Pennsylvania Department of Environmental Protection

Southwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0205044**
Facility Type	**Industrial**	APS ID	**1147921**
Major / Minor	**Minor**	Authorization ID	**1545012**

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

Applicant and Facility Information

Applicant Name	**Allied Waste Systems of Pennsylvania, LLC**	Facility Name	**Imperial Landfill**
Applicant Address	PO Box 47, 11 Boggs Road	Facility Address	11 Boggs Road
	Imperial, PA 15126-0047		Imperial, PA 15126-0047
Applicant Contact	Shawn Meenihan	Facility Contact	***same as applicant***
Applicant Phone	(724) 908-5488	Facility Phone	***same as applicant***
Applicant Email	SMeenihan@RepublicServices.com	Facility Email	***same as applicant***
Client ID	246284	Site ID	238922
SIC Code	4953	Municipality	Findlay Township
SIC Description	Trans. & Utilities - Refuse Systems	County	Allegheny
Date Application Received	September 26, 2025	EPA Waived?	Yes
Date Application Accepted	October 9, 2025	If No, Reason	
Purpose of Application	Renewal of an NPDES permit for discharges of storm water and groundwater from a municipal/residual solid waste landfill.		

Summary of Review

On August 27, 2025, on behalf of Allied Waste Systems of Pennsylvania LLC (AWS), Civil Design Solutions, Inc. (CDS) submitted an application to the Pennsylvania Department of Environmental Protection (DEP) to renew NPDES Permit PA0205044 for discharges from the Imperial Landfill. The renewal application was initially deficient due to missing proof of Act 14 notifications and a missing line drawing/flow diagram. AWS and CDS were notified on August 28, 2025 that the missing items must be submitted to DEP on or before September 27, 2025 for DEP to continue processing the application. CDS resubmitted the application with proof of Act 14 notifications and a flow diagram on September 26, 2025.

The Imperial Landfill is a solid waste disposal facility that accepts municipal solid waste, construction and demolition debris, certain non-hazardous industrial wastes, and asbestos. AWS's current NPDES permit for the Imperial Landfill was issued on January 29, 2021 with an effective date of March 1, 2021 and an expiration date of February 28, 2026. The NPDES permit renewal application was due by September 1, 2025 (180 days before expiration). The renewal application was submitted before the due date, so it is considered timely, notwithstanding the application's administrative deficiencies. The permit was amended once during its term on January 23, 2025 to add Outfall 013, which discharges storm water runoff from Sedimentation Pond. 1. Pursuant to AWS's timely application, DEP's inability to reissue the permit before the expiration date, and 25 Pa. Code § 92a.7(b), the terms and conditions of the 2021 Permit (as amended) were automatically continued past the expiration date.

The current NPDES permit authorizes discharges from ten outfalls including six outfalls from Sedimentation Basins A, B, C, D, and 1, and four outfalls from other areas at the site. Outfall 001 is for discharges of storm water from the principal and emergency spillways from Sedimentation Basin B; Outfalls 002 and 004 are, respectively, for storm water discharges from the principal and emergency spillways from Sedimentation Basin A; Outfalls 005 is for discharges of storm water from the principal and emergency spillways from Sedimentation Basin C; and Outfall 006 is for storm water discharges from the principal and emergency spillways from Sedimentation Basin D. Outfall 013 is for the principal and emergency spillways from Sedimentation Pond 1. Outfall 009 discharges storm water from a Courtesy Public Drop Off Area. Outfall 010 discharges storm water from

Approve	Deny	Signatures	Date
✓		Ryan C. Decker, P.E. / Environmental Engineer	March 18, 2026
X		Michael E. Fifth, P.E. / Environmental Engineer Manager	March 30, 2026

Summary of Review

the landfill's maintenance garage and surrounding area. Outfall 011 discharges storm water from the main entrance through which all waste trucks travel. Outfall 012 discharges storm water from the landfill's pretreatment plant entrance. All existing outfalls will be reauthorized by the renewed NPDES permit.

In 2017, DEP issued a Water Quality Management permit to authorize modifications to the outfall structures of Sedimentation Basins B, C, and D. The modifications resulted in the co-location of those basins' principal and emergency spillways' outfalls. Based on those changes, Outfalls 003, 007, and 008 were removed from the permit.

All the sedimentation basins receive storm water that does not encounter municipal/residual waste. Sedimentation Basin B also receives groundwater from a low-level interceptor and groundwater underdrain. The groundwater does not contact disposed waste. However, the landfill and surrounding areas covered under the permit are near or within areas where bituminous surface mining was historically conducted, which affects the quality of storm water discharges from the site.

Outfalls 001, 005, 006, and 012 discharge to an unnamed tributary to South Fork Montour Run that is impaired by siltation from erosion from derelict land. Outfalls 002, 004 discharge to an unnamed tributary to North Fork Montour Run, which is attaining its designated uses. Outfalls 009, 010, 011, 013, discharge to an unnamed tributary to Raccoon Creek (colloquially called "Potato Garden Run") that is impaired by metals from acid mine drainage. All the impaired surface waters are subject to final Total Maximum Daily Loads.

All leachate from the Imperial Landfill is collected, pretreated by the landfill's onsite pretreatment plant (permitted by a May 12, 2017 minor modification to Solid Waste Permit #100620), and discharged to Moon Township Municipal Authority's sewer system.

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)	Variable
Latitude	40° 26' 36.6"	Longitude	-80° 16' 17.6"
Quad Name	Clinton	Quad Code	1503
Wastewater Description:	Principal and emergency spillway discharges from Sedimentation Basin B collecting storm water runoff from disturbed construction areas, access roads, rock crushing activities, and Area 7 landfill; groundwater underdrain; and low-level interceptor.		
Receiving Waters	Unnamed Tributary to South Fork Montour Run	Stream Code	36726
NHD Com ID	99687304	RMI	0.12
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	20-G	Chapter 93 Class.	TSF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	Siltation		
Source(s) of Impairment	Erosion from Derelict Land		
TMDL Status	Final (March 24, 2005)	Name	Montour Run Watershed
Nearest Downstream Public Water Supply Intake	Moon Township Municipal Authority (PWS ID 5020011)		
PWS Waters	Ohio River	Flow at Intake (cfs)	4,730
PWS RMI	969.33	Distance from Outfall (mi)	13.94

Changes Since Last Permit Issuance: None

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	002	Design Flow (MGD)	Variable
Latitude	40° 27' 30.0"	Longitude	-80° 16' 30.0"
Quad Name	Clinton	Quad Code	1503
Wastewater Description:	Principal spillway discharges from Sedimentation Basin A collecting storm water runoff from vegetated, closed legacy landfill areas.		
Receiving Waters	Unnamed Tributary to North Fork Montour Run	Stream Code	36729
NHD Com ID	99686814	RMI	1.12
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	20-G	Chapter 93 Class.	TSF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment			
Source(s) of Impairment			
TMDL Status	Final (March 24, 2005)	Name	Montour Run Watershed
Nearest Downstream Public Water Supply Intake	Moon Township Municipal Authority (PWS ID 5020011)		
PWS Waters	Ohio River	Flow at Intake (cfs)	4,730
PWS RMI	969.33	Distance from Outfall (mi)	14.03

Changes Since Last Permit Issuance: None

Discharge, Receiving Waters and Water Supply Information

Outfall No.	004	Design Flow (MGD)	Variable
Latitude	40° 27' 30.0"	Longitude	-80° 16' 31.0"
Quad Name	Clinton	Quad Code	1503
Wastewater Description:	Emergency spillway discharges Sedimentation Basin A collecting storm water runoff from vegetated, closed legacy landfill areas.		
Receiving Waters	Unnamed Tributary to North Fork Montour Run	Stream Code	36729
NHD Com ID	99686814	RMI	1.12
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	20-G	Chapter 93 Class.	TSF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment			
Source(s) of Impairment			
TMDL Status	Final (March 24, 2005)	Name	Montour Run Watershed
Nearest Downstream Public Water Supply Intake	Moon Township Municipal Authority (PWS ID 5020011)		
PWS Waters	Ohio River	Flow at Intake (cfs)	4,730
PWS RMI	969.33	Distance from Outfall (mi)	14.03

Changes Since Last Permit Issuance: None

Discharge, Receiving Waters and Water Supply Information

Outfall No.	005	Design Flow (MGD)	Variable
Latitude	40° 26' 36.2"	Longitude	-80° 16' 17.6"
Quad Name	Clinton	Quad Code	1503
Wastewater Description:	Principal and emergency spillway discharges from Sedimentation Basin C collecting storm water runoff from disturbed construction areas, access roads, rock crushing activities, closed vegetated areas, and Area 7 landfill.		
Receiving Waters	Unnamed Tributary to South Fork Montour Run	Stream Code	36726
NHD Com ID	99687304	RMI	0.11
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	20-G	Chapter 93 Class.	TSF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	Siltation		
Source(s) of Impairment	Erosion from Derelict Land		
TMDL Status	Final (March 24, 2005)	Name	Montour Run Watershed
Nearest Downstream Public Water Supply Intake	Moon Township Municipal Authority (PWS ID 5020011)		
PWS Waters	Ohio River	Flow at Intake (cfs)	4,730
PWS RMI	969.33	Distance from Outfall (mi)	13.93

Changes Since Last Permit Issuance: None

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	006	Design Flow (MGD)	Variable
Latitude	40° 26' 45.6"	Longitude	-80° 16' 20.2"
Quad Name	Clinton	Quad Code	1503
Wastewater Description:	Principal and emergency spillway discharges from Sedimentation Basin D collecting storm water from disturbed construction areas, access roads, rock crushing activities, closed vegetated areas, and Area 7 landfill.		
Receiving Waters	Unnamed Tributary to South Fork Montour Run	Stream Code	36726
NHD Com ID	99687288	RMI	0.30
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	20-G	Chapter 93 Class.	TSF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	Siltation		
Source(s) of Impairment	Erosion from Derelict Land		
TMDL Status	Final (March 24, 2005)	Name	Montour Run Watershed
Nearest Downstream Public Water Supply Intake	Moon Township Municipal Authority (PWS ID 5020011)		
PWS Waters	Ohio River	Flow at Intake (cfs)	4,730
PWS RMI	969.33	Distance from Outfall (mi)	14.12

Changes Since Last Permit Issuance: None

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	009	Design Flow (MGD)	Variable
Latitude	40° 26' 32.0"	Longitude	-80° 17' 15.1"
Quad Name	Clinton	Quad Code	1503
Wastewater Description:	Storm water from the Courtesy Public Drop Off Area comprised of a concrete containment structure with open-top residual waste dumpsters used by the public to dispose of household residual waste.		
Receiving Waters	Unnamed Tributary to Raccoon Creek ["Potato Garden Run"]	Stream Code	33756
NHD Com ID	99687508	RMI	6.2
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	20-D	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	Metals		
Source(s) of Impairment	Abandoned Mine Drainage		
TMDL Status	Final (April 9, 2003) Final (April 7, 2005)	Name	Potato Garden Run, Raccoon Creek Watershed
Nearest Downstream Public Water Supply Intake	Midland Borough Municipal Authority (PWS ID 5040038)		
PWS Waters	Ohio River	Flow at Intake (cfs)	5,880
PWS RMI	944.8	Distance from Outfall (mi)	39.36

Changes Since Last Permit Issuance: None

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	010	Design Flow (MGD)	Variable
Latitude	40° 27' 8.0"	Longitude	-80° 16' 59.1"
Quad Name	Clinton	Quad Code	1503
Wastewater Description:	Storm water runoff from the maintenance garage and surrounding yard including mobile equipment, above ground storage tanks, a covered residual waste dumpster, and miscellaneous materials like tires, steel scrap, and equipment.		
Receiving Waters	Unnamed Tributary to Raccoon Creek ["Potato Garden Run"]	Stream Code	33756
NHD Com ID	99687508	RMI	5.87
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	20-D	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	Metals		
Source(s) of Impairment	Abandoned Mine Drainage		
TMDL Status	Final (April 9, 2003) Final (April 7, 2005)	Name	Potato Garden Run, Raccoon Creek Watershed
Nearest Downstream Public Water Supply Intake	Midland Borough Municipal Authority (PWS ID 5040038)		
PWS Waters	Ohio River	Flow at Intake (cfs)	5,880
PWS RMI	944.8	Distance from Outfall (mi)	39.03

Changes Since Last Permit Issuance: None

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	011	Design Flow (MGD)	Variable
Latitude	40° 26' 6.2"	Longitude	-80° 17' 26.4"
Quad Name	Clinton	Quad Code	1503
Wastewater Description:	Storm water runoff from the facility entrance that provides access for all waste trucks to and from the landfill.		
Receiving Waters	Unnamed Tributary to Raccoon Creek ["Potato Garden Run"]	Stream Code	33756
NHD Com ID	99687508	RMI	6.78
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	20-D	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	Metals		
Source(s) of Impairment	Abandoned Mine Drainage		
TMDL Status	Final (April 9, 2003) Final (April 7, 2005)	Name	Potato Garden Run, Raccoon Creek Watershed
Nearest Downstream Public Water Supply Intake	Midland Borough Municipal Authority (PWS ID 5040038)		
PWS Waters	Ohio River	Flow at Intake (cfs)	5,880
PWS RMI	944.8	Distance from Outfall (mi)	39.94

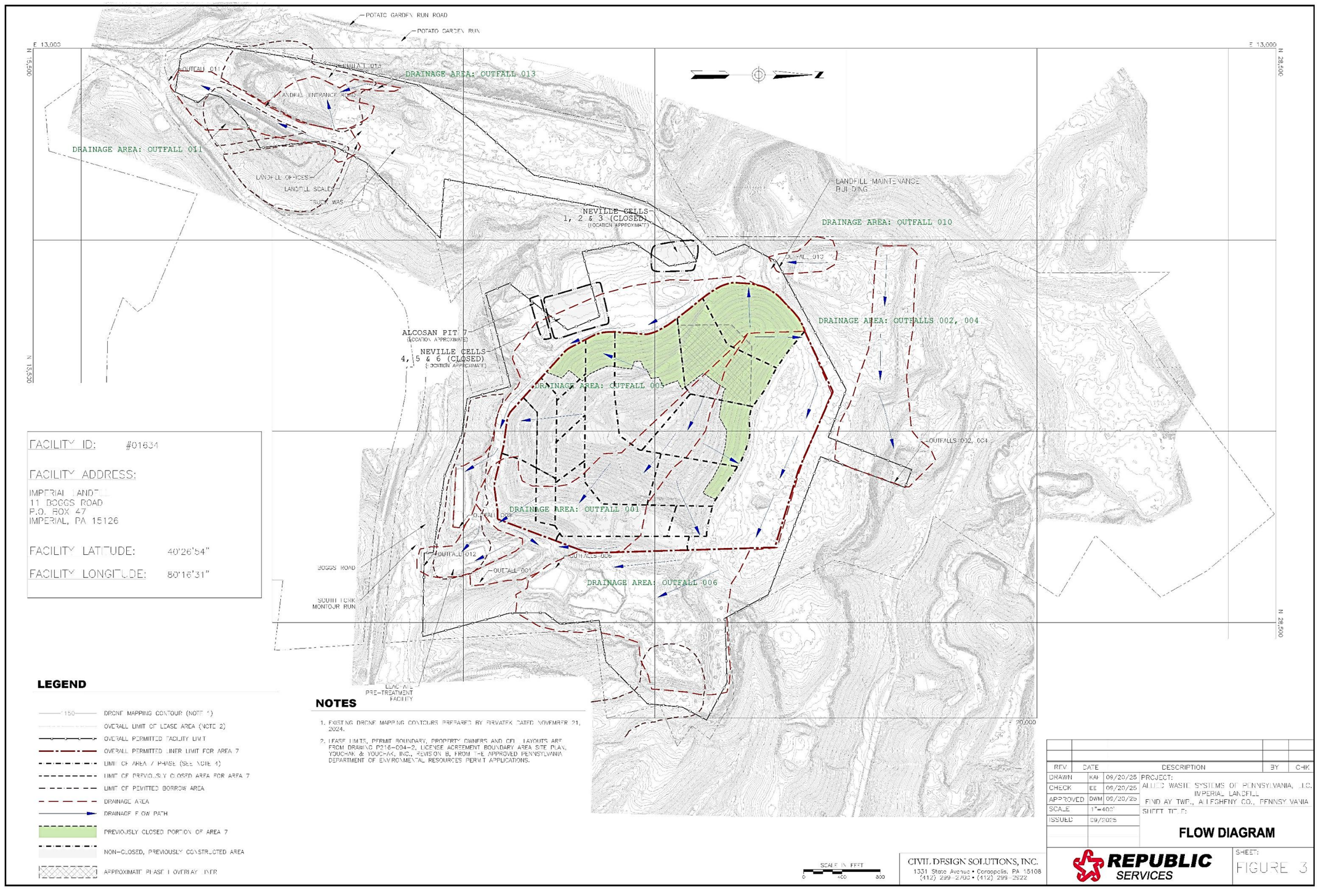
Changes Since Last Permit Issuance: None

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	012	Design Flow (MGD)	Variable
Latitude	40° 26' 32.5"	Longitude	-80° 16' 20.1"
Quad Name	Clinton	Quad Code	1503
Wastewater Description:	Storm water from the Pretreatment Facility Entrance (no waste trucks).		
Receiving Waters	Unnamed Tributary to South Fork Montour Run	Stream Code	36726
NHD Com ID	99687370	RMI	0.04
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	20-G	Chapter 93 Class.	TSF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	Metals, Organic Enrichment/Low D.O., Siltation		
Source(s) of Impairment	Abandoned Mine Drainage, Habitat Modification, Urban Runoff/Storm Sewers		
TMDL Status	Final (March 24, 2005)	Name	Montour Run Watershed
Nearest Downstream Public Water Supply Intake	Moon Township Municipal Authority (PWS ID 5020011)		
PWS Waters	Ohio River	Flow at Intake (cfs)	4,730
PWS RMI	969.33	Distance from Outfall (mi)	13.86

Changes Since Last Permit Issuance: None

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	013	Design Flow (MGD)	Variable
Latitude	40° 26' 23.2"	Longitude	-80° 17' 26.3"
Quad Name	Clinton	Quad Code	1503
Wastewater Description:	Principal and emergency spillway discharges from Sedimentation Pond 1 collecting storm water runoff from the Western Highwall Borrow Area.		
Receiving Waters	Unnamed Tributary to Raccoon Creek ["Potato Garden Run"]	Stream Code	33756
NHD Com ID	99687508	RMI	6.4
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	0.0
Elevation (ft)		Slope (ft/ft)	
Watershed No.	20-D	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	Metals		
Source(s) of Impairment	Abandoned Mine Drainage		
TMDL Status	Final (April 9, 2003) Final (April 7, 2005)	Name	Potato Garden Run, Raccoon Creek Watershed
Nearest Downstream Public Water Supply Intake	Midland Borough Municipal Authority		
PWS ID	5040038	PWS Withdrawal (MGD)	7.2
PWS Waters	Ohio River	Flow at Intake (cfs)	5,880
PWS RMI	944.8	Distance from Outfall (mi)	

Changes Since Last Permit Issuance: None



FACILITY ID: #01631

FACILITY ADDRESS:

IMPERIAL LANDFILL
11 BOGGS ROAD
P.O. BOX 47
IMPERIAL, PA 15126

FACILITY LATITUDE: 40°26'54"

FACILITY LONGITUDE: 80°16'31"

LEGEND

- 150 — DRONE MAPPING CONTOUR (NOTE 1)
- OVERALL LIMIT OF LEASE AREA (NOTE 2)
- OVERALL PERMITTED FACILITY LIMIT
- OVERALL PERMITTED LINER LIMIT FOR AREA 7
- LIMIT OF AREA 7 PHASE (SEE NOTE 4)
- LIMIT OF PREVIOUSLY CLOSED AREA FOR AREA 7
- LIMIT OF PERMITTED BORROW AREA
- DRAINAGE AREA
- DRAINAGE FLOW PATH
- PREVIOUSLY CLOSED PORTION OF AREA 7
- NON-CLOSED, PREVIOUSLY CONSTRUCTED AREA
- APPROXIMATE PLASTIC OVERLAY LINER

NOTES

1. EXISTING DRONE MAPPING CONTOURS PREPARED BY PIRVATEK DATED NOVEMBER 21, 2024.
2. LEASE LIMITS, PERMIT BOUNDARY, PROPERTY OWNERS AND CELL LAYOUTS ARE FROM DRAWING D216-004-2, LICENSE AGREEMENT BOUNDARY AREA SITE PLAN, YOUCHAK & YOUCHAK, INC., REVISION B, FROM THE APPROVED PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES PERMIT APPLICATIONS.

SCALE IN FEET
0 400 800

CIVIL DESIGN SOLUTIONS, INC.
1331 State Avenue • Coraopolis, PA 15108
(412) 299-2700 • (412) 299-2922

REV	DATE		DESCRIPTION	BY	CHK
DRAWN	KAI	09/20/25	PROJECT: ALLIED WASTE SYSTEMS OF PENNSYLVANIA, LLC. IMPERIAL LANDFILL		
CHECK	EE	09/20/25	FINDLAY TWP., ALLEGHENY CO., PENNSYLVANIA		
APPROVED	DWM	09/20/25	SCALE: 1"=400'		
ISSUED		09/2025	SHEET TITLE: **FLOW DIAGRAM**		

REPUBLIC SERVICES

SHEET: FIGURE 3

Image Source and Date: Google Earth Pro, June 1, 2025. Annotations by DEP.

Treatment Facility Summary		
Treatment Facility: Sedimentation Basins A, B, C, and D		
WQM Permit No.	**Issuance Date**	**Purpose**
0210201	June 22, 2010	Permit issued to Allied Waste Systems of Pennsylvania, LLC for the modification of Sedimentation Basins B, C, and D
0210201 A-1	May 10, 2017	Permit amendment issued to Allied Waste Systems of Pennsylvania, LLC for the replacement of Sedimentation Basin B's, C's, and D's corrugated metal risers with 5-foot diameter concrete risers; new 8-inch diameter vertically swiveling outlet pipes on those basins' concrete risers to allow for manual raising or lowering of basins' pool elevations; and backfilling of those basins' emergency spillways (principal and emergency spillways both discharge through the concrete risers).

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Industrial	Primary	Anionic polymer flocculation; sedimentation	None	Variable

Changes Since Last Permit Issuance: WQM Permit 0210201 A-1 was issued to help address effluent violations.

Compliance History

DMR Data for Outfall 001 (from February 1, 2025 to January 31, 2026)

Parameter	JAN-26	DEC-25	NOV-25	OCT-25	SEP-25	AUG-25	JUL-25	JUN-25	MAY-25	APR-25	MAR-25	FEB-25
Flow (MGD) Average Quarterly		0.4356			0.360			0.3212			0.2304	
Flow (MGD) Daily Maximum		0.5184			0.540			0.3528			0.3024	
pH (S.U.) Daily Minimum		7.88			7.22			7.61			7.75	
pH (S.U.) Daily Maximum		7.92			8.03			7.80			7.99	
COD (mg/L) Daily Maximum		36						62				
TSS (mg/L) Average Quarterly		< 5.0			30.5			13.0			20.0	
TSS (mg/L) Instantaneous Maximum		< 5.0			52.0			18.0			31.0	
Total Dissolved Solids (mg/L) Daily Maximum		1250						1030				
Oil and Grease (mg/L) Daily Maximum		< 6						< 6				
Ammonia (mg/L) Daily Maximum		0.87						15.1				
Total Aluminum (mg/L) Average Quarterly		< 0.10			< 0.55			< 0.15			< 0.50	
Total Aluminum (mg/L) Instantaneous Maximum		< 0.10			1.00			0.20			0.90	
Total Barium (mg/L) Daily Maximum		0.05						0.06				
Total Chromium (mg/L) Daily Maximum		< 0.01						< 0.01				
Total Iron (mg/L) Average Quarterly		0.24			0.96			0.25			1.09	
Total Iron (mg/L) Instantaneous Maximum		0.25			1.75			0.40			1.19	
Total Lead (mg/L) Daily Maximum		< 0.02						< 0.02				

Parameter	JAN-26	DEC-25	NOV-25	OCT-25	SEP-25	AUG-25	JUL-25	JUN-25	MAY-25	APR-25	MAR-25	FEB-25
Total Manganese (mg/L) Average Quarterly		0.15			0.30			0.24			0.97	
Total Manganese (mg/L) Instantaneous Maximum		0.16			0.34			0.29			1.07	
Total Magnesium (mg/L) Daily Maximum		90.2						70.8				
Total Zinc (mg/L) Daily Maximum		< 0.01						< 0.01				
Total Phenolics (mg/L) Daily Maximum		< 0.02						< 0.02				
TOC (mg/L) Daily Maximum		9.8						20.0				

DMR Data for Outfall 002 (from February 1, 2025 to January 31, 2026)

Parameter	JAN-26	DEC-25	NOV-25	OCT-25	SEP-25	AUG-25	JUL-25	JUN-25	MAY-25	APR-25	MAR-25	FEB-25
Flow (MGD) Average Quarterly		0.0792			0.0792			0.0792			0.072	
Flow (MGD) Daily Maximum		0.0792			0.0792			0.0792			0.0792	
pH (S.U.) Daily Minimum		7.94			7.28			7.73			7.75	
pH (S.U.) Daily Maximum		8.04			7.98			7.73			7.95	
COD (mg/L) Daily Maximum		34						62				
TSS (mg/L) Average Quarterly		< 6.0			< 30.5			5.0			18.5	
TSS (mg/L) Instantaneous Maximum		6.0			56.0			5.0			25.0	
Total Dissolved Solids (mg/L) Daily Maximum		1320						970				
Oil and Grease (mg/L) Daily Maximum		< 6						< 5				
Ammonia (mg/L) Daily Maximum		0.91						15.7				

Parameter	JAN-26	DEC-25	NOV-25	OCT-25	SEP-25	AUG-25	JUL-25	JUN-25	MAY-25	APR-25	MAR-25	FEB-25
Total Aluminum (mg/L) Average Quarterly		< 0.10			< 0.65			< 0.10			< 0.50	
Total Aluminum (mg/L) Instantaneous Maximum		< 0.10			1.20			< 0.10			0.90	
Total Barium (mg/L) Daily Maximum		0.06						0.06				
Total Chromium (mg/L) Daily Maximum		< 0.01						< 0.01				
Total Iron (mg/L) Average Quarterly		0.22			1.03			0.14			1.13	
Total Iron (mg/L) Instantaneous Maximum		0.23			1.89			0.14			1.23	
Total Lead (mg/L) Daily Maximum		< 0.02						< 0.02				
Total Manganese (mg/L) Average Quarterly		0.14			0.30			0.19			0.96	
Total Manganese (mg/L) Instantaneous Maximum		0.15			0.34			0.19			1.06	
Total Magnesium (mg/L) Daily Maximum		90.6						69.7				
Total Zinc (mg/L) Daily Maximum		< 0.01						< 0.01				
Total Phenolics (mg/L) Daily Maximum		< 0.02						< 0.02				
TOC (mg/L) Daily Maximum		10.1						19.7				

DMR Data for Outfall 005 (from February 1, 2025 to January 31, 2026)

Parameter	JAN-26	DEC-25	NOV-25	OCT-25	SEP-25	AUG-25	JUL-25	JUN-25	MAY-25	APR-25	MAR-25	FEB-25
Flow (MGD) Average Quarterly								0.2607			0.108	
Flow (MGD) Daily Maximum								0.34128			0.108	

Parameter	JAN-26	DEC-25	NOV-25	OCT-25	SEP-25	AUG-25	JUL-25	JUN-25	MAY-25	APR-25	MAR-25	FEB-25
pH (S.U.) Daily Minimum								8.02			7.8	
pH (S.U.) Daily Maximum								8.28			7.8	
BOD5 (mg/L) Daily Maximum								< 1.5				
COD (mg/L) Daily Maximum								12				
TSS (mg/L) Average Quarterly								14.0			12.0	
TSS (mg/L) Instantaneous Maximum								19.0			12.0	
Total Dissolved Solids (mg/L) Daily Maximum								624				
Oil and Grease (mg/L) Daily Maximum								< 5				
Total Nitrogen (mg/L) Daily Maximum								< 3.86				
Ammonia (mg/L) Daily Maximum								0.14				
Total Aluminum (mg/L) Average Quarterly								0.25			0.40	
Total Aluminum (mg/L) Instantaneous Maximum								0.40			0.40	
Total Barium (mg/L) Daily Maximum								0.04				
Total Chromium (mg/L) Daily Maximum								< 0.01				
Total Iron (mg/L) Average Quarterly								0.34			0.41	
Total Iron (mg/L) Instantaneous Maximum								0.60			0.41	
Total Lead (mg/L) Daily Maximum								< 0.02				
Total Manganese (mg/L) Average Quarterly								0.05			0.22	

Parameter	JAN-26	DEC-25	NOV-25	OCT-25	SEP-25	AUG-25	JUL-25	JUN-25	MAY-25	APR-25	MAR-25	FEB-25
Total Manganese (mg/L) Instantaneous Maximum								0.08			0.22	
Total Magnesium (mg/L) Daily Maximum								41.2				
Total Zinc (mg/L) Daily Maximum								0.04				
Total Phenolics (mg/L) Daily Maximum								< 0.02				
TOC (mg/L) Daily Maximum								4.0				

DMR Data for Outfall 006 (from February 1, 2025 to January 31, 2026)

Parameter	JAN-26	DEC-25	NOV-25	OCT-25	SEP-25	AUG-25	JUL-25	JUN-25	MAY-25	APR-25	MAR-25	FEB-25
Flow (MGD) Average Quarterly		0.2592						0.2643			0.1908	
Flow (MGD) Daily Maximum		0.2592						0.26928			0.2304	
pH (S.U.) Daily Minimum		8.43						7.92			8.00	
pH (S.U.) Daily Maximum		8.43						8.13			8.23	
COD (mg/L) Daily Maximum		20						24				
TSS (mg/L) Average Quarterly		8.0						< 13.5			12.5	
TSS (mg/L) Instantaneous Maximum		8.0						22.0			16.0	
Total Dissolved Solids (mg/L) Daily Maximum		226						698				
Oil and Grease (mg/L) Daily Maximum		< 5						< 5				
Ammonia (mg/L) Daily Maximum		0.11						0.90				
Total Aluminum (mg/L) Average Quarterly		< 0.10						< 0.25			< 0.35	

Parameter	JAN-26	DEC-25	NOV-25	OCT-25	SEP-25	AUG-25	JUL-25	JUN-25	MAY-25	APR-25	MAR-25	FEB-25
Total Aluminum (mg/L) Instantaneous Maximum		< 0.10						0.40			0.60	
Total Barium (mg/L) Daily Maximum		0.04						0.04				
Total Chromium (mg/L) Daily Maximum		< 0.01						< 0.01				
Total Iron (mg/L) Average Quarterly		0.06						0.39			0.29	
Total Iron (mg/L) Instantaneous Maximum		0.06						0.62			0.47	
Total Lead (mg/L) Daily Maximum		< 0.02						< 0.02				
Total Manganese (mg/L) Average Quarterly		0.09						0.10			0.18	
Total Manganese (mg/L) Instantaneous Maximum		0.09						0.14			0.18	
Total Magnesium (mg/L) Daily Maximum		44.7						43.6				
Total Zinc (mg/L) Daily Maximum		0.06						0.05				
Total Phenolics (mg/L) Daily Maximum		< 0.02						< 0.02				
TOC (mg/L) Daily Maximum		5.1						9.3				

Compliance History

Effluent Violations for Outfall 001, from: March 1, 2025 To: January 31, 2026

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
Total Aluminum	09/30/25	IMAX	1.00	mg/L	.75	mg/L
Total Aluminum	03/31/25	IMAX	0.90	mg/L	.75	mg/L

Summary of Inspections:

Other Comments:

Effluent Violations for Outfall 002, from: March 1, 2025 To: January 31, 2026

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
Total Aluminum	09/30/25	IMAX	1.20	mg/L	.75	mg/L
Total Aluminum	03/31/25	IMAX	0.90	mg/L	.75	mg/L

Summary of Inspections:

Other Comments:

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** Variable
Latitude 40° 26' 36.6" **Longitude** -80° 16' 17.6"

Wastewater Description: Principal and emergency spillway discharges from Sedimentation Basin B collecting storm water runoff from disturbed construction areas, access roads, rock crushing activities, and Area 7 landfill; groundwater underdrain; and low-level interceptor.

Outfall 001 is the discharge point for the principal and emergency spillways of Sedimentation Basin B, which receives storm water runoff from disturbed construction areas, access roads, rock crushing activity areas, and portions of the Area 7 landfill including intermediate soil cover, closed portions with a final cap system, and portions of the landfill which are covered with a temporary geomembrane. The drainage area for Outfall 001 is about 2,831,400 ft^2 and is classified as a non-waste-contact area. Sedimentation Basin B also receives groundwater from a low-level interceptor and underdrain beneath the landfill liner. Outfall 003 was formerly the emergency spillway for Sedimentation Basin B, but the emergency spillway constructed into the embankment of Sedimentation Basin B was backfilled and removed and then Outfall 003 was removed from the permit. The concrete riser now functions as both the principal spillway and emergency spillway for the basin as depicted in **Figure 1**, below.

Wastewaters regulated at Outfall 001 are currently subject to the following effluent limits and monitoring requirements.

Table 1. Current Effluent Limits and Monitoring Requirements at Outfall 001

Parameter	Mass (lbs/day)		Concentration (mg/L)			Measurement Frequency	Sample Type
	Avg. Mo.	Max Daily	Avg. Mo.	Max Daily	IMAX		
Flow	Report	Report	—	—	—	2/quarter	Measured
pH (S.U.)	—	—	6.0 Daily Min	9.0	—	2/quarter	Grab
COD	—	—	—	Report	—	1/6 months	Grab
Total Suspended Solids	—	—	35.0	—	70.0	2/quarter	Grab
Total Dissolved Solids	—	—	—	Report	—	1/6 months	Grab
Oil and Grease	—	—	—	Report	—	1/6 months	Grab
Ammonia-Nitrogen	—	—	—	Report	—	1/6 months	Grab
Aluminum, Total	—	—	Report	—	0.75	2/quarter	Grab
Barium, Total	—	—	—	Report	—	1/6 months	Grab
Chromium, Total	—	—	—	Report	—	1/6 months	Grab
Iron, Total	—	—	3.5	—	7.0	2/quarter	Grab
Lead, Total	—	—	—	Report	—	1/6 months	Grab
Manganese, Total	—	—	2.0	—	4.0	2/quarter	Grab
Magnesium, Total	—	—	—	Report	—	1/6 months	Grab
Zinc, Total	—	—	—	Report	—	1/6 months	Grab
Phenolics, Total	—	—	—	Report	—	1/6 months	Grab
Total Organic Carbon	—	—	—	Report	—	1/6 months	Grab

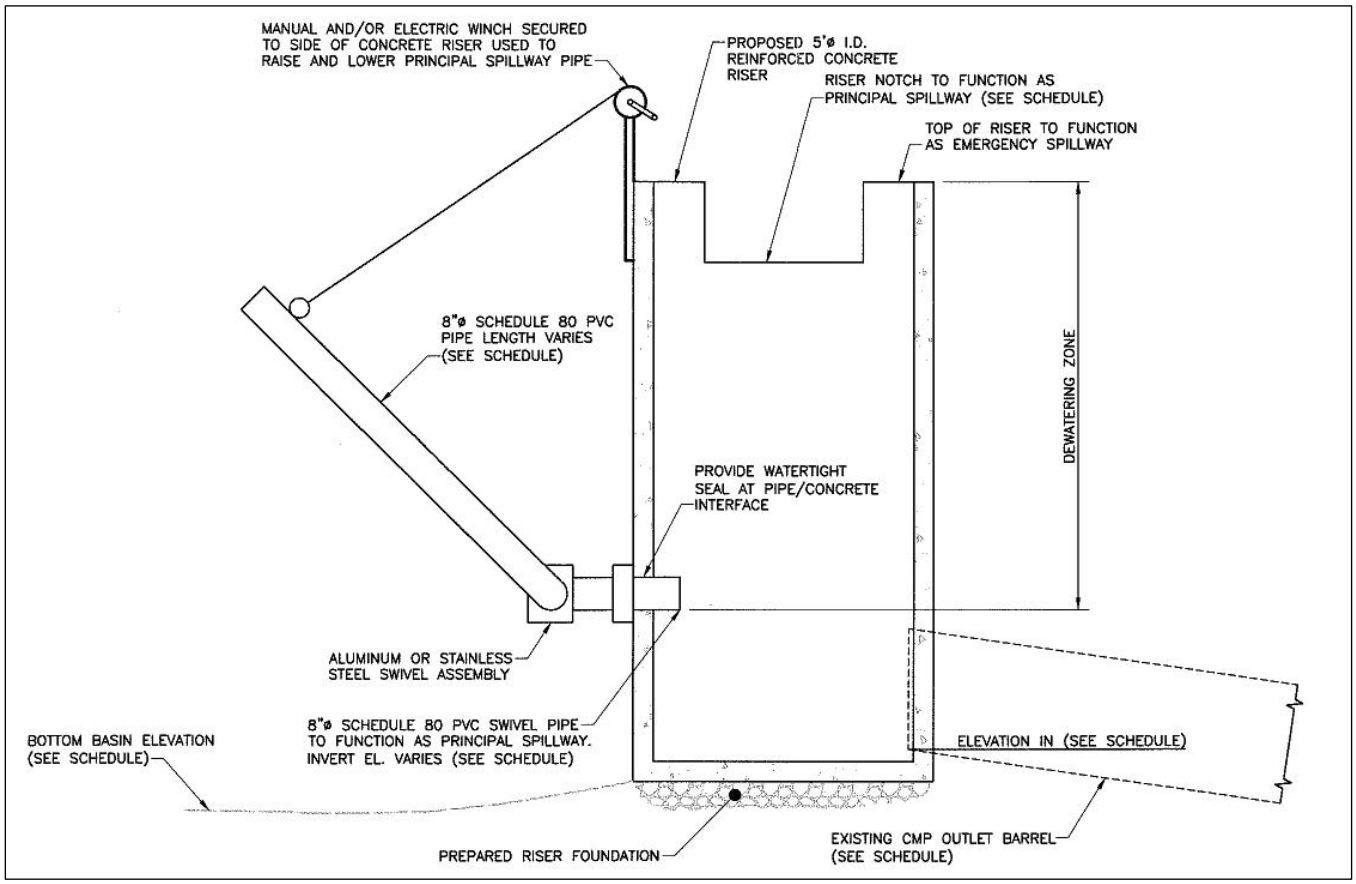
The effluent limits and monitoring requirements in **Table 1** will remain in effect in the renewed permit pursuant to anti-backsliding requirements under Section 402(o) of the Clean Water Act and/or 40 CFR § 122.44(l) (incorporated by reference at 25 Pa. Code § 92a.44) [1]—unless the limits are superseded by more stringent limits developed for this renewal or are relaxed pursuant to the anti-backsliding exceptions listed in Section 402(o) of the Clean Water Act or 40 CFR § 122.44(l).

001.A. Technology-Based Effluent Limitations (TBELs)

Numeric TBELs for TSS, iron, manganese, and pH were imposed in the NPDES permit issued to this facility in 2010 based on the need to control pollutants contributing to the impairments of the facility's receiving waters including: TSS from siltation from erosion from derelict land; and aluminum, iron, manganese, and acidic pH from abandoned/acid mine drainage. Notwithstanding the various metals associated with the latter impairment cause, aluminum is the only parameter subject to WQBELs based on the Montour Run TMDL, as explained in Section 001.B below.

[1] *Reissued permits.* (1) Except as provided in paragraph (l)(2) of this section when a permit is renewed or reissued, interim effluent limitations, standards or conditions must be at least as stringent as the final effluent limitations, standards, or conditions in the previous permit (unless the circumstances on which the previous permit was based have materially and substantially changed since the time the permit was issued and would constitute cause for permit modification or revocation and reissuance under § 122.62.)

Figure 1. Outlet Configuration for Sedimentation Basins B, C, and D



The fact sheet for AWS's 2010 NPDES permit did not identify the specific regulatory reference for the TSS, iron, manganese, and pH TBELs, but the limits evidently are based on 40 CFR Part 434, which establishes numeric TBELs for TSS, iron, manganese, and pH on discharges from coal mines and associated areas—such discharges having similar pollutants of concern to abandoned mine drainage due to contact with coal and coal residuals. The TBELs in Part 434 are based on the use of conventional lime neutralization technology that employs flow equalization, acidity neutralization, ferrous iron oxidation, and solids removal. The non-contact storm water and non-storm water contributors to Sedimentation Basin B (low-level interceptor and groundwater underdrain) are not mine wastewaters, and AWS does not use lime neutralization technology or ferrous iron oxidation, but the principles of treatment for mine wastewater pollutants would reasonably apply to discharges containing similar pollutants. Also, the U.S. Environmental Protection Agency did identify similar types of transient wastewater sources for control by Part 434.[2]

In November 2019, AWS completed modifications to Sedimentation Basin B's outlet structure (as depicted in **Figure 1**) to bring the facility into compliance with the existing TBELs. DEP previously determined that controlling TSS using sedimentation also will control aluminum and iron, which is supported by effluent data reported during the previous permit term that reflect improved settling (*i.e.*, increased storage capacity and longer detention times) resulting from the outlet structure modifications. The pH of Outfall 001's effluent is above neutral (median of about 8.0 s.u.), which would represent the pH of influent wastewater to Sedimentation Basin B in the absence of chemical neutralization.

Even though AWS does not use lime neutralization or ferrous iron oxidation, Outfall 001 currently complies with numeric TBELs for TSS, iron, manganese, and pH. The limits will remain in effect based on anti-backsliding. Consistent with DEP's evaluations for previous permits—to the extent that AWS needs to implement new or additional controls for TSS, iron, manganese, and pH—lime neutralization and ferrous iron oxidation are available and affordable technologies AWS does not use that could be used to achieve the existing TBELs.

[2] "The major sources of wastewater in the coal mining category include precipitation, surface runoff, ground water infiltration, and effluents from coal preparation plants. No process water is used in the mining phase, except for minor consumption in dust suppression, pump coolants, and firefighting needs. Therefore, pollution abatement in this industry must be approached differently than other industries, with reliance on operating and management practices for wastewater source control as well as end-of-pipe treatment technologies." p.3, Final Development Document for Effluent Limitations Guidelines and Standards for the Coal Mining Point Source Category. September 1982.

Monitoring Requirements

AWS checked the box on Module 1 of the NPDES permit application to certify storm water discharges from Outfall 001 are not exposed to industrial activities, which would theoretically exempt Outfall 001's discharges from monitoring requirements. DEP understands that storm water discharges from Outfall 001 are not exposed to residual waste, but there are pollutant sources in the drainage area identified on Module 1 that are exposed to precipitation. Effluent limits also are imposed to implement TMDL requirements. Therefore, effluent limits and monitoring requirements will continue to apply to Outfall 001.

Consistent with 25 Pa. Code § 92a.61(h) and DEP's policy for permitting storm water discharges associated with industrial activities, minimum standards described in DEP's "PAG-03 NPDES General Permit for Discharges of Stormwater Associated with Industrial Activity" (PAG-03) are imposed on storm water discharges authorized by individual industrial waste NPDES permits.[3] Based on AWS's SIC Code of 4953, the facility would be classified under "Appendix C – Landfills and Land Application Sites" of the PAG-03 General Permit.[4] To ensure baseline consistency with other landfill and land application sites in Pennsylvania that discharge storm water associated with their industrial activities, the monitoring requirements and sector-specific Best Management Practices (BMPs) of PAG-03, Appendix C are imposed at AWS's outfalls that discharge storm water. The monitoring requirements of Appendix C are shown in **Table 2**.

Table 2. PAG-03 Appendix C – Minimum Monitoring Requirements

Discharge Parameter	Units	Sample Type	Minimum Measurement Frequency	Benchmark Values
Total Nitrogen †	mg/L	1 Grab	1/6 months	XXX
Total Phosphorus	mg/L	1 Grab	1/6 months	XXX
pH	S.U.	1 Grab	1/6 months	9.0
Total Suspended Solids	mg/L	1 Grab	1/6 months	100
Chemical Oxygen Demand (COD)	mg/L	1 Grab	1/6 months	120
Ammonia-Nitrogen	mg/L	1 Grab	1/6 months	XXX
Iron, Total	mg/L	1 Grab	1/6 months	XXX

† Total Nitrogen is the sum of Total Kjeldahl-N (TKN) plus Nitrite-Nitrate as N (NO2+NO3-N), where TKN and NO2+NO3-N are measured in the same sample.

As shown in **Table 1**, AWS currently monitors Outfall 001 for a variety of other pollutants including TDS, oil and grease, barium, chromium, lead, magnesium, zinc, total phenolics, and total organic carbon. These other pollutants are indicator pollutants that are monitored to detect impacts from solid waste, solid waste constituents, leachate, and contaminants or constituents of decomposition. Monitoring and reporting for those parameters will remain in the permit for that purpose. The list of additional indicator parameters is drawn from 25 Pa. Code § 273.284, which describes water quality monitoring requirements for municipal waste landfills (in the context of solid waste permitting).

To the extent that more stringent numeric TBELs based on the use of treatment facilities do not apply, DEP regulates storm water discharges associated with industrial activities using non-numeric effluent limits in the form of best management practices (BMPs). BMPs specified in the permit are designed to minimize various types of pollutant discharges to the extent technologically possible and economically practicable and achievable considering best industry practices. For pollutants that are not subject to numeric TBELs, non-numeric BMPs satisfy the control level requirements of the Clean Water Act (BAT/BPT/BCT) for storm water discharges associated with industrial activities.

The effectiveness of an industrial facility's BMPs is evaluated using a benchmark monitoring program that compares effluent results to certain benchmark values. The benchmark values are the pollutant concentrations above which a storm water discharge could potentially impair or contribute to impairing water quality or affect human health from ingestion of water or fish. The benchmarks also are set at a level, that if below, a facility's discharges pose less potential for water quality concern. As such, the benchmarks provide an appropriate level to determine whether a facility's BMPs are successfully implemented. The benchmark values listed in **Table 2** are not effluent limitations and exceedances do not constitute permit violations. However, if sampling demonstrates exceedances of benchmark values for two consecutive monitoring periods, then AWS must submit a Corrective Action Plan within 90 days of the end of the monitoring period triggering the plan. Continued exceedances of the benchmark values will require a graduated response. Benchmark values and corrective action plan requirements will be specified in a condition in Part C of the permit.

[3] Standard Operating Procedure (SOP) for Clean Water Program, Establishing Effluent Limitations for Individual Industrial Permits, Section III.C. (SOP No. BCW-PMT-032, February 5, 2024, Version 1.7): "The applicable appendix of the PAG-03 General Permit should be considered the minimum standards for limits, benchmarks and monitoring requirements for individual industrial stormwater permits. The application manager may include other limits, benchmarks and monitoring requirements as justified in the fact sheet."

[4] The determination of which of the PAG-03 General Permit's appendices applies to a facility is based on a facility's SIC Code.

AWS did not report any exceedances of TBELs or benchmark values at Outfall 001 during the previous permit term. Pollutants that are not subject to either TBELs or benchmark values (other than aluminum that is subject to a WQBEL) were present in low concentrations or were otherwise not detectable. Therefore, no additional TBELs are considered. Numeric TBELs will continue to control TSS, iron, manganese, and pH. Compliance with those TBELs will be used to evaluate the effectiveness of AWS's sedimentation basin.

001.B. Water Quality-Based Effluent Limitations (WQBELs)

Generally, DEP does not develop numeric WQBELs for storm water discharges. 25 Pa. Code § 96.4(g) requires mathematical modeling used to develop WQBELs to be based on steady state design flows including: $Q_{7\text{-}10}$ low-flow for acute and chronic aquatic life criteria and threshold human health criteria, and harmonic mean flow for non-threshold human health criteria. Storm water discharges are intermittent, are usually characterized by high flows occurring over relatively short time intervals, and can carry a variety of pollutants whose source, nature, and extent varies. Such variation and the unknowns associated with dynamic, wet weather mixing conditions and resulting water quality impacts are not conducive to steady state modeling. Based on those circumstances and consistent with 40 CFR § 122.44(k)(2) and (3), no modeling is performed.[5]

As stated in the Fact Sheet for EPA's 2021 Multi-Sector General Permit (the federal equivalent of DEP's PAG-03 General Permit): "[f]acilities that achieve the permit's technology-based limits [numeric and/or non-numeric] through the careful selection, design, installation, and implementation of effective stormwater control measures are likely to be controlling their stormwater discharges to a degree that would make additional water quality-based measures unnecessary." AWS's use of a sedimentation basin in combination with a TMDL WQBEL for aluminum (see below) and permit conditions for storm water that require the use of BMPs including pollution prevention and exposure minimization, good housekeeping, erosion and sediment control, and spill prevention and response—with benchmark monitoring to confirm the effectiveness of those BMPs—will ensure Outfall 001 complies with water quality standards.

Montour Run Watershed Total Maximum Daily Load

Outfalls 001, 002, 004, 005, 006, and 012 are located in the Montour Run watershed, which is a watershed that is not attaining its designated uses. There is a final TMDL for the Montour Run watershed to address the causes of impairment. A TMDL establishes the amount of a pollutant that a water body can assimilate without exceeding the water quality criteria for that pollutant. TMDLs provide the scientific basis for a state to establish water quality-based controls to reduce pollution from both point and non-point sources to restore and maintain the quality of the state's water resources. A TMDL considers each river and tributary within the target watershed and its impairment sources. Stream data and discharge data are used to calculate minimum pollutant reductions that are necessary to attain water quality criteria. To achieve those reductions, a TMDL prescribes allocations for all contributing pollutant sources in the target watershed to minimally achieve water quality criteria (*i.e.*, 100% use of a stream's assimilative capacity). TMDL allocations include waste load allocations (WLA), load allocations (LA), and a margin of safety (MOS). The WLA is the portion of the allowable load assigned to point sources. The LA is the portion of the allowable load assigned to non-point sources. The MOS is applied to account for uncertainties in the computational process and may be expressed implicitly (documenting conservative processes in the computations) or explicitly (setting aside a portion of the allowable load). Absent a TMDL revision, loads included in the MOS cannot be reallocated to either the WLA or LA portion of the TMDL.

Outfall 001 discharges to an impaired stream (unnamed tributary 36726) in the Montour Run watershed. The TMDL did not assign WLAs to individual discharges from the Imperial Landfill (see the TMDL Component Summary and related maps at the end of this Fact Sheet), but it did impose an aluminum WLA of 0.0 pounds/day at the mouth of South Fork Montour Run. The aluminum WLA of 0.0 pounds/day at the mouth of South Fork Montour Run implies that no point source discharges were identified in that subwatershed when the TMDL was developed. Criteria for other mine drainage pollutants were attained in that part of the watershed, so no other TMDL requirements apply to Outfall 001.

Pennsylvania's most stringent aluminum criterion is an acute aquatic life criterion of 0.75 mg/L. To implement the TMDL's WLA for aluminum, AWS's 2010 NPDES permit limited aluminum at all outfalls permitted in 2010 (Outfalls 001 through 008) to the aluminum criterion including average monthly and maximum daily limits of 0.50 mg/L and 0.75 mg/L, respectively.

[5] 40 CFR § 122.44: In addition to the conditions established under § 122.43(a), each NPDES permit shall include conditions meeting the following requirements when applicable: […]

(k) Best management practices (BMPs) to control or abate the discharge of pollutants when: […]

(2) Authorized under section 402(p) of the CWA for the control of storm water discharges;

(3) Numeric effluent limitations are infeasible;

The average monthly limit for aluminum was subsequently replaced with an average quarterly reporting requirement in AWS's 2021 NPDES permit based on an anti-backsliding exception.

Limiting the maximum daily concentration of aluminum at Outfall 001 to the aluminum criterion allows for a non-zero introduction of load to the South Fork Montour Run subwatershed, but the net effect of that load introduction will not contribute to the impairment because of the diluting effect of the water accompanying the discharge of load. That is, the in-stream concentration of aluminum will not increase above the 0.75 mg/L aluminum criterion when the maximum concentrations of aluminum in Outfall 001 and other point source discharges from the Imperial Landfill are limited to the criterion. Consequently, maintaining the existing maximum daily limit of 0.75 mg/L will be consistent with the TMDL's waste load allocation as required by 40 CFR § 122.44(d)(1)(vii)(B).

001.C. Effluent Limitations and Monitoring Requirements for Outfall 001

In accordance with 25 Pa. Code §§ 92a.12 and 92a.61 and anti-backsliding requirements under 40 CFR § 122.44(l) (incorporated by reference in Pennsylvania regulations at 25 Pa. Code § 92a.44), effluent limits at Outfall 001 are the more stringent of TBELs, WQBELs, regulatory effluent standards, and monitoring requirements developed for this permit renewal. Applicable effluent limits are summarized in the table below.

Table 3. Effluent Limits and Monitoring Requirements for Outfall 001

Parameter	Mass (pounds/day)		Concentration (mg/L)			Basis
	Average Quarterly	Daily Maximum	Average Quarterly	Maximum Daily	Instant Maximum	
Flow (MGD)	Report	Report	—	—	—	25 Pa. Code § 92a.61(h)
pH (S.U.)	—	—	6.0 Inst. Min.		9.0	33 USC § 1342(a)(1)(B); 25 Pa. Code § 92a.12(a); & 40 CFR § 122.44(l)
Chemical Oxygen Demand (COD)	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Total Suspended Solids	—	—	35.0	—	70.0	33 USC § 1342(a)(1)(B); 25 Pa. Code § 92a.12(a); & 40 CFR § 122.44(l)
Total Dissolved Solids	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Oil and Grease	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Total Nitrogen	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Ammonia-Nitrogen	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Total Phosphorus	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Aluminum, Total	—	—	Report	—	0.75	TMDL WQBEL; 40 CFR § 122.44(l)
Barium, Total	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Chromium, Total	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Iron, Total	—	—	3.5	—	7.0	33 USC § 1342(a)(1)(B); 25 Pa. Code § 92a.12(a); &
Lead, Total	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Manganese, Total	—	—	2.0	—	4.0	33 USC § 1342(a)(1)(B); 25 Pa. Code § 92a.12(a); &
Magnesium, Total	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Zinc, Total	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Phenolics, Total	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Total Organic Carbon	—	—	—	Report	—	25 Pa. Code § 92a.61(h)

The sampling frequency and type for TSS, aluminum, iron, manganese, and pH will be 2/quarter using grab samples. All other parameters will require grab sampling 1/6 months. Flow should be measured 2/quarter at the time of sampling.

Since Outfall 001 is the discharge location for Sedimentation Basin B's principal and emergency spillways, AWS must report if a discharge through Outfall 001 is discharging through the basin's emergency spillway, which would represent a pond that is at its design capacity and dewatering through the crest of the concrete outlet riser.

Development of Effluent Limitations

Outfall No. 002 **Design Flow (MGD)** Variable
Latitude 40° 27' 30.0" **Longitude** -80° 16' 30.0"
Wastewater Description: Principal spillway discharges from Sedimentation Basin A collecting storm water runoff from vegetated, closed legacy landfill areas.

Outfall 002 is the discharge point for the principal spillway of Sedimentation Basin A, which receives storm water runoff from disturbed construction areas, access roads, and closed legacy landfill areas of the site that are vegetated. The 1,132,560 ft^2 drainage area is classified as a non-waste-contact area. Storm water regulated at Outfall 002 is currently subject to the following effluent limits and monitoring requirements.

Table 4. Current Effluent Limits and Monitoring Requirements at Outfall 002

Parameter	Mass (lbs/day)		Concentration (mg/L)			Measurement Frequency	Sample Type
	Avg. Mo.	Max Daily	Avg. Mo.	Max Daily	IMAX		
Flow	Report	Report	—	—	—	2/quarter	Measured
pH (S.U.)	—	—	6.0 (Min)	9.0	—	2/quarter	Grab
COD	—	—	—	Report	—	1/6 months	Grab
Total Suspended Solids	—	—	35.0	—	70.0	2/quarter	Grab
Total Dissolved Solids	—	—	—	Report	—	1/6 months	Grab
Oil and Grease	—	—	—	Report	—	1/6 months	Grab
Ammonia-Nitrogen	—	—	—	Report	—	1/6 months	Grab
Aluminum, Total	—	—	Report	—	0.75	2/quarter	Grab
Barium, Total	—	—	—	Report	—	1/6 months	Grab
Chromium, Total	—	—	—	Report	—	1/6 months	Grab
Iron, Total	—	—	3.5	—	7.0	2/quarter	Grab
Lead, Total	—	—	—	Report	—	1/6 months	Grab
Manganese, Total	—	—	2.0	—	4.0	2/quarter	Grab
Magnesium, Total	—	—	—	Report	—	1/6 months	Grab
Zinc, Total	—	—	—	Report	—	1/6 months	Grab
Phenolics, Total	—	—	—	Report	—	1/6 months	Grab
Total Organic Carbon	—	—	—	Report	—	1/6 months	Grab

The effluent limits and monitoring requirements in **Table 4** will remain in effect in the renewed permit pursuant to anti-backsliding requirements under Section 402(o) of the Clean Water Act and/or 40 CFR § 122.44(l) (incorporated by reference at 25 Pa. Code § 92a.44)—unless the limits are superseded by more stringent limits developed for this renewal or are relaxed pursuant to the anti-backsliding exceptions listed in Section 402(o) of the Clean Water Act or 40 CFR § 122.44(l).

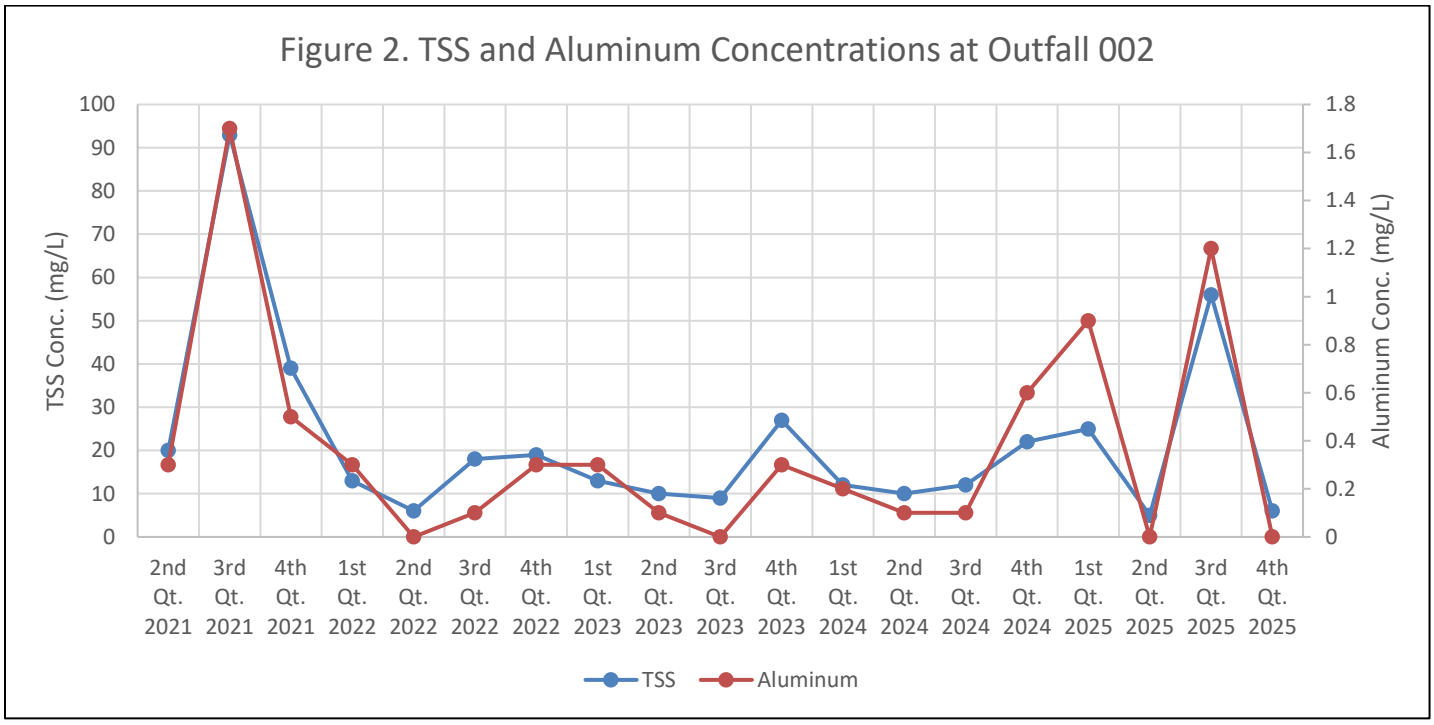
002.A. Technology-Based Effluent Limitations (TBELs)

Sedimentation Basin A has not changed since the previous permit was issued. As explained above, the basin receives runoff from closed areas of the site. Outfall 002 is currently subject to the same effluent limits and monitoring requirements as Outfall 001 including case-by-case TBELs for TSS, iron, and manganese; TMDL WQBELs for aluminum; and monitoring requirements for various general chemistry and metals parameters acting as indicator parameters for waste contact. DMR data indicate that AWS has complied with the TBELs at Outfall 002 throughout the previous permit term except for three aluminum violations in the third quarter of 2021 and in the first and third quarters of 2025, and two TSS violations (average monthly and maximum daily) in the third quarter of 2021.

