pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0205044**
Facility Type	**Industrial**	APS ID	**873576**
Major / Minor	**Minor**	Authorization ID	**1078061**

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) 695-0900	Facility Phone	***same as applicant***
Client ID	246284	Site ID	238922
SIC Code	4953	Municipality	Findlay Township
SIC Description	Solid Waste Landfill	County	Allegheny
Date Application Received	June 1, 2015	EPA Waived?	No
Date Application Accepted		If No, Reason	TMDL

Purpose of Application: Renewal of an NPDES permit for discharges of storm water from a solid waste landfill.

Summary of Review

Allied Waste Systems of Pennsylvania, LLC (AWS)—a subsidiary of Republic Services, Inc.—submitted an application dated May 28, 2015 and received by the Department of Environmental Protection (DEP) on June 1, 2015 to renew the NPDES permit for the Imperial Landfill. 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. The current NPDES permit for Imperial Landfill was issued on November 30, 2010 with a December 1, 2010 effective date and a November 30, 2015 expiration date. AWS's renewal application was received at least 180 days before the permit expired, so the terms and conditions of the 2010 permit were automatically continued and remain in effect.

During the intervening period between AWS's submission of the NPDES permit renewal application in 2015 and the preparation of this Fact Sheet in 2020, AWS made various changes to the site prompting updates to the NPDES permit renewal application. AWS summarized those updates and other changes at the site in AWS's most recent application update in January 2020. That summary, with some additional notes from DEP, is included at the end of this introductory section for ease of reference.

The current NPDES permit authorizes eight outfalls from four Sedimentation Basins: A, B, C, and D. Outfalls 001 and 003 are for the principal and emergency spillways from Sedimentation Basin B; Outfalls 002 and 004 are for the principal and emergency spillways from Sedimentation Basin A; Outfalls 005 and 007 are for the principal and emergency spillways from Sedimentation Basin C; and Outfalls 006 and 008 are for the principal and emergency spillways from Sedimentation Basin D. 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, the renewed permit eliminates those basins' emergency spillway outfalls: 003, 007, and 008. All the sedimentation basins receive non-contact storm water runoff (i.e., not contacting waste). Sedimentation Basin B also receives groundwater from a low-level interceptor and groundwater underdrain. The groundwater does not contact disposed waste.

Approve	Deny	Signatures	Date
X		Ryan C. Decker, P.E. / Environmental Engineer	October 15, 2020
X		Michael E. Fifth, P.E. / Environmental Engineer Manager	November 24, 2020

Summary of Review

Following receipt of the NPDES permit application in 2015, four additional outfalls were identified: 009, 010, 011, and 012.

Outfall 009 is for storm water discharges from a drain in a concrete structure used as a public drop-off area. The drain discharges to the ground surface and not directly to surface waters, but samples at that location would indicate the effectiveness of Best Management Practices (BMPs) used in the drop-off area.

Outfall 010 discharges storm water from the landfill's maintenance garage area. Like Outfall 009, the outfall does not directly discharge to surface waters, but samples at Outfall 010 would indicate the effectiveness of BMPs employed in the maintenance garage area.

Outfall 011 discharges storm water from the facility's entrance road. The outfall was added because there is the potential for storm water impacts from truck traffic (e.g., fugitive waste, materials tracked from the site).

Outfall 012 discharges storm water from the landfill's pretreatment plant facility entrance. Waste trucks do not use the pretreatment plant access road and discharges exposed to industrial activities from the area surrounding the pretreatment plant discharge to Sedimentation Basin C. AWS identified Outfall 012 as an outfall that is not exposed to industrial activities but monitoring requirements will be imposed based on the reported effluent characteristics.

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

Existing effluent limits will be modified slightly to replace average quarterly limits for aluminum with average quarterly reporting requirements. Note that average limits in the 2010 NPDES permit were identified as average monthly limits with a 2/quarter monitoring frequency. DEP's eDMR system identifies average limits based on the duration of the monitoring period so limits calculated as average monthly limits with a quarterly monitoring frequency are identified in eDMR as average quarterly limits. This Fact Sheet adopts the eDMR convention. Monitoring frequencies for a few other parameters are also relaxed.

Application Update Summary

May 28, 2015	Submission of Application for NPDES Permit Renewal to PADEP Water Management for NPDES Permit #PA0205044 which included spillway modifications for Sedimentation Basins B, C and D.
June 19, 2015	Submission of Minor Permit Modification Application to PADEP Management for Solid Waste Permit #100620 which included spillway modifications for Sedimentation Basins B, C and D.
October 28, 2015	Submission of Application for NPDES Minor Permit Amendment to PADEP Water Management for NPDES Permit #PA0205044 which included spillway modifications for Sedimentation Basins B, C and D.
December 23, 2015	Submission of Minor Permit Modification Application to PADEP Waste Management for Solid Waste Permit #100620 which included the leachate pre-treatment facility.
January 4, 2017	Submission of Amended Application for NPDES Permit Renewal to PADEP Water Management for NPDES Permit #PA0205044 which included three new stormwater outfalls [Outfalls 009, 010, and 011]
April 12, 2017	Submission of addendum to the NPDES Permit Renewal to PADEP Water Management for NPDES Permit #PA0205044 which included new point source discharge from the pre-treatment plant access road • *DEP note: the new point source discharge was later identified as Outfall 012; AWS's addendum was not submitted on the correct application forms*
April 27, 2017	PADEP acknowledgement of a new stormwater outfall and requests submission of updated NPDES permit application forms • *DEP note: DEP sent a letter to AWS acknowledging the existence of the new storm water discharge (Outfall 012) prior to permitting it in the renewal; the letter also requested that AWS submit updated application pages for the new outfall using the correct application forms*

Summary of Review

May 10, 2017	Approval of Water Quality Management permit amendment for Permit #02102201 A-1 • *DEP note: This WQM permit authorized changes to the spillway structures for Sedimentation Ponds B, C, and D, which were made to address effluent violations at the ponds' outfalls*
May 12, 2017	Approval of both Minor Permit Modification Applications for Solid Waste Permit #100620 by PADEP Waste Management
June 8, 2017	Submission of updated forms for the Amended Application for NPDES Permit Renewal to PADEP Water Management for NPDES Permit #PA0205044 which included stormwater discharge from the pre-treatment plant access road in accordance with PADEP correspondence dated April 27, 2017
November 15, 2019	Completion of construction modifications to the spillways of Sedimentation Basins B, C and D
December 9, 2019	Submission of Water Quality Management Post Construction Certification to PADEP Water Management for Sedimentation Basins B, C and D modifications
January 27, 2020	Resubmission of May 28, 2015 application incorporating all previous updates

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 of storm water runoff and low-level interceptor and underdrain groundwater collected in Sedimentation Basin B		
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: Combination of principal and emergency spillways and elimination of Outfall 003

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 of storm water runoff collected in Sedimentation Basin A		
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 of storm water runoff collected in Sedimentation Basin A		
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 of storm water runoff collected in Sedimentation Basin C		
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: Combination of principal and emergency spillways and elimination of Outfall 007

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 of storm water runoff collected in Sedimentation Basin D		
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: Combination of principal and emergency spillways and elimination of Outfall 008

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 a concrete containment structure with open-top residual waste dumpsters for public waste drop-off		
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: New outfall

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 a maintenance garage		
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

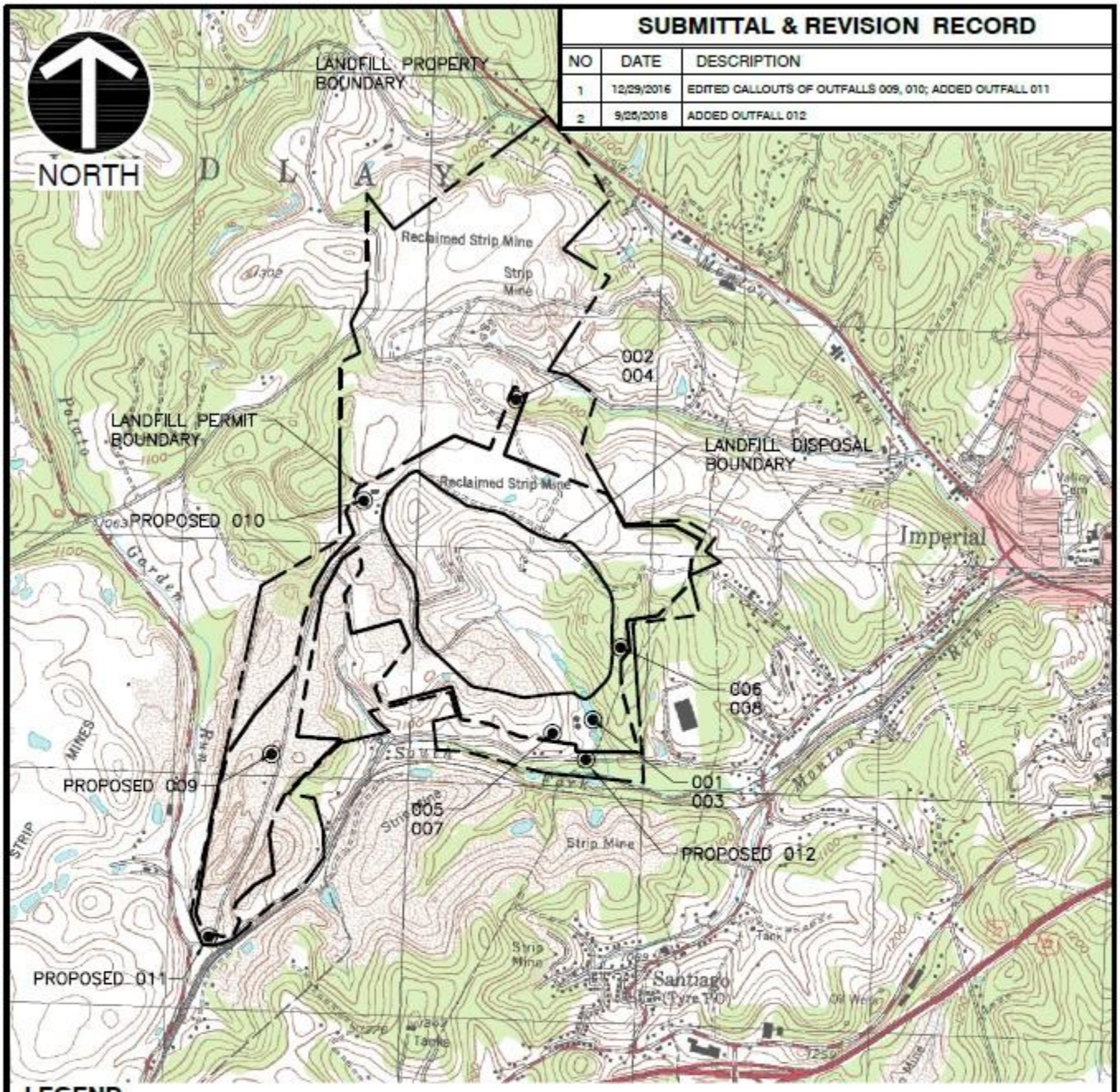
Changes Since Last Permit Issuance: New outfall

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		
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: New outfall

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 plant's facility entrance		
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: New outfall



SUBMITTAL & REVISION RECORD

NO	DATE	DESCRIPTION
1	12/29/2016	EDITED CALLOUTS OF OUTFALLS 009, 010; ADDED OUTFALL 011
2	9/26/2018	ADDED OUTFALL 012

LEGEND

◉ NPDES OUTFALLS (APPROXIMATE LOCATIONS)

REFERENCE

USGS 7.5' MIN. TOPOGRAPHIC QUADRANGLES CLINTON, PA, DATED 1998; OAKDALE, PA, DATED 1993.

