pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Amendment, Major**	Application No.	**PA0254967 A-2**
Facility Type	**Industrial**	APS ID	**1015570**
Major / Minor	**Minor**	Authorization ID	**1312676**

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

Applicant and Facility Information

Applicant Name	**PPG Industries, Inc.**	Facility Name	**Former PPG Ford City Facility Slurry Lagoon Area and Solid Waste Disposal Area**
Applicant Address	440 College Park Drive	Facility Address	Route 128
	Monroeville, PA 15146-1536		Cadogan Township, PA 16212
Applicant Contact	Hadley Stamm	Facility Contact	***same as applicant***
Applicant Phone	(724) 325-5809	Facility Phone	***same as applicant***
Client ID	27913	Site ID	728379
SIC Code	4959	Municipality	Cadogan and North Buffalo Townships
SIC Description	Trans. & Utilities - Sanitary Services, NEC	County	Armstrong
Date Application Received	April 28, 2020	EPA Waived?	Yes
Date Application Accepted		If No, Reason	

Purpose of Application: NPDES permit amendment to add new outfalls.

Summary of Review

By application dated April 24, 2020, PPG Industries, Inc. (PPG) applied to amend NPDES Permit PA0254967 to add new outfalls for seeps identified during reconnaissance of the Slurry Lagoon Area (SLA) and Solid Waste Disposal Area (SWDA). In accordance with an April 2, 2019 Consent Order and Agreement (as amended on November 4, 2020) and PPG's December 20, 2019 NPDES permit (as amended on April 9, 2021 pursuant to an April 1, 2021 Order from the Environmental Hearing Board [EHB Docket No. 2020-015-B] and accompanying Stipulation of Settlement accompanying that Order), PPG performs reconnaissance of the site to identify unpermitted discharges. PPG's reconnaissance identified a variety of seeps including four along the southern perimeter of the SWDA, two along the southern perimeter of the SLA, and ten along the northwestern perimeter of the SLA. The sixteen new outfalls are numbered sequentially from Outfall 023 to Outfall 038.

Some of the newly identified seeps are located close to each other or to existing outfalls, some within 6 to 12 feet of each other. For example, new Outfalls 024 and 025 (seepage areas SWRR-2 and SWRR-3) are located near existing Outfall 014 (SWDA Seep Area 7) and new Outfalls 030 and 031 (seepage areas 128-1A and 128-1B) and Outfalls 036 and 037 (seepage areas 128-6 and 128-6A) are located close to one another. PPG identifies all those discharges as "seepage areas" and DEP recognizes that outfalls located close to one another likely exhibit similar wastewater characteristics as expressions of similarly impacted groundwater. Some spatial variation in seep quality is evident in PPG's analytical data, which may be attributable to contributions of surface runoff at the time of sampling or variations in the locations and types of disposed wastes through which groundwater flows and picks up contaminants.

Notwithstanding the proximity of some seepage areas and the likelihood of some new outfalls to discharge essentially the same groundwater as other existing or new outfalls, DEP has included all the new seepage areas as outfalls in the draft permit amendment. DEP is amenable to representative sampling of some outfalls whereby results for one outfall are submitted as the results for both the sampled outfall and for a nearby outfall if both outfalls are flowing at the same time and there is an established similarity in effluent quality.

Approve	Deny	Signatures	Date
X		Ryan C. Decker, P.E. / Environmental Engineer	August 3, 2021
X		Michael E. Fifth, P.E. / Environmental Engineer Manager	August 6, 2021

Summary of Review

Effluent limits and monitoring requirements for the new outfalls are generally the same as effluent limits and monitoring requirements for existing outfalls. Outfalls along the Allegheny River are subject to technology-based effluent limits (TBELs) for TSS, dissolved iron, and pH, but are not subject to water quality-based effluent limits (WQBELs) due to the available assimilative capacity of the Allegheny River. Discharges to an unnamed tributary to Glade Run are subject to both TBELs and WQBELs. The WQBELs for those discharges are at levels equivalent to Chapter 93's water quality criteria, which is consistent with the negligible assimilative capacity of the receiving water. All outfalls are subject to some baseline monitoring requirements.

PPG expects that most of the seepage areas along the northwestern and southern perimeters of the SLA will be eliminated (i.e., intercepted and re-routed) once the collection and treatment system permitted by Water Quality Management Permit No. 0320200 is operational.

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.	023	Design Flow (MGD)	0.00233 (avg.); 0.00317 (max)
Latitude	40° 45' 24.32"	Longitude	-79° 33' 8.83"
Quad Name	Kittanning	Quad Code	1209
Wastewater Description:	Groundwater from seepage area SWRR-1		
Receiving Waters	Allegheny River (WWF)	Stream Code	42122
NHD Com ID	123860481	RMI	40.56
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)	2,250	Q_{7-10} Basis	US Army Corps. of Engrs.
Elevation (ft)		Slope (ft/ft)	
Watershed No.	17-E	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	Polychlorinated Biphenyls (PCBs)		
Source(s) of Impairment	Source Unknown		
TMDL Status		Name	
Nearest Downstream Public Water Supply Intake	Buffalo Township Municipal Authority - Freeport (PWSID 5030019)		
PWS Waters	Allegheny River	Flow at Intake (cfs)	2,390
PWS RMI	29.4	Distance from Outfall (mi)	11.16

Changes Since Last Permit Issuance: New outfall

Discharge, Receiving Waters and Water Supply Information

Outfall No.	024	Design Flow (MGD)	0.00590 (avg.); 0.0108 (max)
Latitude	40° 45' 22.42"	Longitude	-79° 33' 11.08"
Quad Name	Kittanning	Quad Code	1209
Wastewater Description:	Groundwater from seepage area SWRR-2		
Receiving Waters	Allegheny River (WWF)	Stream Code	42122
NHD Com ID	123860481	RMI	40.51
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)	2,250	Q_{7-10} Basis	US Army Corps. of Engrs.
Elevation (ft)		Slope (ft/ft)	
Watershed No.	17-E	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	Polychlorinated Biphenyls (PCBs)		
Source(s) of Impairment	Source Unknown		
TMDL Status		Name	
Nearest Downstream Public Water Supply Intake	Buffalo Township Municipal Authority - Freeport (PWSID 5030019)		
PWS Waters	Allegheny River	Flow at Intake (cfs)	2,390
PWS RMI	29.4	Distance from Outfall (mi)	11.11

Changes Since Last Permit Issuance: New outfall

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	025	Design Flow (MGD)	0.00239 (avg.); 0.00320 (max)
Latitude	40° 45' 21.92"	Longitude	-79° 33' 11.94"
Quad Name	Kittanning	Quad Code	1209
Wastewater Description:	Groundwater from seepage area SWRR-3		
Receiving Waters	Allegheny River (WWF)	Stream Code	42122
NHD Com ID	123860481	RMI	40.49
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)	2,250	Q_{7-10} Basis	US Army Corps. of Engrs.
Elevation (ft)		Slope (ft/ft)	
Watershed No.	17-E	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	Polychlorinated Biphenyls (PCBs)		
Source(s) of Impairment	Source Unknown		
TMDL Status		Name	
Nearest Downstream Public Water Supply Intake	Buffalo Township Municipal Authority - Freeport (PWSID 5030019)		
PWS Waters	Allegheny River	Flow at Intake (cfs)	2,390
PWS RMI	29.4	Distance from Outfall (mi)	11.09

Changes Since Last Permit Issuance: New outfall

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	026	Design Flow (MGD)	0.00408 (avg.); 0.00472 (max)
Latitude	40° 45' 14.82"	Longitude	-79° 33' 11.44"
Quad Name	Kittanning	Quad Code	1209
Wastewater Description:	Groundwater from seepage area SWRR-4		
Receiving Waters	Allegheny River (WWF)	Stream Code	42122
NHD Com ID	123860481	RMI	40.26
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)	2,250	Q_{7-10} Basis	US Army Corps. of Engrs.
Elevation (ft)		Slope (ft/ft)	
Watershed No.	17-E	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	Polychlorinated Biphenyls (PCBs)		
Source(s) of Impairment	Source Unknown		
TMDL Status		Name	
Nearest Downstream Public Water Supply Intake	Buffalo Township Municipal Authority - Freeport (PWSID 5030019)		
PWS Waters	Allegheny River	Flow at Intake (cfs)	2,390
PWS RMI	29.4	Distance from Outfall (mi)	10.86

Changes Since Last Permit Issuance: New outfall

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	027	Design Flow (MGD)	0.00214 (avg.); 0.00245 (max)
Latitude	40° 45' 14.82"	Longitude	-79° 33' 11.44"
Quad Name	Kittanning	Quad Code	1209
Wastewater Description:	Groundwater from seepage area SLRR-1		
Receiving Waters	Allegheny River (WWF)	Stream Code	42122
NHD Com ID	123860481	RMI	40.25
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)	2,250	Q_{7-10} Basis	US Army Corps. of Engrs.
Elevation (ft)		Slope (ft/ft)	
Watershed No.	17-E	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	Polychlorinated Biphenyls (PCBs)		
Source(s) of Impairment	Source Unknown		
TMDL Status		Name	
Nearest Downstream Public Water Supply Intake	Buffalo Township Municipal Authority - Freeport (PWSID 5030019)		
PWS Waters	Allegheny River	Flow at Intake (cfs)	2,390
PWS RMI	29.4	Distance from Outfall (mi)	10.85