Comparing TSS concentrations and aluminum concentrations indicate that effluent concentrations for those parameters are positively correlated (see **Figure 2**, below) such that elevated TSS concentrations correspond to elevated aluminum concentrations. AWS already has the technology in place to control TSS (and thus aluminum) with the use of a sedimentation basin. However, the outlet structure of Sedimentation Basin A was not modified with the other sedimentation basins to increase storage capacity and extend detention times. AWS may need to consider modifications to Sedimentation Basin A to extend detention times if effluent violations continue.

As with Outfall 001, AWS checked the box on Module 1 of the NPDES permit application to certify storm water discharges from Outfall 002 are not exposed to industrial activities. DEP understands that Outfall 002 is not exposed to residual waste, but AWS has reported effluent violations at Outfall 002, which implies that there are pollutant sources in the drainage area—at a minimum, sediment. Therefore, existing effluent limits, monitoring requirements, and BMPs will remain in effect with the addition of semi-annual monitoring for Total Nitrogen and Total Phosphorus based on the requirements of Appendix C

of the PAG-03 (as discussed in Section 001.A of this Fact Sheet). No other TBELs or monitoring requirements are considered for Outfall 002.



002.B. Water Quality-Based Effluent Limitations (WQBELs)

As explained in Section 001.B of this Fact Sheet, DEP generally does not develop numerical WQBELs for storm water discharges because mathematical modeling used to develop WQBELs must be performed at steady state design conditions and the variability associated with storm water discharges and wet weather mixing conditions and any resulting water quality impacts are not conducive to steady state modeling. Even though no mathematical modeling is performed, AWS's use of a sedimentation basin in combination with a TMDL WQBEL for aluminum (see below) and permit conditions for storm water that require the use of BMPs including pollution prevention and exposure minimization, good housekeeping, erosion and sediment control, and spill prevention and response—with benchmark monitoring to confirm the effectiveness of those BMPs—will ensure Outfall 002 complies with water quality standards.

Montour Run Watershed TMDL

Outfall 002 is subject to aluminum WQBELs based on the Montour Run Watershed TMDL. TMDL-based water quality limits apply pursuant to the requirements of 40 CFR § 122.44(d)(1)(vii)(B). Outfall 002 discharges to an attainment water (unnamed tributary 36729) in a nonattainment portion (North Fork Montour Run) of the Montour Run watershed. As discussed in Section 001.B of this Fact Sheet, the TMDL for the Montour Run watershed did not assign WLAs to individual discharges from the Imperial Landfill, so the maximum daily concentration of aluminum at Outfall 002 was limited in AWS's 2021 NPDES permit to the aluminum criterion (0.75 mg/L) to ensure Outfall 002's discharges do not contribute to impairment of North Fork Montour Run. That limit will be maintained in addition to reporting average quarterly aluminum concentrations.

WLAs for iron and manganese also were imposed at the mouth of the North Fork Montour Run by the Montour Run Watershed TMDL. However, WQBELs for iron and manganese are not imposed at Outfall 002 because, unlike Outfall 001's receiving water, the receiving water for Outfall 002 is attaining its designated uses (*i.e.*, iron and manganese do not contribute to the impairment of unnamed tributary 36729), so existing TBELs adequately regulate iron and manganese. Therefore, no new TMDL WQBELs are imposed at Outfall 002.

002.C. Effluent Limitations and Monitoring Requirements for Outfall 002

In accordance with 25 Pa. Code §§ 92a.12 and 92a.61 and anti-backsliding requirements under 40 CFR § 122.44(l) (incorporated by reference in Pennsylvania regulations at 25 Pa. Code § 92a.44), effluent limits at Outfall 002 are the more stringent of TBELs, WQBELs, regulatory effluent standards, and monitoring requirements developed for this permit renewal. Applicable effluent limits are summarized in the table below.

Table 5. Effluent Limits and Monitoring Requirements for Outfall 002

Parameter	Mass (pounds/day)		Concentration (mg/L)			Basis
	Average Quarterly	Daily Maximum	Average Quarterly	Maximum Daily	Instant Maximum	
Flow (MGD)	Report	Report	—	—	—	25 Pa. Code § 92a.61(h)
pH (S.U.)	—	—	6.0 Inst. Min.		9.0	33 USC § 1342(a)(1)(B); 25 Pa. Code § 92a.12(a); & 40 CFR § 122.44(l)
Chemical Oxygen Demand (COD)	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Total Suspended Solids	—	—	35.0	—	70.0	33 USC § 1342(a)(1)(B); 25 Pa. Code § 92a.12(a); & 40 CFR § 122.44(l)
Total Dissolved Solids	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Oil and Grease	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Total Nitrogen	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Ammonia-Nitrogen	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Total Phosphorus	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Aluminum, Total	—	—	Report	—	0.75	TMDL WQBEL; 40 CFR § 122.44(l)
Barium, Total	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Chromium, Total	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Iron, Total	—	—	3.5	—	7.0	33 USC § 1342(a)(1)(B); 25 Pa. Code § 92a.12(a); &
Lead, Total	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Manganese, Total	—	—	2.0	—	4.0	33 USC § 1342(a)(1)(B); 25 Pa. Code § 92a.12(a); &
Magnesium, Total	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Zinc, Total	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Phenolics, Total	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Total Organic Carbon	—	—	—	Report	—	25 Pa. Code § 92a.61(h)

The sampling frequency and type for TSS, aluminum, iron, manganese, and pH will be 2/quarter using grab samples. All other parameters will require grab sampling 1/6 months. Flow should be measured 2/quarter at the time of sampling.

Development of Effluent Limitations

Outfall No. 004 **Design Flow (MGD)** Variable
Latitude 40° 27' 30.0" **Longitude** -80° 16' 31.0"
Wastewater Description: Emergency spillway discharges of storm water runoff collected in Sedimentation Basin A

Outfall 004 is the discharge point for the emergency spillway of Sedimentation Basin A, which receives storm water runoff from the same non-waste-contact areas as Outfall 002. Storm water regulated at Outfall 004 is currently subject to the following effluent limits and monitoring requirements.

Table 6. Current Effluent Limits and Monitoring Requirements at Outfall 004

Parameter	Mass (lbs/day)		Concentration (mg/L)			Measurement Frequency	Sample Type
	Avg. Mo.	Max Daily	Avg. Mo.	Max Daily	IMAX		
Flow	Report	Report	—	—	—	2/quarter	Measured
pH (S.U.)	—	—	6.0 (Min)	9.0	—	2/quarter	Grab
Chemical Oxygen Demand (COD)	—	—	—	Report	—	1/6 months	Grab
Total Suspended Solids	—	—	35.0	—	70.0	2/quarter	Grab
Total Dissolved Solids	—	—	—	Report	—	1/6 months	Grab
Oil and Grease	—	—	—	Report	—	1/6 months	Grab
Ammonia-Nitrogen	—	—	—	Report	—	1/6 months	Grab
Aluminum, Total	—	—	Report	—	0.75	2/quarter	Grab
Barium, Total	—	—	—	Report	—	1/6 months	Grab
Chromium, Total	—	—	—	Report	—	1/6 months	Grab
Iron, Total	—	—	3.5	—	7.0	2/quarter	Grab
Lead, Total	—	—	—	Report	—	1/6 months	Grab
Manganese, Total	—	—	2.0	—	4.0	2/quarter	Grab
Magnesium, Total	—	—	—	Report	—	1/6 months	Grab
Zinc, Total	—	—	—	Report	—	1/6 months	Grab
Phenolics, Total	—	—	—	Report	—	1/6 months	Grab
Total Organic Carbon	—	—	—	Report	—	1/6 months	Grab

The effluent limits and monitoring requirements in **Table 6** will remain in effect in the renewed permit pursuant to anti-backsliding requirements under Section 402(o) of the Clean Water Act and/or 40 CFR § 122.44(l) (incorporated by reference at 25 Pa. Code § 92a.44)—unless the limits are superseded by more stringent limits developed for this renewal or are relaxed pursuant to the anti-backsliding exceptions listed in Section 402(o) of the Clean Water Act or 40 CFR § 122.44(l).

004.A. Technology-Based Effluent Limitations (TBELs)

Outfall 004 is currently subject to the same effluent limits and monitoring requirements as Outfalls 001 and 002 including case-by-case TBELs for TSS, iron, and manganese; a TMDL WQBEL for aluminum; and monitoring for various general chemistry and metals parameters. DMR data indicate that AWS has complied with the TBELs at Outfall 004 throughout the previous permit term except for one aluminum violation in the third quarter of 2024 and two TSS violations (average monthly and maximum daily) in the third quarter of 2024. DEP has previously acknowledged that TSS in precipitation-induced overflows from Sedimentation Basin A's emergency spillway may not be controllable if the high flow rates in those circumstances prevent storm water flow into the basin from having enough detention time for particles to settle. For this permit renewal, the TBELs for TSS, iron, and manganese will remain unchanged. As discussed in Section 002.A of this Fact Sheet, AWS may need to consider modifications to Sedimentation Basin A to extend detention times if effluent violations become persistent.

As with other storm water outfalls, AWS checked the box on Module 1 of the NPDES permit application to certify storm water discharges from Outfall 004 are not exposed to industrial activities. DEP understands that Outfall 004 is not exposed to residual waste, but AWS has reported effluent violations at Outfall 004, which implies that there are pollutant sources in the drainage area—at a minimum, sediment. Therefore, existing effluent limits, monitoring requirements, and BMPs will remain in effect with the addition of semi-annual monitoring for Total Nitrogen and Total Phosphorus based on the requirements of Appendix C of the PAG-03 (as discussed in Section 001.A of this Fact Sheet). No other TBELs or monitoring requirements are considered for Outfall 004.

004.B. Water Quality-Based Effluent Limitations (WQBELs)

As explained in Section 001.B of this Fact Sheet, DEP generally does not develop numerical WQBELs for storm water discharges because mathematical modeling used to develop WQBELs must be performed at steady state design conditions and the variability associated with storm water discharges and wet weather mixing conditions and any resulting water quality impacts are not conducive to steady state modeling. Even though no mathematical modeling is performed, AWS's use of a sedimentation basin in combination with a TMDL WQBEL for aluminum (see below) and permit conditions for storm water that require the use of BMPs including pollution prevention and exposure minimization, good housekeeping, erosion and sediment control, and spill prevention and response—with benchmark monitoring to confirm the effectiveness of those BMPs—will ensure Outfall 004 complies with water quality standards.

Montour Run Watershed TMDL

Outfall 004 is subject to an aluminum WQBEL based on the Montour Run Watershed TMDL. TMDL-based water quality limits apply pursuant to the requirements of 40 CFR § 122.44(d)(1)(vii)(B). Outfall 004 discharges to an attainment water (unnamed tributary 36729) in a nonattainment portion (North Fork Montour Run) of the Montour Run watershed. As discussed in Section 001.B of this Fact Sheet, the TMDL for the Montour Run watershed did not assign WLAs to individual discharges from the Imperial Landfill, so the maximum daily concentration of aluminum at Outfall 004 was limited in AWS's 2021 NPDES permit to the aluminum criterion to ensure Outfall 004's discharges do not contribute to impairment of North Fork Montour Run. That limit will be maintained in addition to reporting average quarterly aluminum concentrations.

In addition to aluminum, WLAs for iron and manganese also were imposed at the mouth of the North Fork Montour Run by the Montour Run Watershed TMDL. However, WQBELs for iron and manganese are not imposed at Outfall 004 because the receiving water for Outfall 004 is attaining its designated uses, so existing TBELs adequately regulate iron and manganese. Therefore, no new TMDL WQBELs are imposed at Outfall 004.

004.C. Effluent Limitations and Monitoring Requirements for Outfall 004

In accordance with 25 Pa. Code §§ 92a.12 and 92a.61 and anti-backsliding requirements under 40 CFR § 122.44(l) (incorporated by reference in Pennsylvania regulations at 25 Pa. Code § 92a.44), effluent limits at Outfall 004 are the more stringent of TBELs, WQBELs, regulatory effluent standards, and monitoring requirements developed for this permit renewal. Applicable effluent limits are summarized in the table below.

Table 7. Effluent Limits and Monitoring Requirements for Outfall 004

Parameter	Mass (pounds/day)		Concentration (mg/L)			Basis
	Average Quarterly	Daily Maximum	Average Quarterly	Maximum Daily	Instant Maximum	
Flow (MGD)	Report	Report	—	—	—	25 Pa. Code § 92a.61(h)
pH (S.U.)	—	—	6.0 Inst. Min.		9.0	33 USC § 1342(a)(1)(B); 25 Pa. Code § 92a.12(a); & 40 CFR § 122.44(l)
Chemical Oxygen Demand (COD)	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Total Suspended Solids	—	—	35.0	—	70.0	33 USC § 1342(a)(1)(B); 25 Pa. Code § 92a.12(a); & 40 CFR § 122.44(l)
Total Dissolved Solids	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Oil and Grease	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Total Nitrogen	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Ammonia-Nitrogen	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Total Phosphorus	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Aluminum, Total	—	—	Report	—	0.75	TMDL WQBEL; 40 CFR § 122.44(l)
Barium, Total	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Chromium, Total	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Iron, Total	—	—	3.5	—	7.0	33 USC § 1342(a)(1)(B); 25 Pa. Code § 92a.12(a); &
Lead, Total	—	—	—	Report	—	25 Pa. Code § 92a.61(h)

Table 7 (cont'd). Effluent Limits and Monitoring Requirements for Outfall 004

Parameter	Mass (pounds/day)		Concentration (mg/L)			Basis
	Average Quarterly	Daily Maximum	Average Quarterly	Maximum Daily	Instant Maximum	
Manganese, Total	—	—	2.0	—	4.0	33 USC § 1342(a)(1)(B); 25 Pa. Code § 92a.12(a); &
Magnesium, Total	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Zinc, Total	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Phenolics, Total	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Total Organic Carbon	—	—	—	Report	—	25 Pa. Code § 92a.61(h)

The sampling frequency and type for TSS, aluminum, iron, manganese, and pH will be 2/quarter using grab samples. All other parameters will require grab sampling 1/6 months. Flow should be measured 2/quarter at the time of sampling.

Development of Effluent Limitations

Outfall No. 005 **Design Flow (MGD)** Variable
Latitude 40° 26' 36.2" **Longitude** -80° 16' 17.6"

Wastewater Description: Principal and emergency spillway discharges from Sedimentation Basin C collecting storm water runoff from disturbed construction areas, access roads, rock crushing activities, closed vegetated areas, and Area 7 landfill.

Outfall 005 is the discharge point for the principal and emergency spillways of Sedimentation Basin C, which receives storm water runoff from disturbed construction areas, access roads, rock crushing activity areas, and portions of the Area 7 landfill including intermediate soil cover, closed portions with a final cap system, and portions of the landfill which are covered with a temporary geomembrane. The drainage area for Outfall 005 is about 4,225,320 ft^2 and is classified as a non-waste-contact area. Outfall 007 was formerly the emergency spillway for Sedimentation Basin C, but the emergency spillway constructed into the embankment of Sedimentation Basin C was backfilled and removed. The concrete riser now functions as both the principal spillway and emergency spillway for the basin as depicted in **Figure 1** of this Fact Sheet. Storm water regulated at Outfall 005 is currently subject to the following effluent limits and monitoring requirements.

Table 8. Current Effluent Limits and Monitoring Requirements at Outfall 005

Parameter	Mass (lbs/day)		Concentration (mg/L)			Measurement Frequency	Sample Type
	Avg. Mo.	Max Daily	Avg. Mo.	Max Daily	IMAX		
Flow	Report	Report	—	—	—	2/quarter	Measured
pH (S.U.)	—	—	6.0 (Min)	9.0	—	2/quarter	Grab
BOD5	—	—	—	Report	—	1/6 months	Grab
COD	—	—	—	Report	—	1/6 months	Grab
TSS	—	—	35.0	—	70.0	2/quarter	Grab
TDS	—	—	—	Report	—	1/6 months	Grab
Oil and Grease	—	—	—	Report	—	1/6 months	Grab
Total Nitrogen							
Ammonia-Nitrogen	—	—	—	Report	—	1/6 months	Grab
Aluminum, Total	—	—	Report	—	0.75	2/quarter	Grab
Barium, Total	—	—	—	Report	—	1/6 months	Grab
Chromium, Total	—	—	—	Report	—	1/6 months	Grab
Iron, Total	—	—	3.5	—	7.0	2/quarter	Grab
Lead, Total	—	—	—	Report	—	1/6 months	Grab
Manganese, Total	—	—	2.0	—	4.0	2/quarter	Grab
Magnesium, Total	—	—	—	Report	—	1/6 months	Grab
Zinc, Total	—	—	—	Report	—	1/6 months	Grab
Phenolics, Total	—	—	—	Report	—	1/6 months	Grab
Total Organic Carbon	—	—	—	Report	—	1/6 months	Grab

The effluent limits and monitoring requirements in **Table 8** will remain in effect in the renewed permit pursuant to anti-backsliding requirements under Section 402(o) of the Clean Water Act and/or 40 CFR § 122.44(l) (incorporated by reference at 25 Pa. Code § 92a.44)—unless the limits are superseded by more stringent limits developed for this renewal or are relaxed pursuant to the anti-backsliding exceptions listed in Section 402(o) of the Clean Water Act or 40 CFR § 122.44(l).

005.A. Technology-Based Effluent Limitations (TBELs)

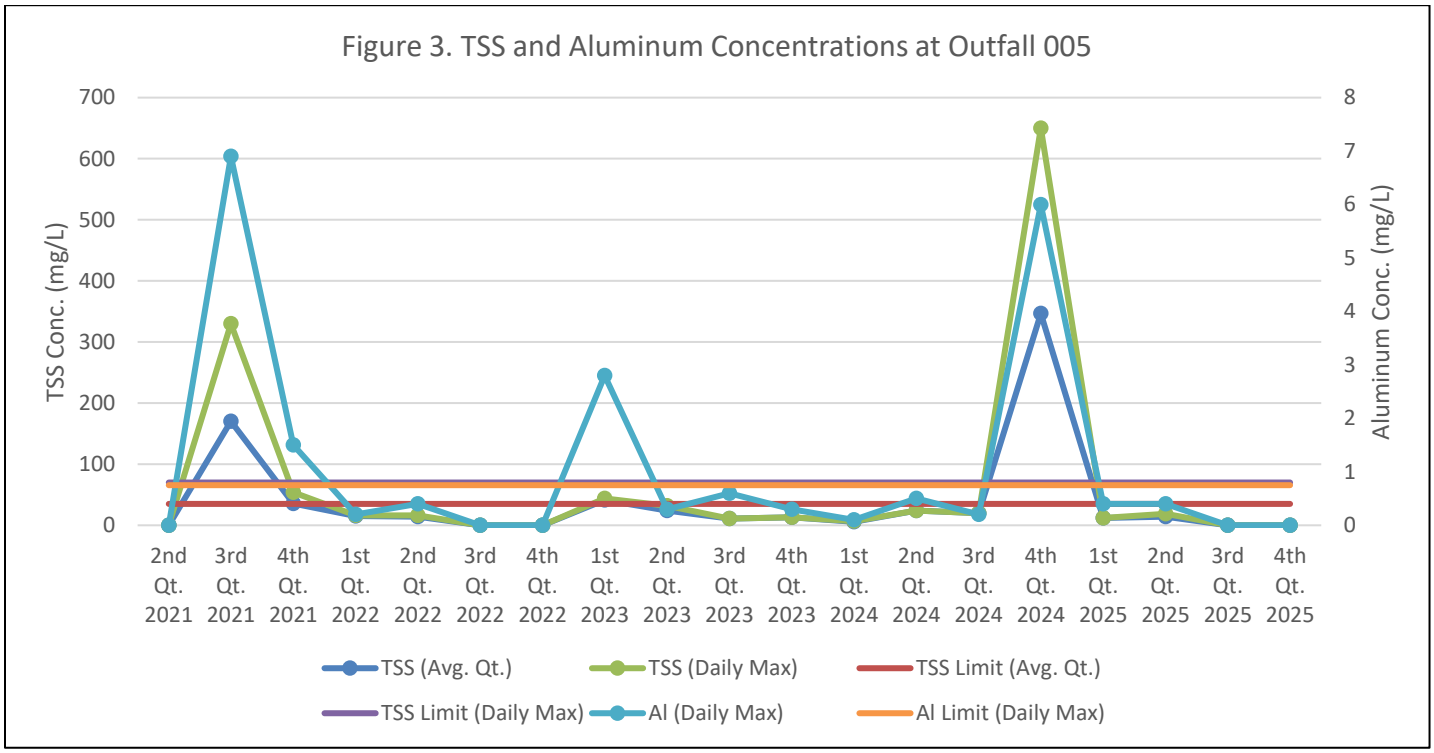
Outfall 005 is currently subject to the same effluent limits and monitoring requirements as Outfalls 001, 002, and 004 including case-by-case TBELs for TSS, iron, and manganese; a TMDL WQBEL for aluminum; and monitoring for various general chemistry and metals parameters. Unlike other outfalls at the Imperial Landfill, monitoring at Outfall 005 also includes BOD5 and Total Nitrogen. AWS has reported intermittent exceedances of TSS and aluminum limits (see **Figure 3**). TSS violations occurred in the third and fourth quarter of 2021, the first quarter of 2023, and the fourth quarter of 2024 with concurrent aluminum violations. AWS also reported violations of iron and manganese limits in the fourth quarter of 2024.

DEP's inspection report from March 2022 stated that aluminum exceedances at Outfalls 005 are due to natural background sources (strip mining) that occurred historically on the property for Outfall 005. Site representatives were reported to state that the BMPs employed are standard for this industry and that TSS cannot be reduced at Outfall 005 (or Outfall 002). DEP disagrees.

Part C.II.F.6 of the current NPDES permit discusses AWS's obligations for responding to exceedances of benchmark values including a requirement to submit a corrective action plan for two or more consecutive exceedances of benchmark values. Corrective actions are required unless the permittee can demonstrate that: (1) the exceedances are solely attributable to natural background sources; (2) no further pollutant reductions are technologically available and economically practicable and achievable in light of best industry practice; or (3) further pollutant reductions are not necessary to prevent stormwater discharges from causing or contributing to an exceedance of applicable water quality standards. TSS, aluminum, iron, and manganese at Outfall 005 are not subject to benchmark values, so the claim of natural background sources cannot be used to justify the violations reported for those parameters.

DEP is aware that strip mining occurred historically at the site and imposed BAT TBELs specifically to control pollutants originating from strip mined areas, which means DEP has already rejected the premise that "natural background sources" of TSS, aluminum, iron, and manganese do not require controls. Also, with respect to those controls, DEP has identified flow equalization, acidity neutralization, ferrous iron oxidation, and solids removal as the BAT. Those technologies are not standard for the municipal solid waste landfill industry, but they are standard for areas associated with coal mining (consistent with the 40 CFR Part 434 basis for the limits). AWS does not employ all those treatment technologies, which DEP considers to be available and affordable to mitigate coal-impacted wastewater. Therefore, there are technologies available to mitigate the TSS and metals effluent limit violations at Outfall 005. Short of installing chemical treatment systems, AWS also could consider alternatives such as baffles to extend the detention time in Sedimentation Basin C.

For this permit renewal, the TBELs for TSS, iron, and manganese will remain unchanged. AWS should explore the alternative control methods discussed above if effluent violations continue.



As with other storm water outfalls, AWS checked the box on Module 1 of the NPDES permit application to certify storm water discharges from Outfall 005 are not exposed to industrial activities. DEP understands that Outfall 005 is not exposed to residual wastes, but AWS has acknowledged that Outfall 005 receives runoff from former strip-mined areas. Therefore, existing effluent limits, monitoring requirements, and BMPs will remain in effect with the addition of semi-annual monitoring for Total Phosphorus based on the requirements of Appendix C of the PAG-03 (as discussed in Section 001.A of this Fact Sheet). No other TBELs or monitoring requirements are considered for Outfall 005.

005.B. Water Quality-Based Effluent Limitations (WQBELs)

As explained in Section 001.B of this Fact Sheet, DEP generally does not develop numerical WQBELs for storm water discharges because mathematical modeling used to develop WQBELs must be performed at steady state design conditions and the variability associated with storm water discharges and wet weather mixing conditions and any resulting water quality impacts are not conducive to steady state modeling.

Even though no mathematical modeling is performed, existing permit requirements are designed to ensure Outfall 005 complies with water quality standards. As with other outfalls at the Imperial Landfill, AWS's compliance with BAT TBELs in combination with a TMDL WQBEL for aluminum (see below) and permit conditions for storm water that require the use of BMPs including pollution prevention and exposure minimization, good housekeeping, erosion and sediment control, and spill prevention and response—with benchmark monitoring to confirm the effectiveness of those BMPs—will ensure Outfall 005 complies with water quality standards (provided AWS complies with the permit requirements). To the extent that AWS's existing BMPs and sedimentation basin do not result in compliance with existing BAT TBELs, AWS should explore additional BMPs and/or treatment options to control TSS and metals from abandoned mine drainage from strip mined areas at the site (as discussed in Section 005.A of this Fact Sheet).

Montour Run Watershed TMDL

Outfall 005 is subject to aluminum WQBELs based on the Montour Run Watershed TMDL. TMDL-based water quality limits apply pursuant to the requirements of 40 CFR § 122.44(d)(1)(vii)(B). Outfall 005 discharges to a nonattainment water (unnamed tributary 36726) in the South Fork Montour Run portion of the Montour Run watershed. As discussed in Section 001.B of this Fact Sheet, the TMDL for the Montour Run watershed did not assign WLAs to individual discharges from the Imperial Landfill, so the maximum daily concentration of aluminum at Outfall 005 was limited in AWS's 2021 NPDES permit to the aluminum criterion (0.75 mg/L) to ensure Outfall 005's discharges do not contribute to impairment of South Fork Montour Run. That limit will be maintained in addition to reporting average quarterly aluminum concentrations. No other parameters were subject to WLAs in the South Fork Montour Run portion of the Montour Run watershed, so no other TMDL WQBELs apply to Outfall 005.

005.C. Effluent Limitations and Monitoring Requirements for Outfall 005

In accordance with 25 Pa. Code §§ 92a.12 and 92a.61 and anti-backsliding requirements under 40 CFR § 122.44(l) (incorporated by reference in Pennsylvania regulations at 25 Pa. Code § 92a.44), effluent limits at Outfall 005 are the more stringent of TBELs, WQBELs, regulatory effluent standards, and monitoring requirements developed for this permit renewal. Applicable effluent limits are summarized in the table below.

Table 9. Effluent Limits and Monitoring Requirements for Outfall 005

Parameter	Mass (pounds/day)		Concentration (mg/L)			Basis
	Average Quarterly	Daily Maximum	Average Quarterly	Maximum Daily	Instant Maximum	
Flow (MGD)	Report	Report	—	—	—	25 Pa. Code § 92a.61(h)
pH (S.U.)	—	—	6.0 Inst. Min.		9.0	33 USC § 1342(a)(1)(B); 25 Pa. Code § 92a.12(a); & 40 CFR § 122.44(l)
BOD_5	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Chemical Oxygen Demand (COD)	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Total Suspended Solids	—	—	35.0	—	70.0	33 USC § 1342(a)(1)(B); 25 Pa. Code § 92a.12(a); & 40 CFR § 122.44(l)
Total Dissolved Solids	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Oil and Grease	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Total Nitrogen	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Ammonia Nitrogen	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Total Phosphorus	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Aluminum, Total	—	—	Report	—	0.75	TMDL WQBEL; 40 CFR § 122.44(l)
Barium, Total	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Chromium, Total	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Iron, Total	—	—	3.5	—	7.0	33 USC § 1342(a)(1)(B); 25 Pa. Code § 92a.12(a); &
Lead, Total	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Manganese, Total	—	—	2.0	—	4.0	33 USC § 1342(a)(1)(B); 25 Pa. Code § 92a.12(a); &
Magnesium, Total	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Zinc, Total	—	—	—	Report	—	25 Pa. Code § 92a.61(h)

Table 9 (cont'd). Effluent Limits and Monitoring Requirements for Outfall 005

Parameter	Mass (pounds/day)		Concentration (mg/L)			Basis
	Average Quarterly	Daily Maximum	Average Quarterly	Maximum Daily	Instant Maximum	
Phenolics, Total	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Total Organic Carbon	—	—	—	Report	—	25 Pa. Code § 92a.61(h)

The sampling frequency and type for TSS, aluminum, iron, manganese, and pH will be 2/quarter using grab samples. All other parameters will require grab sampling 1/6 months. Flow should be measured 2/quarter at the time of sampling.

Development of Effluent Limitations

Outfall No. 006 **Design Flow (MGD)** Variable
Latitude 40° 26' 36.6" **Longitude** -80° 16' 17.6"

Wastewater Description: Principal and emergency spillway discharges from Sedimentation Basin D collecting storm water runoff from disturbed construction areas, access roads, rock crushing activities, and Area 7 landfill.

Outfall 006 is the discharge point for the principal and emergency spillways of Sedimentation Basin D, which receives storm water runoff from disturbed construction areas, access roads, rock crushing activity areas, and portions of the Area 7 landfill including intermediate soil cover, closed portions with a final cap system, and portions of the landfill which are covered with a temporary geomembrane. The drainage area for Outfall 006 is about 5,009,400 ft^2 and is classified as a non-waste-contact area. Outfall 008 was formerly the emergency spillway for Sedimentation Basin D, but the emergency spillway constructed into the embankment of Sedimentation Basin D was backfilled and removed. The concrete riser now functions as both the principal spillway and emergency spillway for the basin as depicted in **Figure 1**. Storm water regulated at Outfall 006 is currently subject to the following effluent limits and monitoring requirements.

Table 10. Current Effluent Limits and Monitoring Requirements at Outfall 006

Parameter	Mass (lbs/day)		Concentration (mg/L)			Measurement Frequency	Sample Type
	Avg. Mo.	Max Daily	Avg. Mo.	Max Daily	IMAX		
Flow	Report	Report	—	—	—	2/quarter	Measured
pH (S.U.)	—	—	6.0 (Min)	9.0	—	2/quarter	Grab
COD	—	—	—	Report	—	1/6 months	Grab
TSS	—	—	35.0	—	70.0	2/quarter	Grab
TDS	—	—	—	Report	—	1/6 months	Grab
Oil and Grease	—	—	—	Report	—	1/6 months	Grab
Ammonia-Nitrogen	—	—	—	Report	—	1/6 months	Grab
Aluminum, Total	—	—	Report	—	0.75	2/quarter	Grab
Barium, Total	—	—	—	Report	—	1/6 months	Grab
Chromium, Total	—	—	—	Report	—	1/6 months	Grab
Iron, Total	—	—	3.5	—	7.0	2/quarter	Grab
Lead, Total	—	—	—	Report	—	1/6 months	Grab
Manganese, Total	—	—	2.0	—	4.0	2/quarter	Grab
Magnesium, Total	—	—	—	Report	—	1/6 months	Grab
Zinc, Total	—	—	—	Report	—	1/6 months	Grab
Phenolics, Total	—	—	—	Report	—	1/6 months	Grab
Total Organic Carbon	—	—	—	Report	—	1/6 months	Grab

The effluent limits and monitoring requirements in **Table 10** will remain in effect in the renewed permit pursuant to anti-backsliding requirements under Section 402(o) of the Clean Water Act and/or 40 CFR § 122.44(l) (incorporated by reference at 25 Pa. Code § 92a.44)—unless the limits are superseded by more stringent limits developed for this renewal or are relaxed pursuant to the anti-backsliding exceptions listed in Section 402(o) of the Clean Water Act or 40 CFR § 122.44(l).

006.A. Technology-Based Effluent Limitations (TBELs)

Outfall 006 is currently subject to the same effluent limits and monitoring requirements as Outfalls 001, 002, 004, and 005 including case-by-case TBELs for TSS, iron, and manganese; TMDL WQBELs for aluminum; and monitoring for various general chemistry and metals parameters. DMR data indicate that AWS has complied with the TBELs at Outfall 006 throughout the previous permit term.

As with other storm water outfalls, AWS checked the box on Module 1 of the NPDES permit application to certify storm water discharges from Outfall 006 are not exposed to industrial activities. DEP understands that Outfall 006 is not exposed to residual waste, but AWS did identify pollutant sources in the drainage area—at a minimum, sediment. Therefore, existing effluent limits, monitoring requirements, and BMPs will remain in effect with the addition of semi-annual monitoring for Total Nitrogen and Total Phosphorus based on the requirements of Appendix C of the PAG-03 (as discussed in Section 001.A of this Fact Sheet). No other TBELs or monitoring requirements are considered for Outfall 006.

006.B. Water Quality-Based Effluent Limitations (WQBELs)

As explained in Section 001.B of this Fact Sheet, DEP generally does not develop numerical WQBELs for storm water discharges because mathematical modeling used to develop WQBELs must be performed at steady state design conditions

and the variability associated with storm water discharges and wet weather mixing conditions and any resulting water quality impacts are not conducive to steady state modeling.

Even though no mathematical modeling is performed, existing permit requirements are designed to ensure Outfall 006 complies with water quality standards. As with other outfalls at the Imperial Landfill, AWS's compliance with BAT TBELs in combination with a TMDL WQBEL for aluminum (see below) and permit conditions for storm water that require the use of BMPs including pollution prevention and exposure minimization, good housekeeping, erosion and sediment control, and spill prevention and response—with benchmark monitoring to confirm the effectiveness of those BMPs—will ensure Outfall 006 complies with water quality standards.

Montour Run Watershed TMDL

Outfall 006 is subject to aluminum WQBELs based on the Montour Run Watershed TMDL. TMDL-based water quality limits apply pursuant to the requirements of 40 CFR § 122.44(d)(1)(vii)(B). Outfall 006 discharges to a nonattainment water (unnamed tributary 36726) in the South Fork Montour Run portion of the Montour Run watershed. As discussed in Section 001.B of this Fact Sheet, the TMDL for the Montour Run watershed did not assign WLAs to individual discharges from the Imperial Landfill, so the maximum daily concentration of aluminum at Outfall 006 was limited in AWS's 2021 NPDES permit to the aluminum criterion (0.75 mg/L) to ensure Outfall 006's discharges do not contribute to impairment of South Fork Montour Run. That limit will be maintained in addition to reporting average quarterly aluminum concentrations. No other parameters were subject to WLAs in the South Fork Montour Run portion of the Montour Run watershed, so no other TMDL WQBELs apply to Outfall 006.

006.C. Effluent Limitations and Monitoring Requirements for Outfall 006

In accordance with 25 Pa. Code §§ 92a.12 and 92a.61 and anti-backsliding requirements under 40 CFR § 122.44(l) (incorporated by reference in Pennsylvania regulations at 25 Pa. Code § 92a.44), effluent limits at Outfall 006 are the more stringent of TBELs, WQBELs, regulatory effluent standards, and monitoring requirements developed for this permit renewal. Applicable effluent limits are summarized in the table below.

Table 11. Effluent Limits and Monitoring Requirements for Outfall 006

Parameter	Mass (pounds/day)		Concentration (mg/L)			Basis
	Average Quarterly	Daily Maximum	Average Quarterly	Maximum Daily	Instant Maximum	
Flow (MGD)	Report	Report	—	—	—	25 Pa. Code § 92a.61(h)
pH (S.U.)	—	—	6.0 Inst. Min.		9.0	33 USC § 1342(a)(1)(B); 25 Pa. Code § 92a.12(a); & 40 CFR § 122.44(l)
Chemical Oxygen Demand (COD)	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Total Suspended Solids	—	—	35.0	—	70.0	33 USC § 1342(a)(1)(B); 25 Pa. Code § 92a.12(a); & 40 CFR § 122.44(l)
Total Dissolved Solids	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Oil and Grease	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Total Nitrogen	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Ammonia Nitrogen	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Total Phosphorus	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Aluminum, Total	—	—	Report	—	0.75	TMDL WQBEL; 40 CFR § 122.44(l)
Barium, Total	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Chromium, Total	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Lead, Total	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Iron, Total	—	—	3.5	—	7.0	33 USC § 1342(a)(1)(B); 25 Pa. Code § 92a.12(a); &
Manganese, Total	—	—	2.0	—	4.0	33 USC § 1342(a)(1)(B); 25 Pa. Code § 92a.12(a); &
Magnesium, Total	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Zinc, Total	—	—	—	Report	—	25 Pa. Code § 92a.61(h)

Table 11 (cont'd). Effluent Limits and Monitoring Requirements for Outfall 006

Parameter	Mass (pounds/day)		Concentration (mg/L)			Basis
	Average Quarterly	Daily Maximum	Average Quarterly	Maximum Daily	Instant Maximum	
Phenolics, Total	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Total Organic Carbon	—	—	—	Report	—	25 Pa. Code § 92a.61(h)

The sampling frequency and type for TSS, aluminum, iron, manganese, and pH will be 2/quarter using grab samples. All other parameters will require grab sampling 1/6 months. Flow should be measured 2/quarter at the time of sampling.

Development of Effluent Limitations

Outfall No.	009	**Design Flow (MGD)**	Variable
Latitude	40° 26' 32.0"	**Longitude**	-80° 17' 15.1"

Wastewater Description: Storm water from the Courtesy Public Drop Off Area comprised of a concrete containment structure with open-top residual waste dumpsters used by the public to dispose of household residual waste.

Outfall 009 is for storm water discharges from a drain hole in a concrete structure used as a public drop-off area to dispose of approved household residual wastes. The Courtesy Public Drop Off Area is approximately 8,700 ft^2 has two open-top residual waste dumpsters. The drain discharges to the ground surface and not directly to surface waters. The area downgradient of the drain hole is covered with grass. Storm water regulated at Outfall 009 is currently subject to the following monitoring requirements.

Table 12. Current Monitoring Requirements at Outfall 009

Parameter	Mass (lbs/day)		Concentration (mg/L)			Measurement Frequency	Sample Type
	Avg. Mo.	Max Daily	Avg. Mo.	Max Daily	IMAX		
Flow	—	Report	—	—	—	1/6 months	Estimate
pH (S.U.)	—	—	—	Report	—	1/6 months	Grab
Chemical Oxygen Demand (COD)	—	—	—	Report	—	1/6 months	Grab
Total Suspended Solids	—	—	—	Report	—	1/6 months	Grab
Ammonia-Nitrogen	—	—	—	Report	—	1/6 months	Grab
Iron, Total	—	—	—	Report	—	1/6 months	Grab

The effluent limits and monitoring requirements in **Table 12** will remain in effect in the renewed permit pursuant to anti-backsliding requirements under Section 402(o) of the Clean Water Act and/or 40 CFR § 122.44(l) (incorporated by reference at 25 Pa. Code § 92a.44)—unless the limits are superseded by more stringent limits developed for this renewal or are relaxed pursuant to the anti-backsliding exceptions listed in Section 402(o) of the Clean Water Act or 40 CFR § 122.44(l).

