pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southeast Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0051616**
Facility Type	**Industrial**	APS ID	**1103304**
Major / Minor	**Minor**	Authorization ID	**1466371**

NPDES PERMIT FACT SHEET INDIVIDUAL INDUSTRIAL WASTE (IW) AND IW STORMWATER

Applicant and Facility Information

Applicant Name	**PA American Water Co.**	Facility Name	**Shady Lane Water Treatment Plant**
Applicant Address	852 Wesley Drive	Facility Address	137 Shady Lane
	Mechanicsburg, PA 17055-4436		Spring City, PA 19475-1132
Applicant Contact	David Lentowski	Facility Contact	Mark Cooper
Applicant Phone	(484) 855-1008	Facility Phone	(610) 802-3342
Client ID	87712	Site ID	237989
SIC Code	4941	Municipality	East Vincent Township
SIC Description	Trans. & Utilities - Water Supply	County	Chester
Date Application Received	December 20, 2023	EPA Waived?	Yes
Date Application Accepted		If No, Reason	

Purpose of Application: Permit Renewal

Summary of Review

The applicant requests renewal of an NPDES permit to discharge process wastewater from a water treatment plant.

The process wastewater comes from solids and cleaning waste from Sedimentation Tank 1, overflows from Sedimentation Tank 2 and filter backwash. They go to a waste pump station and are pumped to the Recycled Water Settling Tank, and clarified supernatant is normally sent to the head of the plant however in emergencies this clarified supernatant will be discharged to Outfall 001. There has been no process wastewater discharge to Outfall 001 since 2000. The solids from the recycled water settling tank are sent to the Pottstown WWTP as needed.

The Shady Lane Water Treatment Plant (WTP) will be taken offline upon completion of the new Lock 57 WTP. NPDES permit amendment was issued on June 23, 2022 to incorporate this new WTP. The Shady Lane WTP is currently expected to be decommissioned in 2027.

A WQM Permit No. 1522201 was issued on 5/5/2023 for the construction and operation of the wastewater treatment plant to treat the filter backwash wastewater and sedimentation basin solids blowdown from the Lock 57 WTP. The plant will have two membrane lined earthen lagoons for wastewater clarification and residual holding basins for filter backwash and rinse water. Streams that will go to the treatment lagoons are: drain from carbon contact tank, overflow from flocculation, drains and sludge blowdown from the clarification tanks, backwash waste, filter overflow and rinse, and clearwell drainage.

There is a Secondary Outfall shown in the flow balance diagram which was never documented in the permit in the past. Discharge would only occur in the emergency if the recycled water settling tank was full and the waste pumps were still running. The recycling tank level is monitored and there is a high-level alarm. Recycled water has not overflowed in the past several years. Once the new Lock 57 WTP starts operation, the secondary outfall will be eliminated. A Part C. condition is included in the permit to require sampling if any discharge occurs.

Approve	Deny	Signatures	Date
X		*Sara Abraham* Sara Reji Abraham, E.I.T. / Project Manager	April 15, 2024
		Pravin C. Patel, P.E. / Environmental Engineer Manager	

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.

Act 14 Notifications:

East Vincent Township - October 18, 2023
Chester County - October 18, 2023

Permit Conditions:

A. Acquire Necessary Property Rights
B. Proper Sludge Disposal
C. WQM Permit Requirement
D. Applicable BAT/BCT if Developed
E. Chlorine Optimization
F. Monitoring at the Secondary Outfall
G. Notification of completion of construction
H. Sedimentation Basin Cleaning

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.07
Latitude	40º 11' 40.39"	Longitude	-75º 34' 21.64"
Quad Name	Phoenixville	Quad Code	1741
Wastewater Description:	Water Treatment Effluent		
Receiving Waters	Schuylkill River (WWF, MF)	Stream Code	00833
NHD Com ID	25989546	RMI	46.1
Watershed No.	3-D	Chapter 93 Class.	WWF, MF
Assessment Status	Impaired		
Cause(s) of Impairment	POLYCHLORINATED BIPHENYLS (PCBS)		
Source(s) of Impairment	SOURCE UNKNOWN		
TMDL Status	Final	Name	Schuylkill River PCB TMDL

Discharge, Receiving Waters and Water Supply Information

Outfall No.	002	Design Flow (MGD)	.07
Latitude	40º 11' 38.01"	Longitude	-75º 34' 9.77"
Quad Name	Phoenixville	Quad Code	1741
Wastewater Description:	Water Treatment Effluent		
Receiving Waters	Schuylkill River (WWF, MF)	Stream Code	00833
NHD Com ID	25989546	RMI	46.4
Q_{7-10} Flow (cfs)	188	Q_{7-10} Basis	From previous fact sheet, Stream stats
Elevation (ft)	103.61		
Watershed No.	3-D	Chapter 93 Class.	WWF, MF
Assessment Status	Impaired		
Cause(s) of Impairment	POLYCHLORINATED BIPHENYLS (PCBS)		
Source(s) of Impairment	SOURCE UNKNOWN		
TMDL Status	Final	Name	Schuylkill River PCB TMDL