SCALE IN FEET
0 2000 4000

*HAND SIGNATURE ON FILE

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ALLIED WASTE SYSTEMS OF PENNSYLVANIA, LLC
IMPERIAL LANDFILL
FINDLAY TOWNSHIP
ALLEGHENY COUNTY, PENNSYLVANIA

SITE LOCATION MAP

DRAWN BY:	SCC	CHECKED BY:	DDR	APPROVED BY:	TKN*	FIGURE NO.: 1
DATE:	7/28/2016	DWG SCALE:	1"=2,000'	PROJECT NO:	160-035	

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

Effluent Violations for Outfall 001, from: October 1, 2019 To: August 31, 2020

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
TSS	12/31/19	Avg Qrtly	44.7	mg/L	35.0	mg/L
TSS	03/31/20	Avg Qrtly	37.5	mg/L	35.0	mg/L
TSS	12/31/19	IMAX	90.0	mg/L	70.0	mg/L
Total Aluminum	12/31/19	Avg Qrtly	0.8	mg/L	0.5	mg/L
Total Aluminum	12/31/19	IMAX	1.30	mg/L	0.75	mg/L

Effluent Violations for Outfall 005, from: October 1, 2019 To: August 31, 2020

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
TSS	12/31/19	Avg Qrtly	125.0	mg/L	35.0	mg/L
TSS	06/30/20	Avg Qrtly	40.0	mg/L	35.0	mg/L
TSS	03/31/20	Avg Qrtly	72.0	mg/L	35.0	mg/L
TSS	12/31/19	IMAX	308.0	mg/L	70.0	mg/L
TSS	03/31/20	IMAX	82.0	mg/L	70.0	mg/L
Total Aluminum	12/31/19	Avg Qrtly	2.5	mg/L	0.5	mg/L
Total Aluminum	06/30/20	Avg Qrtly	1.2	mg/L	0.5	mg/L
Total Aluminum	03/31/20	Avg Qrtly	1.5	mg/L	0.5	mg/L
Total Aluminum	06/30/20	IMAX	1.20	mg/L	0.75	mg/L
Total Aluminum	12/31/19	IMAX	4.30	mg/L	0.75	mg/L
Total Aluminum	03/31/20	IMAX	1.50	mg/L	0.75	mg/L

Development of Effluent Limitations

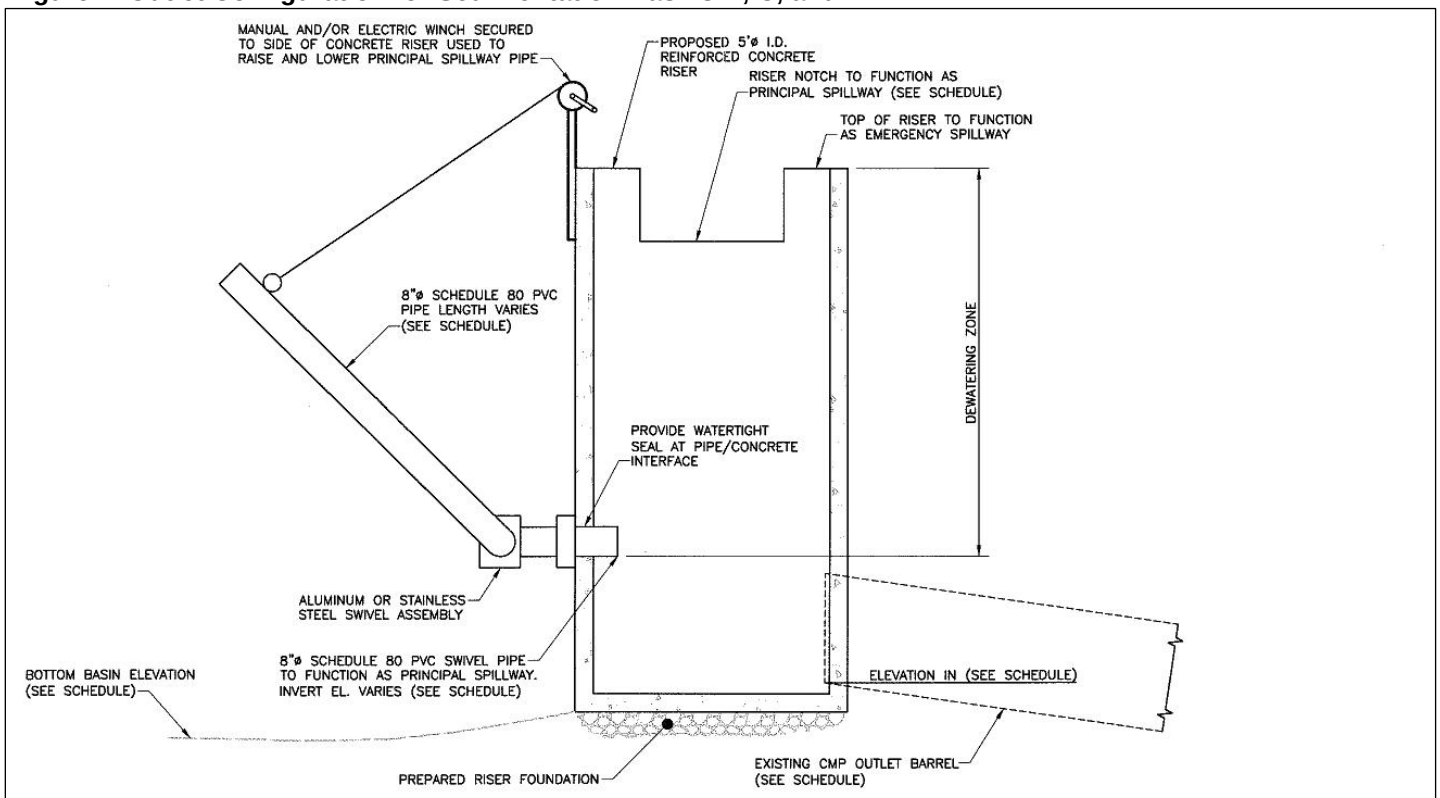
Outfall No.	001	**Design Flow (MGD)**	Variable
Latitude	40° 26' 36.60"	**Longitude**	-80° 16' 17.60"

Wastewater Description: Storm water and low-level interceptor and underdrain groundwater collected in Sedimentation Basin B

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. The concrete riser now functions as both the principal spillway and emergency spillway for the basin as depicted in Figure 1.

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



CONCRETE RISER SCHEDULE

	BOTTOM BASIN ELEVATION	EMBANKMENT CREST ELEVATION	TOP OF RISER ELEVATION	RISER NOTCH WIDTH (FT)	RISER NOTCH DEPTH (FT)	NUMBER OF NOTCHES	SWIVEL PIPE INVERT ELEVATION	SWIVEL PIPE LENGTH (FT)	EXISTING OUTLET BARREL INVERT ELEVATION IN	EXISTING OUTLET BARREL INVERT ELEVATION OUT	OUTLET BARREL DIAMETER (FT)	OUTLET BARREL LENGTH (FT)
POND B	1040.0	1052.7	1048.0	2.5	2.0	2	1043.0	5.0	1041.10	1036.51	4.0	92
POND C	1092.0	1106.5	1102.0	2.5	2.0	2	1095.5	6.5	1093.00	1090.20	4.0	110
POND D	1175.0	1190.0	1087.0	2.5	2.5	2	1078.5	8.5	1078.00	1076.00	4.5	150

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

Outfall 001 is currently subject to TBELs for total suspended solids, iron, and manganese; WQBELs for aluminum; and monitoring for Chemical Oxygen Demand, Oil and Grease, Total Dissolved Solids, Total Organic Carbon, Barium, Chromium, Lead, Magnesium, Zinc, and Phenols. The TBELs were imposed based on technology-based effluent limits applicable to mine wastewaters because discharges from the facility exhibited elevated concentrations of mine water pollutants and because the landfill discharges to a watershed that is impaired by mine drainage. The current effluent limits and monitoring requirements are summarized in Table 1.

Table 1. Outfall 001 Existing Effluent Limits

Parameter	Concentration (mg/L)		
	Average Quarterly	Instant Maximum	Measurement Frequency
Flow (MGD)	Report	Report	2/quarter
Chemical Oxygen Demand	Report	Report	2/quarter
Oil and Grease	Report	Report	2/quarter
Total Dissolved Solids	Report	Report	2/quarter
Total Organic Carbon	Report	Report	2/quarter
Total Suspended Solids	35.0	70.0	2/quarter
Barium	Report	Report	2/quarter
Chromium	Report	Report	2/quarter
Lead	Report	Report	2/quarter
Magnesium	Report	Report	2/quarter
Iron	3.5	7.0	2/quarter
Aluminum	0.5	0.75	2/quarter
Manganese	2.0	4.0	2/quarter
Zinc	Report	Report	2/quarter
Phenols	Report	Report	2/quarter
pH	within the range of 6.0 to 9.0		2/quarter

AWS requested the removal of the average limits for TSS, aluminum, iron, and manganese. The removal of case-by-case TBELs and WQBELs is subject to anti-backsliding requirements in 40 CFR § 122.44(l) and Section 402(o) of the Clean Water Act. WQBELs for aluminum are addressed in Section 001.B of this Fact Sheet.

Backsliding from Average Limits for TSS, Iron, and Manganese

EPA explains anti-backsliding provisions in Section 7.2.1 of the 2010 NPDES Permit Writers' Manual:

> **7.2.1 Anti-backsliding Statutory Provisions**
>
> Clean Water Act (CWA) section 402(o) expressly prohibits backsliding from certain existing effluent limitations. CWA section 402(o) consists of three main parts: (1) a prohibition on specific forms of backsliding, (2) exceptions to the prohibition, and (3) a safety clause that provides an absolute limitation on backsliding.
>
> First, CWA section 402(o)(1) prohibits the relaxation of effluent limitations for two situations:
>
> - To revise an existing TBEL that was developed on a case-by-case basis using best professional judgment (BPJ) to reflect subsequently promulgated effluent limitations guidelines and standards (effluent guidelines) that would result in a less stringent effluent limitation.
>
> - Relaxation of an effluent limitation that is based on state standards, such as water quality standards or treatment standards, unless the change is consistent with CWA section 303(d)(4). Section 303(d)(4) may be applied independently of section 402(o).
>
> The prohibition against relaxation of effluent limitations is subject to the exceptions in CWA section 402(o)(2) and, for limitations based on state standards, the provisions of CWA section 303(d)(4). […]

AWS's effluent limits for TSS, iron, and manganese were imposed as case-by-case TBELs using Best Professional Judgment. The statutory provisions in Section 402(o) of the Clean Water Act only address backsliding from case-by-case TBELs to subsequently promulgated effluent limitations guidelines. Other TBEL backsliding scenarios, including backsliding from case-by-case TBELs to other case-by-case TBELs, are addressed by 40 CFR § 122.44(l). EPA explains those anti-backsliding provisions in Section 7.2.2 of the 2010 NPDES Permit Writers' Manual:

> **7.2.2 Anti-backsliding Regulatory Provisions**
>
> Anti-backsliding regulations are found at Title 40 of the Code of Federal Regulations (CFR) 122.44(l). The regulations do not specifically address backsliding where a permittee seeks relaxation of an effluent limitation that

is based on a state treatment standard or water quality standard [i.e., based on CWA section 301(b)(1)(C), 303(d) or 303(e)]. They do, however, address all other forms of backsliding.

First, the regulations at § 122.44(l)(1) restrict the relaxation of final effluent limitations and the relaxation of standards or conditions contained in existing permits. Thus, this regulation, in effect, addresses all types of backsliding not addressed in the CWA provisions (e.g., backsliding from limitations derived from effluent guidelines, from new source performance standards, from existing case-by-case limitations to new case-by-case limitations, and from conditions such as monitoring requirements that are not effluent limitations). Under the regulation, a permittee must meet one of the causes for modification under § 122.62 for the reissued permit to allow relaxation of such limitations, standards, or conditions.

Second, the regulations at § 122.44(l)(2)(i) directly reflect the specific prohibition imposed by CWA section 402(o) on backsliding where a permittee seeks to revise an existing case-by-case TBEL developed using BPJ to reflect a subsequently promulgated effluent guideline that is less stringent than the case-by-case requirement. The regulations include the same exceptions to this prohibition that are in CWA section 402(o)(2) and the same safety clause in CWA section 402(o)(3).

