

Application Type
Facility Type
Major / Minor

Renewal
Industrial
Minor

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

Application No. **PA0204901**
APS ID **1118897**
Authorization ID **1494139**

Applicant and Facility Information

Applicant Name	Allegheny County Port Authority	Facility Name	Port Authority Ross Township Garage
Applicant Address	345 6th Avenue Heinz 57 Center	Facility Address	4600 Perry Highway
Applicant Contact	Eric Bilsky	Facility Contact	Douglas Dusbiber
Applicant Phone	(412) 566-5167	Facility Phone	(412) 566-5170
Client ID	69898	Site ID	250837
SIC Code	4111	Municipality	Ross Township
SIC Description	Trans. & Utilities - Local And Suburban Transit	County	Allegheny
Date Application Received	<u>July 26, 2024</u>	EPA Waived?	Yes
Date Application Accepted	<u>August 22, 2024</u>	If No, Reason	
Purpose of Application	Renewal of NPDES Industrial Waste Permit without an ELG.		

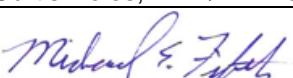
Summary of Review

On August 1, 2024, Port Authority of Allegheny County (PAT) submitted an NPDES permit renewal application to discharge storm water runoff from its Ross Maintenance Garage via Outfalls 001 & 002 into Nelson Run (WWF). The application operates under SIC Code 4911 – Transportation & Public Utilities. The PAT Garage is a maintenance facility primarily engaged in the repair, cleaning, and staging of PAT buses. The garage has a maintenance shop with service bays, an indoor bus staging area, two (2) indoor wash bays, and several isolated storage rooms. The facility also has an administrative office.

To the east of the facility is West View Avenue (a minor roadway) and Perry Highway (a principal roadway) to the south. The facility is located along a downward sloping hillside on the north and to the west is West View Cemetery. Most of the facility is a one-story building except for the tire change bay which has a second floor. Employee parking lots border the northeast and southeast sides of the facility building with bus paved areas for access entrances, parking areas and garage bay access on the northwest and southwest sides of the building. Most of the northeast parking lot (the lower employee parking area) is under the Bus Storage overhang of the facility building.

PAT Ross Garage is a bus parking and maintenance facility. Most of the activities undertaken at this facility are service oriented and conducted under roof. Under normal condition, storm water should not come into contact with pollutants that may exist within the maintenance building. Frequent traffic flow however results in pollution discharges from the facility.

The primary pollutants of concern originate from the bus undercarriages during maintenance and vehicle washing activities. PAT has sealed all internal floor drains which previously drained to the storm water conveyance system. The remaining floor drains are pre-treated by an oil/water separator (OWS) and discharged to the Allegheny County Sanitary Authority (ALCOSAN) system.

Approve	Deny	Signatures	Date
X		 Curtis Holes, P.E. / Environmental Engineer	August 22, 2024
X		 Michael E. Fifth, P.E. / Environmental Engineer Manager	September 4, 2024

Summary of Review

The facility's Water Quality Management Permit # 0290209, issued on January 1, 1992, authorizes the use of a 20,000-gallon OWS at Outfall 001 for treatment of paved area storm water runoff. Subsequently on December 8, 2015, the Water Quality Management Permit was amended authorizing the installation of one (1), Stormwater 360 VORTECHS 5000 solids separator.

Outfall 001 is equipped with a 20,000-gallon OWS and solids separator. In the drainage area of Outfall 001, the activities that exist are ingress/egress of bus traffic and bus storage related to garage operations. The location of Outfall 001 is 40° 30' 6.4", -80° 01' 16.5" and has a drainage area of 76,942 sf that is 98% impervious. Samples collected in accordance with the NPDES permit shall be collected at the oil/water separator discharge pipe, prior to comingling with any other wastewaters.

Discharges from Outfall 002 are not treated. In the drainage area of Outfall 002, the activities that exist are ingress/egress/parking of employee vehicle and roof drains. The location of Outfall 002 is 40° 30' 4.9", -80° 01' 16.5" and has a drainage area of 198,503 sf that is 95% impervious. Samples collected in accordance with the NPDES permit shall be collected at the oil/water separator discharge pipe, prior to comingling with any other wastewaters.

Wastewater originating within the maintenance building is pretreated by a separate 3,000-gallon OWS and discharged to the ALCOSAN.

Residual waste disposal must meet solid waste regulations.

Part C language in the draft permit provides controls on stormwater outfalls and best management practices.

The Ross Township Garage Facility has no open violations with Clean Water Program.

It is recommended that a draft permit be published for public comment in response to this application.

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)	0.0
Latitude	40° 30' 6.4"	Longitude	-80° 01' 16.5"
Quad Name	Pittsburgh West	Quad Code	
Wastewater Description:	Stormwater runoff associated with areas of bus maintenance and storage.		
Treatment System:	Solids separator and 20,000-gallon oil/water separator.		
Outfall No.	002	Design Flow (MGD)	0.0
Latitude	40° 30' 4.9"	Longitude	-80° 01' 16.5"
Quad Name	Pittsburgh West	Quad Code	
Wastewater Description:	Maintenance building roof and vehicle parking area stormwater runoff.		
Treatment System:	NONE		
Receiving Waters	Nelson Run	Stream Code	42128
NHD Com ID	99684164	RMI	1.5
Drainage Area	1.16	Yield (cfs/mi ²)	0
Q ₇₋₁₀ Flow (cfs)	0	Q ₇₋₁₀ Basis	PA Bulletin 6 & 12
Elevation (ft)	1,200	Slope (ft/ft)	0.015
Watershed No.	20-G	Chapter 93 Class.	WWF
Assessment Status	Impaired		
Cause(s) of Impairment	Siltation, Organic Enrichment/Low D.O.		
Source(s) of Impairment	Urban Runoff/Storm Sewers, Road Runoff		
TMDL Status	Pending	Name	
Nearest Downstream Public Water Supply Intake	Millvale Borough Water Department		
PWS Waters	Girty's Run	Flow at Intake (cfs)	-
PWS RMI	1.45	Distance from Outfall (mi)	5.7

Table 1 – Parameters of Concern

Outfall	Flow (mgd)	Pollutant Sources	Pollutants of Concern
001	Varies	Bus storage and maintenance yard runoff	oil & grease, BOD ₅ , COD, total suspended solids, iron, xylenes
002	Varies	Maintenance building roof and parking area stormwater runoff.	TSS, iron, Oil & Grease

Compliance History	
Summary of DMRs:	No exceedances with permit effluent limits.
Summary of Inspections:	The last inspection conducted by the Department was on December 13, 2023 by Shawn Bell with no violations noted.

Other Comments: **None**

Compliance History

DMR Data for Outfall 001 (from August 1, 2023 to June 30, 2024)

Parameter	Limit	JUN-24	MAY-24	APR-24	MAR-24	FEB-24	JAN-24	DEC-23	NOV-23	OCT-23	SEP-23	AUG-23
Flow (MGD) Average Monthly	Report	0.0099	0.1232	0.02635	0.0418	0.129	0.01885	0.01675	0.0251	0.02845	0.0247	0.05435
Flow (MGD) Daily Maximum	Report	0.0159	0.2346	0.0301	0.0551	0.2346	0.0260	0.0193	0.0268	0.0301	0.0276	0.0582
pH (S.U.) Daily Minimum	Report	7.84	7.42	7.24	7.48	7.26	7.70	7.70	7.46	7.56	7.62	7.20
pH (S.U.) Instantaneous Maximum	Report	7.88	7.71	7.89	7.76	7.92	7.82	7.72	7.76	7.61	7.89	7.55
BOD5 (mg/L) Average Monthly	Report	< 34.9	24.25	34.35	55.35	59.2	117.3	< 74.5	< 18.55	33.05	44.75	19.68
BOD5 (mg/L) Daily Maximum	Report	39.3	37.2	45.6	84.0	79.1	230	129	< 20.0	33.3	47.7	30.8
COD (mg/L) Average Monthly	Report	< 148	123	66.5	92.3	175.95	415.4	< 111.3	47.3	73.2	78.9	54.05
COD (mg/L) Daily Maximum	Report	192	124	87.9	135	282.0	788.0	173	58.6	94.6	85.6	87.8
TSS (mg/L) Daily Maximum	100.0	140.0	230.0	63.0	42.0	87.0	36.0	42.0	40.4	30.0	22.40	16.00
Oil and Grease (mg/L) Average Monthly	15.0	< 4.875	< 5.00	< 4.875	< 4.80	< 9.125	< 4.925	< 4.85	< 4.85	< 5.085	< 4.80	< 4.775
Oil and Grease (mg/L) Daily Maximum	30.0	< 4.90	< 5.00	< 4.90	< 4.85	13.50	< 4.95	< 4.90	< 4.85	5.42	< 4.80	< 4.80
Dissolved Iron (mg/L) Average Monthly	3.5	0.2305	< 0.2825	< 0.200	< 0.219	< 2.77	< 2.055	1.795	< 0.200	0.5675	0.7195	< 0.2575
Dissolved Iron (mg/L) Daily Maximum	7.0	0.255	0.365	< 0.200	0.238	5.34	3.910	3.390	< 0.200	0.820	0.742	0.315

NPDES Permit Fact Sheet
Port Authority Ross Township Garage

NPDES Permit No. PA0204901

DMR Data for Outfall 002 (from August 1, 2023 to June 30, 2024)

Parameter	Limit	JUN-24	MAY-24	APR-24	MAR-24	FEB-24	JAN-24	DEC-23	NOV-23	OCT-23	SEP-23	AUG-23
Flow (MGD) Daily Maximum	Report	0.0243			0.0268			0.0276			0.0284	
pH (S.U.) Daily Minimum	Report	8.19			8.28			8.02			7.63	
pH (S.U.) Instantaneous Maximum	Report	8.19			8.28			8.02			7.63	
BOD5 (mg/L) Daily Maximum	Report	21.4			42.9			21.3			5.22	
COD (mg/L) Daily Maximum	Report	164			< 15.0			49.6			49.6	
TSS (mg/L) Daily Maximum	Report	94.0			< 1.60			< 1.60			2.50	
Oil and Grease (mg/L) Daily Maximum	Report	5.1			< 4.80			< 4.85			< 4.80	
Dissolved Iron (mg/L) Daily Maximum	Report	0.260			< 0.200			< 0.200			< 0.200	

Compliance History

Effluent Violations for Outfall 001, from: August 1, 2023 To: June 30, 2024

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
TSS	05/31/24	Daily Max	230.0	mg/L	100.0	mg/L
TSS	06/30/24	Daily Max	140.0	mg/L	100.0	mg/L

Development of Effluent Limitations

Outfall No.	001	Design Flow (MGD)	0.0 (Stormwater)
Latitude	40° 30' 6.4"	Longitude	-80° 01' 16.5"
Wastewater Description: Stormwater runoff associated with areas of bus maintenance and storage.			

Technology-Based Limitations

Outfall 001 discharges stormwater runoff from the bus storage and maintenance yard. The drainage area to this outfall is paved and is used by buses and other maintenance vehicles for parking and service. Discharges from Outfall 001 are treated by a Stormwater 360 VORTECHS 5000 solids separator and 20,000-gallon, American Petroleum Institute certified, OWS prior to being discharged into a drainage swale leading to Nelson Run. Sample analysis results that were submitted with the NPDES permit application contained concentrations of oil and grease (<4 mg/L), biological oxygen demand (29 mg/L), chemical oxygen demand (91 mg/L), total suspended solids (40 mg/L), total nitrogen (2.1 mg/L), total phosphorus (0.073 mg/L), pH (7.0 S.U.), dissolved iron (0.472 ug/L) and xylenes (<0.33 ug/L). Outfall 001 discharge samples must be collected at the OWS discharge pipe prior to comingling with any other wastewaters.

Effluent Limitation Rationale

There are no Federal Effluent Limitation Guidelines ("ELG's") for facilities with SIC code 4111. However, parking and maintenance facilities may generate and discharge runoff containing significant amounts of oil and grease, TSS and heavy metals. Oil & grease, TSS and heavy metal concentrations are known to have an adverse impact on receiving waters. The existing NPDES permit contains effluent limitations for TSS, iron, and oil & grease.

In the absence of any Effluent Limitation Guidelines ("ELG's") regarding this type of wastewater, technology limitations are developed based on Best Professional Judgment ("BPJ"). Authority to establish BPJ limits on a case-by-case basis is derived from Section 402(a)(1) of the Clean Water Act and 40 CFR § 125.3(a)(2)(B). The maximum daily effluent limit of 100 mg/L TSS is proposed under BPJ. Maximum Daily limits are readily achievable through the application of BMPs and solids removal technologies.

In establishing effluent limitations on a case-by-case basis, the appropriate technology for the applicant is considered. When evaluating appropriate BPJ limits for a permittee, the Department considers six factors as required by 40 CFR § 125.3. The six factors are: (1) the age of the equipment and facility, (2) the process employed, (3) the engineering aspects of the application of various types of control technique, (4) process changes, (5) the cost of achieving such effluent reduction and, (6) non-water quality environmental impact (including energy requirements). Factors specific to each level of control technology include costs, pollutant reduction benefits and economic achievability. Each of these factors are discussed below as they relate to the Port Authority Ross Garage Facility.

1. Equipment and Facility Age – Discharges from Port Authority's Ross Garage Facility are currently treated by an oil/water separator and solids separator. The equipment is properly installed and up to date. As such, equipment age is not an applicable consideration and costs have already been incurred to meet the existing effluent limitations. Comparing activities at other Port Authority active garages, the facilities historically had issues with TSS until BMPs were updated and installed. Once BMPs were updated, the discharges are typically are below 100 mg/L with only an anomalous outlier result, as reflected in Attachment B of the attached Port Authority's Comment Letter. With the exception of this one outlier, the Department believes that the existing pollution control equipment in conjunction with increased housekeeping, street sweeping, and regular system maintenance is adequate to control the suspended solids concentrations at the Ross Garage Facility during either the inactive or active operations. If Port Authority is unable however to achieve compliance with the proposed TSS effluent limitations, it may be necessary to install additional supplementary treatment or evaluate the frequency of BMP maintenance. The cost of this supplementary treatment has not been evaluated in this report since the most efficient solutions do not require additional treatment solutions. In any case, treatment systems designed to control the effluent quality for similar discharges are widely available, proven effective and commonly used.
2. The Process Employed – The Port Authority may utilize a combination of best management practices and treatment technologies for sediment removal. BPJ effluent limitations are not based upon the installation of nor limited by the availability of specific treatment systems. As mentioned in the previous paragraph, the Department anticipates compliance with the proposed effluent limitations through implementation of BMPs including housekeeping and regular system maintenance. As such, any expenses associated with BMP implementation are minimal or previously incurred.

3. Engineering Aspects of Control Techniques – Stormwater pollutants are currently controlled through BMPs and unit treatment processes. Additional engineering solutions may be necessary if the facility is unable to meet its proposed effluent limitations. This action may require consultation with a design engineer, additional permitting and the procurement of additional equipment. The technologies currently in use at the facility and other technologies that may be needed to meet the proposed effluent limitations are commonly available.
4. Process Changes – The Port Authority may need to modify its processes to include more frequent street sweeping and expand its employee training efforts to identify and control its solids discharges. These process changes have already been proposed at the facility therefore additional measures may not be necessary.
5. The Cost of Achieving Such Effluent Reduction – PAT has already procured and installed the grit removal and oil/water separators. The Department recommends that PAT adopt additional BMPs; the cost of which would be negligible compared to the installation of supplementary treatment. The cost of implementing these BMPs is not expected to be burdensome.
6. Non-water quality environmental impact – There are no non-water quality impacts known for the discharges from this facility.

The permit has been redrafted to include a TSS limits of 100 mg/L daily maximum and reporting only for the average monthly discharge concentrations at Outfall 001.

The effluent limits for oil and grease are imposed in accordance with PA Code § 95.2. [15 mg/L average, 30 mg/L maximum for oil-bearing wastewaters]

The effluent limitations for dissolved iron have been re-imposed in accordance with PA Code § 95.2(4).

In accordance with Chapter 6 of the Department's *Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits*, pH effluent limitations should not be imposed for discharges of stormwater runoff. The guidance recommends the use of "monitor only" and no numerical limits since it has been documented across the state that rainfall pH is below 6 standard units.

Effluent limitations from the previous permit are proposed for TSS, oil and grease, dissolved iron. The Department is imposing previously permitted monitoring requirements for BOD_5 , COD and pH. The proposed technology based effluent limitations and monitoring requirements for Outfall 001 are shown in Table 2.

Water Quality-Based Effluent Limitations – Outfall 001

Outfalls 001 discharge storm water runoff from the Ross Facility following treatment by an OWS and grit chamber. The treated wastewater discharges into Nelson Run. Water quality analyses are typically performed under low-flow (Q_{7-10}) conditions. Since the discharges from this site consist entirely of stormwater, a formal water quality analysis cannot be accurately conducted. Water quality based effluent limitations are not imposed.

Development of Effluent Limitations

Outfall No.	002	Design Flow (MGD)	0.0 (Stormwater)
Latitude	40° 30' 4.9"	Longitude	-80° 01' 16.5"
Wastewater Description: Maintenance building roof and vehicle parking area stormwater runoff.			