009.A. Technology-Based Effluent Limitations (TBELs)

As with other storm water outfalls, AWS checked the box on Module 1 of the NPDES permit application to certify storm water discharges from Outfall 009 are not exposed to industrial activities. However, there are two open-top dumpsters in the drainage area, which preclude the classification of Outfall 009 as "no exposure". Therefore, existing benchmark monitoring requirements and BMPs will remain in effect with the addition of 1) another tier of corrective actions in response to four or more consecutive exceedances of benchmark values (based on the requirements of the current PAG-03), and 2) semi-annual monitoring for Total Nitrogen and Total Phosphorus based on the requirements of Appendix C of the PAG-03 (as discussed in Section 001.A of this Fact Sheet). No other technology-based requirements are imposed for Outfall 009.

AWS has not collected a sample of the discharge—whether to complete DMRs or to complete the NPDES permit renewal application—claiming that "concentrated flow is not evident". In the NPDES permit application, AWS again proposed that the permit only require visual inspections of Outfall 009. DEP disagrees with that proposal.

DEP's concerns relating to the Courtesy Public Drop Off Area derive, in part, from the storm water BMP in Condition II.C.1.h in Part C of the permit, which states: "Keep all dumpster lids closed when not in use. For dumpsters and roll off boxes that do not have lids, ensure that discharges have a control (*e.g.*, secondary containment, treatment). This permit does not authorize dry weather discharges from dumpsters or roll off boxes." The basis for regulating storm water discharges from the Courtesy Public Drop Off Area is that: 1) there are wastes exposed to storm water in that area, 2) storm water comes into contact with those wastes and discharges from that area, and 3) public activities in that area are unsupervised and people using that area are not sensitive to the need for storm water controls (*e.g.*, making sure waste gets into the dumpster).

As explained above and in previous permits, Outfall 009 is identified as a drain hole in the south wall of the concrete structure that contains the public drop-off dumpsters. DEP understands that discharges from the Courtesy Public Drop Off Area are unlikely during normal precipitation events based on AWS's previous observations. The configuration of the structure appears to direct storm water as sheet flow from the concrete pad into the vegetated area south of the structure and not to the drain hole as a concentrated discharge. DEP previously proposed capping the drain hole, manually opening the drain to release any accumulated storm water after storm events, and sampling the discharge at that time after visually inspecting the storm water for contaminants. AWS stated that samples of stagnant water in that situation would not be representative. DEP notes that its suggestion was to sample storm water flowing out of the drain hole after unplugging the hole after a rain

event and not sampling stagnant water detained by the plug. Sampling storm water from secondary containment structures in that manner is a normal procedure employed by many facilities.

DEP again proposes options to facilitate sampling of storm water from the Courtesy Public Drop Off Area including:

- Installation of a low berm (*e.g.*, six inches high) along the open, southern edge of the concrete structure to direct storm water to the drain hole (if that is the low point of the concrete pad). AWS could then sample storm water flowing out of the hole during a storm event. This would allow AWS to collect a concentrated, flowing water sample. If the low point is elsewhere along the southern edge of the pad (aerial imagery shown in **Figure 4** suggests storm water runs off from the middle of the concrete pad), then a new hole could be installed in the berm at that location.

- Implement methods to sample sheet flow from the concrete pad. Sheet flow sampling methods generally involve temporary or permanent structures to concentrate diffuse flow to enable sample collection in a bottle. For sheet flow sampling guidance, refer to Section 2.B (pp. 9 & 10) in EPA's "Industrial Stormwater Monitoring and Sampling Guide", April 2021, Document No. EPA 832-B-09-003.

Figure 4. Aerial Image of Courtesy Public Drop Off Area

Image source and date: Google Earth Pro; June 23, 2022. Annotations by DEP.

While samples of qualifying rain events are preferred, the lack of a qualifying rain event should not be used to justify no sampling if there otherwise is an opportunity to collect a sample.

009.B. Water Quality-Based Effluent Limitations (WQBELs)

Outfall 009 is located about 1,000 feet from the nearest surface water (Potato Garden Run). Storm water discharges from Outfall 009 will infiltrate before reaching surface waters. Therefore, those discharges do not have a reasonable potential to cause or contribute to excursions above water quality criteria and no WQBELs are imposed.

There is a Final TMDL for the Potato Garden Run watershed dated April 9, 2003 and a Final TMDL for the Racoon Creek Watershed (of which the Potato Garden Run watershed is a part) dated April 7, 2005. However, as explained above, storm water discharges from Outfall 009 will infiltrate before reaching surface waters, so no TMDL WQBELs are imposed.

The lack of "reasonable potential" should not be construed as a lack of a need to monitor storm water quality for the separate purpose of ensuring BMPs (*i.e.*, technology-based requirements) are adequately implemented in the drainage area.

009.C. Effluent Limitations and Monitoring Requirements for Outfall 009

In accordance with 25 Pa. Code §§ 92a.12 and 92a.61 and anti-backsliding requirements under 40 CFR § 122.44(l) (incorporated by reference in Pennsylvania regulations at 25 Pa. Code § 92a.44), effluent limits at Outfall 009 are the more stringent of TBELs, WQBELs, regulatory effluent standards, and monitoring requirements developed for this permit renewal. Applicable effluent limits are summarized in the table below.

Table 13. Effluent Limits and Monitoring Requirements for Outfall 009

Parameter	Mass (pounds)		Concentration (mg/L)			Basis
	Average Monthly	Maximum Daily	Average Monthly	Maximum Daily	Instant Maximum	
Flow (MGD)	—	Report	—	—	—	25 Pa. Code § 92a.61(h)
pH (S.U.)	—	—	—	Report	—	PAG-03, Appendix C; 25 Pa. Code § 92a.61(h)
Chemical Oxygen Demand (COD)	—	—	—	Report	—	PAG-03, Appendix C; 25 Pa. Code § 92a.61(h)
Total Suspended Solids	—	—	—	Report	—	PAG-03, Appendix C; 25 Pa. Code § 92a.61(h)
Total Nitrogen	—	—	—	Report	—	PAG-03, Appendix C; 25 Pa. Code § 92a.61(h)
Ammonia-Nitrogen	—	—	—	Report	—	PAG-03, Appendix C; 25 Pa. Code § 92a.61(h)
Total Phosphorus	—	—	—	Report	—	PAG-03, Appendix C; 25 Pa. Code § 92a.61(h)
Iron, Total	—	—	—	Report	—	PAG-03, Appendix C; 25 Pa. Code § 92a.61(h)

Outfall 009's discharges are precipitation-induced and non-continuous, so grab sampling will be required for all parameters except flow, which should be estimated at the time of sampling. The sampling frequency for all parameters will be 1/6 months.

Development of Effluent Limitations

Outfall No.	010	**Design Flow (MGD)**	Variable
Latitude	40° 27' 8.0"	**Longitude**	-80° 16' 59.1"

Wastewater Description: Storm water runoff from the maintenance garage and surrounding yard including mobile equipment, above ground storage tanks, a covered residual waste dumpster, and miscellaneous materials like tires, steel scrap, and equipment.

Outfall 010 is for storm water runoff from the landfill's maintenance garage area, which encompasses a drainage area of approximately 18,300 ft^2. Potentially exposed materials include mobile equipment, aboveground storage tanks, a covered residual waste dumpster, and miscellaneous materials such as tires, steel scrap, and equipment. Storm water regulated at Outfall 010 is currently subject to the following monitoring requirements.

Table 14. Current Effluent Limits and Monitoring Requirements at Outfall 010

Parameter	Mass (lbs/day)		Concentration (mg/L)			Measurement Frequency	Sample Type
	Avg. Mo.	Max Daily	Avg. Mo.	Max Daily	IMAX		
Flow	—	Report	—	—	—	1/6 months	Estimate
pH (S.U.)	—	—	—	Report	—	1/6 months	Grab
Chemical Oxygen Demand (COD)	—	—	—	Report	—	1/6 months	Grab
Total Suspended Solids	—	—	—	Report	—	1/6 months	Grab
Ammonia-Nitrogen	—	—	—	Report	—	1/6 months	Grab
Aluminum, Total	—	—	—	Report	—	1/6 months	Grab
Iron, Total	—	—	—	Report	—	1/6 months	Grab
Lead, Total	—	—	—	Report	—	1/6 months	Grab
Manganese, Total	—	—	—	Report	—	1/6 months	Grab
Zinc, Total	—	—	—	Report	—	1/6 months	Grab

The effluent limits and monitoring requirements in **Table 14** will remain in effect in the renewed permit pursuant to anti-backsliding requirements under Section 402(o) of the Clean Water Act and/or 40 CFR § 122.44(l) (incorporated by reference at 25 Pa. Code § 92a.44)—unless the limits are superseded by more stringent limits developed for this renewal or are relaxed pursuant to the anti-backsliding exceptions listed in Section 402(o) of the Clean Water Act or 40 CFR § 122.44(l).

010.A. Technology-Based Effluent Limitations (TBELs)

As with other storm water outfalls, AWS checked the box on Module 1 of the NPDES permit application to certify storm water discharges from Outfall 010 are not exposed to industrial activities. However, the listed exposed materials preclude the classification of Outfall 010 as "no exposure". Therefore, existing benchmark monitoring requirements and BMPs will remain in effect with the addition of 1) another tier of corrective actions in response to four or more consecutive exceedances of benchmark values (based on the requirements of the current PAG-03), and 2) semi-annual monitoring for Total Nitrogen and Total Phosphorus based on the requirements of Appendix C of the PAG-03 (as discussed in Section 001.A of this Fact Sheet). No other technology-based requirements are imposed for Outfall 010.

Outfall 010 does not discharge directly to surface waters. The general flow pathway from the maintenance garage leads over a hillside into an area with gravel and grass. The nearest surface water is about 3,000 feet away. AWS has not collected a sample of the discharge—whether to complete DMRs or to complete the NPDES permit renewal application—claiming that "concentrated flow is not evident". In the NPDES permit application, AWS proposed that the permit only require visual inspections of Outfall 010. DEP refers AWS to Section 2.B (pp. 9 and 10) of EPA's "Industrial Stormwater Monitoring and Sampling Guide", April 2021, Doc. No. EPA 832-B-09-003 for guidance on sampling sheet flow.

010.B. Water Quality-Based Effluent Limitations (WQBELs)

Discharges from Outfall 010 do not have a reasonable potential to cause or contribute to excursions above water quality criteria because the discharges do not discharge directly to surface waters. Therefore, no WQBELs are imposed. As with Outfall 009, Outfall 010's discharges are unaffected by the Potato Garden Run and Racoon Creek Watershed TMDLs because the discharges do not reach those surface waters.

010.C. Effluent Limitations and Monitoring Requirements for Outfall 010

In accordance with 25 Pa. Code §§ 92a.12 and 92a.61 and anti-backsliding requirements under 40 CFR § 122.44(l) (incorporated by reference in Pennsylvania regulations at 25 Pa. Code § 92a.44), effluent limits at Outfall 010 are the more stringent of TBELs, WQBELs, regulatory effluent standards, and monitoring requirements developed for this permit renewal. Applicable effluent limits are summarized in the table below.

Table 15. Effluent Limits and Monitoring Requirements for Outfall 010

Parameter	Mass (pounds)		Concentration (mg/L)			Basis
	Average Monthly	Maximum Daily	Average Monthly	Maximum Daily	Instant Maximum	
Flow (MGD)	—	Report	—	—	—	25 Pa. Code § 92a.61(h)
pH (S.U.)	—	—	—	Report	—	PAG-03, Appendix C; 25 Pa. Code § 92a.61(h)
Chemical Oxygen Demand (COD)	—	—	—	Report	—	PAG-03, Appendix C; 25 Pa. Code § 92a.61(h)
Total Suspended Solids	—	—	—	Report	—	PAG-03, Appendix C; 25 Pa. Code § 92a.61(h)
Total Nitrogen	—	—	—	Report	—	PAG-03, Appendix C; 25 Pa. Code § 92a.61(h)
Ammonia-Nitrogen	—	—	—	Report	—	PAG-03, Appendix C; 25 Pa. Code § 92a.61(h)
Total Phosphorus	—	—	—	Report	—	PAG-03, Appendix C; 25 Pa. Code § 92a.61(h)
Aluminum, Total						25 Pa. Code § 92a.61(h)
Iron, Total	—	—	—	Report	—	PAG-03, Appendix C; 25 Pa. Code § 92a.61(h)
Lead, Total	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Manganese, Total	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Zinc, Total	—	—	—	Report	—	25 Pa. Code § 92a.61(h)

Outfall 010's discharges are precipitation-induced and non-continuous, so grab sampling will be required for all parameters except flow, which should be estimated at the time of sampling. The sampling frequency for all parameters will be 1/6 months.

Development of Effluent Limitations

Outfall No. 011 **Design Flow (MGD)** Variable
Latitude 40° 26' 6.2" **Longitude** -80° 17' 26.4"
Wastewater Description: Storm water runoff from the facility entrance that provides access for all waste trucks to and from the landfill.

Outfall 011 discharges storm water from the facility's entrance road and surrounding area. The drainage area is approximately 784,000 ft^2. All waste trucks accessing the landfill pass through the facility entrance along Boggs Road. Storm water regulated at Outfall 011 is currently subject to the following monitoring requirements.

Table 16. Current Effluent Limits and Monitoring Requirements at Outfall 011

Parameter	Mass (lbs/day)		Concentration (mg/L)			Measurement Frequency	Sample Type
	Avg. Mo.	Max Daily	Avg. Mo.	Max Daily	IMAX		
Flow	—	Report	—	—	—	1/6 months	Estimate
pH (S.U.)	—	—	—	Report	—	1/6 months	Grab
Chemical Oxygen Demand (COD)	—	—	—	Report	—	1/6 months	Grab
Total Suspended Solids	—	—	—	Report	—	1/6 months	Grab
Ammonia-Nitrogen	—	—	—	Report	—	1/6 months	Grab
Aluminum, Total	—	—	—	Report	—	1/6 months	Grab
Iron, Total	—	—	—	Report	—	1/6 months	Grab
Manganese, Total	—	—	—	Report	—	1/6 months	Grab

The effluent limits and monitoring requirements in **Table 16** will remain in effect in the renewed permit pursuant to anti-backsliding requirements under Section 402(o) of the Clean Water Act and/or 40 CFR § 122.44(l) (incorporated by reference at 25 Pa. Code § 92a.44)—unless the limits are superseded by more stringent limits developed for this renewal or are relaxed pursuant to the anti-backsliding exceptions listed in Section 402(o) of the Clean Water Act or 40 CFR § 122.44(l).

011.A. Technology-Based Effluent Limitations (TBELs)

As with other storm water outfalls, AWS checked the box on Module 1 of the NPDES permit application to certify storm water discharges from Outfall 011 are not exposed to industrial activities. However, the drainage area for the outfall includes waste truck traffic and appears to include truck wash waters from trucks traveling along the entrance road, which preclude the classification of Outfall 011 as "no exposure". Therefore, existing benchmark monitoring requirements and BMPs will remain in effect with the addition of 1) another tier of corrective actions in response to four or more consecutive exceedances of benchmark values (based on the requirements of the current PAG-03), and 2) semi-annual monitoring for Total Nitrogen and Total Phosphorus based on the requirements of Appendix C of the PAG-03 (as discussed in Section 001.A of this Fact Sheet). No other technology-based requirements are imposed for Outfall 011.

AWS has not collected a sample of the discharge—whether to complete DMRs or to complete the NPDES permit renewal application—claiming that "concentrated flow is not evident". In the NPDES permit application, AWS proposed that the permit only require visual inspections of Outfall 011.

There is a swale that runs north-south along the entrance road to the site and then turns west along Boggs Road to a surface water ("Potato Garden Run") (see **Figure 5**). Outfall 011 is identified as the point along this swale where storm water leaves the site on its way to Potato Garden Run. The swale is vegetated, so DEP understands that storm water may infiltrate before reaching Potato Garden Run. However, to the extent that storm water from the entrance road flows into the swale and the swale empties into a surface water, representative samples should be collected to the extent practicable. DEP refers AWS to Section 2.B (pp. 9 and 10) of EPA's "Industrial Stormwater Monitoring and Sampling Guide", April 2021, Doc. No. EPA 832-B-09-003 for guidance on sampling sheet flow.

Historical roadside imagery from Google Maps (see **Figures 6 and 7**) shows storm water runoff creating erosion channels either along Boggs Road or into the grassy area leading back into the swale. There is evidently sufficient storm water runoff to cause erosion, and this storm water would be concentrated and sampleable. For its part, AWS appears to address erosion in this area when it occurs.

Figure 5. Imperial Landfill entrance (May 2025)

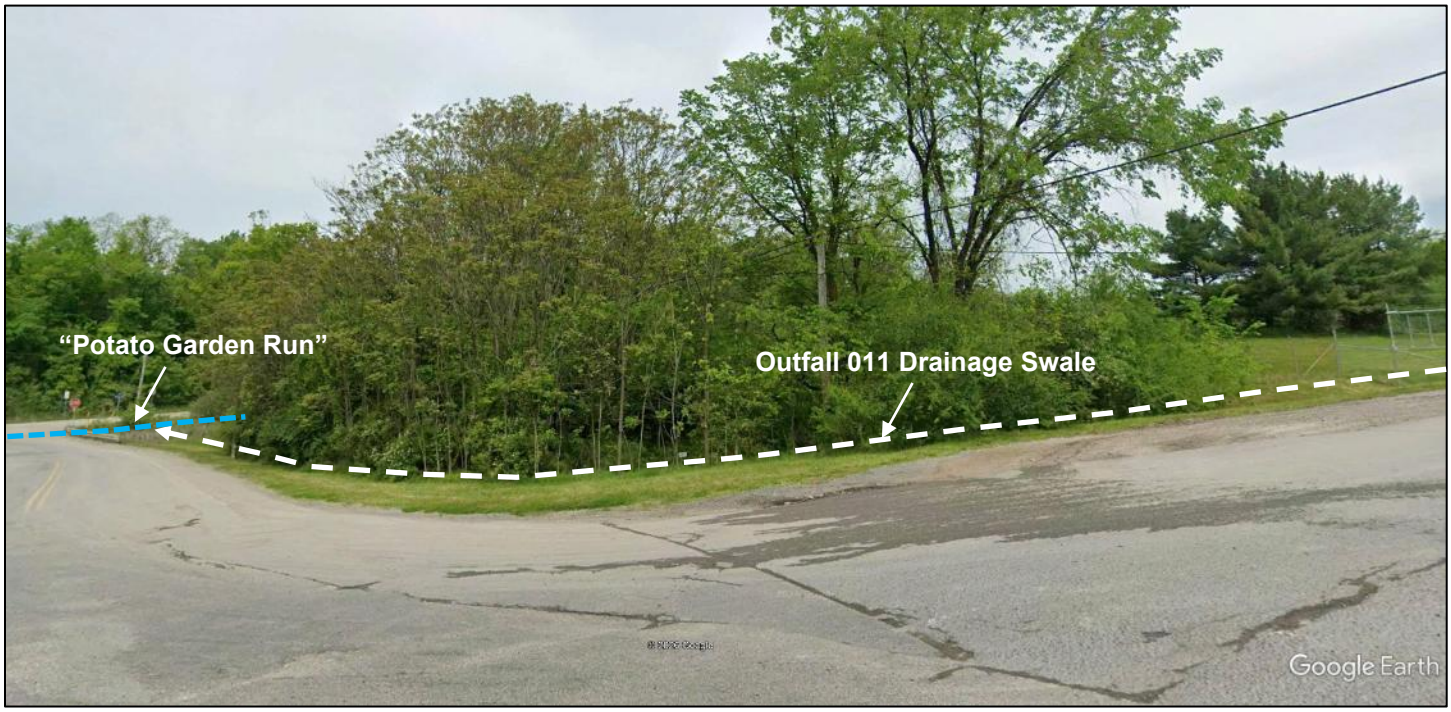


Image Source and Date: Google Earth Pro; May 2025. Annotations by DEP.

Figure 6. Imperial Landfill entrance (July 2021)

Image Source and Date: Google Maps Street View; July 2021. Annotations by DEP.

Figure 7. Imperial Landfill entrance (August 2016)

Image Source and Date: Google Maps Street View; August 2016. Annotations by DEP.