NPDES Permit Fact Sheet

NPDES Permit No. PA0051616
Shady Lane Water Treatment Plant

Development of Effluent Limitations

Outfall No. 001/002 **Design Flow (MGD)** .07
Latitude 40º 11' 38.00"/40º 11' 37.00" **Longitude** -75º 34' 19"/-75º 34' 16"
Wastewater Description: Water Treatment Effluent

Technology-Based Limitations

The following technology-based limitations apply, subject to water quality analysis and BPJ where applicable:

This discharge is subject to the Technology-Based Effluent Limits outlined in the PADEP guidance document Technology-Based Control Requirements for Water Treatment Plant Wastes (362-2183-003). In the Executive Summary of the document, it outlines the following Best Practicable Control Technology Currently Achievable (BPT) technology-based limits for filter backwash wastewater:

Parameter	Monthly Average (mg/l)	Daily Max (mg/l)
Suspended Solids	30	60
Iron (total)	2	4
Aluminum (total)	4	8
Manganese (total)	1	2
pH	6 – 9 all times	
Total Residual Chlorine	0.5*	

*The existing limit 0.7 is carried over to the new permit for the Outfall 001

Water Quality-Based Limitations

The dilution ratio of the Schuylkill River to the discharge is 1740:1 at Q7-10 streamflow. Due to the large dilution afforded by the Schuylkill River, the technology-based limits are presumed to be more stringent than water quality-based limits.

The monitoring requirement for the parameters Chlorodibromomethane, Dichlorobromomethane, and Chloroform from the current permit are carried over to the draft permit.

The source water is taken directly from the Schuylkill River. Since there is no net increase in PCBs discharged back to the Schuylkill River, the Schuylkill River PCB TMDL is not applicable.

The following are new parameters required to be monitored according to our new guidance. The permittee may discontinue monitoring for these parameters if the results in 4 consecutive monitoring periods indicate non-detect results at or below Quantitation Limits of 4.0 ng/L for PFOA, 3.7 ng/L for PFOS, 3.5 ng/L for PFBS and 6.4 ng/L for HFPO-DA. When monitoring is discontinued, permittee must enter a No Discharge Indicator (NODI) Code of “GG” on DMRs.

PFOA			Report			Data collection/SOP
PFOS			Report			Data collection/SOP
HFPO-DA			Report			Data collection/SOP
PFBS			Report			Data collection/SOP

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 Startup of New or Upgraded Facilities.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	2/month	Estimate
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	Daily when Discharging	Grab
Total Residual Chlorine (TRC)	XXX	XXX	XXX	0.7	XXX	2.0	Daily when Discharging	Grab
Total Suspended Solids	17.5	35	XXX	30.0	60.0	75	Weekly when Discharging	Grab
Aluminum, Total	2.34	4.67	XXX	4.0	8.0	10	Weekly when Discharging	Grab
Iron, Total	1.17	2.34	XXX	2.0	4.0	5	Weekly when Discharging	Grab
Manganese, Total	0.58	1.17	XXX	1.0	2.0	2.5	Weekly when Discharging	Grab
Chlorodibromomethane	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	Grab
Dichlorobromomethane	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	Grab
Chloroform	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	Grab
PFOA (ng/L)	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab
PFOS (ng/L)	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab
PFBS (ng/L)	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab
HFPO-DA (ng/L)	XXX	XXX	XXX	XXX	Report	XXX	1/year	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 002, Effective Period: Startup of New or Upgraded Facilities 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	Minimum	Average Monthly	Daily 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	Daily when Discharging	Grab
Total Residual Chlorine (TRC)	XXX	XXX	XXX	0.5	XXX	1.6	Daily when Discharging	Grab
Total Suspended Solids	17.5	35	XXX	30.0	60.0	75	Weekly when Discharging	Grab
Aluminum, Total	2.34	4.67	XXX	4.0	8.0	10	Weekly when Discharging	Grab
Iron, Total	1.17	2.34	XXX	2.0	4.0	5	Weekly when Discharging	Grab
Manganese, Total	0.58	1.17	XXX	1.0	2.0	2.5	Weekly when Discharging	Grab
Chlorodibromomethane	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	Grab
Dichlorobromomethane	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	Grab
Chloroform	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	Grab
PFOA (ng/L)	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab
PFOS (ng/L)	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab
PFBS (ng/L)	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab
HFPO-DA (ng/L)	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab