pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southeast Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0056065**
Facility Type	**Non-Municipal**	APS ID	**1011628**
Major / Minor	**Minor**	Authorization ID	**1305956**

Applicant and Facility Information

Applicant Name	**Enserv Inc.**	Facility Name	**Immaculata University STP**
Applicant Address	1145 King Road	Facility Address	1145 King Road
	Immaculata, PA 19345-9903		Immaculata, PA 19345-9903
Applicant Contact	Sister Ann Veronica	Facility Contact	Jason Clemonds
Applicant Phone	(610) 647-4400	Facility Phone	(610) 647-4400
Client ID	64931	Site ID	449987
Ch 94 Load Status	Not Overloaded	Municipality	East Whiteland Township
Connection Status		County	Chester
Date Application Received	January 31, 2020	EPA Waived?	Yes
Date Application Accepted		If No, Reason	

Purpose of Application: Permit Renewal.

Summary of Review

The permittee has submitted a NPDES permit renewal application to discharge sewage into unnamed tributary of Valley Creek (EV, MF).

The facility consists of a sequential Batch Reactor plant – Lakeside screen, effluent equalization, two batch reactors, one effluent equalization, one Drum filter, and Ultra-Violet disinfection.

DEP has conducted a site inspection on 12/10/19. Copy of the inspection report is attached

Immaculata.RTPT.12-10-19.pdf

Operations Section commented: *Facility had some operational issues in the Spring of 2019. The problems were from the former operations environmental firm not maintaining or being familiarized with the tertiary unit. A new operations firm has taken over and there have been no issues since the turnover. In addition, this area in East Whiteland Township will hopefully have public sewers to phase this facility out.*

No changes in quality and quantity of the effluent, therefore current monitoring requirements and effluent limits remain the same and will be proposed as seen on p. 8 of this factsheet.
Effluent limits determination for current permit is listed in p.7 of this factsheet.

Act 14 Notification:
East Whiteland TWP was notified on January 2, 2020
County of Chester was notified on January 2, 2020

Approve	Deny	Signatures	Date
X		Begay Omuralieva Begay Omuralieva / Environmental Engineering Specialist	April 24, 2020
X		Pravin C. Patel, P.E. / Environmental Engineer Manager /s/	April 24, 2020

Summary of Review

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.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.0977
Latitude	40º 2' 0.60"	Longitude	-75º 33' 59.94"
Quad Name	Malvern	Quad Code	1841
Wastewater Description:	Sewage Effluent from Immaculata University		
Receiving Waters	Unnamed Tributary of Valley Creek (EV, MF)	Stream Code	01012
NHD Com ID	25980406	RMI	1.7
Drainage Area	0.06	Yield (cfs/mi^2)	0.02
Q_{7-10} Flow (cfs)	0.012	Q_{7-10} Basis	1993 WQPR
Elevation (ft)		Slope (ft/ft)	
Watershed No.	3-F	Chapter 93 Class.	EV, MF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	CAUSE UNKNOWN, FLOW REGIME MODIFICATION, HABITAT ALTERATIONS, PATHOGENS, POLYCHLORINATED BIPHENYLS (PCBS), SILTATION		
Source(s) of Impairment	HABITAT MODIFICATION - OTHER THAN HYDROMODIFICATION, SOURCE UNKNOWN, URBAN RUNOFF/STORM SEWERS		
TMDL Status	Final	Name	Valley and Little Valley Creeks

Changes Since Last Permit Issuance: none

Other Comments: The Valley and Little Valley Creeks TMDL addresses PCB contamination that originated from the Paoli Rail Yard. The TMDL Implementation Plan addressed remedial activity at the Paoli Rail Yard and removal of stream bed sediments containing greater than 1 mg/l PCB. Therefore, the TMDL does not affect the discharge from ENSERV.

Treatment Facility Summary

Treatment Facility Name: Enserv Inc.

WQM Permit No.	Issuance Date
1508401	05/07/2008

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Sequencing Batch Reactor	Ultraviolet	0.0977

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.0977	244	Not Overloaded		Delcora WWTTP

Changes Since Last Permit Issuance: none

Compliance History

DMR Data for Outfall 001 (from March 1, 2019 to February 29, 2020)