Changes Since Last Permit Issuance: New outfall

Discharge, Receiving Waters and Water Supply Information

Outfall No.	028	Design Flow (MGD)	0.00525 (avg.); 0.00592 (max)
Latitude	40° 45' 9.37"	Longitude	-79° 33' 27.49"
Quad Name	Kittanning	Quad Code	1209
Wastewater Description:	Groundwater from seepage area SLRR-2		
Receiving Waters	Allegheny River (WWF)	Stream Code	42122
NHD Com ID	123865343	RMI	40.17
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)	2,250	Q_{7-10} Basis	US Army Corps. of Engrs.
Elevation (ft)		Slope (ft/ft)	
Watershed No.	17-E	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	Polychlorinated Biphenyls (PCBs)		
Source(s) of Impairment	Source Unknown		
TMDL Status		Name	
Nearest Downstream Public Water Supply Intake	Buffalo Township Municipal Authority - Freeport (PWSID 5030019)		
PWS Waters	Allegheny River	Flow at Intake (cfs)	2,390
PWS RMI	29.4	Distance from Outfall (mi)	10.77

Changes Since Last Permit Issuance: New outfall

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	029	Design Flow (MGD)	0.0000480 (avg.); 0.000101 (max)
Latitude	40° 45' 15.54"	Longitude	-79° 34' 2.79"
Quad Name	Kittanning	Quad Code	1209
Wastewater Description:	Groundwater from seepage area 128-1		
Receiving Waters	Unnamed Tributary to Glade Run (TSF)	Stream Code	46185 (Glade Run)
NHD Com ID	123860297	RMI	0.64 (Glade Run)
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	17-E	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		Name	
Nearest Downstream Public Water Supply Intake	Buffalo Township Municipal Authority - Freeport (PWSID 5030019)		
PWS Waters	Allegheny River	Flow at Intake (cfs)	2,390
PWS RMI	29.4	Distance from Outfall (mi)	40.2

Changes Since Last Permit Issuance: New outfall

Discharge, Receiving Waters and Water Supply Information

Outfall No.	030	Design Flow (MGD)	0.0000209 (avg.); 0.0000288 (max)
Latitude	40° 45' 15.54"	Longitude	-79° 34' 2.79"
Quad Name	Kittanning	Quad Code	1209
Wastewater Description:	Groundwater from seepage area 128-1A		
Receiving Waters	Unnamed Tributary to Glade Run (TSF)	Stream Code	46185 (Glade Run)
NHD Com ID	123860297	RMI	0.64 (Glade Run)
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	17-E	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		Name	
Nearest Downstream Public Water Supply Intake	Buffalo Township Municipal Authority - Freeport (PWSID 5030019)		
PWS Waters	Allegheny River	Flow at Intake (cfs)	2,390
PWS RMI	29.4	Distance from Outfall (mi)	40.2

Changes Since Last Permit Issuance: New outfall

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	031	Design Flow (MGD)	0.00000504 (avg.); 0.00000576 (max)
Latitude	40° 45' 15.54"	Longitude	-79° 34' 2.79"
Quad Name	Kittanning	Quad Code	1209
Wastewater Description:	Groundwater from seepage area 128-1B		
Receiving Waters	Unnamed Tributary to Glade Run (TSF)	Stream Code	46185 (Glade Run)
NHD Com ID	123860297	RMI	0.64 (Glade Run)
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	17-E	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		Name	
Nearest Downstream Public Water Supply Intake	Buffalo Township Municipal Authority - Freeport (PWSID 5030019)		
PWS Waters	Allegheny River	Flow at Intake (cfs)	2,390
PWS RMI	29.4	Distance from Outfall (mi)	40.2

Changes Since Last Permit Issuance: New outfall

Discharge, Receiving Waters and Water Supply Information

Outfall No.	032	Design Flow (MGD)	0.0000480 (avg.); 0.0000864 (max)
Latitude	40° 45' 15.54"	Longitude	-79° 34' 2.79"
Quad Name	Kittanning	Quad Code	1209
Wastewater Description:	Groundwater from seepage area 128-2		
Receiving Waters	Unnamed Tributary to Glade Run (TSF)	Stream Code	46185 (Glade Run)
NHD Com ID	123860297	RMI	0.64 (Glade Run)
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	17-E	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		Name	
Nearest Downstream Public Water Supply Intake	Buffalo Township Municipal Authority - Freeport (PWSID 5030019)		
PWS Waters	Allegheny River	Flow at Intake (cfs)	2,390
PWS RMI	29.4	Distance from Outfall (mi)	40.2

Changes Since Last Permit Issuance: New outfall

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	033	Design Flow (MGD)	0.0000432 (avg.); 0.0000432 (max)
Latitude	40° 45' 16.43"	Longitude	-79° 34' 4.14"
Quad Name	Kittanning	Quad Code	1209
Wastewater Description:	Groundwater from seepage area 128-3		
Receiving Waters	Unnamed Tributary to Glade Run (TSF)	Stream Code	46185 (Glade Run)
NHD Com ID	123860297	RMI	0.64 (Glade Run)
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	17-E	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		Name	
Nearest Downstream Public Water Supply Intake	Buffalo Township Municipal Authority - Freeport (PWSID 5030019)		
PWS Waters	Allegheny River	Flow at Intake (cfs)	2,390
PWS RMI	29.4	Distance from Outfall (mi)	40.2

Changes Since Last Permit Issuance: New outfall

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	034	Design Flow (MGD)	0.000134 (avg.); 0.000144 (max)
Latitude	40° 45' 16.43"	Longitude	-79° 34' 4.14"
Quad Name	Kittanning	Quad Code	1209
Wastewater Description:	Groundwater from seepage area 128-4		
Receiving Waters	Unnamed Tributary to Glade Run (TSF)	Stream Code	46185 (Glade Run)
NHD Com ID	123860297	RMI	0.64 (Glade Run)
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	17-E	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		Name	
Nearest Downstream Public Water Supply Intake	Buffalo Township Municipal Authority - Freeport (PWSID 5030019)		
PWS Waters	Allegheny River	Flow at Intake (cfs)	2,390
PWS RMI	29.4	Distance from Outfall (mi)	40.2

Changes Since Last Permit Issuance: New outfall

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	035	Design Flow (MGD)	0.0000624 (avg.); 0.0000720 (max)
Latitude	40° 45' 16.43"	Longitude	-79° 34' 4.14"
Quad Name	Kittanning	Quad Code	1209
Wastewater Description:	Groundwater from seepage area 128-5		
Receiving Waters	Unnamed Tributary to Glade Run (TSF)	Stream Code	46185 (Glade Run)
NHD Com ID	123860297	RMI	0.64 (Glade Run)
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	17-E	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		Name	
Nearest Downstream Public Water Supply Intake	Buffalo Township Municipal Authority - Freeport (PWSID 5030019)		
PWS Waters	Allegheny River	Flow at Intake (cfs)	2,390
PWS RMI	29.4	Distance from Outfall (mi)	40.2

Changes Since Last Permit Issuance: New outfall

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	036	Design Flow (MGD)	0.00104 (avg.); 0.00111 (max)
Latitude	40° 45' 16.43"	Longitude	-79° 34' 4.14"
Quad Name	Kittanning	Quad Code	1209
Wastewater Description:	Groundwater from seepage area 128-6		
Receiving Waters	Unnamed Tributary to Glade Run (TSF)	Stream Code	46185 (Glade Run)
NHD Com ID	123860297	RMI	0.64 (Glade Run)
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	17-E	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		Name	
Nearest Downstream Public Water Supply Intake	Buffalo Township Municipal Authority - Freeport (PWSID 5030019)		
PWS Waters	Allegheny River	Flow at Intake (cfs)	2,390
PWS RMI	29.4	Distance from Outfall (mi)	40.2

Changes Since Last Permit Issuance: New outfall

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	037	Design Flow (MGD)	0.000144 (avg.); 0.000245 (max)
Latitude	40° 45' 16.43"	Longitude	-79° 34' 4.14"
Quad Name	Kittanning	Quad Code	1209
Wastewater Description:	Groundwater from seepage area 128-6A		
Receiving Waters	Unnamed Tributary to Glade Run (TSF)	Stream Code	46185 (Glade Run)
NHD Com ID	123860297	RMI	0.64 (Glade Run)
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	17-E	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		Name	
Nearest Downstream Public Water Supply Intake	Buffalo Township Municipal Authority - Freeport (PWSID 5030019)		
PWS Waters	Allegheny River	Flow at Intake (cfs)	2,390
PWS RMI	29.4	Distance from Outfall (mi)	40.2

Changes Since Last Permit Issuance: New outfall

Discharge, Receiving Waters and Water Supply Information

Outfall No.	038	Design Flow (MGD)	0.00461 (avg.); 0.0118 (max)
Latitude	40° 45' 16.43"	Longitude	-79° 34' 4.14"
Quad Name	Kittanning	Quad Code	1209
Wastewater Description:	Groundwater from seepage area 128-7		
Receiving Waters	Unnamed Tributary to Glade Run (TSF)	Stream Code	46185 (Glade Run)
NHD Com ID	123860297	RMI	0.64 (Glade Run)
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	17-E	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		Name	
Nearest Downstream Public Water Supply Intake	Buffalo Township Municipal Authority - Freeport (PWSID 5030019)		
PWS Waters	Allegheny River	Flow at Intake (cfs)	2,390
PWS RMI	29.4	Distance from Outfall (mi)	40.2