011.B. Water Quality-Based Effluent Limitations (WQBELs)

As explained in Section 001.B of this Fact Sheet, DEP generally does not develop numerical WQBELs for storm water discharges because mathematical modeling used to develop WQBELs must be performed at steady state design conditions and the variability associated with storm water discharges and wet weather mixing conditions and any resulting water quality impacts are not conducive to steady state modeling.

Even though no mathematical modeling is performed, existing permit requirements are designed to ensure Outfall 011 complies with water quality standards including pollution prevention and exposure minimization, good housekeeping, erosion and sediment control, and spill prevention and response—with benchmark monitoring to confirm the effectiveness of those BMPs—will ensure Outfall 011 complies with water quality standards.

Potato Garden Run and Raccoon Creek Watershed TMDLs

No WLAs were assigned to Outfall 011 by either the Potato Garden Run or Racoon Creek Watershed TMDLs. No TMDL WQBELs will be imposed at Outfall 011 since there are no effluent data to show that load reductions are necessary. However, monitoring for aluminum and manganese will be required to collect data on Outfall 011's effluent quality if/when there are discharges that can be sampled and analyzed.

011.C. Effluent Limitations and Monitoring Requirements for Outfall 011

In accordance with 25 Pa. Code §§ 92a.12 and 92a.61 and anti-backsliding requirements under 40 CFR § 122.44(l) (incorporated by reference in Pennsylvania regulations at 25 Pa. Code § 92a.44), effluent limits at Outfall 011 are the more stringent of TBELs, WQBELs, regulatory effluent standards, and monitoring requirements developed for this permit renewal. Applicable effluent limits are summarized in the table below.

Table 17. Effluent Limits and Monitoring Requirements for Outfall 011

Parameter	Mass (pounds)		Concentration (mg/L)			Basis
	Average Monthly	Maximum Daily	Average Monthly	Maximum Daily	Instant Maximum	
Flow (MGD)	—	Report	—	—	—	25 Pa. Code § 92a.61(h)
pH (S.U.)	—	—	—	Report	—	PAG-03, Appendix C; 25 Pa. Code § 92a.61(h)
Chemical Oxygen Demand (COD)	—	—	—	Report	—	PAG-03, Appendix C; 25 Pa. Code § 92a.61(h)
Total Suspended Solids	—	—	—	Report	—	PAG-03, Appendix C; 25 Pa. Code § 92a.61(h)
Total Nitrogen	—	—	—	Report	—	PAG-03, Appendix C; 25 Pa. Code § 92a.61(h)
Ammonia-Nitrogen	—	—	—	Report	—	PAG-03, Appendix C; 25 Pa. Code § 92a.61(h)
Total Phosphorus	—	—	—	Report	—	PAG-03, Appendix C; 25 Pa. Code § 92a.61(h)
Aluminum, Total	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Iron, Total	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Manganese, Total	—	—	—	Report	—	25 Pa. Code § 92a.61(h)

Outfall 011's discharges are precipitation-induced and non-continuous, so grab sampling will be required for all parameters except flow, which should be estimated at the time of sampling. The sampling frequency for all parameters will be 1/6 months.

Development of Effluent Limitations

Outfall No. 012 **Design Flow (MGD)** Variable
Latitude 40° 26' 32.5" **Longitude** -80° 16' 20.1"
Wastewater Description: Storm water from the Pretreatment Facility Entrance (no waste trucks)

Outfall 012 discharges storm water from the Pretreatment Facility Entrance. No waste trucks access or depart the landfill through this entrance. There is no treatment chemical handling, leachate storage, or treatment activities present within the drainage area of Outfall 012. The drainage area for Outfall 012 is approximately 76,200 ft^2. Storm water regulated at Outfall 012 is currently subject to the following monitoring requirements.

Table 18. Current Effluent Limits and Monitoring Requirements at Outfall 012

Parameter	Mass (lbs/day)		Concentration (mg/L)			Measurement Frequency	Sample Type
	Avg. Mo.	Max Daily	Avg. Mo.	Max Daily	IMAX		
Flow	—	Report	—	—	—	1/6 months	Estimate
pH (S.U.)	—	—	—	Report	—	1/6 months	Grab
TSS	—	—	—	Report	—	1/6 months	Grab
Aluminum, Total	—	—	—	Report	—	1/6 months	Grab
Iron, Total	—	—	—	Report	—	1/6 months	Grab

The effluent limits and monitoring requirements in **Table 18** will remain in effect in the renewed permit pursuant to anti-backsliding requirements under Section 402(o) of the Clean Water Act and/or 40 CFR § 122.44(l) (incorporated by reference at 25 Pa. Code § 92a.44)—unless the limits are superseded by more stringent limits developed for this renewal or are relaxed pursuant to the anti-backsliding exceptions listed in Section 402(o) of the Clean Water Act or 40 CFR § 122.44(l).

012.A. Technology-Based Effluent Limitations (TBELs)

As with other storm water outfalls, AWS checked the box on Module 1 of the NPDES permit application to certify storm water discharges from Outfall 012 are not exposed to industrial activities consistent with EPA's conditional exclusion for "no exposure" under 40 CFR § 122.26(g) (incorporated by reference at 25 Pa. Code § 92a.32(a)) and DEP's requirements under 25 Pa. Code § 92a.32(b). Pursuant to 40 CFR § 122.26(g)(3)(ii), the conditional exclusion from the requirement for an NPDES permit is only available on a facility-wide basis but § 122.26(g)(3)(ii) acknowledges that if a facility has some discharges of storm water that would otherwise be "no exposure" discharges, then the requirements of an individual permit can be adjusted accordingly.

To qualify for the "no exposure" exemption, the regulations require facility operators to submit a signed certification stating that there are no discharges of storm water contaminated by exposure to industrial materials and activities. The "No Exposure?" checkbox on Module 1 of DEP's permit application functions as that certification. DEP also requires applicants to submit corroborating analytical results for each "no exposure" outfall. AWS did not submit corroborating analytical results for Outfall 012 claiming that "concentrated flow is not evident". In the NPDES permit application, AWS proposed that the permit only require visual inspections of Outfall 012.

Notwithstanding AWS's claim about concentrated flow, DEP observes that: 1) unlike some other storm water outfalls at the site where sheet flow is likely to be predominant, Outfall 012 is a piped outfall with catch basins in the outfall's drainage area; and 2) AWS did report results from at least one sampling event in the second half of 2021. The results from that sampling event are summarized in **Table 19**.

Table 19. Effluent Concentrations Reported for Outfall 012

Parameter	2nd Semi-Annual Sample (2021)	No Exposure Threshold
Flow (MGD)	0.0648	—
TSS	10	≤30
Aluminum, Total	1.1	0.75 †
Iron, Total	0.76	1.5 †
pH (S.U.)	7.48	6.0 to 9.0

† Most stringent water quality criterion.

Available analytical results indicate that pollutant concentrations are low except for aluminum, which exceeds the aluminum acute water quality criterion. Outfall 012 discharges to a stream that is impaired by metals.

Figure 8. Outfall 012 and Partial Drainage Area View

Figure 9. Outfall 012 and Outflow Area

Source and Date: February 18, 2019 Letter from CEC Re: Outfalls 009, 010, 011, and 012

In the previous permit, DEP did not impose semi-annual monitoring requirements at Outfall 012 based on Appendix C of the PAG-03 because the Outfall 012 drainage area is not associated with industrial activities involving the transport and disposal of residual waste. However, pursuant to the lack of recent corroborating analytical results for no exposure, the elevated aluminum concentration in the available results from 2021, and 40 CFR § 122.26(a)(9)(i)(C) (regarding the regulation of storm water to impose TMDL requirements), monitoring will continue to be required at Outfall 012. [6]

Under the PAG-03, when there are storm water discharges that require a permit, but not under a specific industrial category, then the monitoring requirements listed under Appendix J of the PAG-03 apply as shown in **Table 20**.

Table 20. PAG-03 Appendix J – Minimum Monitoring Requirements

Discharge Parameter	Units	Sample Type	Minimum Measurement Frequency	Benchmark Values
Total Nitrogen †	mg/L	1 Grab	1/6 months	XXX
Total Phosphorus	mg/L	1 Grab	1/6 months	XXX
Total Suspended Solids	mg/L	1 Grab	1/6 months	100
Oil and Grease	mg/L	1 Grab	1/6 months	XXX
pH	S.U.	1 Grab	1/6 months	9.0
Chemical Oxygen Demand (COD)	mg/L	1 Grab	1/6 months	120

† Total Nitrogen is the sum of Total Kjeldahl-N (TKN) plus Nitrite-Nitrate as N (NO2+NO3-N), where TKN and NO2+NO3-N are measured in the same sample.

[6] 40 CFR § 122.26(a) ***Permit requirement.***

(9)(i) On and after October 1, 1994, for discharges composed entirely of storm water, that are not required by paragraph (a)(1) of this section to obtain a permit, operators shall be required to obtain a NPDES permit only if:

(C) The Director, or in States with approved NPDES programs either the Director or the EPA Regional Administrator, determines that storm water controls are needed for the discharge based on wasteload allocations that are part of "total maximum daily loads" (TMDLs) that address the pollutant(s) of concern; […]

The semi-annual monitoring requirements and BMPs from Appendix J of the PAG-03 will be imposed at Outfall 012 subject to the benchmark values in Appendix J. As explained previously, the benchmark values are not effluent limitations and exceedances do not constitute permit violations. However, if sampling demonstrates exceedances of benchmark values for two consecutive monitoring periods, then AWS must submit a corrective action plan within 90 days of the end of the monitoring period triggering the plan. The corrective action plan requirement and the benchmark values will be specified in a condition in Part C of the permit. No other technology-based requirements are imposed for Outfall 009.

012.B. Water Quality-Based Effluent Limitations (WQBELs)

As explained in Section 001.B of this Fact Sheet, DEP generally does not develop numerical WQBELs for storm water discharges because mathematical modeling used to develop WQBELs must be performed at steady state design conditions and the variability associated with storm water discharges and wet weather mixing conditions and any resulting water quality impacts are not conducive to steady state modeling.

Even though no mathematical modeling is performed, existing permit requirements are designed to ensure Outfall 012 complies with water quality standards. As with other outfalls at the Imperial Landfill, AWS's compliance with BAT TBELs in combination with a TMDL WQBEL for aluminum (see below) and permit conditions for storm water that require the use of BMPs including pollution prevention and exposure minimization, good housekeeping, erosion and sediment control, and spill prevention and response—with benchmark monitoring to confirm the effectiveness of those BMPs—will ensure Outfall 012 complies with water quality standards (provided AWS complies with the permit requirements).

Montour Run Watershed TMDL

Outfall 012 discharges to a nonattainment water (unnamed tributary 36726) in the South Fork Montour Run portion of the Montour Run watershed. As discussed in Section 001.B of this Fact Sheet, the TMDL for the Montour Run watershed did not assign WLAs to individual discharges from the Imperial Landfill, but it did impose an aluminum WLA of 0.0 pounds/day at the mouth of South Fork Montour Run. Therefore, to be consistent with that WLA, the previous permit regulated the concentration of aluminum at Outfall 012 using benchmark monitoring with a benchmark value of 0.75 mg/L. Monitoring for iron also was required as a TMDL parameter of concern based on 25 Pa. Code § 92a.61(b). Those requirements will be maintained pursuant to 40 CFR § 122.44(d)(1)(vii)(B) and anti-backsliding requirements.

012.C. Effluent Limitations and Monitoring Requirements for Outfall 012

In accordance with 25 Pa. Code §§ 92a.12 and 92a.61 and anti-backsliding requirements under 40 CFR § 122.44(l) (incorporated by reference in Pennsylvania regulations at 25 Pa. Code § 92a.44), effluent limits at Outfall 012 are the more stringent of TBELs, WQBELs, regulatory effluent standards, and monitoring requirements developed for this permit renewal. Applicable effluent limits are summarized in the table below.

Table 21. Effluent Limits and Monitoring Requirements for Outfall 012

Parameter	Mass (pounds)		Concentration (mg/L)			Basis
	Average Monthly	Maximum Daily	Average Monthly	Maximum Daily	Instant Maximum	
Flow (MGD)	—	Report	—	—	—	25 Pa. Code § 92a.61(h)
pH (S.U.)	—	—	—	Report	—	PAG-03, Appendix J; 25 Pa. Code § 92a.61(h)
Chemical Oxygen Demand (COD)	—	—	—	Report	—	PAG-03, Appendix J; 25 Pa. Code § 92a.61(h)
Total Suspended Solids	—	—	—	Report	—	PAG-03, Appendix J; 25 Pa. Code § 92a.61(h)
Oil and Grease	—	—	—	Report	—	PAG-03, Appendix J; 25 Pa. Code § 92a.61(h)
Total Nitrogen	—	—	—	Report	—	PAG-03, Appendix J; 25 Pa. Code § 92a.61(h)
Total Phosphorus	—	—	—	Report	—	PAG-03, Appendix J; 25 Pa. Code § 92a.61(h)
Aluminum, Total	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Iron, Total	—	—	—	Report	—	25 Pa. Code § 92a.61(h)

Outfall 012's discharges are precipitation-induced and non-continuous, so grab sampling will be required for all parameters except flow, which should be estimated at the time of sampling. The sampling frequency for all parameters will be 1/6 months.

Development of Effluent Limitations

Outfall No.	013	**Design Flow (MGD)**	Variable
Latitude	40° 26' 23.2"	**Longitude**	-80° 17' 26.3"

Wastewater Description: Principal and emergency spillway discharges of storm water runoff from the Western Highwall Borrow Area collected in Sedimentation Pond 1

Outfall 013 is the discharge point for the principal spillway and emergency spillway of Sedimentation Pond 1 for runoff from the 353,750 sq. ft. Western Highwall Borrow Area (see **Figure 10**). The outfall was added to the permit in 2025. Storm water regulated at Outfall 013 is currently subject to the following effluent limits and monitoring requirements.

Table 22. Current Effluent Limits and Monitoring Requirements at Outfall 013

Parameter	Mass (lbs/day)		Concentration (mg/L)			Measurement Frequency	Sample Type
	Avg. Mo.	Max Daily	Avg. Mo.	Max Daily	IMAX		
Flow	Report	Report	—	—	—	2/quarter	Measured
pH (S.U.)	—	—	6.0 Inst. Min	—	9.0	2/quarter	Grab
Chemical Oxygen Demand (COD)	—	—	—	—	Report	1/6 months	Grab
Total Suspended Solids	—	—	35.0	—	7.0	2/quarter	Grab
Ammonia-Nitrogen	—	—	—	—	Report	1/6 months	Grab
Aluminum, Total	—	—	Report	—	Report	2/quarter	Grab
Iron, Total	—	—	3.5	—	7.0	2/quarter	Grab
Manganese, Total	—	—	2.0	—	4.0	2/quarter	Grab

The effluent limits and monitoring requirements in **Table 22** will remain in effect in the renewed permit pursuant to anti-backsliding requirements under Section 402(o) of the Clean Water Act and/or 40 CFR § 122.44(l) (incorporated by reference at 25 Pa. Code § 92a.44)—unless the limits are superseded by more stringent limits developed for this renewal or are relaxed pursuant to the anti-backsliding exceptions listed in Section 402(o) of the Clean Water Act or 40 CFR § 122.44(l).

Figure 10. Western Highwall Borrow Area

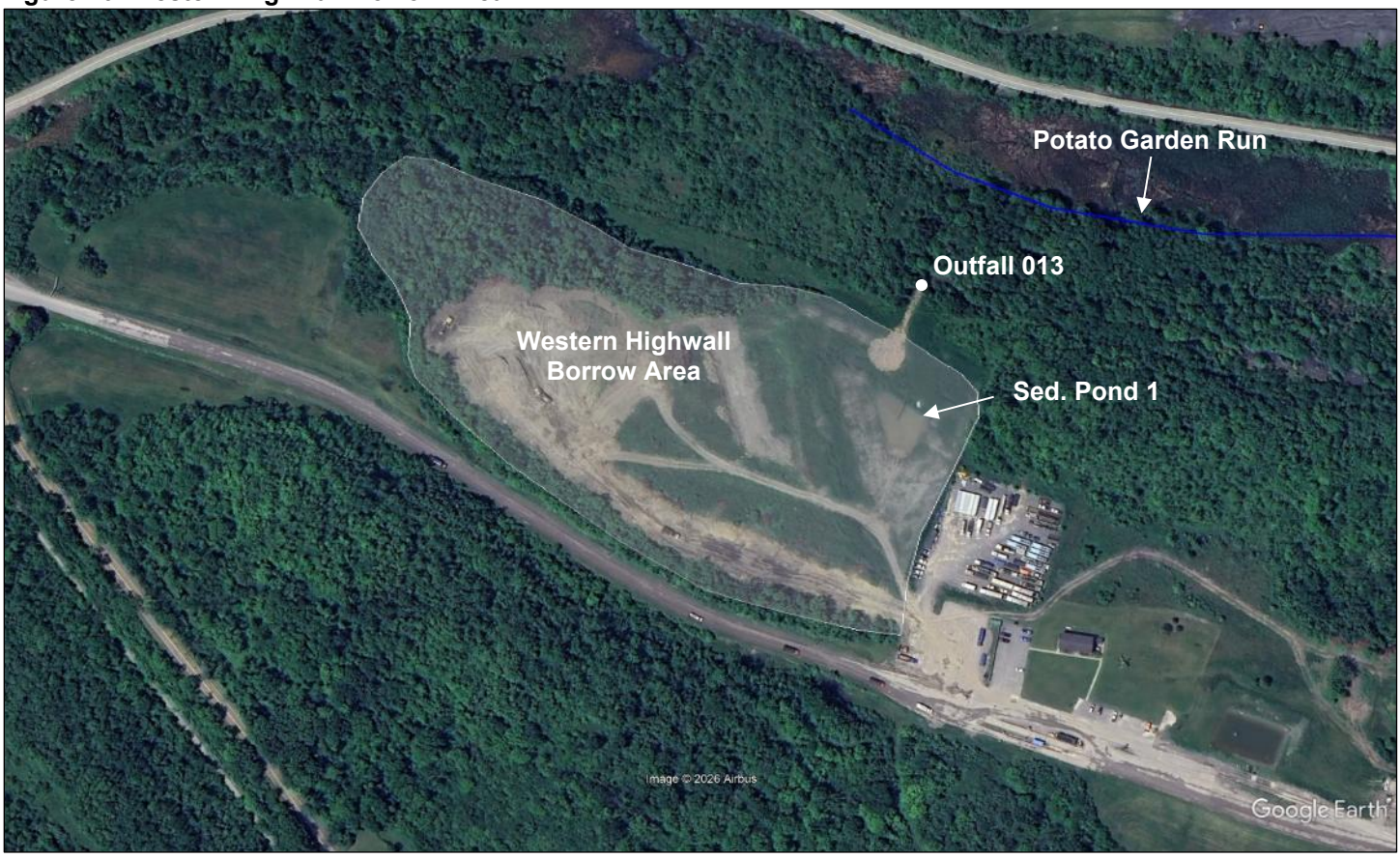


Image Source and Date: Google Earth Pro, June 1, 2025. Annotations by DEP.

Activities in the borrow area include earthmoving. Sediment is the primary pollutant of concern associated with earthmoving. There are no waste disposal activities in the Outfall 013 drainage area. However, the Western Highwall Borrow Area is part of a DEP Abandoned Mine Land Inventory Site (Potato Garden Run #1) and is located within the areal extent of former bituminous surface mine permit 2666BSM8 for Aloe Coal Company Russell No. 2 (12/22/1966).

013.A. Technology-Based Effluent Limitations (TBELs)

Storm water discharges from the Imperial Landfill are not categorically subject to Federal Effluent Limitations Guidelines (ELGs). The Landfills Point Source Category ELGs under 40 CFR Part 445 do not regulate storm water discharges from municipal solid waste landfills. Therefore, case-by-case TBELs are developed pursuant to DEP's best professional judgement in accordance with 25 Pa. Code § 92a.48(a)(3) and 40 CFR § 125.3(c)(2) (incorporated by reference into DEP's regulations by 25 Pa. Code § 92a.3(b)(4)).