Technology-Based Limitations

Outfall 002 discharges storm water runoff from the building roof and adjacent parking area. The outfall was created during the previous permitting cycle at the Department's request to separate roof drain runoff from other runoff streams in order to prevent overload of the OWS. The removal of roof water runoff from the OWS was completed prior to issuance of this NPDES permit. Sample analysis results that were submitted with the NPDES permit application contained concentrations of oil and grease (<4 mg/L), biological oxygen demand (<2 mg/L), chemical oxygen demand (59 mg/L), total suspended solids (<5.0 mg/L), total nitrogen (1.4 mg/L), total phosphorus (0.057 mg/L), pH (8.11 S.U.) and dissolved iron (<0.0191 ug/L). The previously permitted limitations will be imposed for flow, BOD₅, COD, oil and grease, TSS, dissolved iron and pH and monitoring frequency of 1/quarter for discharges from Outfall 002. Outfall 002 samples must be collected prior to comingling with discharges from Outfall 001.

The proposed technology based effluent limitations and monitoring requirements for Outfall 002 are shown in Table 3.

Water Quality-Based Effluent Limitations – Outfall 002

Outfalls 002 discharge storm water runoff from the Ross Facility. The stormwater discharges into Nelson Run. Water quality analyses are typically performed under low-flow (Q₇₋₁₀) conditions. Since the discharges from this site consist entirely of stormwater, a formal water quality analysis cannot be accurately conducted. Water quality based effluent limitations are not imposed.

Discharges of Stormwater Associated with Industrial Activity

The following BMPs may be helpful for reducing the discharge of pollutants into Waters of the Commonwealth. In light of the high effluent concentrations for a range of pollutants at this site, these BMPs have been included in Part C of the NPDES permit.

1. Enclose, cover or contain washing areas; use pressure washing without detergents or additives; perform washing in designated areas where wash water can be separately collected and treated, as appropriate.
2. Provide secondary containment for cracked batteries; store intact batteries on impervious surfaces.
3. Practice good housekeeping, periodically inspecting for leaks and spills; promptly clean up any leak/spill residue.
4. Store all hazardous and petroleum liquids in secure areas away from storm drains; minimize use of hazardous products.
5. Use oil-water separators to treat storm water drainage prior to discharge.
6. Do not conduct surface preparation and painting in windy conditions; use measures to collect any residue or spills.
7. Perform engine maintenance in areas where drainage can be contained and collected; minimize use of solvents and other hazardous materials.
8. Perform all vehicle and parts maintenance activities, wherever feasible, in enclosed areas.
9. Ensure adequate secondary containment and leak detection for fuel and other hazardous liquid storage areas.
10. For salt storage piles, follow the applicable recommendations and BMPs from the "Salt Storage Handbook" published by the Salt Institute.

Table 2 – Outfall 001 Effluent Limitations and Monitoring Requirements

Parameter	Mass (lb/day)		Concentration (mg/L)			Units
	Monthly Average	Daily Maximum	Minimum	Monthly Average	Daily Maximum	
Flow	Monitor & Report	---	---	---	---	MGD
Total Suspended Solids	---	---	---	Report	100.0	mg/L
Oil and Grease	---	---	---	15.0	30.0	mg/L
BOD ₅	---	---	---	Report	Report	mg/L
COD	---	---	---	Report	Report	mg/L
Iron, dissolved	---	---	---	3.5	7.0	mg/L
pH	---	---	Report	---	Report (IMAX)	S.U.

Table 3 – Outfall 002 Monitoring Requirements

Parameter	Mass (lb/day)		Concentration (mg/L)			Units
	Monthly Average	Daily Maximum	Minimum	Monthly Average	Daily Maximum	
Flow	Monitor & Report	---	---	---	---	MGD
Total Suspended Solids	---	---	---	---	Report	mg/L
Oil and Grease	---	---	---	---	Report	mg/L
BOD5	---	---	---	---	Report	mg/L
COD	---	---	---	---	Report	mg/L
Iron, dissolved	---	---	---	---	Report	mg/L
pH	---	---	---	---	Report (IMAX)	S.U.

1. Guidelines: PA Bulletin 6 & 12; EPA Multi-Sector General Permit; EPA Permit Writers' Manual; Benchmarks: 100.0 mg/L for TSS and 30.0 mg/L for Oil & Grease.
2. Regulations: Chapters 92, 93, 95, Code of Federal Regulations and the Clean Water Act

Stick Diagram

Port Authority of Allegheny County
Ross Garage Facility
Ross Township
Allegheny County
PA0204901