Changes Since Last Permit Issuance: New outfall

Figure 1. New Seep Locations

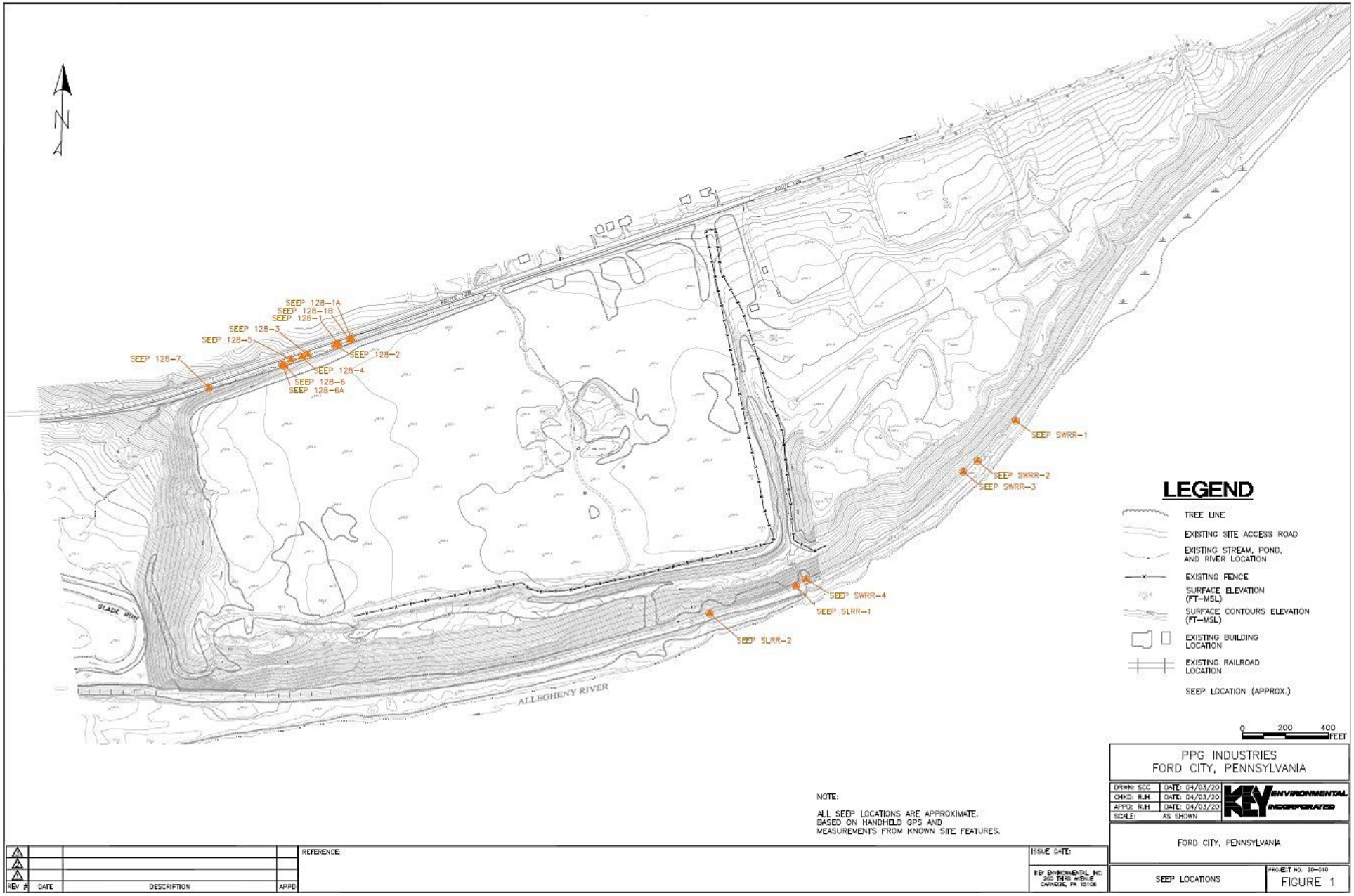

Figure 2. Site Overview and NPDES Monitoring Points

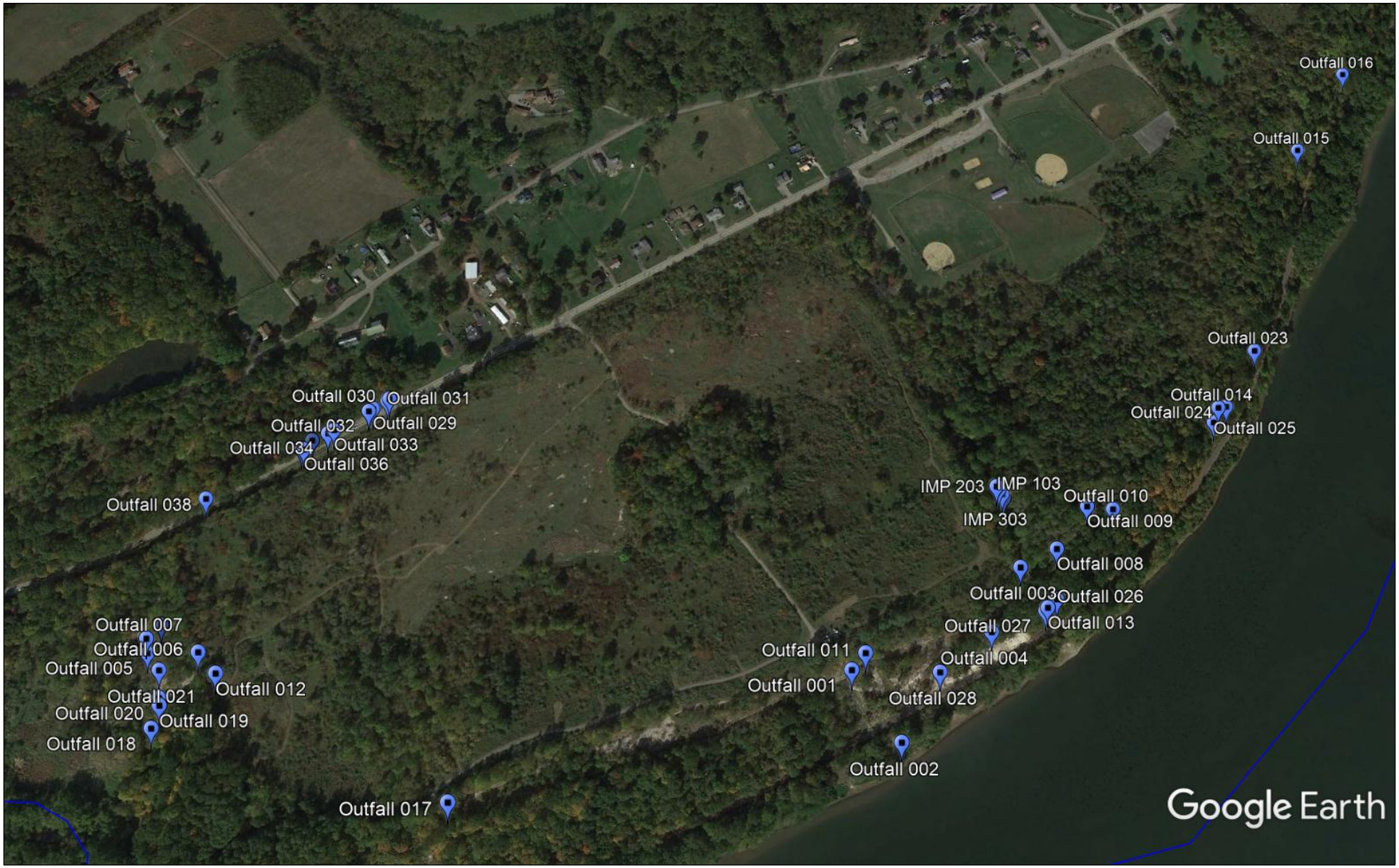

Image Source and Date: Google Earth Pro, October 8, 2020. Outfall annotations added by DEP based on latitudes and longitudes reported on the permit and permit amendment applications.

Treatment Facility Summary		
Treatment Facility: Collection and Treatment System		
WQM Permit No.	**Issuance Date**	**Purpose**
0320200	April 1, 2021	Permit issued to PPG Industries, Inc. for a 0.115 MGD collection and treatment system including shallow and deep groundwater collection trenches, eleven extraction wells, a 1,000-gallon equalization tank, a 1,100-gallon antifoaming chemical tank with dosing pump, two sets of two 500-gallon neutralization tanks with mixers, a 1,100-gallon sulfuric acid tank with dosing pumps, and 4,000-gallon purge tank, a 500-gallon water supply tank, and a 5,000-gallon leachate collection tank

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Industrial	Primary	Neutralization	None	0.053

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.115	N/A	Not Overloaded	N/A	N/A

Changes Since Last Permit Issuance: None

Compliance History

Effluent Violations for Outfall 003, from: July 1, 2020 To: May 31, 2021

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
pH	05/31/21	Daily Max	11.0	S.U.	9.0	S.U.
pH	04/30/21	Daily Max	11.1	S.U.	9.0	S.U.
pH	01/31/21	Daily Max	10.8	S.U.	9.0	S.U.
pH	12/31/20	Daily Max	10.6	S.U.	9.0	S.U.
pH	02/28/21	Daily Max	10.9	S.U.	9.0	S.U.
pH	03/31/21	Daily Max	10.9	S.U.	9.0	S.U.

Effluent Violations for Outfall 004, from: July 1, 2020 To: May 31, 2021

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
pH	05/31/21	Daily Max	10.1	S.U.	9.0	S.U.
pH	04/30/21	Daily Max	9.8	S.U.	9.0	S.U.
pH	03/31/21	Daily Max	9.8	S.U.	9.0	S.U.
pH	01/31/21	Daily Max	10.2	S.U.	9.0	S.U.
pH	10/31/20	Daily Max	10.0	S.U.	9.0	S.U.
pH	12/31/20	Daily Max	10.1	S.U.	9.0	S.U.
pH	02/28/21	Daily Max	10.0	S.U.	9.0	S.U.
pH	09/30/20	Daily Max	9.8	S.U.	9.0	S.U.

Effluent Violations for Outfall 005, from: July 1, 2020 To: May 31, 2021

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
pH	05/31/21	Daily Max	10.6	S.U.	9.0	S.U.
pH	04/30/21	Daily Max	10.6	S.U.	9.0	S.U.

pH	03/31/21	Daily Max	10.0	S.U.	9.0	S.U.
pH	01/31/21	Daily Max	10.2	S.U.	9.0	S.U.
pH	11/30/20	Daily Max	9.9	S.U.	9.0	S.U.
pH	12/31/20	Daily Max	10.2	S.U.	9.0	S.U.
pH	02/28/21	Daily Max	10.8	S.U.	9.0	S.U.
pH	10/31/20	Daily Max	9.6	S.U.	9.0	S.U.

Effluent Violations for Outfall 006, from: July 1, 2020 To: May 31, 2021

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
pH	05/31/21	Daily Max	11.2	S.U.	9.0	S.U.
pH	04/30/21	Daily Max	11.4	S.U.	9.0	S.U.
pH	03/31/21	Daily Max	11.0	S.U.	9.0	S.U.
pH	08/31/20	Daily Max	11.0	S.U.	9.0	S.U.
pH	09/30/20	Daily Max	11.2	S.U.	9.0	S.U.
pH	01/31/21	Daily Max	11.6	S.U.	9.0	S.U.
pH	10/31/20	Daily Max	11.4	S.U.	9.0	S.U.
pH	11/30/20	Daily Max	11.6	S.U.	9.0	S.U.
pH	12/31/20	Daily Max	11.5	S.U.	9.0	S.U.
pH	02/28/21	Daily Max	11.7	S.U.	9.0	S.U.
pH	07/31/20	Daily Max	11.0	S.U.	9.0	S.U.

Effluent Violations for Outfall 007, from: July 1, 2020 To: May 31, 2021

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
pH	05/31/21	Daily Max	10.6	S.U.	9.0	S.U.
pH	04/30/21	Daily Max	10.7	S.U.	9.0	S.U.
pH	03/31/21	Daily Max	10.4	S.U.	9.0	S.U.
pH	08/31/20	Daily Max	10.7	S.U.	9.0	S.U.
pH	09/30/20	Daily Max	10.6	S.U.	9.0	S.U.
pH	01/31/21	Daily Max	10.7	S.U.	9.0	S.U.
pH	10/31/20	Daily Max	10.6	S.U.	9.0	S.U.
pH	11/30/20	Daily Max	10.9	S.U.	9.0	S.U.
pH	12/31/20	Daily Max	10.9	S.U.	9.0	S.U.
pH	02/28/21	Daily Max	10.8	S.U.	9.0	S.U.
pH	07/31/20	Daily Max	10.6	S.U.	9.0	S.U.

Effluent Violations for Outfall 008, from: July 1, 2020 To: May 31, 2021

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
TSS	07/31/20	Avg Mo	98.7	mg/L	30.0	mg/L
TSS	07/31/20	Daily Max	147.0	mg/L	60.0	mg/L

Effluent Violations for Outfall 010, from: July 1, 2020 To: May 31, 2021

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
TSS	02/28/21	Avg Mo	34.7	mg/L	30.0	mg/L

Effluent Violations for Outfall 013, from: July 1, 2020 To: May 31, 2021

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
pH	05/31/21	Daily Max	10.5	S.U.	9.0	S.U.
pH	04/30/21	Daily Max	10.7	S.U.	9.0	S.U.
pH	03/31/21	Daily Max	10.6	S.U.	9.0	S.U.
pH	08/31/20	Daily Max	10.9	S.U.	9.0	S.U.
pH	09/30/20	Daily Max	10.7	S.U.	9.0	S.U.
pH	01/31/21	Daily Max	10.7	S.U.	9.0	S.U.
pH	10/31/20	Daily Max	10.8	S.U.	9.0	S.U.
pH	11/30/20	Daily Max	10.7	S.U.	9.0	S.U.
pH	12/31/20	Daily Max	10.8	S.U.	9.0	S.U.
pH	02/28/21	Daily Max	10.9	S.U.	9.0	S.U.
pH	07/31/20	Daily Max	11.0	S.U.	9.0	S.U.

Effluent Violations for Outfall 014, from: July 1, 2020 To: May 31, 2021

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
TSS	11/30/20	Avg Mo	46.1	mg/L	30.0	mg/L
TSS	11/30/20	Daily Max	83.2	mg/L	60.0	mg/L

Effluent Violations for Outfall 015, from: July 1, 2020 To: May 31, 2021

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
TSS	05/31/21	Avg Mo	41.0	mg/L	30.0	mg/L
TSS	11/30/20	Avg Mo	35.3	mg/L	30.0	mg/L
TSS	05/31/21	Daily Max	64.8	mg/L	60.0	mg/L

Effluent Violations for Outfall 017, from: July 1, 2020 To: May 31, 2021

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
pH	05/31/21	Daily Max	9.1	S.U.	9.0	S.U.
pH	04/30/21	Daily Max	9.8	S.U.	9.0	S.U.
pH	01/31/21	Daily Max	9.9	S.U.	9.0	S.U.
pH	12/31/20	Daily Max	9.3	S.U.	9.0	S.U.
pH	03/31/21	Daily Max	9.6	S.U.	9.0	S.U.

Effluent Violations for Outfall 018, from: July 1, 2020 To: May 31, 2021

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
pH	01/31/21	Daily Max	9.1	S.U.	9.0	S.U.
TSS	04/30/21	Avg Mo	105.8	mg/L	30.0	mg/L
TSS	05/31/21	Avg Mo	93.3	mg/L	30.0	mg/L
TSS	08/31/20	Avg Mo	34.6	mg/L	30.0	mg/L
TSS	10/31/20	Avg Mo	70.2	mg/L	30.0	mg/L
TSS	09/30/20	Avg Mo	50.1	mg/L	30.0	mg/L
TSS	10/31/20	Daily Max	109.0	mg/L	60.0	mg/L
TSS	05/31/21	Daily Max	124.0	mg/L	60.0	mg/L
TSS	04/30/21	Daily Max	211.0	mg/L	60.0	mg/L

Effluent Violations for Outfall 020, from: July 1, 2020 To: May 31, 2021

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
pH	05/31/21	Daily Max	9.5	S.U.	9.0	S.U.
pH	04/30/21	Daily Max	9.7	S.U.	9.0	S.U.
pH	03/31/21	Daily Max	9.6	S.U.	9.0	S.U.

pH	09/30/20	Daily Max	9.4	S.U.	9.0	S.U.
pH	11/30/20	Daily Max	9.5	S.U.	9.0	S.U.
pH	12/31/20	Daily Max	9.4	S.U.	9.0	S.U.
pH	01/31/21	Daily Max	9.7	S.U.	9.0	S.U.
pH	10/31/20	Daily Max	9.1	S.U.	9.0	S.U.
pH	07/31/20	Daily Max	9.1	S.U.	9.0	S.U.
TSS	10/31/20	Avg Mo	76.0	mg/L	30.0	mg/L
TSS	07/31/20	Avg Mo	141.0	mg/L	30.0	mg/L
TSS	07/31/20	Daily Max	228.0	mg/L	60.0	mg/L
TSS	10/31/20	Daily Max	76.0	mg/L	60.0	mg/L

Effluent Violations for Outfall 021, from: July 1, 2020 To: May 31, 2021

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
pH	05/31/21	Daily Max	10.4	S.U.	9.0	S.U.
pH	04/30/21	Daily Max	10.6	S.U.	9.0	S.U.
pH	03/31/21	Daily Max	10.5	S.U.	9.0	S.U.
pH	09/30/20	Daily Max	10.0	S.U.	9.0	S.U.
pH	12/31/20	Daily Max	10.1	S.U.	9.0	S.U.
pH	01/31/21	Daily Max	10.3	S.U.	9.0	S.U.
pH	10/31/20	Daily Max	10.0	S.U.	9.0	S.U.
pH	11/30/20	Daily Max	10.1	S.U.	9.0	S.U.
pH	02/28/21	Daily Max	10.4	S.U.	9.0	S.U.
TSS	09/30/20	Avg Mo	67.2	mg/L	30.0	mg/L
TSS	09/30/20	Daily Max	67.2	mg/L	60.0	mg/L

Effluent Violations for Outfall 022, from: July 1, 2020 To: May 31, 2021

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
pH	05/31/21	Daily Max	10.9	S.U.	9.0	S.U.
pH	04/30/21	Daily Max	11.0	S.U.	9.0	S.U.
pH	03/31/21	Daily Max	10.8	S.U.	9.0	S.U.
pH	08/31/20	Daily Max	11.1	S.U.	9.0	S.U.
pH	09/30/20	Daily Max	11.1	S.U.	9.0	S.U.
pH	01/31/21	Daily Max	11.2	S.U.	9.0	S.U.
pH	10/31/20	Daily Max	11.1	S.U.	9.0	S.U.
pH	11/30/20	Daily Max	11.5	S.U.	9.0	S.U.
pH	12/31/20	Daily Max	11.4	S.U.	9.0	S.U.
pH	02/28/21	Daily Max	11.2	S.U.	9.0	S.U.
pH	07/31/20	Daily Max	11.0	S.U.	9.0	S.U.

Development of Effluent Limitations

Outfall Nos. 023, 024, 025, and 026 **Design Flow (MGD)** Variable
Wastewater Description: Seepage areas SWRR-1, SWRR-2, SWRR-3, and SWRR-4

Outfalls 023, 024, 025, and 026 discharge groundwater seepage from areas downgradient of the Solid Waste Disposal Area (SWDA). The discharges are intermittent seasonal discharges.

Technology-Based Effluent Limitations (TBELs) for SWDA Seeps

There are no federal effluent limitations guidelines that apply to seepage discharges from the SLA and SWDA. Therefore, pursuant to Section 402(a)(1) of the Clean Water Act and implementing regulations in 40 CFR § 125.3 (incorporated by reference in DEP's regulations at 25 Pa. Code § 92a.3(b)(4)), DEP will evaluate case-by-case effluent limits.

DEP previously identified Best Available Technology (BAT) for seeps from the SLA and SWDA as neutralization and sedimentation. The newly identified seeps in the amendment application are substantially similar to permitted seeps in their discharge quality and quantity and some of the new seeps may be alternative expressions of the same seepage areas due to their proximity to permitted seeps. There have been no substantive changes relating to the § 125.3(d) factors considered in DEP's previous best professional judgment (BPJ) evaluation for the seeps covered by the December 2019 NPDES permit to warrant a change to BAT. The age of equipment and processes employed have not changed. There are no process changes to consider because there are no facilities generating process wastewaters at the site. PPG will implement a Cleanup Plan including the installation of leachate collection and treatment facilities at the SLA and the stabilization and capping of portions of the SWDA and SWDA Annex. Those measures are expected to reduce the quantity and/or improve the quality of the seep discharges, so the measures could be considered "process changes" to the extent that they impact the generation of polluted groundwater. The measures included in PPG's revised cleanup plan are feasible from an engineering standpoint and have been approved by DEP. The costs to construct treatment systems have increased since DEP completed its previous BPJ evaluation, so treatment technologies that were unaffordable at that time remain as such.

SWDA seeps are not included as part of PPG's proposed collection and treatment facilities because there is a reduced potential for pollutants to leach from the cullet/bulk glass wastes disposed in the SWDA areas and pollutants generally are not present in treatable concentrations in the SWDA seeps as shown in Table 1.

Table 1. BAT-Equivalent Concentrations and SWDA Seepage Discharge Concentrations

Parameter	Maximum Reported Conc. (µg/L)				BAT-Equivalent Concentration (µg/L) [30-day]	Treatment Technology
	023	024	025	026		
Aluminum, Total	203	97.1	65.9	90.7	Not Reported	Not Reported
Antimony, Total	60.7	844	629	27.3	Not Reported	Not Reported
Arsenic, Total	91.1	464	262	43.4	200	Arsenite oxidation; lime precipitation or iron/alum co-precipitation; gravity clarification
Barium, Total	25.8	45.6	50.8	19.8	1,000	Sulfate precipitation; coagulation; gravity clarification
Cadmium, Total	<1	<1	<1	<1	100	High pH precipitation; gravity clarification or filtration where caustic is substituted for lime
Chromium (VI)	NR	NR	NR	NR	50	Acidic reduction to trivalent chromium or ion exchange at pH below 6.0
Chromium, Total	<2	4.63	2.76	3.16	500	Precipitation; gravity clarification for lime or filtration for caustic
Copper, Total	2.71	3.34	<2	2.50	400	Precipitation; gravity clarification
Cyanide, Total	<10	<10	<10	<10	100	Two-stage alkaline chlorination
Fluoride	226	1460	1360	358	10,000	High pH lime precipitation; gravity clarification
Iron, Total	403	144	93.3	303	1,500	Oxidation at neutral pH of ferrous to ferric iron; precipitation, gravity clarification or filtration
Lead, Total	1.92	1.49	<1	<1	150	High-pH precipitation; gravity clarification for lime or filtration for caustic
Mercury, Total	<0.2	<0.2	<0.2	<0.2	3	Ion exchange or coagulation plus filtration
Nickel, Total	5.2	1.96	<1	1.13	750	High pH precipitation; gravity clarification and/or filtration

Table 1 (continued). BAT-Equivalent Concentrations

Parameter	Maximum Reported Conc. (µg/L)				BAT-Equivalent Concentration (µg/L) [30-day]	Treatment Technology
	023	024	025	026		
Silver, Total	<1	<1	<1	<1	100	Ion exchange or ferric chloride co-precipitation plus filtration
Zinc, Total	14.3	30.3	11.6	<5	500	Precipitation at optimized pH; gravity clarification and/or filtration
pH (s.u.)	7.80	8.44	8.46	8.53	6.0 to 9.0	Neutralization

Antimony and arsenic concentrations at Outfalls 024 and 025 are higher than at the other SWDA seeps. However, PPG has not reported any other discharges at those locations since the seeps were initially observed in the spring of 2020. Additionally, the identified BAT-equivalent treatment technology for arsenic does not lend itself to intermittent/seasonal applications at unknown design flow rates. Data collected under the permit after the Cleanup Plan is implemented can be used to further evaluate technology-based controls for the SWDA seeps.

For this permit amendment, the TBELs, effluent standards, and monitoring requirements previously established for seep discharges from the SLA and SWDA will be imposed at Outfalls 023, 024, 025, and 026. Also, based on applicable state regulations, the following effluent standards and monitoring requirements are imposed:

- Flow monitoring will be required in accordance with 25 Pa. Code § 92a.61(b).
- Limits for pH (6.0 minimum and 9.0 maximum) will be imposed based on 25 Pa. Code § 95.2(1).
- A maximum limit of 7.0 mg/L is imposed for dissolved iron in accordance with 25 Pa. Code §95.2(4).

TSS limits are based on the concentrations described in the 1974 Development Document for the Glass Manufacturing Point Source Category – Plate Glass Manufacturing Subcategory. The effluent limits specified in 40 CFR Part 426 for Plate Glass Manufacturing are production-based, which is why DEP referred to the effluent concentrations in that regulation's Development Document. Best Practicable Control Technology (BPT) for the Plate Glass Subcategory is based on the use of settling lagoons (sedimentation ponds) with achievable effluent concentrations of 30 mg/L (average monthly) and 60 mg/L (maximum daily). PPG may not require treatment facilities to control TSS, but if treatment facilities are required, DEP considers sedimentation/clarification with pH neutralization to be effective technologies to control suspended solids and pH. Even if pumping some of the intermittent, low-flow seeps to a neutralization and sedimentation treatment system would be impractical, TSS may be controllable locally at the outfalls using conventional erosion controls (e.g., turf reinforcement mat).

Table 2. TBELs, Effluent Standards, and Monitoring Requirements

Parameter	Average Monthly (mg/L)	Maximum Daily (mg/L)
Flow (MGD)	Report	Report
Total Dissolved Solids	Report	Report
Total Suspended Solids	30.0	60.0
Iron, Dissolved	—	7.0
Aluminum, Total	Report	Report
Antimony, Total	Report	Report
Arsenic, Total	Report	Report
Chromium, Total	Report	Report
Iron, Total	Report	Report
Lead, Total	Report	Report
pH (s.u.)	not less than 6.0 and not greater than 9.0 standard units	
Oil-bearing wastewaters shall at no time cause a film or sheen upon or discoloration of the waters of this Commonwealth or adjoining shoreline.		

Chapter 95.10 – Total Dissolved Solids Loading

DEP previously determined that the difference between the TDS loading authorized prior to August 21, 2010 and the TDS loading from discharges to be authorized after August 21, 2010 is: 4,904 lbs/day - 1,194 lbs/day = 3,710 lbs/day. Pursuant to 25 Pa. Code § 95.10(a)(7), new and expanding discharge loadings of TDS equal to or less than 5,000 pounds per day, measured as an average daily discharge over the course of a calendar year, otherwise known as the annual average daily load, are exempt from the treatment requirements of § 95.10. DEP's previous load accounting is summarized below.

Table 3. Existing authorized TDS loads

Outfall	Description	Maximum Design Flow (MGD)	Average Flow (MGD)	TDS (mg/L)	Average TDS Loading (lbs/day)
001	Interim abatement system	0.0936	0.0342	3,533	1,008
003	Eastern Drainage Ditch	0.595	0.012	610	61
005	Seep 6 Area	—	0.009	980	74
006	Seep 106 Area	—	0.001	3,967	33
007	Seep W Area	—	0.002	1,057	18
				Total Authorized Annual Average TDS Loading =	1,194

Table 4. Projected TDS loads after the enhanced collection and treatment system (ECTS) is installed

Outfall	Description	Maximum Design Flow (MGD)	Average Flow (MGD)	TDS (mg/L)	Average TDS Loading (lbs/day)
002	ECTS Future Discharge	0.115	0.053	10,971	4,853
008	SWDA 4	—	0.00148	483	6
009	SWDA 5	—	0.001728	400	6
010	SWDA 6	—	0.004838	577	23
Outfall	Description	Maximum Design Flow (MGD)	Average Flow (MGD)	TDS (mg/L)	Average TDS Loading (lbs/day)
011	SLA Trench Drain East	—	—	—	—
012	SLA Trench Drain West	—	—	—	—
014	SWDA Seep Area 7	—	0.0006912	1,200	7
015	SWDA Seep Area 11	—	0.0013968	627	7
016	SWDA Seep Area 12	—	0.00072	317	2
				Total Projected Annual Average TDS Loading =	4,904

Outfalls 017 through 022 are not shown in the tables above because seeps from those SLA outfalls are expected to be collected by the ECTS, which will discharge through Outfall 002. Therefore, the TDS load from those discharges is incorporated into the TDS load at Outfall 002. The TDS load added by the new seep outfalls is summarized in the table below. The Route 128 seepage areas (Outfalls 029 through 038) along the northeastern side of the SLA are included even though they also should be collected by the ECTS and discharge through Outfall 002.

Table 5. TDS loads added by new seep outfalls

Outfall	Description	Maximum Flow (MGD)	Average Flow (MGD)	TDS (mg/L)	Average TDS Loading (lbs/day)
023	Seepage Area SWRR-1	0.00317	0.00233	1,080	21
024	Seepage Area SWRR-2	0.0108	0.00590	1,370	68
025	Seepage Area SWRR-3	0.00320	0.00239	1,150	23
026	Seepage Area SWRR-4	0.00472	0.00408	680	23
027	Seepage Area SLRR-1	0.00245	0.00214	947	17
028	Seepage Area SLRR-2	0.00592	0.00525	1,800	79
029	Seepage Area 128-1	0.000101	0.0006912	2,940	17
030	Seepage Area 128-1A	0.0000288	0.0000209	4,160	0.7
031	Seepage Area 128-1B	0.00000576	0.00000504	4,160	0.2
032	Seepage Area 128-2	0.0000864	0.0000480	636	0.25
033	Seepage Area 128-3	0.0000432	0.0000432	3,960	1.4
034	Seepage Area 128-4	0.000144	0.000134	3,480	4
035	Seepage Area 128-5	0.0000720	0.0000624	3,720	2
036	Seepage Area 128-6	0.00111	0.00104	2,110	18
037	Seepage Area 128-6A	0.000245	0.000144	2,270	3
038	Seepage Area 128-7	0.0118	0.00461	1,215	47
				Total Projected Annual Average TDS Loading =	324

The new/expanding annual average TDS discharge loading is approximated as: 4,904 - 1,194 + 324 = 4,034 lbs/day. The TDS loading is less than 5,000 lbs/day so the discharges are exempt from the treatment requirements of § 95.10. Some

double counting of TDS loads may be represented in new/expanding annual TDS discharge load, but for the purposes of demonstration, including all the new seep outfalls' TDS loads does not trigger § 95.10's TDS load requirements.

Water Quality-Based Effluent Limitations (WQBELs) for All Allegheny River Seeps

Based on the discharge flow rate and effluent quality reported on the application, no WQBELs apply at Outfalls 023, 024, 025, and 026, or at any other outfalls that discharge to the Allegheny River. The low flow rates from the seepage areas and the large assimilative capacity of the Allegheny River does not require the imposition of WQBELs to protect the river's designated uses. To demonstrate this, the combined flow rate of all seeps from the site to the Allegheny River are added together and modeled as one discharge.

Toxics Management Spreadsheet Water Quality Modeling Program and Procedures for Evaluating Reasonable Potential

WQBELs are evaluated pursuant to Section 301(b)(1)(C) of the Clean Water Act and, per 40 CFR § 122.44(d)(1)(i), are imposed to "control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) that are or may be discharged at a level that will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard, including state narrative criteria for water quality." The Department of Environmental Protection developed the DEP Toxics Management Spreadsheet (TMS) to facilitate calculations necessary to complete a reasonable potential (RP) analysis and determine WQBELs for discharges of toxic and some nonconventional pollutants.

The TMS is a single discharge, mass-balance water quality modeling program for Microsoft Excel® that considers mixing, first-order decay, and other factors to determine WQBELs for toxic and nonconventional pollutants. Required input data including stream code, river mile index, elevation, drainage area, discharge flow rate, low-flow yield, and the hardness and pH of both the discharge and the receiving stream are entered into the TMS to establish site-specific discharge conditions. Other data such as reach dimensions, partial mix factors, and the background concentrations of pollutants in the stream also may be entered to further characterize the discharge and receiving stream. The pollutants to be analyzed by the model are identified by inputting the maximum concentration reported in the permit application or Discharge Monitoring Reports, or by inputting an Average Monthly Effluent Concentration (AMEC) calculated using DEP's TOXCONC.xls spreadsheet for datasets of 10 or more effluent samples. Pollutants with no entered concentration data and pollutants for which numeric water quality criteria in 25 Pa. Code Chapter 93 have not been promulgated are excluded from the modeling.

The TMS evaluates each pollutant by computing a Wasteload Allocation for each applicable criterion, determining the most stringent governing WQBEL, and comparing that governing WQBEL to the input discharge concentration to determine whether permit requirements apply in accordance with the following RP thresholds:

- Establish limits in the permit where the maximum reported effluent concentration or calculated AMEC equals or exceeds 50% of the WQBEL. Use the average monthly, maximum daily, and instantaneous maximum (IMAX) limits for the permit as recommended by the TMS (or, if appropriate, use a multiplier of 2 times the average monthly limit for the maximum daily limit and 2.5 times the average monthly limit for IMAX).

- For non-conservative pollutants, establish monitoring requirements where the maximum reported effluent concentration or calculated AMEC is between 25% - 50% of the WQBEL.

- For conservative pollutants, establish monitoring requirements where the maximum reported effluent concentration or calculated AMEC is between 10% - 50% of the WQBEL.

In most cases, pollutants with effluent concentrations less than DEP's Target Quantitation Limits are eliminated as candidates for WQBELs and monitoring.

Reasonable Potential Analysis and WQBEL Development for Outfall 001

The combined flow rate used for modeling is 0.28235 MGD—the sum of the flow rates of all direct discharges from the site to the Allegheny River including all existing permitted discharges, the new discharges covered by this permit amendment, and discharges that will be replaced by other discharges such as Outfall 001, which will be replaced by Outfall 002. The modeled discharge concentrations are the maximum concentrations reported on the permit amendment application among the reported results for seepage areas SWRR-1, SWRR-2, SWRR-3, SWRR-4, SLRR-1, and SLRR-2.

Table 6. TMS Modeling Inputs

Parameter	Value
River Mile Index	40.25
Discharge Flow (MGD)	0.28235
Basin/Stream Characteristics	
Parameter	**Value**
Area in Square Miles	8,990
Q_{7-10} (cfs)	2,250
Low-flow yield (cfs/mi^2)	0.25
Elevation (ft)	769
Slope	0.001

A partial mix factor of 0.4 is used for the chronic fish criteria (CFC), threshold human health (THH) and cancer risk level (CRL) analyses in PENTOXSD. Partial mix factors (PMFs) represent the fractional portion of the receiving stream that mixes with a discharge at design conditions. A PMF of 0.4 provides PPG with 40% of the Allegheny River's minimum regulated flow for mixing and dilution. The PMF was manually input because the TMS, as a single discharge model, allocates high percentages of stream flow to individual discharges, which often results in those discharges being modeled with most or all of a receiving stream's assimilative capacity; this would leave little or no assimilative capacity for other dischargers to the same receiving stream. In PPG's case, there are other downstream dischargers (e.g., Rosebud Mining Company – Logansport Mine NPDES PA0235407) that discharge metals to the Allegheny River. Since there are other facilities discharging the same metals contained in PPG's discharges and the other discharges are located within the mixing zone for discharges from the site (as defined by criteria compliance times), a PMF of 0.4 is used for the criteria with 12-hour compliance times (CFC, THH, and CRL).

Even under the conservative modeling conditions described above, the TMS recommends no WQBELs or monitoring requirements (see Attachment A).

Effluent Limitations and Monitoring Requirements for Outfalls 023, 24, 025, and 026

In accordance with 25 Pa. Code §§ 92a.12 and 92a.61, effluent limits at Outfalls 023, 24, 025, and 026 are the more stringent of TBELs, WQBELs, regulatory effluent standards, and monitoring requirements.

Table 7. Effluent Limits and Monitoring Requirements for Outfalls 023, 24, 025, and 026

Parameter	Mass (pounds)		Concentration (mg/L)			Basis
	Average Monthly	Daily Maximum	Average Monthly	Daily Maximum	Instant Maximum	
Flow (MGD)	Report	Report	—	—	—	25 Pa. Code § 92a.61(b)
Total Dissolved Solids	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Total Suspended Solids	—	—	30.0	60.0	—	BPJ TBELs
Iron, Dissolved	—	—	—	7.0	—	25 Pa. Code § 95.2(4)
Aluminum, Total	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Antimony, Total	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Arsenic, Total	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Chromium, Total	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Iron, Total	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Lead, Total	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
pH (s.u.)	within the range of 6.0 to 9.0					BPJ TBELs; 25 Pa. Code § 95.2(1)
Oil-bearing wastewaters shall at no time cause a film or sheen upon or discoloration of the waters of this Commonwealth or adjoining shoreline.						25 Pa. Code § 95.2(2)(i)

Monitoring frequencies and sample types for all parameters will be 2/month grab sampling. Flow should be estimated at the time of sampling.

Development of Effluent Limitations

Outfall Nos. 027 and 028 **Design Flow (MGD)** Variable
Wastewater Description: Seepage areas SLRR-1, SLRR-2

Outfalls 027 and 028 discharge groundwater seepage from areas downgradient of the Slurry Lagoon Area. The discharges are intermittent seasonal discharges.

Technology-Based Effluent Limitations (TBELs) for SWDA Seeps

There are no federal effluent limitations guidelines that apply to seepage discharges from the SLA and SWDA. Therefore, pursuant to Section 402(a)(1) of the Clean Water Act and implementing regulations in 40 CFR § 125.3 (incorporated by reference in DEP's regulations at 25 Pa. Code § 92a.3(b)(4)), DEP will impose case-by-case effluent limits.

As stated previously, DEP identified BAT for seeps from the SLA and SWDA as neutralization and sedimentation. The quality and quantity of the newly identified seeps are substantially similar to existing permitted seeps and some of the new seeps may be alternative expressions of the same seepage areas due to their proximity to permitted seeps. There have been no substantive changes relating to the § 125.3(d) factors considered in DEP's previous best professional judgment (BPJ) evaluation for the seeps covered by the December 2019 NPDES permit to warrant a change to BAT.

Effluent concentrations for total iron at Outfall 027 and 028 exceed the BAT-equivalent concentration of 1.5 mg/L, but the average concentrations from the three samples collected at SLRR-1 and SLRR-2, 1.77 mg/L and 1.78 mg/L, respectively, are only marginally higher than 1.5 mg/L. The pH levels reported for SLRR-1 and SLRR-2 ranging from 9.43 to 10.7 s.u. are characteristic of the elevated pH levels for discharges from the SLA. However, seeps downgradient of the SLA along the Allegheny River are expected to be reduced or eliminated by the collection and treatment system PPG plans to install.