Thus, if the permit condition being considered for relaxation is either a case-by-case effluent limitation developed using BPJ or is any other limitation, standard, or condition other than an effluent limitation based on a state standard, the permit writer can apply the requirements in § 122.44(l). For effluent limitations based on state standards, the permit writer should apply the provisions of CWA sections 402(o) and 303(d)(4) directly.

The proposed removal of average limits for TSS, iron, and manganese is subject to the following restrictions from 40 CFR § 122.44(l)(1) and (2):

(l) *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.)

(2) In the case of effluent limitations established on the basis of Section 402(a)(1)(B) of the CWA, a permit may not be renewed, reissued, or modified on the basis of effluent guidelines promulgated under section 304(b) subsequent to the original issuance of such permit, to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit.

Section 122.44(l)(1) requires that effluent limits be at least as stringent as those in the previous permit unless one of the causes for modification listed in 40 CFR § 122.62 applies. Section 122.44(l)(2) requires that case-by-case effluent limits (i.e., those developed pursuant to Section 402(a)(1)(B) of the CWA) not be made less stringent due to the promulgation of less stringent effluent guidelines, subject to certain exceptions. Section 122.44(l)(2)(ii) puts limitations on backsliding, similar to Section 402(o)(3) of the Clean Water Act, but the § 122.44(l)(2)(ii) limitations apply to backsliding from case-by-case TBELs to less stringent limits in subsequently promulgated effluent guidelines and not to other backsliding situations such as the one presently under consideration (case-by-case TBELs to less stringent case-by-case TBELs).

The storm water and non-contact groundwater discharges from the Imperial Landfill are not subject to federal Effluent Limitations Guidelines, so the provisions of § 122.44(l)(2) do not apply. Therefore, backsliding is contingent on the existence of one or more of § 122.62's eighteen causes for permit modification and the backsliding is limited to pollutant levels that will not violate water quality standards.

The 40 CFR § 122.62 causes for modification that might apply are:

- § 122.62(a)(1): "*Alterations*. There are material and substantial alterations or additions to the permitted facility or activity (including a change or changes in the permittee's sludge use or disposal practice) which occurred after permit issuance which justify the application of permit conditions that are different or absent in the existing permit.";
- § 122.62(a)(15): "To correct technical mistakes, such as errors in calculation, or mistaken interpretations of law made in determining permit conditions."; and
- § 122.62(a)(16): "When the discharger has installed the treatment technology considered by the permit writer in setting effluent limitations imposed under section 402(a)(1) of the CWA and has properly operated and

> maintained the facilities but nevertheless has been unable to achieve those effluent limitations. In this case, the limitations in the modified permit may reflect the level of pollutant control actually achieved (but shall not be less stringent than required by a subsequently promulgated effluent limitations guideline)."

The fact sheet for the previous permit does not identify the specific regulatory reference for the TSS, iron, and manganese TBELs, it merely notes that the limits are consistent with the use of sedimentation technology and that the limits for the metals were imposed because of the Montour Run TMDL. As explained in Section 001.B below, aluminum is the only parameter subject to WQBELs based on the Montour Run TMDL. The TBELs for TSS, iron, and manganese appear to be based on 40 CFR Part 434. Part 434 establishes TBELs for TSS, iron, manganese, and pH on discharges from coal mines. Those are some of the same pollutants that contribute to the impairment of the Montour Run watershed.

AWS completed alterations to the outfall structures for Sedimentation Basins B, C, and D in 2019. However, those alterations were intended to bring the facility into compliance with the existing effluent limits. Alterations intended to result in compliance with effluent limits do not justify the removal of those limits. Therefore, the § 122.62(a)(1) cause for modification is not applicable.

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, but the principles of treatment for mine wastewater pollutants would reasonably apply to discharges containing similar pollutants and EPA did identify similar types of transient wastewater sources for control by Part 434.[1]

AWS does not use lime neutralization technology. AWS uses anionic polymers logs, which help create floc particles that subsequently settle out in the sedimentation basin. Since AWS does not use the lime neutralization technology that was implicitly considered by the previous permit writer when setting the TSS, iron, and manganese limits at Outfall 001, the § 122.62(a)(16) cause for modification is not applicable. The implication from this analysis is that there are available and affordable technologies AWS does not use that could be used to achieve the existing effluent limits.

The third potentially applicable cause for modification is to correct technical mistakes. In the 1982 amendments to Part 434, EPA included a provision for alternative effluent limitations during storms. EPA explains on pp. 5 and 9 of the 1982 Final Development Document for Coal Mining:

> Previous studies conducted by EPA have shown that the TSS limitations cannot be consistently met during precipitation events due primarily to site specific factors. Accordingly, previous coal mining regulations have afforded relief from effluent requirements during storm conditions provided the treatment facility is properly designed and operated. The exemption permitted a discharge without regard to effluent quality.
>
> Since promulgation of the previous BPT and NSPS coal mining regulations, two separate studies (one at 24 sites, the other at 8 sites) have been performed to evaluate the performance of sedimentation ponds during various rainfall events. These studies concluded that settleable solids and pH best characterize pond performance, and limitations are established for these parameters. Compliance with the limitations will be required for any discharges due to precipitation except those caused by storms greater than a 10-year, 24-hour precipitation event. For these events, only a pH limitation will apply. These are the modifications to the exemption published in 44 FR 76788 (28 December 1979). The additional costs incurred for this modification will be confined to a minor amount of additional, inexpensive monitoring and some potential supplemental lime addition requirements. These are judged to be relatively minor, and far outweighed by the potential savings accrued from the elimination of the 10-year, 24-hour design standard. No alternate limitations or exemptions are provided for discharges from the underground workings of underground mines except where such discharges are commingled with surface runoff. In order to allow alternate treatment systems and to be consistent with the proposed Office of Surface Mining (OSM) regulations, the Agency has also decided to delete pond design criteria as requirements for eligibility for the storm exemption. Thus, facilities will not have to construct specified treatment ponds; they will instead be required to meet effluent limitations. […]

[1] "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.

> Previous studies by EPA contractors showed that TSS cannot be controlled consistently when it rains. Since those studies, EPA has instituted two sampling and analysis programs to characterize sedimentation pond performance parameters during various rainfall events. Results substantiate that settleable solids and pH can be effectively controlled during rainfall events (or snowmelt of equivalent volume) less than the 10-year, 24-hour design storm[.]

To the extent that DEP could have made technical mistakes considering the above provision of the regulations referenced for AWS's TSS, iron, and manganese TBELs, there could be justification to modify effluent limits on the sedimentation basins' emergency spillway discharges. If TSS limits on storm water discharges *during* storm events cannot be consistent achieved and the only discharges from AWS's sedimentation basins that cannot be detained and controlled during storm events are those resulting from storms that exceed the 25-year, 24-hour storm event design basis for the basins, then any discharges from the basins during lesser storms should be able to meet the TSS limits.

Figure 2. Correlation of Outfall 001 Avg. TSS Conc. and Flows (1st Qtr. 2012 - 2nd Qtr. 2020) - Outlier Excluded

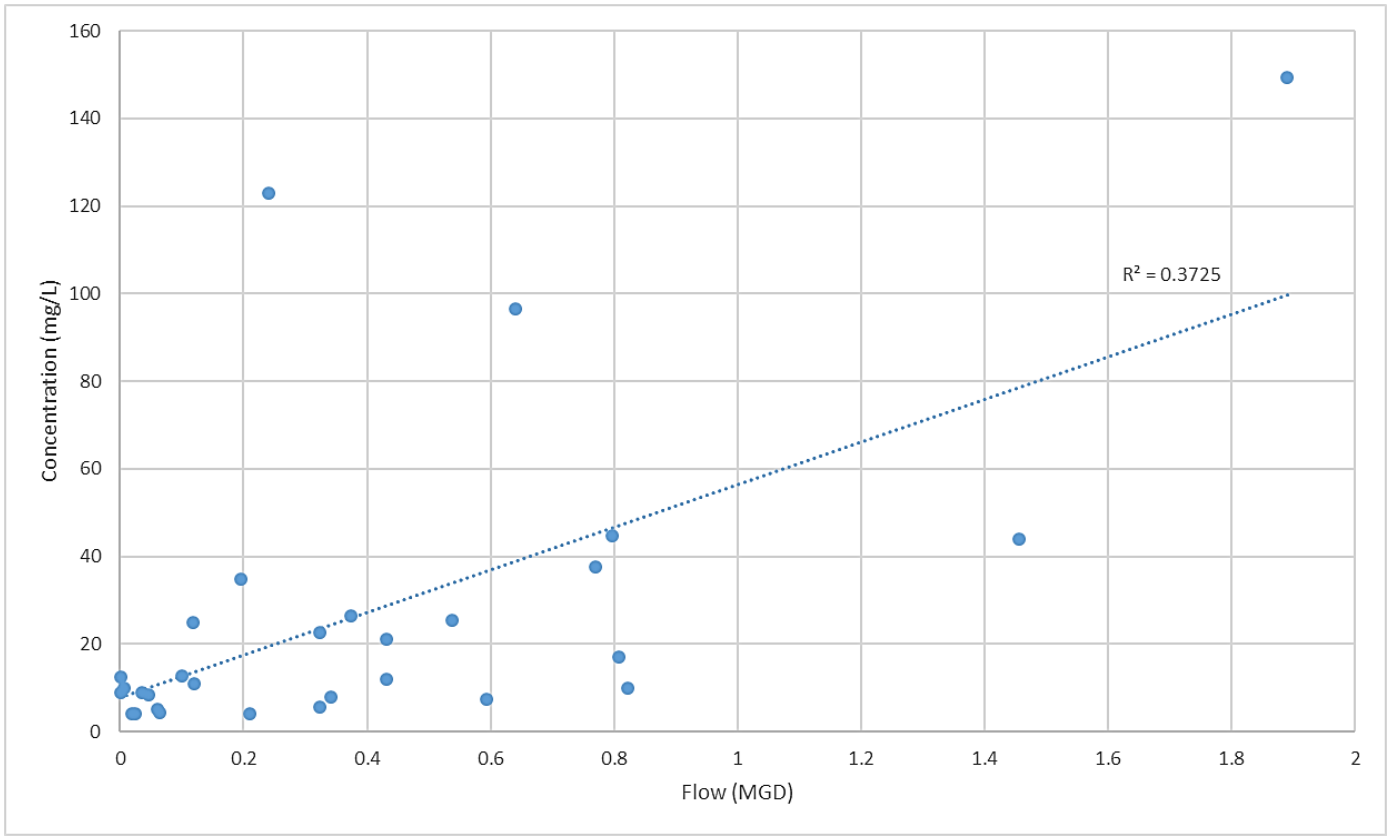
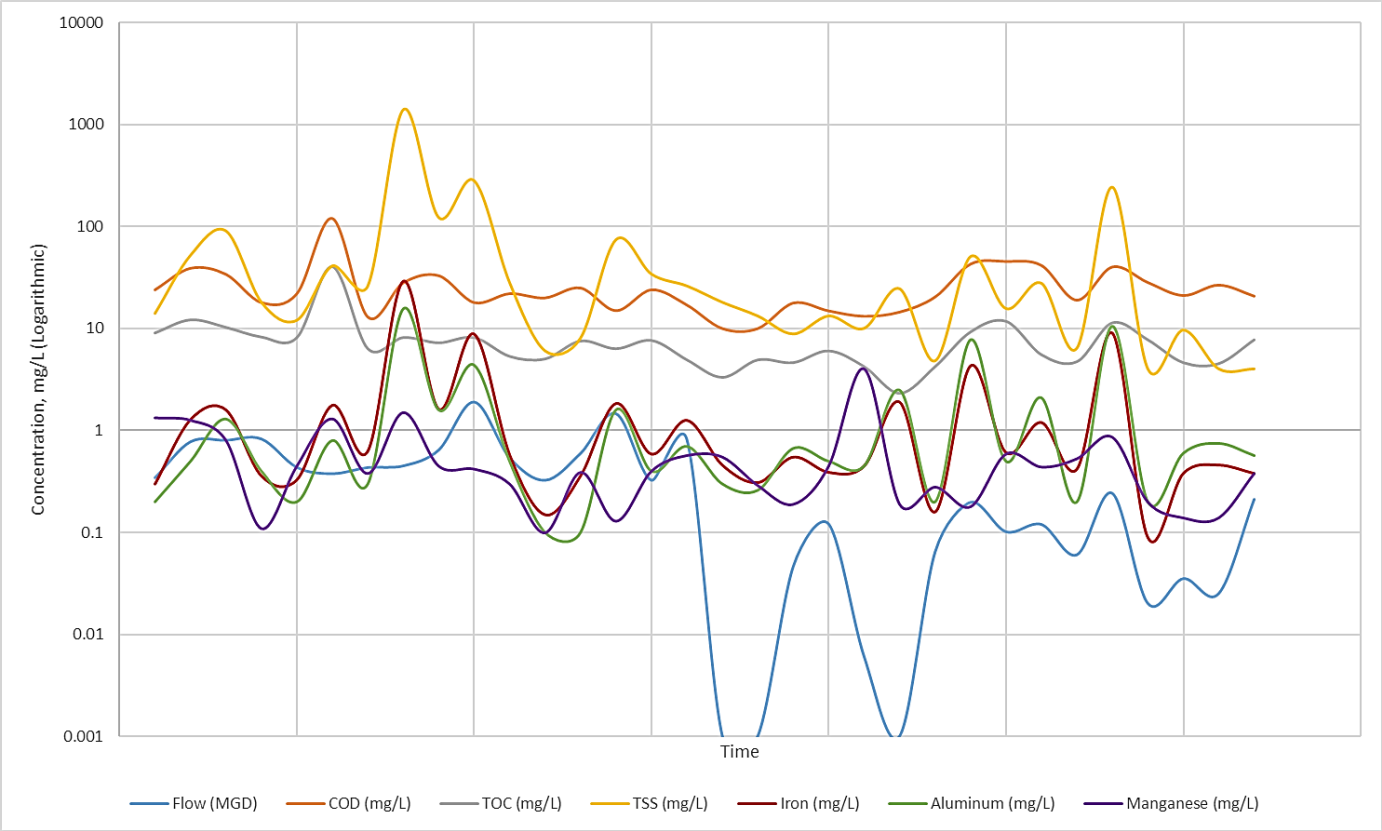


Figure 2 is a graph of the TSS concentrations and corresponding flow rates at Outfall 001 over the last eight years, excluding the 702 mg/L outlier TSS concentration from the third quarter of 2018. A trend line and R-squared correlation coefficient are shown on the graph. The graph indicates that TSS concentrations and discharge flow rates are poorly correlated. TSS excursions such as the ones EPA describes are not limited to high-flow events. TSS violations also occur during flows about the mean flow. DEP also notes that AWS has not violated manganese limits at Outfall 001 in the last eight years. Iron violations were reported in the first quarter of 2013, the first quarter of 2018, and the third quarter of 2018 and those violations coincide with violations of TSS and aluminum limits. Generally, elevated iron concentrations (not in excess of the limits) also were reported when violations of TSS and aluminum limits occurred. This alludes to a correlation between TSS, iron, and aluminum concentrations for individual events—sometimes during high flow events and sometimes during flows about the mean flow. Figure 3 presents a logarithmic comparison of effluent concentrations, excluding data for barium, chromium, lead, magnesium, phenols, and zinc that are often low or not detectable.

Based on Figure 3, controlling TSS should control iron and aluminum. The modifications to Sedimentation Basin B's outlet structure were completed in November 2019. First and second quarter TSS, iron, and aluminum results in 2020 did not exceed current effluent limits except for one average violation of TSS in the first quarter (37.5 mg/L versus the 35 mg/L limit). The outlet modifications AWS completed may have helped bring the facility into compliance with the current effluent limits, but more data are needed to determine if routine compliance will be achieved. As explained previously in

this section, additional modifications could be made such as lime neutralization to target metals removal. Alternatively, additional TSS controls could be employed such as baffle curtains in the ponds.

Figure 3. Outfall 001 Effluent Concentration Comparison (Logarithmic) (1st Qtr. 2012 - 2nd Qtr. 2020)



Based on the preceding analysis, DEP does not find cause to modify the average quarterly effluent limits for TSS, iron, and manganese at Outfall 001.

Monitoring Requirements

DEP's policy for permitting storm water discharges associated with industrial activities is to impose the minimum standards described in the applicable appendix of DEP's PAG-03 General Permit for Discharges of Storm Water Associated with Industrial Activity. The minimum standards for facilities with AWS's SIC Code (4953) given in Appendix C of the PAG-03 for Landfills and Land Application Sites are summarized in Table 2.

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

Discharge Parameter	Units	Monitoring Requirements		Benchmark Values
		Minimum Measurement Frequency	Sample Type	
Total Suspended Solids	mg/L	1/6 months	1 Grab	100
Chemical Oxygen Demand	mg/L	1/6 months	1 Grab	120
Ammonia-Nitrogen	mg/L	1/6 months	1 Grab	—
Total Iron	mg/L	1/6 months	1 Grab	—
pH	s.u.	1/6 months	1 Grab	—

AWS is already subject to more stringent requirements than those in Table 1 except for ammonia-nitrogen, which AWS does not analyze. Ammonia-nitrogen will be added to the monitored parameter list as a baseline parameter.

Based on the analytical data for Outfall 001 reported on the permit application (see Table 3), the sampling frequencies for chemical oxygen demand, oil and grease, TDS, total organic carbon, barium, chromium, lead, magnesium, zinc, and phenols will be reduced from 2/quarter to 1/6 months. The monitoring frequency for ammonia-nitrogen also will be 1/6 months.

Table 3. Storm Water Analytical Results for Outfall 001

Parameter	Average	Maximum	No Exposure Thresholds (mg/L)	MSGP Benchmarks (mg/L)
Oil and Grease	<5.0	<5.0	≤ 5.0	N/A
BOD_5	4.6	4.6	≤ 10.0	30
COD	25.7	45.5	≤ 30.0	120
TSS	<30	242	≤ 30.0	100
Total Nitrogen	1.7	1.7	≤ 2.0 (Tot. N)	N/A
Total Phosphorus	<0.01	<0.01	≤ 1.0	2.0
pH (s.u.)	7.0	8.7	6.0 – 9.0 s.u.	6.0 – 9.0 s.u.
Aluminum	<1.9	10.6	<0.75†	N/A
Barium	0.06	0.12	<2.4†	N/A
Chromium	<0.006	0.02	<0.010†	N/A
Iron	1.4	9	<1.50†	1.0
Lead	<0.007	0.03	<0.0025†	0.095
Magnesium	54.1	87.8	N/A	N/A
Manganese	0.6	4	<1.0†	N/A
Zinc	<0.016	0.07	<0.12†	0.12
Phenols	<0.02	<0.02	≤ 2.0 (Tot. N)	2.14
TDS	760	1120	<500†	N/A
TOC	6.3	11.7	N/A	N/A

† Most stringent water quality criterion in 25 Pa. Code Chapter 93. Hardness-dependent criteria are shown based on a hardness of 100 mg/L.

No additional TBELs will be imposed at Outfall 001. The pollutants present in elevated concentrations are already subject to TBELs or monitoring requirements.

001.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. AWS can detain storm water runoff and release it at a later time when flows are lower, but basins must be dewatered within a certain number of days and it is unlikely that the receiving stream will return to Q_{7-10} flow conditions within a few days.

Outfall 001 is subject to aluminum WQBELs based on the Montour Run Watershed TMDL. TMDL-based water quality limits apply consistent with the requirements of 40 CFR § 122.44(d)(1)(vii)(B)[2] and independent of DEP's Q_{7-10} design flow conditions for water quality modeling in 25 Pa. Code § 96.4(g).

Even though no mathematical modeling is performed, TMDL WQBELs (see below) and 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.

Backsliding from Average Aluminum WQBELs

EPA explains anti-backsliding provisions for WQBELs in Section 7.2.1.3 of the 2010 NPDES Permit Writers' Manual:

7.2.1.3 Exceptions for Limitations Based on State Standards

[2] "(vii) When developing water quality-based effluent limits under this paragraph the permitting authority shall ensure that:
(B) Effluent limits developed to protect a narrative water quality criterion, a numeric water quality criterion, or both, are consistent with the assumptions and requirements of any available wasteload allocation for the discharge prepared by the State and approved by EPA pursuant to 40 CFR 130.7."

EPA has consistently interpreted CWA section 402(o)(1) to allow relaxation of WQBELs and effluent limitations based on state standards if the relaxation is consistent with the provisions of CWA section 303(d)(4) or if one of the exceptions in CWA section 402(o)(2) is met. The two provisions constitute independent exceptions to the prohibition against relaxation of effluent limitations. If either is met, relaxation is permissible.

CWA section 303(d)(4) has two parts: paragraph (A), which applies to nonattainment waters, and paragraph (B), which applies to attainment waters.

- Nonattainment water: CWA section 303(d)(4)(A) allows the establishment of a less stringent effluent limitation when the receiving water has been identified as not meeting applicable water quality standards (i.e., a nonattainment water) if the permittee meets two conditions. First, the existing effluent limitation must have been based on a total maximum daily load (TMDL) or other wasteload allocation (WLA) established under CWA section 303. Second, relaxation of the effluent limitation is only allowed if attainment of water quality standards will be ensured or the designated use not being attained is removed in accordance with the water quality standards regulations. This subsection does not provide an exception for establishing less stringent limitations where the original limitation was based on state permitting standards (e.g., state treatment standards) and was not based on a TMDL or WLA.

All of AWS's discharges are located in the Montour Run Watershed, which is a nonattainment watershed with a final Total Maximum Daily Load. Outfall 001 discharges to a nonattainment water (unnamed tributary 36726) in the Montour Run Watershed. The TMDL did not assign waste load allocations (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. WLAs apply to point source discharges, so an aluminum WLA of 0.0 pounds/day at the mount of South Fork Montour Run implies that no point source discharges were identified in that subwatershed when the TMDL was developed.

Most of the Imperial Landfill's discharges are in the South Fork section of the Montour Run Watershed, which only received allocations for aluminum. Criteria for other mine drainage pollutants were attained in that part of the watershed so no other TMDL WQBELs apply.

Pennsylvania's most stringent aluminum criterion is an acute fish criterion of 0.75 mg/L. To implement the TMDL's WLA for aluminum, the 2010 permit limited aluminum at all outfalls permitted in 2010 (Outfalls 001 through 008) to the aluminum criterion. An average limit of 0.50 mg/L was calculated from the 0.75 mg/L maximum daily limit using EPA's statistically based effluent limit calculations from its *Technical Support Document For Water Quality-based Toxics Control* (March 1991). If the average limit of 0.50 mg/L for aluminum is removed from Outfall 001 and AWS's other outfalls, then the permit will still ensure water quality standards are attained due to the imposition of the maximum daily limit at the most stringent criterion. That is, impairment could be caused by aluminum concentrations in excess of 0.75 mg/L, but limiting discharges of aluminum to a maximum concentration of 0.75 mg/L will require average aluminum concentrations to be 0.75 mg/L or less, so discharges will still comply with the water quality criterion. Limiting 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. DEP also notes that, unlike continuous discharges, non-continuous discharges like AWS's storm water discharges are not required to have both maximum daily and average monthly limits per 40 CFR § 122.45(e).

Since the proposed change to the aluminum WQBELs is consistent with Section 303(d)(4) of the Clean Water Act, the removal of the average quarterly aluminum limits is permissible. The average quarterly limit for aluminum will be replaced with an average quarterly reporting requirement.

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

In accordance with 25 Pa. Code §§ 92a.12 and 92a.61, effluent limits applicable at Outfall 001 are the more stringent of TBELs, WQBELs, regulatory effluent standards, and monitoring requirements.

Table 4. 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)
Chemical Oxygen Demand	—	—	—	Report	—	25 Pa. Code § 92a.61(h)

Table 4 (continued). 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	
Oil and Grease	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Total Dissolved Solids	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Total Organic Carbon	—	—	—	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)
Ammonia-Nitrogen	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Barium	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Chromium	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Lead	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Magnesium	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Iron	—	—	3.5	—	7.0	33 USC § 1342(a)(1)(B); 25 Pa. Code § 92a.12(a); &
Aluminum	—	—	Report	—	0.75	TMDL WQBEL; 40 CFR § 122.44(l)
Manganese	—	—	2.0	—	4.0	33 USC § 1342(a)(1)(B); 25 Pa. Code § 92a.12(a); &
Zinc	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Phenols	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
pH	within the range of 6.0 to 9.0					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 40º 27' 30.00" **Longitude** -80º 16' 30.00"
Wastewater Description: Principal spillway discharges of storm water runoff collected in Sedimentation Basin A

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.

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 for various general chemistry and metals parameters. As described in Section 001.A of this Fact Sheet, DEP does not find cause to modify the average effluent limits for TSS, iron, and manganese at Outfall 001. DMR data indicate that AWS has complied with the TBELs at Outfall 002 in every quarterly monitoring period for the last eight years except for one violation of the average manganese limit in the second quarter of 2019 (2.04 mg/L versus a 2.0 mg/L limit).

Based on the analytical data for Outfall 002 summarized in Table 5, the sampling frequencies for COD, oil and grease, TDS, total organic carbon, barium, chromium, lead, magnesium, zinc, and phenols will be reduced from 2/quarter to 1/6 months. Ammonia-nitrogen will be added to the monitored parameter list as a baseline parameter for storm water runoff from landfills (see Table 2). The monitoring frequency for ammonia-nitrogen will be 1/6 months.

Table 5. Storm Water Analytical Results for Outfall 002

Parameter	Average	Maximum	No Exposure Thresholds (mg/L)	MSGP Benchmarks (mg/L)
Oil and Grease	<5.0	<5.3	≤ 5.0	N/A
BOD_5	<2	<2	≤ 10.0	30
COD	<17.3	21.7	≤ 30.0	120
TSS	<6	24.0	≤ 30.0	100
Total Nitrogen	0.51	0.51	≤ 2.0 (Tot. N)	N/A
Total Phosphorus	<0.01	<0.01	≤ 1.0	2.0
pH (s.u.)	6.7	7.7	6.0 – 9.0 s.u.	6.0 – 9.0 s.u.
Aluminum	<0.4	1.9	<0.75†	N/A
Barium	0.03	0.04	<2.4†	N/A
Chromium	<0.004	<0.004	<0.010†	N/A
Iron	0.4	1.3	<1.50†	1.0
Lead	<0.005	<0.005	<0.0025†	0.095
Magnesium	98	138	N/A	N/A
Manganese	0.3	1.6	<1.0†	N/A
Zinc	<0.01	0.011	<0.12†	0.12
Phenols	<0.02	<0.02	≤ 2.0 (Tot. N)	2.14
TDS	1275	1700	<500†	N/A
TOC	5	7	N/A	N/A

† Most stringent water quality criterion in 25 Pa. Code Chapter 93. Hardness-dependent criteria are shown based on a hardness of 100 mg/L.

No additional TBELs are proposed for Outfall 002 based on the effluent summary in Table 5.

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

Montour Run Watershed TMDL

Outfall 002 is subject to aluminum WQBELs based on the Montour Run Watershed TMDL. TMDL-based water quality limits apply consistent with the requirements of 40 CFR § 122.44(d)(1)(vii)(B) and independent of DEP's Q_{7-10} design flow conditions for water quality modeling in 25 Pa. Code § 96.4(g).

Outfall 002 discharges to an attainment water (unnamed tributary 36729) in a nonattainment portion (North Fork Montour Run) of the Montour Run Watershed. The TMDL for the Montour Run Watershed did not assign waste load allocations to individual discharges from the Imperial Landfill, so the 2010 permit limited discharges of aluminum from Outfall 002 to the aluminum criterion to ensure that those discharges do not contribute to impairment of North Fork Montour Run.

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. WQBELs for iron and manganese were not imposed at Outfall 002 in the 2010 permit. DEP notes that, unlike Outfall 001's receiving water, the receiving water for Outfall 002 is attaining its designated uses. Therefore, no new TMDL WQBELs are imposed at Outfall 002.

Backsliding from Average Aluminum WQBELs

EPA explains anti-backsliding provisions for WQBELs in attainment waters in Section 7.2.1.3 of the 2010 NPDES Permit Writers' Manual:

- Attainment water: CWA section 303(d)(4)(B) applies to waters where the water quality equals or exceeds levels necessary to protect the designated use, or to otherwise meet applicable water quality standards (i.e., an attainment water). Under CWA section 303(d)(4)(B), a limitation based on a TMDL, WLA, other water quality standard, or any other permitting standard may only be relaxed where the action is consistent with state's antidegradation policy.

As explained in Section 001.B of this Fact Sheet, Pennsylvania's most stringent aluminum criterion is an acute fish criterion of 0.75 mg/L. That limit was imposed as the maximum daily limit for aluminum at all outfalls permitted in 2010 (Outfalls 001 through 008). An average limit of 0.50 mg/L was calculated from the 0.75 mg/L maximum daily limit using EPA's statistically based effluent limit calculations from its *Technical Support Document For Water Quality-based Toxics Control* (March 1991). If the average limit of 0.50 mg/L for aluminum is removed from Outfall 002, then the permit will still ensure water quality standards are attained because limiting discharges of aluminum to a maximum concentration of 0.75 mg/L will require average aluminum concentrations to be 0.75 mg/L or less, which complies with the water quality criterion and will consequently not contribute to stream degradation.

Since the proposed change to the average quarterly aluminum WQBEL is consistent with DEP's antidegradation requirements, the removal of the average quarterly aluminum limits is permissible. The average quarterly limit for aluminum will be replaced with a quarterly reporting requirement.

Other WQBELs

As explained in Section 001.B of this Fact Sheet, DEP generally 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 and 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 aluminum WQBEL and 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.

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

In accordance with 25 Pa. Code §§ 92a.12 and 92a.61, effluent limits applicable at Outfall 002 are the more stringent of TBELs, WQBELs, regulatory effluent standards, and monitoring requirements.

Table 6. 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)
Chemical Oxygen Demand	—	—	—	Report	—	25 Pa. Code § 92a.61(h)

Table 6 (continued). 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	
Oil and Grease	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Total Dissolved Solids	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Total Organic Carbon	—	—	—	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)
Ammonia-Nitrogen	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Barium	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Chromium	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Lead	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Magnesium	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Iron	—	—	3.5	—	7.0	33 USC § 1342(a)(1)(B); 25 Pa. Code § 92a.12(a); &
Aluminum	—	—	Report	—	0.75	TMDL WQBEL; 40 CFR § 122.44(l)
Manganese	—	—	2.0	—	4.0	33 USC § 1342(a)(1)(B); 25 Pa. Code § 92a.12(a); &
Zinc	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Phenols	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
pH	within the range of 6.0 to 9.0					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 40º 27' 30.00" **Longitude** -80º 16' 31.00"
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.

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; TMDL WQBELs for aluminum; and monitoring for various general chemistry and metals parameters. As explained in Section 001.A of this Fact Sheet, there may be cause to modify the effluent limits for TSS, iron, and manganese at Outfall 004. 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 the storm water from having enough detention time for particles to settle. Whether that possibility bears out is unknown because AWS has never reported a discharge from Outfall 004. For this permit renewal, the TBELs for TSS, iron, and manganese will remain unchanged with the understanding that they could be modified if site-specific information suggests that TSS and suspended metals cannot be controlled during precipitation-induced overflows from the emergency spillway.

No additional TBELs are proposed for Outfall 004 presuming that the effluent data for Outfall 002 (see Table 5) also represent emergency overflows from Outfall 004. As explained in Section 002.A of this Fact Sheet, ammonia-nitrogen will be added to the parameter list and monitoring frequencies for parameters without limits will be reduced from 2/quarter to 1/6 months.

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

Montour Run Watershed TMDL

Outfall 004 is subject to aluminum WQBELs based on the Montour Run Watershed TMDL. TMDL-based water quality limits apply consistent with the requirements of 40 CFR § 122.44(d)(1)(vii)(B) and independent of DEP's Q_{7-10} design flow conditions for water quality modeling in 25 Pa. Code § 96.4(g).

Backsliding from Average Aluminum WQBELs

Outfall 004 discharges to the same receiving water as Outfall 002, which is an attainment water. Similar to Outfall 002, removal of the average quarterly aluminum limit from Outfall 004 will be consistent with antidegradation requirements because the maximum daily limit of 0.75 mg/L is equivalent to the most stringent water quality criterion and will remain in effect, thus preventing Outfall 004's discharges from degrading the receiving stream. The average quarterly limit for aluminum will be removed and replaced with a quarterly reporting requirement.

No other WQBELs are developed for this outfall. Outfalls that do not discharge do not have a reasonable potential to cause or contribute to an excursion above water quality criteria.

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

In accordance with 25 Pa. Code §§ 92a.12 and 92a.61, effluent limits applicable at Outfall 004 are the more stringent of TBELs, WQBELs, regulatory effluent standards, and monitoring requirements.

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)
Chemical Oxygen Demand	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Oil and Grease	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Total Dissolved Solids	—	—	—	Report	—	25 Pa. Code § 92a.61(h)

Table 7 (continued). 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	
Total Organic Carbon	—	—	—	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)
Ammonia-Nitrogen	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Barium	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Chromium	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Lead	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Magnesium	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Iron	—	—	3.5	—	7.0	33 USC § 1342(a)(1)(B); 25 Pa. Code § 92a.12(a); &
Aluminum	—	—	Report	—	0.75	TMDL WQBEL; 40 CFR § 122.44(l)
Manganese	—	—	2.0	—	4.0	33 USC § 1342(a)(1)(B); 25 Pa. Code § 92a.12(a); &
Zinc	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Phenols	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
pH	within the range of 6.0 to 9.0					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	40º 26' 36.20"	**Longitude**	-80º 16' 17.60"

Wastewater Description: Principal and emergency spillway discharges of storm water runoff collected in Sedimentation Basin C

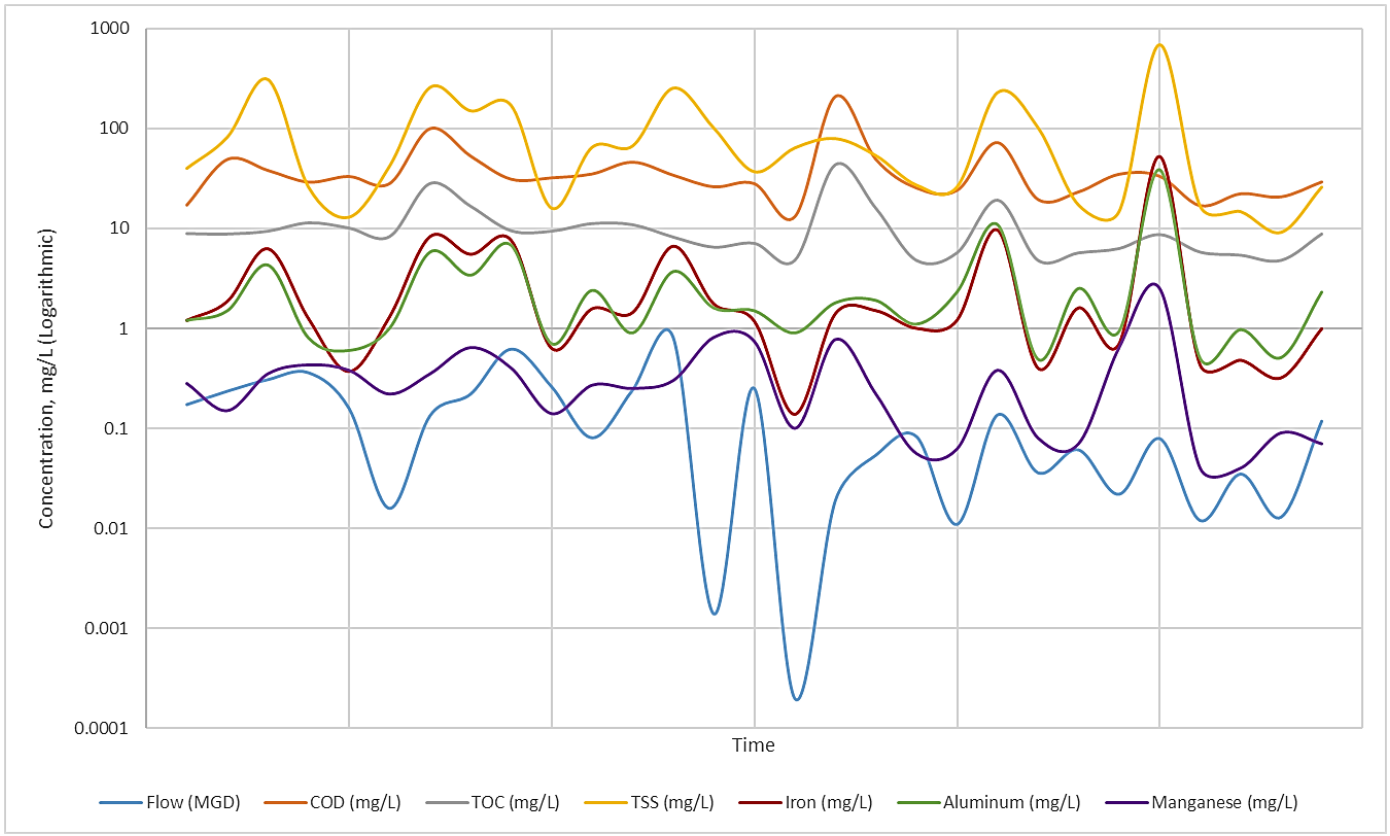
Outfall 005 is the discharge point for the principal and emergency spillways of Sedimentation Basin C, which receives storm water runoff from disturbed construction areas, access roads, rock crushing activity areas, and portions of the Area 7 landfill including intermediate soil cover, closed portions 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.

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; TMDL WQBELs for aluminum; and monitoring for various general chemistry and metals parameters. As described in Section 001.A of this Fact Sheet, DEP does not find cause to modify the average effluent limits for TSS, iron, and manganese at Outfall 005. Effluent concentrations for TSS, iron, and aluminum show a correlation similar to Outfall 001's (see Figure 4 below and compare to Figure 3) leading to a similar conclusion that controlling TSS will control aluminum and iron concentrations. Alternatively, lime neutralization and similar treatment options are available and affordable for targeted metals removal.

Figure 4. Outfall 005 Effluent Concentration Comparison (Logarithmic) (1st Qtr. 2012 - 2nd Qtr. 2020)



Based on the analytical data for Outfall 005 summarized in Table 8, the sampling frequencies for COD, oil and grease, TDS, total organic carbon, barium, chromium, lead, magnesium, zinc, and phenols will be reduced from 2/quarter to 1/6 months. Ammonia-nitrogen will be added to the monitored parameter list as a baseline parameter for storm water runoff

from landfills (see Table 2) and total nitrogen and BOD_5 will be added due to the elevated concentrations reported in the effluent (see Table 8). The monitoring frequency for ammonia-nitrogen, total nitrogen, and BOD_5 will be 1/6 months.

Table 8. Storm Water Analytical Results for Outfall 005

Parameter	Average	Maximum	No Exposure Thresholds (mg/L)	MSGP Benchmarks (mg/L)
Oil and Grease	<5.0	<5.0	≤ 5.0	N/A
BOD_5	77.6	77.6	≤ 10.0	30
COD	29.2	72.4	≤ 30.0	120
TSS	88	686	≤ 30.0	100
Total Nitrogen	6.4	6.4	≤ 2.0 (Tot. N)	N/A
Total Phosphorus	0.23	0.23	≤ 1.0	2.0
pH (s.u.)	7.0	8.9	6.0 – 9.0 s.u.	6.0 – 9.0 s.u.
Aluminum	4.6	38.6	<0.75†	N/A
Barium	0.07	0.38	<2.4†	N/A
Chromium	<0.02	0.21	<0.010†	N/A
Iron	5.2	52.3	<1.50†	1.0
Lead	<0.04	0.49	<0.0025†	0.095
Magnesium	21.9	33.8	N/A	N/A
Manganese	0.3	2.5	<1.0†	N/A
Zinc	<0.09	1	<0.12†	0.12
Phenols	<0.02	<0.02	≤ 2.0 (Tot. N)	2.14
TDS	420	542	<500†	N/A
TOC	7.3	19.2	N/A	N/A

† Most stringent water quality criterion in 25 Pa. Code Chapter 93. Hardness-dependent criteria are shown based on a hardness of 100 mg/L.

No additional TBELs are proposed for Outfall 005 based on the effluent summary in Table 8.

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

Montour Run Watershed TMDL

Outfall 005 is subject to aluminum WQBELs based on the Montour Run Watershed TMDL. TMDL-based water quality limits apply consistent with the requirements of 40 CFR § 122.44(d)(1)(vii)(B) and independent of DEP's Q_{7-10} design flow conditions for water quality modeling in 25 Pa. Code § 96.4(g).

Backsliding from Average Aluminum WQBELs

Outfall 005 discharges to a nonattainment water (unnamed tributary 36726) so relaxation of the aluminum limits is subject to two requirements per CWA § 303(d)(4)(A): 1) the existing effluent limitation must have been based on a total maximum daily load (TMDL) or other wasteload allocation (WLA) established under CWA section 303; and 2) relaxation of the effluent limitation is only allowed if attainment of water quality standards will be ensured or the designated use not being attained is removed in accordance with the water quality standards regulations.

The average quarterly aluminum limit is a TMDL-based WQBEL. Also, if the average limit of 0.50 mg/L for aluminum is removed from Outfall 005, then the permit will still ensure water quality standards are attained due to the imposition of the maximum daily limit at the most stringent aluminum criterion of 0.75 mg/L.

Since the proposed change to the aluminum WQBELs is consistent with Section 303(d)(4) of the Clean Water Act, which in turn is consistent with Section 402(o)(1) of the Act, the removal of the average quarterly aluminum limits is permissible. The average quarterly limit for aluminum will be replaced with a quarterly reporting requirement.

No other WQBELs are developed for Outfall 005 per the previously stated rationale in Section 001.B of this Fact Sheet.

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

In accordance with 25 Pa. Code §§ 92a.12 and 92a.61, effluent limits applicable at Outfall 005 are the more stringent of TBELs, WQBELs, regulatory effluent standards, and monitoring requirements.

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)
BOD_5	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Chemical Oxygen Demand	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Oil and Grease	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Total Dissolved Solids	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Total Organic Carbon	—	—	—	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 Nitrogen	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Ammonia Nitrogen	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Barium	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Chromium	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Lead	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Magnesium	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Iron	—	—	3.5	—	7.0	33 USC § 1342(a)(1)(B); 25 Pa. Code § 92a.12(a); &
Aluminum	—	—	Report	—	0.75	TMDL WQBEL; 40 CFR § 122.44(l)
Manganese	—	—	2.0	—	4.0	33 USC § 1342(a)(1)(B); 25 Pa. Code § 92a.12(a); &
Zinc	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Phenols	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
pH	within the range of 6.0 to 9.0					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 40º 26' 36.60" **Longitude** -80º 16' 17.60"
Wastewater Description: Principal and emergency spillway discharges of storm water runoff collected in Sedimentation Basin D

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.

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. As described in Section 001.A of this Fact Sheet, DEP does not find cause to modify the average effluent limits for TSS, iron, and manganese at Outfall 006.

Based on the analytical data for Outfall 006 summarized in Table 10, the sampling frequencies for COD, oil and grease, TDS, total organic carbon, barium, chromium, lead, magnesium, zinc, and phenols will be reduced from 2/quarter to 1/6 months. Ammonia-nitrogen will be added to the monitored parameter list as a baseline parameter for storm water runoff from landfills (see Table 2). The monitoring frequency for ammonia-nitrogen will be 1/6 months.

Table 10. Storm Water Analytical Results for Outfall 006

Parameter	Average	Maximum	No Exposure Thresholds (mg/L)	MSGP Benchmarks (mg/L)
Oil and Grease	<5.0	<5.6	≤ 5.0	N/A
BOD_5	<2	<2	≤ 10.0	30
COD	<12	21	≤ 30.0	120
TSS	<32	330	≤ 30.0	100
Total Nitrogen	0.66	0.66	≤ 2.0 (Tot. N)	N/A
Total Phosphorus	0.01	0.01	≤ 1.0	2.0
pH (s.u.)	6.9	8.4	6.0 – 9.0 s.u.	6.0 – 9.0 s.u.
Aluminum	<1.7	14.4	<0.75†	N/A
Barium	0.03	0.12	<2.4†	N/A
Chromium	<0.005	0.021	<0.010†	N/A
Iron	1.4	13.3	<1.50†	1.0
Lead	<0.006	0.014	<0.0025†	0.095
Magnesium	57	124	N/A	N/A
Manganese	0.19	0.49	<1.0†	N/A
Zinc	<0.02	0.059	<0.12†	0.12
Phenols	<0.02	<0.02	≤ 2.0 (Tot. N)	2.14
TDS	863	1440	<500†	N/A
TOC	2.8	4	N/A	N/A

No additional TBELs are proposed for Outfall 006 based on the effluent summary in Table 10.

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

Montour Run Watershed TMDL

Outfall 006 is subject to aluminum WQBELs based on the Montour Run Watershed TMDL. TMDL-based water quality limits apply consistent with the requirements of 40 CFR § 122.44(d)(1)(vii)(B) and independent of DEP's Q_{7-10} design flow conditions for water quality modeling in 25 Pa. Code § 96.4(g).

Backsliding from Average Aluminum WQBELs

Outfall 006 discharges to a nonattainment water (unnamed tributary 36726) so relaxation of the aluminum limits is subject to two requirements: 1) the existing effluent limitation must have been based on a total maximum daily load (TMDL) or other wasteload allocation (WLA) established under CWA section 303; and 2) relaxation of the effluent limitation is only allowed if attainment of water quality standards will be ensured or the designated use not being attained is removed in accordance with the water quality standards regulations.

The average quarterly aluminum limit is a TMDL-based WQBEL. Also, if the average limit of 0.50 mg/L for aluminum is removed from Outfall 005, then the permit will still ensure water quality standards are attained due to the imposition of the maximum daily limit at the most stringent aluminum criterion of 0.75 mg/L.

Since the proposed change to the aluminum WQBELs is consistent with Section 303(d)(4) of the Clean Water Act, which in turn is consistent with Section 402(o)(1) of the Act, the removal of the average quarterly aluminum limits is permissible. The average quarterly limit for aluminum will be replaced with a reporting requirement.

No other WQBELs are developed for Outfall 006 per the previously stated rationale in Section 001.B of this Fact Sheet.

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

In accordance with 25 Pa. Code §§ 92a.12 and 92a.61, effluent limits applicable at Outfall 006 are the more stringent of TBELs, WQBELs, regulatory effluent standards, and monitoring requirements.

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)
Chemical Oxygen Demand	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Oil and Grease	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Total Dissolved Solids	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Total Organic Carbon	—	—	—	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)
Ammonia-Nitrogen	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Barium	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Chromium	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Lead	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Magnesium	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Iron	—	—	3.5	—	7.0	33 USC § 1342(a)(1)(B); 25 Pa. Code § 92a.12(a); &
Aluminum	—	—	Report	—	0.75	TMDL WQBEL; 40 CFR § 122.44(l)
Manganese	—	—	2.0	—	4.0	33 USC § 1342(a)(1)(B); 25 Pa. Code § 92a.12(a); &
Zinc	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Phenols	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
pH	within the range of 6.0 to 9.0					25 Pa. Code § 92a.61(h)

The sampling frequency and type for all parameters except flow will be 2/quarter using grab samples. Flow should be measured 2/quarter at the time of sampling.

Development of Effluent Limitations

Outfall No.	009	**Design Flow (MGD)**	Variable
Latitude	40º 26' 32.00"	**Longitude**	-80º 17' 15.10"

Wastewater Description: Storm water from a concrete containment structure with open-top residual waste dumpsters for public waste drop-off

Outfall 009 is for storm water discharges from a drain in a concrete structure used as a public drop-off area to dispose of approved household residual wastes. The 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 outfall is covered with grass.

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

As explained in Section 001.A of this Fact Sheet, DEP's policy for permitting storm water discharges associated with industrial activities is to impose the minimum standards described in the applicable appendix of DEP's PAG-03 General Permit for Discharges of Storm Water Associated with Industrial Activity. The applicable appendix of the PAG-03 for facilities with an SIC Code of 4953 is Appendix C – Landfill and Land Application Sites with semi-annual analyses for TSS, COD, ammonia-nitrogen, total iron, and pH (see Table 2).

Outfall 009 does not discharge directly to surface waters, but it does discharge to groundwater via infiltration. AWS was not able to collect a sample of the discharge for the permit application and proposed that Outfall 009 only require visual inspections. DEP understands that discharges may be infrequent, but that does not preclude the use of effluent analyses (when possible) as an indicator of the effectiveness of BMPs in the drop-off area. The permit identifies the following BMP relating to dumpsters:

> 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 General Permit does not authorize dry weather discharges from dumpsters or roll off boxes.

AWS's open-top dumpsters are in three-sided secondary containment, but storm water discharges passively from that containment. AWS should consider capping the drain hole, manually opening the drain and releasing any accumulated storm water after storm events, and sampling the discharge at that time after visually inspecting the storm water for contaminants. Manual storm water releases from the containment area would prompt regular visual inspections to ensure wastes disposed during unsupervised public waste drop-off are deposited in the dumpsters and not in the secondary containment structure.

Due to the absence of effluent data from which to evaluate the need for TBELs, no TBELs are imposed.

Even though no TBELs are imposed, effluent limits may be warranted in the future if pollutant concentrations in storm water consistently exceed the benchmark values from EPA's Multi-Sector General Permit (MSGP). EPA's MSGP is the federal equivalent of DEP's PAG-03 General Permit for Discharges of Storm Water Associated with Industrial Activity. EPA uses benchmark monitoring in the MSGP as an indicator of the effectiveness of a facility's best management practices. DEP uses benchmark values for the same purpose. The MSGP benchmarks listed in Table 2 will be listed in Part C of the permit.

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, 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.

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.

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

In accordance with 25 Pa. Code §§ 92a.12 and 92a.61, effluent limits applicable at Outfall 009 are the more stringent of TBELs, WQBELs, regulatory effluent standards, and monitoring requirements.

Table 12. 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)
Total Suspended Solids	—	—	—	Report	—	PAG-03, Appendix C; 25 Pa. Code § 92a.61(h)
Chemical Oxygen Demand	—	—	—	Report	—	PAG-03, Appendix C; 25 Pa. Code § 92a.61(h)
Ammonia-Nitrogen	—	—	—	Report	—	PAG-03, Appendix C; 25 Pa. Code § 92a.61(h)
Iron, Total	—	—	—	Report	—	PAG-03, Appendix C; 25 Pa. Code § 92a.61(h)
pH	—	—	—	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 40º 27' 8.00" **Longitude** -80º 16' 59.10"
Wastewater Description: Storm water runoff from a maintenance garage

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.

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

Outfall 010 does not discharge directly to surface waters. The 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. Similar to Outfall 009, minimum monitoring requirements from Appendix C of DEP's PAG-03 General Permit (see Table 2) will be imposed at Outfall 010 to evaluate the effectiveness of BMPs in the drainage area.

Based on the effluent summary in Table 13, additional monitoring for total aluminum, lead, manganese, and zinc will be added to the baseline parameters from Appendix C of the PAG-03 because aluminum, lead, manganese, and zinc concentrations are elevated.

Table 13. Storm Water Analytical Results for Outfall 010

Parameter	Average	Maximum	No Exposure Thresholds (mg/L)	MSGP Benchmarks (mg/L)
Oil and Grease	<6	<6	≤ 5.0	N/A
BOD_5	8	8	≤ 10.0	30
COD	110	110	≤ 30.0	120
TSS	1070	1070	≤ 30.0	100
Total Nitrogen	2.1	2.1	≤ 2.0 (Tot. N)	N/A
Total Phosphorus	1.68	1.68	≤ 1.0	2.0
pH (s.u.)	8.08	8.08	6.0 – 9.0 s.u.	6.0 – 9.0 s.u.
Aluminum	17.7	17.7	<0.75†	N/A
Barium	0.78	0.78	<2.4†	N/A
Chromium	0.09	0.09	<0.010†	N/A
Iron	30.4	30.4	<1.50†	1.0
Lead	0.194	0.194	<0.0025†	0.095
Magnesium	29.1	29.1	N/A	N/A
Manganese	1.82	1.82	<1.0†	N/A
Zinc	0.66	0.66	<0.12†	0.12
Phenols	<0.02	<0.02	≤ 2.0 (Tot. N)	2.14
TDS	600	600	<500†	N/A
TOC	5.8	5.8	N/A	N/A

Even though no TBELs are imposed, effluent limits may be warranted in the future if pollutant concentrations in storm water consistently exceed the benchmark values from EPA's Multi-Sector General Permit (MSGP). As with Outfall 009, the storm water benchmark monitoring and corrective action plan requirements will be in effect for Outfall 010.

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 reach 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 to not reach those surface waters except maybe as part of groundwater baseflow.

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

In accordance with 25 Pa. Code §§ 92a.12 and 92a.61, effluent limits applicable at Outfall 010 are the more stringent of TBELs, WQBELs, regulatory effluent standards, and monitoring requirements.

Table 14. 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)
Total Suspended Solids	—	—	—	Report	—	PAG-03, Appendix C; 25 Pa. Code § 92a.61(h)
Chemical Oxygen Demand	—	—	—	Report	—	PAG-03, Appendix C; 25 Pa. Code § 92a.61(h)
Ammonia-Nitrogen	—	—	—	Report	—	PAG-03, Appendix C; 25 Pa. Code § 92a.61(h)
Iron, Total	—	—	—	Report	—	PAG-03, Appendix C; 25 Pa. Code § 92a.61(h)
Aluminum, Total	—	—	—	Report	—	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)
pH	—	—	—	Report	—	PAG-03, Appendix C; 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 40º 26' 6.20" **Longitude** -80º 17' 26.40"
Wastewater Description: Storm water runoff from the facility entrance

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.

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

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 the PAG-03 will be applied to Outfall 011's storm water discharges. Based on the facility's SIC Code of 4953, the facility is classified under Appendix C of the PAG-03 General Permit. To ensure that there is baseline consistency for landfills that discharge storm water associated with their industrial activities, the monitoring requirements of Appendix C of the PAG-03 will be imposed at Outfall 011 (see Table 2).

No additional monitoring requirements are proposed for Outfall 011 based on the effluent summary in Table 15.

Table 15. Storm Water Analytical Results for Outfall 011

Parameter	Average	Maximum	No Exposure Thresholds (mg/L)	MSGP Benchmarks (mg/L)
Oil and Grease	<8	<8	≤ 5.0	N/A
BOD_5	2	2	≤ 10.0	30
COD	20	20	≤ 30.0	120
TSS	6	6	≤ 30.0	100
Total Nitrogen	<1.1	<1.1	≤ 2.0 (Tot. N)	N/A
Total Phosphorus	0.11	0.11	≤ 1.0	2.0
pH (s.u.)	8.24	8.24	6.0 – 9.0 s.u.	6.0 – 9.0 s.u.
Aluminum	0.1	0.1	<0.75†	N/A
Barium	0.05	0.05	<2.4†	N/A
Chromium	<0.01	<0.01	<0.010†	N/A
Iron	0.20	0.20	<1.50†	1.0
Lead	<0.001	<0.001	<0.0025†	0.095
Magnesium	25.3	25.3	N/A	N/A
Manganese	0.02	0.02	<1.0†	N/A
Zinc	<0.01	<0.01	<0.12†	0.12
Phenols	<0.02	<0.02	≤ 2.0 (Tot. N)	2.14
TDS	556	556	<500†	N/A
TOC	5.5	5.5	N/A	N/A

Even though no additional monitoring requirements are imposed, effluent limits may be warranted in the future if pollutant concentrations in storm water consistently exceed the benchmark values from EPA's Multi-Sector General Permit (MSGP). As with Outfalls 009 and 010, the storm water benchmark monitoring and corrective action plan requirements will be in effect for Outfall 011.

011.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. Since uncontrolled discharges of storm water (i.e., those that are not subject to detention and manual release by facility staff) should not occur during low flow conditions in the receiving stream, there should be no reasonable potential for storm water discharges to cause or contribute to an exceedance of water quality criteria. When storm water is discharging, stream flow would be augmented above the Q_{7-10} design flow by the same storm event that caused the storm water discharge and the augmented stream flow will provide additional assimilative capacity during the storm event.

Even though no mathematical modeling is performed, 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.

No waste load allocations were assigned to the Imperial Landfill's discharges by either the Potato Garden Run or Racoon Creek Watershed TMDLs. The discharges from Imperial Landfill to those watersheds either do not discharge to surface waters (Outfalls 009 and 010) or, in the case of Outfall 011, do not exhibit a reasonable potential to exceed water quality criteria because the concentrations of TMDL pollutants in the discharge are less than the most stringent water quality criteria. No TMDL WQBELs will be imposed at Outfall 011 but monitoring for aluminum and manganese will be added to the monitored parameter list to collect more data on Outfall 011's effluent quality.

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

In accordance with 25 Pa. Code §§ 92a.12 and 92a.61, effluent limits applicable at Outfall 011 are the more stringent of TBELs, WQBELs, regulatory effluent standards, and monitoring requirements.

Table 16. 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)
Total Suspended Solids	—	—	—	Report	—	PAG-03, Appendix C; 25 Pa. Code § 92a.61(h)
Chemical Oxygen Demand	—	—	—	Report	—	PAG-03, Appendix C; 25 Pa. Code § 92a.61(h)
Ammonia-Nitrogen	—	—	—	Report	—	PAG-03, Appendix C; 25 Pa. Code § 92a.61(h)
Aluminum, Total	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Iron, Total	—	—	—	Report	—	PAG-03, Appendix C; 25 Pa. Code § 92a.61(h)
Manganese, Total	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
pH	—	—	—	Report	—	PAG-03, Appendix C; 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 40º 26' 32.50" **Longitude** -80º 16' 20.10"
Wastewater Description: Storm water from the pretreatment plant's facility entrance

The drainage area for Outfall 012 is approximately 76,200 ft^2.

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

AWS requested that Outfall 012 be permitted as a storm water discharge that is not exposed to industrial activities and noted that waste trucks do not use the pretreatment plant's entrance to access the site. Despite AWS's certification that Outfall 012 is not exposed to industrial activities, effluent data for Outfall 012's storm water discharges show that some pollutants concentrations exceed no exposure thresholds and/or benchmarks, specifically, TSS, iron, and aluminum.

Table 17. Storm Water Analytical Results for Outfall 012

Parameter	Average	Maximum	No Exposure Thresholds (mg/L)	MSGP Benchmarks (mg/L)
Oil and Grease	<5	<6	≤ 5.0	N/A
BOD_5	2	11	≤ 10.0	30
COD	22	46	≤ 30.0	120
TSS	204	306	≤ 30.0	100
Total Nitrogen	<1.1	<2	≤ 2.0 (Tot. N)	N/A
Total Phosphorus	0.17	0.42	≤ 1.0	2.0
pH (s.u.)	7.99	8.30	6.0 – 9.0 s.u.	6.0 – 9.0 s.u.
Aluminum	4.2	7.5	<0.75†	N/A
Barium	0.07	0.20	<2.4†	N/A
Chromium	<0.01	0.02	<0.010†	N/A
Iron	5.62	10.4	<1.50†	1.0
Lead	0.007	0.016	<0.0025†	0.095
Magnesium	8.1	10.3	N/A	N/A
Manganese	0.22	0.40	<1.0†	N/A
Zinc	0.04	0.10	<0.12†	0.12
Phenols	<20	<20	≤ 2.0 (Tot. N)	2.14
TDS	240	640	<500†	N/A
TOC	3.9	5.6	N/A	N/A

If effluent data for other outfalls are any indication (see Figures 3 and 4), then the aluminum and iron are correlated with TSS. Pursuant to AWS's no exposure declaration, the minimum requirements of Appendix C of the PAG-03 will not be imposed at Outfall 012. However, water quality-based requirements will be considered.

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

40 CFR § 122.26(a)(9)(i)(C) and (D) provide the following:

> (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; or
> >
> > (D) The Director, or in States with approved NPDES programs either the Director or the EPA Regional Administrator, determines that the discharge, or category of discharges within a geographic area, contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States.

Pursuant to those regulations and the Clean Streams Law, DEP can regulate storm water discharges that are not associated with industrial activities.

Outfall 012 discharges into a storm sewer that leads to unnamed tributary 36726 in the South Fork section of the Montour Run Watershed. As previously established in Section 001.B of this Fact Sheet, the South Fork Montour Run subwatershed is subject to WLAs for aluminum.

The TMDL did not assign waste load allocations (WLAs) to 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. For this permit renewal, Outfall 012 will require monitoring for TSS, aluminum, iron, and pH pursuant to 25 Pa. Code § 92a.61(h). A storm water benchmark value of 0.75 mg/L for aluminum will apply to Outfall 012. 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, 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.

If AWS cannot implement corrective actions to reduce TSS, aluminum, and iron concentrations at Outfall 012, then DEP will consider additional requirements and/or limits in subsequent permit renewals.

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

In accordance with 25 Pa. Code §§ 92a.12 and 92a.61, effluent limits applicable at Outfall 012 are the more stringent of TBELs, WQBELs, regulatory effluent standards, and monitoring requirements.

Table 18. 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)
Total Suspended Solids	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Aluminum, Total	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
Iron, Total	—	—	—	Report	—	25 Pa. Code § 92a.61(h)
pH	—	—	—	Report	—	25 Pa. Code § 92a.61(h)

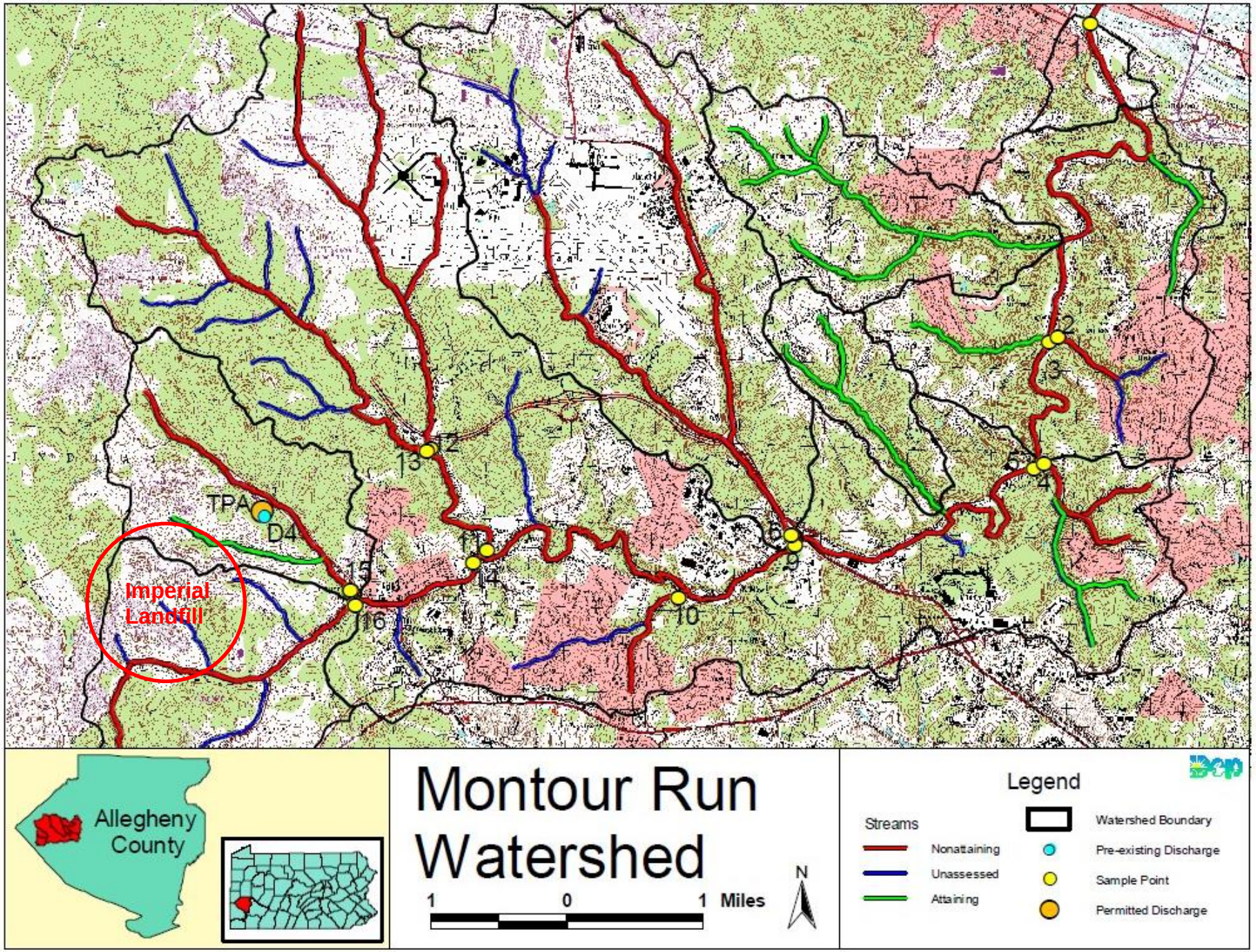
Outfall 011's discharges are precipitation-induced and non-continuous, so grab sampling will be required for all parameters except flow, which should be estimated at the time of sampling. The sampling frequency for all parameters will be 1/6 months.

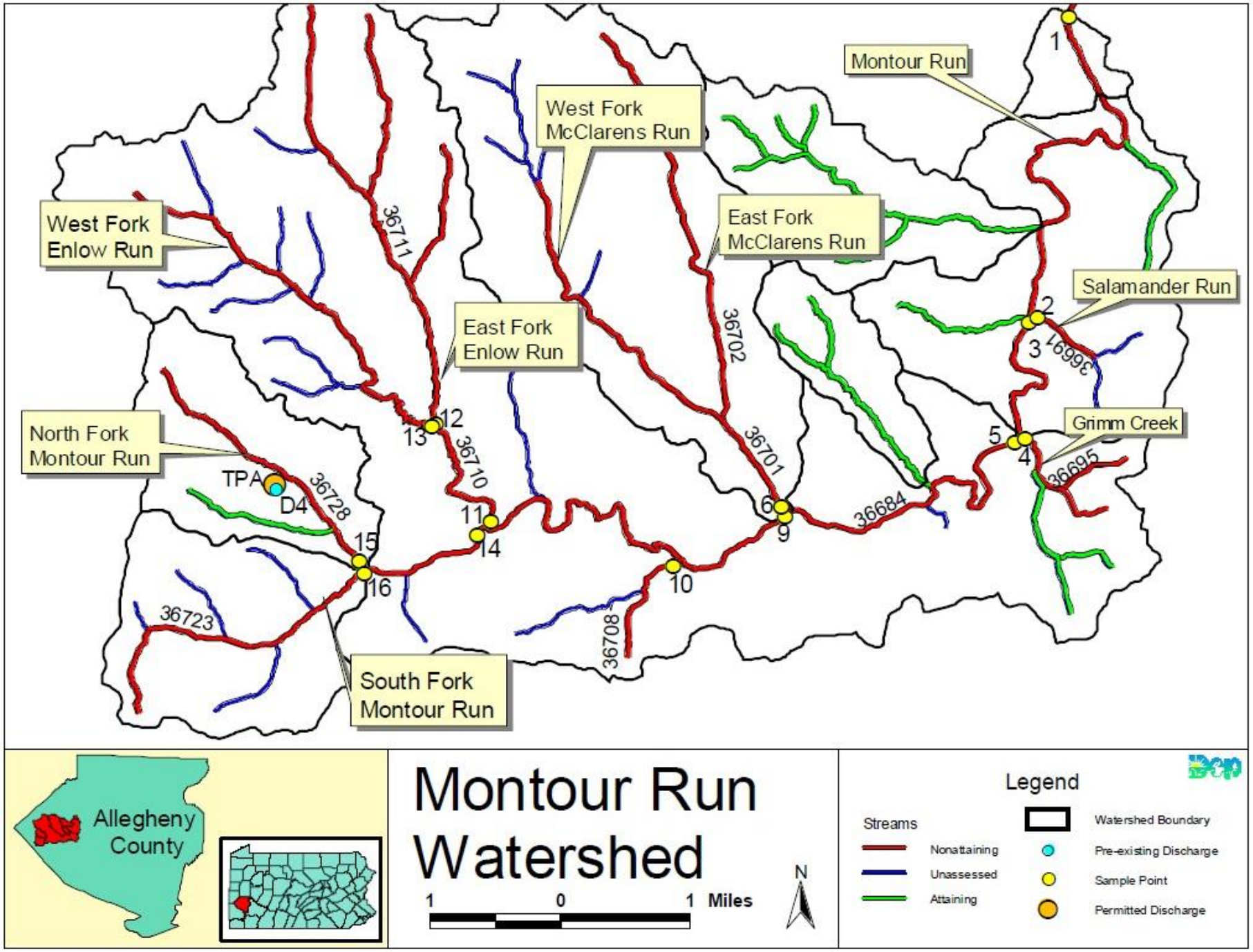
Tools and References Used to Develop Permit	
☐	WQM for Windows Model (see Attachment)
☐	PENTOXSD for Windows Model (see Attachment)
☐	TRC Model Spreadsheet (see Attachment)
☐	Temperature Model Spreadsheet (see Attachment)
☐	Toxics Screening Analysis Spreadsheet (see Attachment)
☐	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
☐	Technical Guidance for the Development and Specification of Effluent Limitations, 362-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 362-2000-003, 3/98.
☐	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 362-2000-008, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 362-2183-003, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 362-2183-004, 12/97.
☐	Pennsylvania CSO Policy, 385-2000-011, 9/08.
☐	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 391-2000-002, 4/97.
☐	Determining Water Quality-Based Effluent Limits, 391-2000-003, 12/97.
☐	Implementation Guidance Design Conditions, 391-2000-006, 9/97.
☐	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 391-2000-007, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 391-2000-008, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 391-2000-010, 3/99.
☐	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 391-2000-011, 5/2004.
☐	Implementation Guidance for Section 93.7 Ammonia Criteria, 391-2000-013, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 391-2000-014, 4/2008.
☐	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 391-2000-015, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 391-2000-017, 4/09.
☐	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 391-2000-018, 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, 391-2000-019, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 391-2000-021, 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, 391-2000-022, 3/1999.
☐	Design Stream Flows, 391-2000-023, 9/98.
☐	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 391-2000-024, 10/98.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 391-3200-013, 6/97.
☐	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☐	SOP:
☒	Montour Run Watershed TMDL (September 27, 2004)
☒	Final Raccoon Creek Watershed TMDL (February 3, 2005)
☒	Potato Garden Run Watershed Final TMDL (February 25, 2003)

TMDL Component Summary for the Montour Run Watershed.

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
12
13
11
14
15
16
SFMD7
SFMD3
MP6
SFMU2
SFMS6
SFMS7
MKR3
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