pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southeast Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0056766**
Facility Type	**Storm Water**	APS ID	**1072279**
Major / Minor	**Minor**	Authorization ID	**1411890**

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

Applicant and Facility Information

Applicant Name	**Philadelphia City Division of Aviation**	Facility Name	**Philadelphia International Airport**
Applicant Address	Terminal E International Airport Terminal D-E, Third Floor Philadelphia, PA 19153	Facility Address	Philadelphia International Airport Philadelphia, PA 19153
Applicant Contact	Thomas Joseph	Facility Contact	Thomas Joseph
Applicant Phone	(215) 937-5572	Facility Phone	(215) 937-5572
Client ID	91987	Site ID	271474
SIC Code	4581	Municipality	Philadelphia City
SIC Description	Trans. & Utilities - Airports, Flying Fields, And Services	County	Philadelphia
Date Application Received	September 28, 2022	EPA Waived?	Yes
Date Application Accepted		If No, Reason	
Purpose of Application	Renewal.		

Summary of Review

The facility is operating as Philadelphia International Airport provides aircraft service for domestic and international travel. During the typical aircraft deicing season of December through April, propylene glycol is applied in various mixtures for deicing of the aircraft as needed prior to departure. There are multiple outfalls (Outfalls 003, 004, 005, and 006) that discharge to Delaware River and Outfall 001 (with internal monitoring points IMPs: 101 and 201) that discharge to Mingo Creek to Schuylkill River.

Outfall No.	Drainage Area (ft^2)	% Impervious	Description of Materials/Activities in Drainage Area Exposed to Precipitation
001	37,915,495	95	Terminal area, taxiways, runways, parking, and the mid-field fuel farm.
003	14,731,121	25	Philadelphia fuel farm and private aircraft hangars near the Chevron Pier.
004	19,479,161	55	Segment of 9R-27L Runway and the UPS facility
005	23,051,516	65	Western portion of 9R-27L Runway, Cargo City, and the West Cargo City Aircraft Deicing Pad.
006	675,180	0	Safety zone at the west end of 9R-27L Runway
101	16,125	100	Mid-field fuel farm fueling rack draining to OWS. Internal to IMP 201 and Outfall 001
201	43,875	100	Mid-field fuel farm area draining to OWS. Internal to Outfall 001

Approve	Deny	Signatures	Date
X		Begay Omuralieva Begay Omuralieva / Environmental Engineering Specialist	December 12, 2023
X		Pravin Patel Pravin C. Patel, P.E. / Environmental Engineer Manager	12/12/2023

Summary of Review

Based on application: Approximately 90% of the deicing fluid is applied to aircraft at a dedicated location on the West Cargo City deicing pad where runoff is collected and transported to the PWD wastewater treatment plant. Approximately 10% of aircraft deicing fluid is applied at the East Commuter Ramp (Terminal F), where Vac Trucks collect runoff to the storm drain sumps for transportation to the PWD wastewater treatment plant. Minimum amounts of aircraft deicing fluid and runway deicing materials drain to the north ponding ditch. Runway deicing materials drain to the stormwater outfalls. Stormwater sampling is performed once per month at Outfall 001 and at least twice per month at Outfall 005 during the deicing season to monitor levels of deicing materials in accordance with the permit conditions. Stormwater sample results are reported to PADEP in the monthly DMRs. Outfall 005 is a representative for outfalls: 003, 004 and 006.

Site visit has been conducted on 02/12/2021. Comments were: '*Discharge non-compliances identified; no operational violations observed"*.

An administrative review of the facility was conducted. A review of the site's discharge monitoring reports (DMR) indicated several occurrences of non-compliance since the last inspection conducted (WQS Sinclair, October 2017). A summary of the non-compliances is provided below. Additionally, the facility reported three separate spill events in 2021 (after this inspection occurred) and four separate spill events in 2020. A summary of these events is provided below. It should be noted that quantity of spilled material does not represent material that entered the stormwater collection system.

Spill Events Reported

Date of Event	Spill Type	Approximate Quantity
3/28/2020	jet fuel	5-gal
7/16/2020	jet fuel	5-gal
7/20/2020	jet fuel	10-gal
8/24/2020	jet fuel	3-gal
3/3/2021	jet fuel	15-gal
8/10/2021	jet fuel	20-gal
10/26/2021	jet fuel	15-gal