Table 8. BAT-Equivalent Concentrations and SWDA Seepage Discharge Concentrations

Parameter	Maximum Reported Conc. (µg/L)		BAT-Equivalent Concentration (µg/L) [30-day]	Treatment Technology
	027	028		
Aluminum, Total	1,730	1,630	Not Reported	Not Reported
Antimony, Total	7.86	16.8	Not Reported	Not Reported
Arsenic, Total	48.5	92.7	200	Arsenite oxidation; lime precipitation or iron/alum co-precipitation; gravity clarification
Barium, Total	34.0	28.3	1,000	Sulfate precipitation; coagulation; gravity clarification
Cadmium, Total	<1	<1	100	High pH precipitation; gravity clarification or filtration where caustic is substituted for lime
Chromium (VI)	NR	NR	50	Acidic reduction to trivalent chromium or ion exchange at pH below 6.0
Chromium, Total	3.60	4.86	500	Precipitation; gravity clarification for lime or filtration for caustic
Copper, Total	14.8	21.8	400	Precipitation; gravity clarification
Cyanide, Total	<10	<10	100	Two-stage alkaline chlorination
Fluoride	42.3	887	10,000	High pH lime precipitation; gravity clarification
Iron, Total	2,250	2,500	1,500	Oxidation at neutral pH of ferrous to ferric iron; precipitation, gravity clarification or filtration
Lead, Total	7.95	14.7	150	High-pH precipitation; gravity clarification for lime or filtration for caustic
Mercury, Total	<0.2	<0.2	3	Ion exchange or coagulation plus filtration
Nickel, Total	5.21	7.38	750	High pH precipitation; gravity clarification and/or filtration
Silver, Total	<1	<1	100	Ion exchange or ferric chloride co-precipitation plus filtration
Zinc, Total	11.6	13.9	500	Precipitation at optimized pH; gravity clarification and/or filtration
pH (s.u.)	9.78	10.70	6.0 to 9.0	Neutralization

As with the SWDA seeps, data collected under the permit after the collection and treatment system for the SLA is installed can be used to further evaluate technology-based controls for the SLA seeps if the SLA seeps persist after the system is installed or if elevated pollutant concentrations manifest at the re-routed seep discharge location at Outfall 002. Presently, the TBELs, effluent standards, and monitoring requirements listed in Table 2 of this Fact Sheet will be imposed at Outfalls 027 and 028.

The site's increase in TDS discharge loading resulting from Outfalls 027 and 028 contributions does not trigger 25 Pa. Code § 95.10's TDS requirements as explained previously in this Fact Sheet.

Water Quality-Based Effluent Limitations (WQBELs) for All Allegheny River Seeps

As demonstrated previously in this Fact Sheet, seepage discharges to the Allegheny River—including discharges from Outfalls 027 and 028—do not require WQBELs to protect the designated uses of the Allegheny River. Therefore, no WQBELs are imposed.

Effluent Limitations and Monitoring Requirements for Outfalls 027 and 028

In accordance with 25 Pa. Code §§ 92a.12 and 92a.61, effluent limits at Outfalls 027 and 028 are the more stringent of TBELs, WQBELs, regulatory effluent standards, and monitoring requirements.

Table 9. Effluent Limits and Monitoring Requirements for Outfalls 027 and 028

Parameter	Mass (pounds)		Concentration (mg/L)			Basis
	Average Monthly	Daily Maximum	Average Monthly	Daily Maximum	Instant Maximum	
Flow (MGD)	Report	Report	—	—	—	25 Pa. Code § 92a.61(b)
Total Dissolved Solids	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Total Suspended Solids	—	—	30.0	60.0	—	BPJ TBELs
Iron, Dissolved	—	—	—	7.0	—	25 Pa. Code § 95.2(4)
Aluminum, Total	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Antimony, Total	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Arsenic, Total	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Chromium, Total	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Iron, Total	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Lead, Total	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
pH (s.u.)	within the range of 6.0 to 9.0					BPJ TBELs; 25 Pa. Code § 95.2(1)
Oil-bearing wastewaters shall at no time cause a film or sheen upon or discoloration of the waters of this Commonwealth or adjoining shoreline.						25 Pa. Code § 95.2(2)(i)

Monitoring frequencies and sample types for all parameters will be 2/month grab sampling. Flow should be estimated at the time of sampling.

Development of Effluent Limitations

Outfall Nos. 029 through 038 **Design Flow (MGD)** Variable
Wastewater Description: Seepage areas 128-1, 128-1A, 128-1B, 128-2, 128-3, 128-4, 128-5, 128-6, 128-6A, 128-7

Outfalls 029 through 038 discharge groundwater seepage from areas northwest of the Slurry Lagoon Area along State Route 128. The discharges are intermittent seasonal discharges.

Technology-Based Effluent Limitations (TBELs) for SWDA Seeps

There are no federal effluent limitations guidelines that apply to seepage discharges from the SLA and SWDA. Therefore, pursuant to Section 402(a)(1) of the Clean Water Act and implementing regulations in 40 CFR § 125.3 (incorporated by reference in DEP's regulations at 25 Pa. Code § 92a.3(b)(4)), DEP will impose case-by-case effluent limits.

Table 10. BAT-Equivalent Concentrations and SWDA Seepage Discharge Concentrations

Parameter	Maximum Reported Conc. (µg/L)										BAT-Equivalent Concentration (µg/L) [30-day]
	029	030	031	032	033	034	035	036	037	038	
Aluminum, Total	1,380	964	964	6,390	13,600	913	450	411	851	1,920	Not Reported
Antimony, Total	20	23	23	<10	<20	<10	<10	<10	7.87	<10	Not Reported
Arsenic, Total	23.3	27.7	27.7	19.9	56.6	13.8	10.1	6.5	10.1	7.76	200
Barium, Total	100	<50	<50	<50	<100	<50	<50	<50	<50	<50	1,000
Cadmium, Total	<10	<5	<5	<5	<10	<5	<5	<5	2.75	<5	100
Chromium (VI)	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	50
Chromium, Total	20	<10	<10	10	<20	<10	<10	<10	<10	<10	500
Copper, Total	27.9	29.4	29.4	15.5	66.5	16.6	11.8	11.4	34.3	19.6	400
Cyanide, Total	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	100
Fluoride	445	<500	<500	304	<250	<250	<250	<250	463	666	10,000
Iron, Total	1,390	683	683	9,290	23,300	2,070	1,100	1,070	1,870	3,160	1,500
Lead, Total	244	292	292	24.1	132	93	66	123	285	163	150
Mercury, Total	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	3
Nickel, Total	21.5	281	281	7.45	44.6	6.53	10.3	8.91	10.5	13.0	750
Silver, Total	<10	<5	<5	<1	<5	<1	<5	<5	<5	<5	100
Zinc, Total	<50	<25	<25	41.4	75.1	<25	<25	<25	13.5	<25	500
pH (s.u.)	11.7	11.32	11.32	10.38	11.69	11.60	11.42	11.81	11.12	11.01	6.0 to 9.0

As with the other new SLA seeps, there are some elevated pollutant concentrations (aluminum, iron, lead, pH) compared to the BAT-equivalent concentrations, but the seeps are expected to be mitigated or eliminated by the collection and treatment system PPG plans to install. Data collected under the permit after the collection and treatment system for the SLA is installed can be used to further evaluate technology-based controls for the SLA seeps if they persist after the system is installed or if elevated pollutant concentrations manifest at the re-routed seep discharge location at Outfall 002.

Water Quality-Based Effluent Limitations (WQBELs) for Route 128 Seeps

The SLA's seeps along Route 128 discharge to a roadside ditch, which appears to be part of an unnamed and undocumented tributary to Glade Run (no PA stream code or NHD reach code). The Q_{7-10} flow of intermittent streams is close or equal to zero. Since any dilution flow at Q_{7-10} conditions is likely to be dominated by contaminated groundwater (stream flow at low flow conditions is groundwater base flow), any discharges to the unnamed tributary must achieve water quality criteria at the point of discharge. Even if the point of first aquatic life use is at Glade Run (according to the requirements of 25 Pa. Code § 96.4(f)) and permissible metals concentrations are slightly higher than water quality criteria as a result, caustic seepage with pH higher than 11.0 must be neutralized to prevent physical harm from contact with the water along the readily accessible section of the SLA bordered by Route 128.

PPG plans to cut off contaminated groundwater discharging along Route 128 with its permitted collection system, which includes a trench along the northwestern portion of the SLA. DEP expects that PPG will be unable to comply with water quality criteria at the Route 128 Seeps until that system is installed and reaches equilibrium. Therefore, a compliance schedule will be included in the permit pursuant to 25 Pa. Code § 92a.51.

Table 11 compares the maximum concentrations reported at the Route 128 Seeps with DEP's Target Quantitation Limits and 25 Pa. Code Chapter 93's most stringent water quality criteria. Results in red exhibit a reasonable potential to cause or contribute to an exceedance of water quality criteria because 1) the pollutants were detected at concentrations that exceed the most stringent water quality criterion (e.g., aluminum, iron, lead); 2) the pollutants were detected at concentrations that exceed 50% of the most stringent water quality criterion; or 3) the results were reported using a reporting limit that exceeds both DEP's Target Quantitation Limit and water quality criteria (cadmium, selenium, silver). In any of those cases, reasonable potential is demonstrated.