Parameter	FEB-20	JAN-20	DEC-19	NOV-19	OCT-19	SEP-19	AUG-19	JUL-19	JUN-19	MAY-19	APR-19	MAR-19
Flow (GPD) Average Monthly	0.0542	0.0436	0.0436	0.0552	0.0566	0.0578	0.0453	0.0398	0.034	0.045	0.0474	0.0454
pH (S.U.) Instantaneous Minimum	7.07	7.26	7.18	7.4	7.42	6.96	6.98	6.41	7.11	FF	7.3	7.3
pH (S.U.) Instantaneous Maximum	8.64	8.31	8.69	8.83	8.72	8.88	8.98	8.39	7.77	FF	8.1	8.2
DO (mg/L) Minimum	7.66	8.67	7.04	7.64	7.65	7.09	7.14	7.01	7.02	FF	6.5	6.7
CBOD5 (lbs/day) Average Monthly	< 1.4	< 0.8	< 1.0	< 1.1	< 1.1	< 2.4	< 4.8	< 0.8	< 0.7	< 1.0	2.3	1.7
CBOD5 (mg/L) Average Monthly	< 3	< 2	< 3	< 2	< 2	< 4	< 16	< 2	< 2	< 3	5	4
TSS (lbs/day) Average Monthly	2.7	< 1.2	1.4	1.8	0.6	< 1.7	< 0.8	< 2.4	< 1.9	2.5	5.1	< 3.5
TSS (mg/L) Average Monthly	6	< 3	4.0	4	1	< 3	< 2	< 6	< 6	7	12	< 10
Fecal Coliform (CFU/100 ml) Geometric Mean	< 4	< 2	< 2	< 2	< 3	< 3	< 23	< 14	< 2	< 1	< 2	< 8
Fecal Coliform (CFU/100 ml) Instantaneous Maximum	21	< 2	< 2	3	10	18	115	3900	9	< 1	10	2100
UV Intensity (µw/cm²) Minimum	5.3	3.6	4.4	0.4	7	3.7	3.6	2.0	1.4	FF	0.4	0.5
Total Nitrogen (mg/L) Average Monthly	19.59	< 13.2	< 13.68	< 10.54	< 10.68	< 13.95	< 10.39	11.6	18.1	1.39	< 7.72	< 5.64
Ammonia (lbs/day) Average Monthly	0.7	< 0.08	< 0.04	< 0.05	< 0.06	< 0.06	< 0.04	< 0.04	< 0.03	< 0.2	0.7	< 0.2
Ammonia (mg/L) Average Monthly	1.4	< 0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.5	1.6	< 0.4
Total Phosphorus (mg/L) Average Monthly	3.61	3.48	1.05	1.4	5.19	3.88	3.55	3.31	7.98	1.39	0.42	1.62

Compliance History

Effluent Violations for Outfall 001, from: April 1, 2019 To: February 29, 2020

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
DO	04/30/19	Min	6.5	mg/L	7.0	mg/L
CBOD5	08/31/19	Avg Mo	< 16	mg/L	10	mg/L
TSS	04/30/19	Avg Mo	12	mg/L	10	mg/L
Fecal Coliform	07/31/19	IMAX	3900	CFU/100 ml	1000	CFU/100 ml

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.0977
Latitude 40° 1' 55.37" **Longitude** 75° 33' 57.22"
Wastewater Description: Treated sewage from Immaculata University STP

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	-	DRBC, 92a.47(a)(4)
Fecal Coliform (5/1 – 9/30)	1,000 / 100 ml	IMAX	-	DRBC, 92a.47(a)(4)
Total Residual Chlorine	0.5	Average Monthly	-	92a.48(b)(2)

Comments: The NPDES permit issued in 2003 included more stringent effluent limits for $CBOD_5$ and TSS based on ABACT Technology Based limits. The ABACT Technology Based average monthly limits for $CBOD_5$ and TSS are both 10 mg/l, respectively.

Water Quality-Based Limitations

Since this is a renewal for a minor non-POTW sewage facility with no changes to flow or operation, remodeling using the Department's WQM model is not required. The NPDES permit renewal issued in 2003 included more stringent effluent limits for $CBOD_5$ and TSS based on ABACT Technology Based limits.

Since this facility is designed for less than 0.1 MGD, no reporting of toxic parameters was required. Therefore, no reasonable potential analysis was performed, and the Department's PENTOXSD model was not run.

The Valley and Little Valley Creeks TMDL:

The Valley and Little Valley Creeks TMDL addresses PCB contamination that originated from the Paoli Rail Yard. The TMDL Implementation Plan addressed remedial activity at the Paoli Rail Yard and removal of stream bed sediments containing greater than 1 mg/l PCB. Therefore, the TMDL does not affect the discharge from ENSERV.

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	Instantaneous Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (GPD)	Report	XXX	XXX	XXX	XXX	XXX	Continuous	Metered
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	7.0	XXX	XXX	XXX	1/day	Grab
CBOD5	8.0	XXX	XXX	10	XXX	20	1/week	24-Hr Composite
TSS	8.0	XXX	XXX	10	XXX	20	1/week	24-Hr Composite
Fecal Coliform (No./100 ml)	XXX	XXX	XXX	200 Geo Mean	XXX	1000	1/week	Grab
UV Intensity (µw/cm²)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Measured
Total Nitrogen	XXX	XXX	XXX	Report	XXX	XXX	1/month	24-Hr Composite
Ammonia Nov 1 - Apr 30	3.0	XXX	XXX	3.7	XXX	7.4	1/week	24-Hr Composite
Ammonia May 1 - Oct 31	1.2	XXX	XXX	1.5	XXX	3	1/week	24-Hr Composite
Total Phosphorus	XXX	XXX	XXX	Report	XXX	XXX	1/month	24-Hr Composite

Compliance Sampling Location: Outfall 001