light radiation	report			

Comments: 4.0-mg/L DO replaces a 3.0-mg/L minimum daily limitation.

Water Quality-Based Limitation

The following limitations were previously determined through water quality modeling:

Parameter	Limit (mg/l)			SBC	Model		
	min	mean	max		min	mean	max
Ammonia summer		5.0	10.0	NA		4.73	9.46
Ammonia winter		15.0	30.0	NA		14.19	28.38
DO	5.0				5.0		

Comments:

A two node WQM7 model was used with the first stage being a dry tributary to Coffee Run. DO remains water quality controlling.

Anti-Backsliding - N/A

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 Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	1/week	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	5.0 Daily Min	XXX	XXX	XXX	1/day	Grab
UV radiation intensity (µW/sq-cm)	XXX	XXX	XXX	Report	XXX	XXX	1/day	Grad
CBOD5	XXX	XXX	XXX	25.0	XXX	50.0	2/month	8-Hr Composite
TSS	XXX	XXX	XXX	30.0	XXX	60.0	2/month	8-Hr Composite
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	Report	XXX	XXX	2/month	8-Hr Composite
Ammonia Nov 1 - Apr 30	XXX	XXX	XXX	15.0	XXX	30.0	2/month	8-Hr Composite
Ammonia May 1 - Oct 31	XXX	XXX	XXX	5.0	XXX	10.0	2/month	8-Hr Composite
Total Phosphorus	XXX	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite

Compliance Sampling Location: At Outfall 001 after disinfection