Event Start Date	Event End Date	Parameter	Limit Type	Reported Value		Permit Limit	Unit	Sampling Point	Sampling Frequency	Sampling Type
12/1/2020	12/31/2020	Oil and Grease	Daily Maximum	192	>	30	mg/L	Final Effluent (001)	1/month	Grab
12/1/2020	12/31/2020	Oil and Grease	Average Monthly	192	>	15	mg/L	Final Effluent (001)	1/month	Grab
7/1/2020	9/30/2020	Total Recoverable Petroleum Hydrocarbons	Maximum	54	>	30	mg/L	Final Effluent (101)	1/quarter	Grab
7/1/2020	9/30/2020	Total Recoverable Petroleum Hydrocarbons	Average	54	>	15	mg/L	Final Effluent (101)	1/quarter	Grab
7/1/2020	9/30/2020	Oil and Grease	Average	23.2	>	15	mg/L	Final Effluent (101)	1/quarter	Grab
2/1/2020	2/29/2020	Oil and Grease	Average Monthly	20.8	>	15	mg/L	Final Effluent (001)	1/month	Grab
3/1/2019	3/31/2019	pH	Instantaneous Minimum	5.92	<	6	S.U.	Final Effluent (005)	1/month	Grab

Summary of Review

There are no changes to the activities at the site. Therefore, all previously established effluent limits and monitoring requirements are proposed in the draft permit for Outfall 001 and IMPs 101 and 201 except benchmark values to be for COD, TSS, BOD5 and pH as 120 mg/l, 100 mg/l, 30 mg/l, and 9 S.U. respectively in Part C of the permit. The benchmark for pH shall be not applicable for Outfall 001 or 005 where discharge limits for pH are identified. CBOD5 reporting is replaced with BOD5 to be compliant with PA statewide PAG03 permit for stormwater discharges associated with industrial activities for "AIR TRANSPORTATION FACILITIES" (appendix G).

Additionally, in May 2023 and relative to prior monitoring periods, there were multiple non-compliance reporting notices for Outfall 005 regarding sampling frequency. These non-compliances are results of eDMRs coding issue since the facility didn't have discharge condition to take all required samples for outfall 005 for all parameters. In order to reduce this kind of reporting issues, revision made to the permit Part C II. G. 1.by reducing monitoring frequency to 2 (two) per month for parameters were required to monitor 3 (three) per month. Therefore, in renewed permit Part C IV. STORMWATER MONITORING REQUIREMENTS. - F condition will read as:

The permittee is required to sample, at both Outfall 001 and 005, once per month between months of December and May (inclusive). When possible, it is preferable that the stormwater samples be collected within 72 hours following winter storm event in which deicing activity was conducted. If no significant deicing activity has occurred by the 21st day of any month, and no winter storms are expected to occur before the end of the month, then dry-weather samples should be collected from Outfalls 001 and 005 to represent that month's required samples. For parameters required the 2 (two) per month samples for Outfall 005, 1 (one) per month sample shall be collected during dry weather and 1 (one) sample shall be collected, when possible, within 72 hours following winter storm event in which deicing activity was conducted. If no significant deicing activity has occurred by the 21st day of any month, and no winter storms are expected to occur before the end of the month, then dry-weather samples should be collected from Outfalls 005 to meet 2 (two) per month permit sampling requirements.

Based on the impairment of receiving stream - Delaware River - WWF, additional sampling for PCBs were requested and below are the sampling results for Outfall 005:

ANALYTICAL REPORT

Project Name: PHL

Lab Project #: 59245
Lab Sample #: 59245-1
Client Sample ID: Outfall 005

Date Sampled: 7/10/2023 2:20 PM
Sampled By: FD
Sample Matrix: Waste Water
Sample Type:

Analyte	CASRN	Result	Q	Units	Method	RL	Analyst	Date / Time Analysis
PCBs (TCL) - wastewater								
PCB-1016	12674-11-2	ND		ug/L	608.3	1.00	SM	7/13/2023 3:10 PM
PCB-1221	11104-28-2	ND		ug/L	608.3	1.00	SM	7/13/2023 3:10 PM
PCB-1232	11141-16-5	ND		ug/L	608.3	1.00	SM	7/13/2023 3:10 PM
PCB-1242	53469-21-9	ND		ug/L	608.3	1.00	SM	7/13/2023 3:10 PM
PCB-1248	12672-29-6	ND		ug/L	608.3	1.00	SM	7/13/2023 3:10 PM
PCB-1254	11097-69-1	ND		ug/L	608.3	1.00	SM	7/13/2023 3:10 PM
PCB-1260	11096-82-5	ND		ug/L	608.3	1.00	SM	7/13/2023 3:10 PM
PCB-1262	37324-23-5	ND		ug/L	608.3	1.00	SM	7/13/2023 3:10 PM
PCB-1268	11100-14-4	ND		ug/L	608.3	1.00	SM	7/13/2023 3:10 PM

Act 14 Notifications:
Delaware County Planning Department and Philadelphia Planning Commission were notified on August 10, 2022.

