pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southeast Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0056880**
Facility Type	**Industrial**	APS ID	**1054140**
Major / Minor	**Minor**	Authorization ID	**1380573**

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

Applicant and Facility Information

Applicant Name	**Lower Bucks County Joint Municipal Authority**	Facility Name	**LBCJMA Water Treatment Plant**
Applicant Address	7811 New Falls Road	Facility Address	60 Main Street
	Levittown, PA 19058-0460		Tullytown, PA 19007
Applicant Contact	Rajput Vijay	Facility Contact	Fredrick Walcott
Applicant Phone	(215) 945-7400	Facility Phone	(215) 547-9581
Client ID	64797	Site ID	270978
SIC Code	4952	Municipality	Tullytown Borough
SIC Description	Trans. & Utilities - Sewerage Systems	County	Bucks
Date Application Received	December 30, 2021	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 0.7 MGD of treated clarified/settled/supernatant water into Delaware River (Zone 2) via Franklin Cove on a continuous basis along with a periodic discharge of Sedimentation Basin's supernatant/clarified/settled water from Authority's Water Treatment Plant.

The existing NPDES permit authorizes intermittent discharge of 0.48 mgd (approximately twice per year) of settled supernatant water from Water Treatment Plant into Delaware River. This permit includes discharge of 0.7 mgd of treated wastewater on a continuous basis into Delaware River.

Raw surface water withdrawn from Delaware River and groundwater from the wells is combined and pumped to a flash mixing tank where Ferric Chloride is added as coagulant and lime is added for pH adjustment. Chorine is also added as pre-chlorination. There is also a provision to add Powdered Activated Carbon to the Tank as well as ahead of the Tank to control taste and odor and trihalomethanes. Potassium Permanganate is added prior to the flash mixing to oxidize naturally occurring organic matters and thus to control formation of trihalomethanes. The coagulated water from the flash mixing tank flows to two flocculation tanks equipped with peddle mixers. Flocculated water then flows to a circular settling tank where bulk of settleable flocks are removed by gravity settling. Supernatant or settled clarified water from the circular settling tanks flows to two rectangular settling basins where settleable solids/flocks are further removed by gravity settling. The supernatant/settled/clarified water from the rectangular tanks flows to four (4) high rate dual media filters where particles are further removed by filtration. Filtered or finish water flows to a clear well from where water is fed to the potable water distribution system by service pumps.

The rectangular settling tanks are cleaned periodically (approximately twice a year). Liquid sludge from circular settling tank and filter backwash water from the four (4) high rate dual media filters flows on a regular basis to a sludge mixing tank (waste tank) and then to a sludge thickening tank after adding polymer. This polymer is added to enhance the coagulation/flocculation or floc formation and thus to enhance solids settling and thickening. The settled solids (sludge) from the sludge thickening tank is withdrawn and pumped to a sludge holding tank from where it is fed to a filter press for dewatering. The dewatered sludge is hauled and disposed of at a sanitary landfill.

Approve	Deny	Signatures	Date
X		Ketan Thaker Ketan Thaker / Project Manager	3/16/2022
X		Pravin Patel Pravin C. Patel, P.E. / Environmental Engineer Manager	03/16/2022

Summary of Review

The filtrate from the filter press and treated clarified water or clarified supernatant from sludge thickening tank flows to a slant tank from where the Authority wants to discharge to the Delaware River on continuous basis along with the supernatant/clarified water from the existing rectangular settling tanks during their cleaning (approximately twice a year). In addition to discharge to the Delaware River, the Authority also discharges wastewater to Authority's sanitary sewer line during emergency conditions such as maintenance.

The authority generally recycles supernatant whenever possible or sends it to the sewage treatment plant. There is no change in treatment process or wastewater characteristics since last permit renewal. Therefore, all the permit limits and special conditions will remain same in this renewal. The discharge is generally in compliance with existing effluent limits except exceedance of Total Iron for few times during last five years. This permit renewal includes discharge of supernatant /clarified water from rectangular settling tanks during their cleaning (approximately twice a year) through Monitoring Point 103 (previously through outfall 002) and wastewater from slant tank on continuous basis from Outfall 003 into Delaware River. This permit renewal includes outfall 001 for discharge of 900 gallons of backwash water from the intake travelling screen to Delaware River.

Following are the effluent limits:

PARAMETER	EFFLUENT LIMITS (AV. MO. in mg/l)	BASIS
Total Suspended Solids	30	BAT
Total Iron	2.0	BAT
Total Aluminum	4.0	BAT
Total Manganese	1.0	BAT
pH (Standard Units SU)	6.0 to 9.0 SU	BAT
Total Residual Chlorine	0.5	BAT

Act-14 Notification to Tullytown Borough on December 20, 2021.
Act-14 Notification to Bucks County on December 20, 2021

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.	003	Design Flow (MGD)	0.7
Latitude	40Âº 7' 44.47"	Longitude	-74Âº 49' 0.83"
Quad Name		Quad Code	
Wastewater Description:	Water Treatment Effluent		

Receiving Waters	Delaware River (WWF, MF)	Stream Code	00002
NHD Com ID	25486822	RMI	122.5
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	2-E	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	FLOW REGIME MODIFICATION, POLYCHLORINATED BIPHENYLS (PCBS), SILTATION		
Source(s) of Impairment	CHANNELIZATION, SOURCE UNKNOWN, URBAN RUNOFF/STORM SEWERS		
TMDL Status	Final	Name	Delaware River Estuary PCB TMDLs

