Pennsylvania Department of Environmental Protection

Southeast Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0012882**
Facility Type	**Industrial**	APS ID	**1126239**
Major / Minor	**Minor**	Authorization ID	**1507435**

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

Applicant and Facility Information

Applicant Name	**Philadelphia Gas Works**	Facility Name	**Philadelphia Gas Works Richmond Plant**
Applicant Address	800 W Montgomery Avenue	Facility Address	3100 E Venango Street
	Philadelphia, PA 19122-2806		Philadelphia, PA 19134-6113
Applicant Contact	Daniel Cassidy	Facility Contact	Ramon Picado
Applicant Phone	(215) 684-6317	Facility Phone	(215) 787-5015
Client ID	14714	Site ID	456903
SIC Code	4925	Municipality	Philadelphia City
SIC Description	Trans. & Utilities - Gas Production And/Or Distribution	County	Philadelphia
Date Application Received	October 31, 2024	EPA Waived?	Yes
Date Application Accepted		If No, Reason	
Purpose of Application	Renewal application.		

Summary of Review

The permittee has submitted a renewal NPDES application for individual permit to discharge industrial wastewater to Delaware River (WWF-MF) through Outfall 004.

Based on the application:

Philadelphia Gas Works (PGW) is a local distribution company that provides natural gas to customers within the City of Philadelphia. Natural gas is supplied to Richmond Plant from two (2) interstate pipelines.

PGW then has the operational obligations of monitoring, controlling, conditioning, and metering the pipeline gas to ensure that the proper quality and quantity of gas will be delivered to the city according to the gas load requirements.

Liquefied Natural Gas (LNG): The LNG facility at the Richmond Plant is a peak shaving facility. Natural gas is liquefied by an Expander Plant and the LNG produced is placed into storage in one (1) of the two (2) LNG storage tanks onsite; each LNG storage tank holds 583,000 barrels (24.5 million gallons) of LNG. LNG produced by the Expander Plant remains in storage until city gas demands exceed the normal contract natural gas quantities or if the pipeline capacity is limited due to high demand. When this happens, LNG is pumped from storage, vaporized, odorized and then pushed into the city's gas distribution system.

The purpose of this application submittal is to renew an existing surface water discharge authorized by NPDES permit number PA0012882 at Richmond Plant, which consists of river water used to supply emergency fire suppression equipment and emergency generator equipment.

Richmond Plant contains two (2) systems (one active and one decommissioned) that produce LNG. The Expander Plant, currently in operation, does not require river water for cooling purposes. The Cascade Refrigerant System, currently decommissioned, contains compressors and heat exchangers that previously required river water for cooling purposes. Though Richmond Plant's process-driven NCCW needs have been eliminated with the decommissioning of the Cascade Refrigerant System, water is still continuously circulated within the facility's river water piping system to maintain pressure to emergency equipment critical to the facility's fire suppression system. All the water used for these processes is withdrawn from the Delaware River and discharged back to the Delaware River either to

Approve	Deny	Signatures	Date
X		Begay Omuralieva Begay Omuralieva / Environmental Engineering Specialist	October 10, 2025
X		Pravin Patel Pravin C. Patel, P.E. / Environmental Engineer Manager	October 10, 2025