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

Summary of Review
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.	005		
Latitude	39Âº 51' 28.64"	Longitude	-75Âº 16' 6.92"
Quad Name		Quad Code	
Wastewater Description:	Stormwater		
Receiving Waters	Delaware River (WWF)	Stream Code	00002
NHD Com ID	134395494	RMI	
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	3-F	Chapter 93 Class.	WWF
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

Changes Since Last Permit Issuance: none

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001		
Latitude	39Âº 53' 18.68"	Longitude	-75Âº 14' 3.45"
Quad Name		Quad Code	
Wastewater Description:	Stormwater		
Receiving Waters	Unnamed Tributary to Mingo Creek	Stream Code	
NHD Com ID	25988642	RMI	
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	3-F	Chapter 93 Class.	
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Not Assessed		
Cause(s) of Impairment			
Source(s) of Impairment			
TMDL Status		Name	

Changes Since Last Permit Issuance:

Discharge, Receiving Waters and Water Supply Information			
IMP	101		
Latitude	39Âº 52' 48.99"	Longitude	-75Âº 14' 20.28"
Quad Name		Quad Code	
Wastewater Description:	Stormwater		
Receiving Waters	Unnamed Tributary to Mingo Creek	Stream Code	
NHD Com ID	25988642	RMI	
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	3-F	Chapter 93 Class.	
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Not Assessed		

Changes Since Last Permit Issuance: none

Discharge, Receiving Waters and Water Supply Information			
IMP	201		
Latitude	39Âº 52' 47.64"	Longitude	-75Âº 14' 20.79"
Quad Name		Quad Code	
Wastewater Description:	Stormwater		
Receiving Waters	Unnamed Tributary to Mingo Creek	Stream Code	
NHD Com ID	25988642	RMI	
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	3-F	Chapter 93 Class.	
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Not Assessed		

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 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) Dec 1 - May 31	Report	XXX	XXX	XXX	XXX	XXX	1/month	Estimate
pH (S.U.) Dec 1 - May 31	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/month	Grab
BOD5 Dec 1 - May 31	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab
COD Dec 1 - May 31	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab
TSS Dec 1 - May 31	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab
Total Dissolved Solids Dec 1 - May 31	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab
Oil and Grease Dec 1 - May 31	XXX	XXX	XXX	15	30 Daily Max	XXX	1/month	Grab
Nitrate-Nitrite Dec 1 - May 31	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab
Total Nitrogen Dec 1 - May 31	XXX	XXX	XXX	Report	XXX	XXX	1/month	Calculation
Ammonia Dec 1 - May 31	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab
TKN Dec 1 - May 31	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab
Total Phosphorus Dec 1 - May 31	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab
Total Iron Dec 1 - May 31	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab

Outfall 001, Continued (from 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		
Total Potassium Dec 1 - May 31	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab
Acetic Acid Dec 1 - May 31	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab
Ethylene Glycol Dec 1 - May 31	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab
Propylene Glycol Dec 1 - May 31	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab

Compliance Sampling Location: Outfall 001

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 005, 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) Dec 1 - May 31	Report	XXX	XXX	XXX	XXX	XXX	1/month	Estimate
pH (S.U.) Dec 1 - May 31	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/month	Grab
BOD5 Dec 1 - May 31	XXX	XXX	XXX	Report	XXX	XXX	2/month	Grab
COD Dec 1 - May 31	XXX	XXX	XXX	Report	XXX	XXX	2/month	Grab
TSS Dec 1 - May 31	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab
Total Dissolved Solids Dec 1 - May 31	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab
Oil and Grease Dec 1 - May 31	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab
Nitrate-Nitrite Dec 1 - May 31	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab
Total Nitrogen Dec 1 - May 31	XXX	XXX	XXX	Report	XXX	XXX	1/month	Calculation
Ammonia Dec 1 - May 31	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab
TKN Dec 1 - May 31	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab
Total Phosphorus Dec 1 - May 31	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab
Total Iron Dec 1 - May 31	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab
Total Potassium Dec 1 - May 31	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab

Outfall 005, Continued (from 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		
Acetic Acid Dec 1 - May 31	XXX	XXX	XXX	Report	XXX	XXX	2/month	Grab
Ethylene Glycol Dec 1 - May 31	XXX	XXX	XXX	Report	XXX	XXX	2/month	Grab
Propylene Glycol Dec 1 - May 31	XXX	XXX	XXX	Report	XXX	XXX	2/month	Grab

Compliance Sampling Location: Outfall 005

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.

IMP 101, Effective Period: Permit Effective Date through Permit Expiration Date.

Outfall 101, Continued (from 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 Quarterly	Maximum	Instant. Maximum		
Oil and Grease	XXX	XXX	XXX	15.0	XXX	30.0	1/quarter	Grab
TRPH	XXX	XXX	XXX	15.0	XXX	30.0	1/quarter	Grab

Compliance Sampling Location: IMP 101

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.

IMP 201, 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 Quarterly	Daily Maximum	Instant. Maximum		
Oil and Grease	XXX	XXX	XXX	15.0	30.0	XXX	1/quarter	Grab
TRPH	XXX	XXX	XXX	15.0	30.0	XXX	1/quarter	Grab

Compliance Sampling Location: IMP 201