Other sedimentation pond outfalls at the Imperial Landfill are subject to TBELs for TSS, iron, manganese, and pH based on 40 CFR Part 434, Subpart B – Coal Preparation Plants and Coal Preparation Plant Associated Areas. While the Imperial Landfill is not a coal preparation plant or coal preparation plant associated area, receiving waters for the Imperial Landfill (including Potato Garden Run that ultimately will receive storm water discharges from Outfall 013) are impaired by metals from acid mine drainage, and overburden materials in the vicinity are impacted by coal consistent with the historical surface mining of coal in the area. Based on DEP's previous regulation of similar discharges from the Imperial Landfill (and DEP's previous case-by-case TBEL evaluation), discharges from Outfall 013 are subject to the most stringent of the following:

Table 23. 40 CFR § 434.22(a) – BPT Coal Prep Plants and Coal Prep Plant Associated Areas

Pollutant	Average of daily values for 30 consecutive days (mg/L)	Maximum for any 1 day (mg/L)
Total Iron	3.5	7.0
Total Manganese	2.0	4.0
TSS	35.0	70.0
pH	Within the range of 6.0 to 9.0 at all times	

Table 24. 40 CFR § 434.23(a) – BAT Coal Prep Plants and Coal Prep Plant Associated Areas

Pollutant	Average of daily values for 30 consecutive days (mg/L)	Maximum for any 1 day (mg/L)
Total Iron	3.5	7.0
Total Manganese	2.0	4.0

There have been no discharges from Sedimentation Pond 1 to date, so there are no effluent characterization data available to identify other parameters of concern. Other storm water discharges near the site's waste disposal areas are monitored for various other constituents. For screening purposes, reporting for Flow, Chemical Oxygen Demand, Total Nitrogen, Total Phosphorus, Ammonia-Nitrogen also will be required at Outfall 013 pursuant to 25 Pa. Code § 92a.61(h). The additional parameters are based on those identified in Appendix C – Landfill and Land Application Sites of DEP's "PAG-03 NPDES General Permit for Discharges of Stormwater Associated with Industrial Activity". In addition, a condition will be added to Part C of the permit requiring AWS to perform an initial effluent characterization (once there is a discharge from Outfall 013), for the following parameters: Oil and Grease, Biochemical Oxygen Demand 5-day (BOD5), Chemical Oxygen Demand (COD), Total Suspended Solids, Total Dissolved Solids, Total Nitrogen, Total Phosphorus, pH, Ammonia-Nitrogen, Total Aluminum, Total Barium, Total Chromium, Total Iron, Total Lead, Total Manganese, Total Magnesium, Total Zinc, Total Phenolics, and Total Organic Carbon.

Flow monitoring is required pursuant to 25 Pa. Code § 92a.61(h) and limits for pH are imposed pursuant to 25 Pa. Code §§ 92a.48(a)(2) and 95.2(1). The pH limits from 95.2(1) are the same as those imposed based on 40 CFR § 434.22(a).

AWS checked the box on Module 1 of the NPDES permit application to certify storm water discharges from Outfall 013 are not exposed to industrial activities. DEP understands that storm water discharges from Outfall 013 are not exposed to residual waste, but there are pollutant sources in the drainage area that are exposed to precipitation (sediment and abandoned mine lands). Monitoring and benchmark values also are imposed to implement TMDL requirements. Therefore, effluent limits and monitoring requirements will continue to apply to Outfall 013.

013.B. Water Quality-Based Effluent Limitations (WQBELs)

Generally, DEP does not develop numerical WQBELs for storm water discharges. Pursuant to 25 Pa. Code § 96.4(g), mathematical modeling used to develop WQBELs must be performed at Q_{7-10} low flow conditions. Precipitation-induced discharges generally do not occur at Q_{7-10} design conditions because the precipitation that causes a storm water discharge will also increase the receiving stream's flow and that increased stream flow will provide additional assimilative capacity during a storm event.

Even though no mathematical modeling is performed, the conditions in Part C of the permit will ensure compliance with water quality standards through a combination of best management practices including pollution prevention and exposure minimization, good housekeeping, erosion and sediment control, and spill prevention and response.

Potato Garden Run and Raccoon Creek Watershed TMDLs

No WLAs were assigned to Outfall 013 by either the Potato Garden Run or Racoon Creek Watershed TMDLs. No TMDL WQBELs will be imposed at Outfall 013 since there are no effluent data to show that load reductions are necessary. However, monitoring for Total Aluminum is required to collect data on Outfall 013's effluent quality and load contributions to Potato Garden Run.

Based on previously submitted as-built drawings, Outfall 013 is located 300± feet away from the approximate headwaters of Potato Garden Run. It is possible that the effluent infiltrates before reaching surface waters.

013.C. Effluent Limitations and Monitoring Requirements for Outfall 013

In accordance with 25 Pa. Code §§ 92a.12 and 92a.61 and anti-backsliding requirements under 40 CFR § 122.44(l) (incorporated by reference in Pennsylvania regulations at 25 Pa. Code § 92a.44), effluent limits at Outfall 013 are the more stringent of TBELs, WQBELs, regulatory effluent standards, and monitoring requirements developed for this permit renewal. Applicable effluent limits are summarized in the table below.

Table 25. Effluent Limits and Monitoring Requirements for Outfall 013

Parameter	Mass (pounds)		Concentration (mg/L)			Basis
	Average Quarterly	Maximum Daily	Average Quarterly	Maximum Daily	Instant Maximum	
Flow (MGD)	Report	Report	—	—	—	25 Pa. Code § 92a.61(h)
pH (S.U.)	—	—	6.0 Inst. Min.	—	9.0	BPJ TBELs; 25 Pa. Code §§ 92a.48(a)(2) and 95.2(1); & 40 CFR §§ 125.3(c)(2) 434.22(a)
Chemical Oxygen Demand (COD)	—	—	—	—	Report	PAG-03, Appendix C; 25 Pa. Code § 92a.61(h)
Total Suspended Solids	—	—	35.0	—	70.0	BPJ TBELs; 25 Pa. Code § 92a.48(a)(3); & 40 CFR §§ 125.3(c)(2) & 434.22(a)
Total Nitrogen	—	—	—	—	Report	PAG-03, Appendix C; 25 Pa. Code § 92a.61(h)
Ammonia-Nitrogen	—	—	—	—	Report	PAG-03, Appendix C; 25 Pa. Code § 92a.61(h)
Total Phosphorus	—	—	—	—	Report	PAG-03, Appendix C; 25 Pa. Code § 92a.61(h)
Aluminum, Total	—	—	Report	—	Report	25 Pa. Code § 92a.61(h)
Iron, Total	—	—	3.5	—	7.0	BPJ TBELs; 25 Pa. Code § 92a.48(a)(3); & 40 CFR §§ 125.3(c)(2) 434.23(a)
Manganese, Total	—	—	2.0	—	4.0	BPJ TBELs; 25 Pa. Code § 92a.48(a)(3); & 40 CFR §§ 125.3(c)(2) 434.23(a)

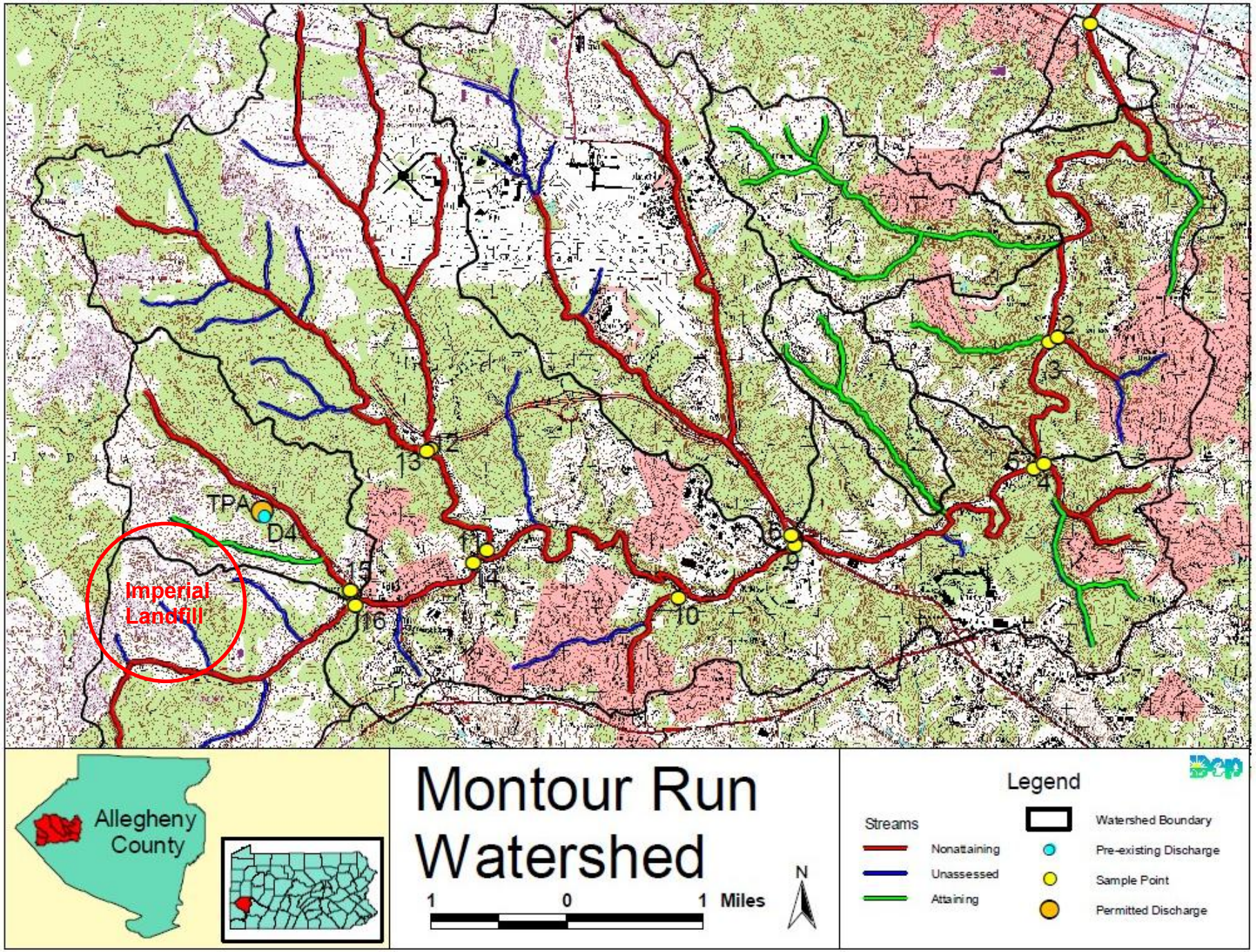
The sampling frequency and type for TSS, aluminum, iron, manganese, and pH will be 2/quarter using grab samples. COD, Total Nitrogen, Total Phosphorus, and Ammonia-Nitrogen will require grab sampling 1/6 months. Flow must be measured 2/quarter at the time of sampling. Since Outfall 013 is the discharge location for Sedimentation Pond 1's principal and emergency spillways, AWS must report if a discharge through Outfall 013 is discharging through the pond's emergency spillway, which would represent a pond that is at its design capacity.

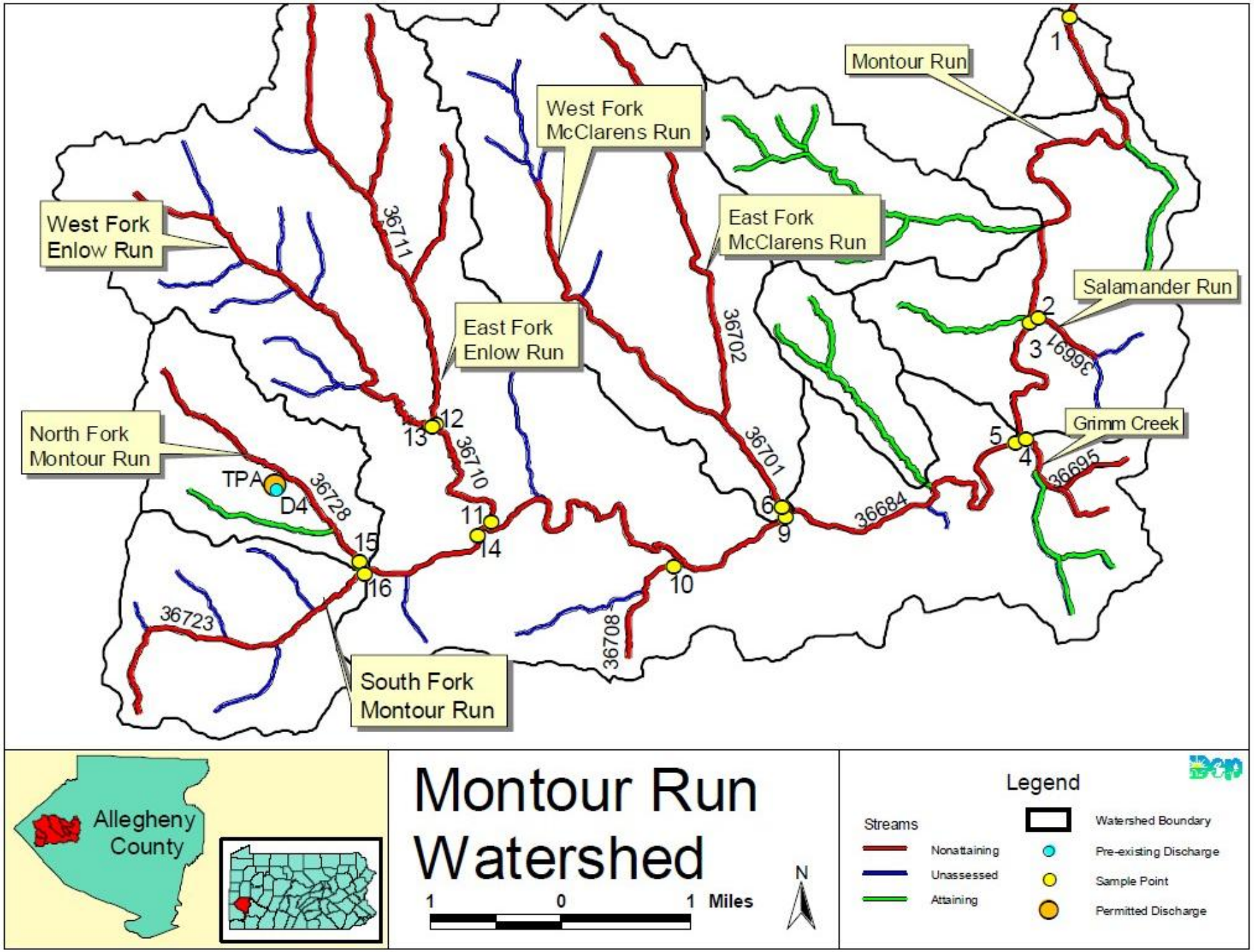
Tools and References Used to Develop Permit	
☐	WQM for Windows Model (see Attachment)
☐	Toxics Management Spreadsheet (see Attachment)
☐	TRC Model Spreadsheet (see Attachment)
☐	Temperature Model Spreadsheet (see Attachment)
☐	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
☒	Technical Guidance for the Development and Specification of Effluent Limitations, 386-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 386-2000-019, 3/98.
☐	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 386-2000-018, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 386-2183-001, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 386-2183-002, 12/97.
☐	Pennsylvania CSO Policy, 386-2000-002, 9/08.
☐	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 386-2000-008, 4/97.
☐	Determining Water Quality-Based Effluent Limits, 386-2000-004, 12/97.
☐	Implementation Guidance Design Conditions, 386-2000-007, 9/97.
☐	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 386-2000-016, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 386-2000-012, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 386-2000-009, 3/99.
☐	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 386-2000-015, 5/2004.
☐	Implementation Guidance for Section 93.7 Ammonia Criteria, 386-2000-022, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 386-2000-013, 4/2008.
☐	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 386-2000-011, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 386-2000-001, 4/09.
☐	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 386-2000-021, 10/97.
☐	Implementation Guidance for Application of Section 93.5(e) for Potable Water Supply Protection Total Dissolved Solids, Nitrite-Nitrate, Non-Priority Pollutant Phenolics and Fluorides, 386-2000-020, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 386-2000-005, 3/99.
☐	Implementation Guidance for the Determination and Use of Background/Ambient Water Quality in the Determination of Wasteload Allocations and NPDES Effluent Limitations for Toxic Substances, 386-2000-010, 3/1999.
☐	Design Stream Flows, 386-2000-003, 9/98.
☐	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 386-2000-006, 10/98.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 386-3200-001, 6/97.
☐	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☒	SOP: Standard Operating Procedure for Clean Water Program New and Reissuance Industrial Waste and Industrial Stormwater Individual NPDES Permit Applications, SOP No. BCW-PMT-001, February 5, 2024, Version 1.7.
☒	SOP: Standard Operating Procedure for Clean Water Program Establishing Effluent Limitations for Individual Industrial Permits, SOP No. BCW-PMT-032, February 5, 2024, Version 1.7.
☐	Other:

Montour Run TMDL Allocations

Station	Parameter	Existing Load (lbs/day)	TMDL Allowable Load (lbs/day)	WLA (lbs/day)	LA (lbs/day)	Load Reduction (lbs/day)	Percent Reduction %
11	*Mouth of Unnamed Tributary 36710 (locally, Enlow Run)*						
	Fe	5.5	5.5	NA	NA	0.0	0
	Mn	4.1	3.3	0.0	3.3	0.0	0
	Al	16.5	9.1	0.0	9.1	7.2	44
	Acidity	ND	NA	NA	NA	0.0	0
12	*Mouth of Unnamed Tributary 36711 (locally, East Fork Enlow Run)*						
	Fe	2.1	2.1	NA	NA	0.0	0
	Mn	1.0	1.0	NA	NA	0.0	0
	Al	ND	ND	NA	NA	0.0	0
	Acidity	ND	ND	NA	NA	0.0	0
13	*Unnamed Tributary 36710, upstream of Unnamed Tributary 36711 (locally West Fork Enlow Run)*						
	Fe	8.2	1.9	0.0	1.9	6.3	77
	Mn	7.0	2.2	0.0	2.2	4.8	68
	Al	5.3	5.1	0.0	5.1	0.2	3
	Acidity	ND	NA	NA	NA	0.0	0
14	*Montour Run, upstream of Unnamed Tributary 36710*						
	Fe	4.9	4.9	NA	NA	0.0	0
	Mn	6.1	5.8	0.0	5.8	0.0	0
	Al	18.4	10.7	0.0	10.7	0.0	0
	Acidity	ND	NA	NA	NA	0.0	0
15	*Mouth of North Fork Montour Run*						
	Fe	3.9	3.7	0.1	3.6	0.2	7
	Mn	9.2	5.3	0.1	5.2	3.9	43
	Al	7.1	1.4	0.1	1.3	5.7	80
	Acidity	ND	NA	NA	NA	0.0	0
16	*Mouth of South Fork Montour Run*						
	Fe	4.3	4.3	NA	NA	0.0	0
	Mn	3.8	3.8	NA	NA	0.0	0
	Al	13.0	1.4	0.0	1.4	11.6	89
	Acidity	ND	NA	NA	NA	0.0	0

ND, values below the detection limit.
NA meets WQS. No TMDL necessary.


Imperial Landfill
TPA
D4
Allegheny County
Montour Run Watershed
1 0 1 Miles
N
Legend
Streams
Nonattaining
Unassessed
Attaining
Watershed Boundary
Pre-existing Discharge
Sample Point
Permitted Discharge


Montour Run
West Fork McClarens Run
East Fork McClarens Run
Salamander Run
West Fork Enlow Run
East Fork Enlow Run
Grimm Creek
North Fork Montour Run
South Fork Montour Run
TPA
D4
36711
36702
36699
36701
36695
36710
36728
36684
36723
36708
1
2
3
4
5
6
9
10
11
12
13
14
15
16
Allegheny County
Montour Run Watershed
1 0 1 Miles
N
Legend
Streams
Nonattaining
Unassessed
Attaining
Watershed Boundary
Pre-existing Discharge
Sample Point
Permitted Discharge


MP5
NFMU9
MP2
NFMU6
NFMU5
TPA
D4
SFMD7
SFMD3
MP6
SFMU2
SFMS6
SFMS7
MKR3
12
13
14
15
16
Montour Run
AMD Discharges
N
1 0 1 Miles
Legend
AMD Discharge
Sample Point
Pre-existing Discharge
Permitted Discharge
Streams
Nonattaining
Unassessed
Attaining
Watershed Boundary