Summary of Review

Outfall 004 via the Castor Avenue city sewer line, or as spillback to the facility's river water Wet Well, which is connected to the Delaware River via a 48" underground pipe.
During normal operations, river water is discharged as spillback to the Wet Well. During winter months, and only on days where freezing conditions within Richmond Plant's River water piping system is a concern, a portion of the river water withdrawn from the wet well is circulated through the piping system and discharged towards Outfall 004, with the remainder of the river water discharged back to the Wet Well. Whether the water is returned to the Wet Well or discharged to Outfall 004, the river water utilized at Richmond Plant is discharged directly without treatment.
Prior to November 2011, Richmond Plant maintained its river water system pressure using its high-capacity pumps, which required a long-term average water intake of 6.67 million gallons per day (mgd). In November 2011, PGW installed a smaller capacity Jockey Pump that can maintain sufficient water pressure at lower pumping rates (less than 1 mgd on average). Currently the Jockey Pump is operated as the primary source of water pressure to the facility's river water
system when no testing or maintenance is needed, and Richmond Plant can operate some emergency fire hydrants using capacity from the Jockey Pump. However, the higher capacity pumps must still be placed on-line to supply larger fire suppression systems, or when maintenance and repairs to the Jockey Pump are needed.
The river water withdrawn by Richmond Plant is used only for emergency fire suppression purposes and as mentioned previously, no cooling water is currently used by any facility processes vital to its core functions. During emergencies, a small portion of the river water withdrawn are used to cool three (3) natural gas fired engines which can power three (3) of the river water pumps when Richmond Plant is without power. These back-up pump engines are kept off-line during normal operation and are only tested for approximately 90 minutes per engine on a biweekly basis. During these tests, any river water used by the engine is spilled back to the Wet Well. As such, there will be no actual intake of river water into the facility when these natural gas engines are in operation unless an actual emergency occurs.

There are no changes in effluent quality nor to quantity of the discharge, therefore all effluent limits and monitoring requirements will be proposed as listed on p. 5

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.	004	Design Flow (MGD)	8.64
Latitude	39º 58' 28.62"	Longitude	-75º 5' 14.79"
Quad Name	Camden	Quad Code	1945
Wastewater Description:	Water used to maintain pressure and cool equipment of facility's fire suppression system		

Receiving Waters	Delaware River (WWF, MF)	Stream Code	00002
NHD Com ID	25595543	RMI	101.3700
Drainage Area	7965.38 sq. mi	Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)	246 (available for dilution)	Q_{7-10} Basis	DRBC
Elevation (ft)	0	Slope (ft/ft)	
Watershed No.	3-J	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), POLYCHLORINATED BIPHENYLS (PCBS)		
Source(s) of Impairment	SOURCE UNKNOWN, SOURCE UNKNOWN		
TMDL Status	Final, 12/30/2006	Name	Delaware River Estuary PCB TMDLs

Changes Since Last Permit Issuance:

Other Comments:

Compliance History

DMR Data for Outfall 004 (from September 1, 2024 to August 31, 2025)

Parameter	AUG-25	JUL-25	JUN-25	MAY-25	APR-25	MAR-25	FEB-25	JAN-25	DEC-24	NOV-24	OCT-24	SEP-24
Flow (MGD) Average Monthly	0.704	0.068	0.058	0.448	0.87	0.672	0.86	0.845	0.636	0.09	0.102	0.067
Flow (MGD) Daily Maximum	1.766	0.23	0.169	1.947	2.646	1.896	4.983	3.018	2.054	0.231	0.636	0.27
pH (S.U.) Instantaneous Minimum	7.4	7.2	7.2	7.6	7.7	7.5	7.2	7.2	7.1	7.0	7.1	7.3
pH (S.U.) Instantaneous Maximum	7.9	7.7	7.5	7.9	7.9	8.1	7.8	7.4	8.0	7.5	7.5	7.4
Temperature (ºF) Industrial Influent Instantaneous Maximum	88.4	82.2	75.3	68.3	61.8	62.4	54.2	55.2	55.4	65.8	70.8	76.8
Temperature (ºF) Instantaneous Maximum	88.4	82.2	75.3	68.3	61.8	62.4	54.2	55.2	55.4	65.8	70.8	76.8
Total Dissolved Solids (mg/L) Average Quarterly			153.0			214.0			172.0			132.0
Total Dissolved Solids (mg/L) Instantaneous Maximum			153			214			172			132

Compliance History

No non-compliances reported

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" (386-0400-001), SOPs and/or BPJ.

Outfall 004, 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	Continuous	Calculation
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/week	Grab
Temperature (ºF)	XXX	XXX	XXX	XXX	XXX	110	1/week	I-S
Temperature (ºF) Industrial Influent	XXX	XXX	XXX	XXX	XXX	Report	1/month	I-S
Total Dissolved Solids	XXX	XXX	XXX	1000.0 Avg Qrtly	XXX	Report	1/quarter	Grab

Compliance Sampling Location: Outfall 004