Background/Ambient Data		Data Source
pH (SU)		
Temperature (°F)		
Hardness (mg/L)		
Other:		

Nearest Downstream Public Water Supply Intake			
PWS Waters		Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	

Discharge, Receiving Waters and Water Supply Information

Outfall No.	MP 103 (Formerly 002)	Design Flow (MGD)	0.48
Latitude	40Âº 7' 49.95"	Longitude	-74Âº 48' 58.50"
Quad Name		Quad Code	
Wastewater Description:	Water Treatment Effluent		

Receiving Waters	Delaware River (WWF, MF)	Stream Code	00002
NHD Com ID	25486822	RMI	
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	2-E	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	FLOW REGIME MODIFICATION, POLYCHLORINATED BIPHENYLS (PCBS), SILTATION		
Source(s) of Impairment	CHANNELIZATION, SOURCE UNKNOWN, URBAN RUNOFF/STORM SEWERS		
TMDL Status	Final	Name	Delaware River Estuary PCB TMDLs

Background/Ambient Data		Data Source
pH (SU)		
Temperature (°F)		
Hardness (mg/L)		
Other:		

Nearest Downstream Public Water Supply Intake			
PWS Waters		Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.0009
Latitude	40Âº 7' 40.77"	Longitude	-74Âº 49' 2.43"
Quad Name		Quad Code	
Wastewater Description:	Washing/Cleaning Wastewater		

Receiving Waters	Delaware River (WWF, MF)	Stream Code	00002
NHD Com ID	25486828	RMI	
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	2-E	Chapter 93 Class.	WWF, MF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	POLYCHLORINATED BIPHENYLS (PCBS)		
Source(s) of Impairment	SOURCE UNKNOWN		
TMDL Status	Final	Name	Delaware River Estuary PCB TMDLs

Background/Ambient Data		Data Source
pH (SU)		
Temperature (°F)		
Hardness (mg/L)		
Other:		

Nearest Downstream Public Water Supply Intake			
PWS Waters		Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	

Compliance History

DMR Data for Outfall 003 (from February 1, 2021 to January 31, 2022)

Parameter	JAN-22	DEC-21	NOV-21	OCT-21	SEP-21	AUG-21	JUL-21	JUN-21	MAY-21	APR-21	MAR-21	FEB-21
Flow (MGD) Average Monthly	191732	192323	171514	1777410	214889	204254	189005	189731	183705	188434	205092	192577
Flow (MGD) Daily Maximum	246698	263882	263491	203393	389329	222315	227285	223394	212906	214742	281765	203510
pH (S.U.) Instantaneous Minimum	7.2	7.1	7.1	7.1	7.1	7.2	7.2	7.0	6.9	7.0	7.3	7.1
pH (S.U.) Instantaneous Maximum	7.6	7.6	7.3	7.6	7.4	7.9	7.8	7.8	7.7	7.4	7.7	7.6
TRC (mg/L) Average Monthly	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.3	0.20	0.2
TSS (mg/L) Average Monthly	5.0	10.0	4.0	19.0	6.0	11.0	11.0	4.0	4.0	10.0	3.0	4.0
TSS (mg/L) Daily Maximum	5.0	10.0	4.0	19.0	6.0	11.0	11.0	4.0	4.0	10.0	3.0	4.0
Total Aluminum (mg/L) Average Monthly	0.1	0.04	0.02	0.1	0.1	0.1	0.040	0.02	0.03	0.04	0.02	0.1
Total Aluminum (mg/L) Daily Maximum	0.1	0.04	0.02	0.1	0.1	0.1	0.040	0.02	0.03	0.04	0.02	0.1
Total Iron (mg/L) Average Monthly	2.1	1.7	0.8	1.6	1.7	2.7	1.7	1.0	1.3	1.8	0.88	1.7
Total Iron (mg/L) Daily Maximum	3.6	1.7	0.8	3.5	1.7	1.7	1.7	1.0	1.3	2.9	0.88	2.3
Total Manganese (mg/L) Average Monthly	0.1	0.06	0.03	0.1	0.1	0.1	0.1	0.04	0.1	0.12	0.04	0.1
Total Manganese (mg/L) Daily Maximum	0.1	0.06	0.03	0.1	0.1	0.1	0.1	0.04	0.1	0.12	0.04	0.1

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 003, 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	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	1/day	Estimate
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.2	1/day	Grab
TSS	XXX	XXX	XXX	30.0	60.0	75	1/month	24-Hr Composite
Total Aluminum	XXX	XXX	XXX	4.0	8.0	10	1/month	24-Hr Composite
Total Iron	XXX	XXX	XXX	2.0	4.0	5	1/month	24-Hr Composite
Total Manganese	XXX	XXX	XXX	1.0	2.0	2.5	1/month	24-Hr Composite

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 MP 103, 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	Semi-Annual Average	Daily Maximum	Instant. Maximum		
Flow (MGD)	XXX	Report Daily Max	XXX	XXX	XXX	XXX	See Permit	Estimate
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	See Permit	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.2	See Permit	Grab
TSS	XXX	XXX	XXX	30.0	60.0	75	See Permit	Grab
Total Aluminum	XXX	XXX	XXX	4.0	8.0	10	See Permit	Grab
Total Iron	XXX	XXX	XXX	2.0	4.0	5	See Permit	Grab
Total Manganese	XXX	XXX	XXX	1.0 Daily Max	2.0	2.5	See Permit	Grab