Table 11. Route 128 Seep Concentrations Compared to Water Quality Criteria and Target QLs

Parameter	Maximum Concentrations (µg/L)										Target QL (µg/L)	Most Stringent Criterion (µg/L)
	128-1 (029)	128-1A (030)	128-1B (031)	128-2 (032)	128-3 (033)	128-4 (034)	128-5 (035)	128-6 (036)	128-6A (037)	128-7 (038)		
Aluminum, Tot.	1380	964	964	6390	13600	913	450	411	851	1920	10	750
Antimony, Tot.	20	23	23	<10	<20	<10	<10	<10	7.87	<10	2	5.6
Arsenic, Tot.	23.3	27.7	27.7	19.9	56.6	13.8	10.1	6.5	10.1	7.76	3	10
Barium, Tot.	100	<50	<50	<50	<100	<50	<50	<50	<50	<50	2	2400
Beryllium, Tot.	<10	<5	<5	<5	<10	<5	<5	<5	<5	<5		N/A
Cadmium, Tot.	<10	<5	<5	<5	<10	<5	<5	<5	2.75	<5	0.2	0.27
Chromium, Tot.	20	<10	<10	10	<20	<10	<10	<10	<10	<10	4	10
Cobalt, Tot.	<5	<2.5	<2.5	3.16	6.36	<2.5	<2.5	<2.5	1.35	<2.5	1	19
Copper, Tot.	27.9	29.4	29.4	15.5	66.5	16.6	11.8	11.4	34.3	19.6	4	9.3
Cyanide, Tot.	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	10	N/A
Iron, Tot.	1390	683	683	9290	23300	2070	1100	1070	1870	3160	20	1500
Iron, Diss.	2800	548	548	2610	1870	1880	1080	840	876	1230	20	300
Lead, Tot.	244	292	292	24.1	132	93	66	123	285	163	1	3.2
Lead, Diss.	220	272	272	9.67	128	90.8	63.3	119	243	156	1	3.2
Manganese, Tot.	50	33.9	33.9	167	158	62.8	41.8	<25	60.4	104	2	1000
Mercury, Tot.	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	0.05
Mercury, Diss.	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	0.05
Nickel, Tot.	21.5	281	281	7.45	44.6	6.53	10.3	8.91	10.5	13	4	52
Selenium, Tot.	<50	<25	<25	<25	<50	25	<25	<25	<25	<25	5	5
Silver, Tot.	<10	<5	<5	<1	<5	<1	<5	<5	<5	<5	0.4	3.7
Thallium, Tot.	<10	<5	<5	<5	<10	<5	<5	<5	<5	<5	2	0.24
Zinc, Tot.	<50	<25	<25	41.4	75.1	<25	<25	<25	13.5	<25	5	117

WQBELs and the Route 128 seep outfalls to which they apply are summarized in Table 12.

Table 12. WQBELs for Route 128 Seep Outfalls

Parameter	Average Monthly (µg/L)	Maximum Daily (µg/L)	Outfalls subject to WQBELs
Aluminum, Total (mg/L)	0.75	0.75	029, 030, 031, 032, 033, 034, 035, 036, 037, 038
Antimony, Total (µg/L)	5.6	11.2	029, 030, 031, 032, 033, 034, 035, 036, 037, 038
Arsenic, Total (µg/L)	10.0	20.0	029, 030, 031, 032, 033, 034, 035, 036, 037, 038
Cadmium, Total † (µg/L)	0.27	0.54	029, 030, 031, 032, 033, 034, 035, 036, 037, 038
Chromium, Total* (µg/L)	10.4	20.8	029, 033
Copper, Total † (µg/L)	9.3	18.6	029, 030, 031, 032, 033, 034, 035, 036, 037, 038
Iron, Total (mg/L)	1.5	3.0	029, 032, 033, 034, 035, 036, 037, 038
Iron, Dissolved (mg/L)	0.3	0.6	029, 030, 031, 032, 033, 034, 035, 036, 037, 038
Lead, Total † (µg/L)	3.2	6.4	029, 030, 031, 032, 033, 034, 035, 036, 037, 038
Nickel, Total (µg/L)	52.0	104.0	030, 031
Selenium, Total (µg/L)	5.0	10.0	029, 030, 031, 032, 033, 034, 035, 036, 037, 038
Silver, Total (µg/L)	3.7	3.7	029, 030, 031, 033, 035, 036, 037, 038
Thallium, Total (µg/L)	0.24	0.48	029, 030, 031, 032, 033, 034, 035, 036, 037, 038

*Conservatively assumes that chromium is present as hexavalent chromium.
†Assumes a default hardness of 100 mg/L for the criterion calculation and dissolved metals translator (where applicable).

The WQBELs in Table 12 are calculated based on the following: where the most stringent applicable numeric water quality criterion from 25 Pa. Code Chapter 93 is an acute fish criterion, the maximum daily limit is set equal to the value of the acute criterion (aluminum is the only parameter subject to this because it only has an acute criterion). Where the most stringent applicable numeric water quality criterion is a chronic fish, human health or cancer risk level criterion, the average monthly

limit is set equal to the value of the corresponding criterion with maximum daily limits calculated as two times the average monthly limit pursuant to the recommendations in DEP's *Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits*. The WQBELs will take effect 90 days after startup of the enhanced collection and treatment system or December 31, 2024, whichever occurs first.

Effluent Limitations and Monitoring Requirements for Outfalls 029 through 038

In accordance with 25 Pa. Code §§ 92a.12 and 92a.61, effluent limits at Outfalls 029 and 038 are the more stringent of TBELs, WQBELs, regulatory effluent standards, and monitoring requirements.

Table 13. Effluent Limits and Monitoring Requirements for Outfall 029

Pollutant	Mass (pounds)		Concentration (mg/L)			Basis
	Average Monthly	Daily Maximum	Average Monthly	Daily Maximum	Instant Maximum	
Flow (MGD)	Report	Report	—	—	—	25 Pa. Code § 92a.61(b)
Total Suspended Solids	—	—	30.0	60.0	—	BPJ TBELs
Total Dissolved Solids	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Aluminum, Total (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Aluminum, Total (Final)	—	—	0.75	0.75	—	WQBELs
Antimony, Total (µg/L) (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Antimony, Total (µg/L) (Final)	—	—	5.6	11.2	—	WQBELs
Arsenic, Total (µg/L) (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Arsenic, Total (µg/L) (Final)	—	—	10.0	20.0	—	WQBELs
Cadmium, Total (µg/L) (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Cadmium, Total (µg/L) (Final)	—	—	0.27	0.54	—	WQBELs
Chromium, Total (µg/L) (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Chromium, Total (µg/L) (Final)	—	—	10.4	20.8	—	WQBELs
Copper, Total (µg/L) (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Copper, Total (µg/L) (Final)	—	—	9.3	18.6	—	WQBELs
Iron, Dissolved (Interim)	—	—	—	7.0	—	25 Pa. Code § 95.2(4)
Iron, Dissolved (Final)	—	—	0.3	0.6	—	WQBELs
Iron, Total (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Iron, Total (Final)	—	—	1.5	3.0	—	WQBELs
Lead, Total (µg/L) (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Lead, Total (µg/L) (Final)	—	—	3.2	6.4	—	WQBELs
Selenium, Total (µg/L) (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Selenium, Total (µg/L) (Final)	—	—	5.0	10.0	—	WQBELs
Silver, Total (µg/L) (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Silver, Total (µg/L) (Final)	—	—	3.7	3.7	—	WQBELs
Thallium, Total (µg/L) (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Thallium, Total (µg/L) (Final)	—	—	0.24	0.48	—	WQBELs
pH (s.u.)	within the range of 6.0 to 9.0					BPJ TBELs; 25 Pa. Code § 95.2(1)
Oil-bearing wastewaters shall at no time cause a film or sheen upon or discoloration of the waters of this Commonwealth or adjoining shoreline.						25 Pa. Code § 95.2(2)(i)

Table 14. Effluent Limits and Monitoring Requirements for Outfalls 030 and 031

Pollutant	Mass (pounds)		Concentration (mg/L)			Basis
	Average Monthly	Daily Maximum	Average Monthly	Daily Maximum	Instant Maximum	
Flow (MGD)	Report	Report	—	—	—	25 Pa. Code § 92a.61(b)
Total Suspended Solids	—	—	30.0	60.0	—	BPJ TBELs
Total Dissolved Solids	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Aluminum, Total (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Aluminum, Total (Final)	—	—	0.75	0.75	—	WQBELs
Antimony, Total (µg/L) (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Antimony, Total (µg/L) (Final)	—	—	5.6	11.2	—	WQBELs
Arsenic, Total (µg/L) (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Arsenic, Total (µg/L) (Final)	—	—	10.0	20.0	—	WQBELs
Cadmium, Total (µg/L) (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Cadmium, Total (µg/L) (Final)	—	—	0.27	0.54	—	WQBELs
Chromium, Total (µg/L)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Copper, Total (µg/L) (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Copper, Total (µg/L) (Final)	—	—	9.3	18.6	—	WQBELs
Iron, Dissolved (Interim)	—	—	—	7.0	—	25 Pa. Code § 95.2(4)
Iron, Dissolved (Final)	—	—	0.3	0.6	—	WQBELs
Iron, Total	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Lead, Total (µg/L) (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Lead, Total (µg/L) (Final)	—	—	3.2	6.4	—	WQBELs
Nickel, Total (µg/L) (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Nickel, Total (µg/L) (Final)	—	—	52.0	104.0	—	WQBELs
Selenium, Total (µg/L) (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Selenium, Total (µg/L) (Final)	—	—	5.0	10.0	—	WQBELs
Silver, Total (µg/L) (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Silver, Total (µg/L) (Final)	—	—	3.7	3.7	—	WQBELs
Thallium, Total (µg/L) (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Thallium, Total (µg/L) (Final)	—	—	0.24	0.48	—	WQBELs
pH (s.u.)	within the range of 6.0 to 9.0					BPJ TBELs; 25 Pa. Code § 95.2(1)
Oil-bearing wastewaters shall at no time cause a film or sheen upon or discoloration of the waters of this Commonwealth or adjoining shoreline.						25 Pa. Code § 95.2(2)(i)

Table 15. Effluent Limits and Monitoring Requirements for Outfalls 032 and 034

Pollutant	Mass (pounds)		Concentration (mg/L)			Basis
	Average Monthly	Daily Maximum	Average Monthly	Daily Maximum	Instant Maximum	
Flow (MGD)	Report	Report	—	—	—	25 Pa. Code § 92a.61(b)
Total Suspended Solids	—	—	30.0	60.0	—	BPJ TBELs
Total Dissolved Solids	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Aluminum, Total (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)

Table 15 (continued). Effluent Limits and Monitoring Requirements for Outfalls 032 and 034

Pollutant	Mass (pounds)		Concentration (mg/L)			Basis
	Average Monthly	Daily Maximum	Average Monthly	Daily Maximum	Instant Maximum	
Aluminum, Total (Final)	—	—	0.75	0.75	—	WQBELs
Antimony, Total (µg/L) (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Antimony, Total (µg/L) (Final)	—	—	5.6	11.2	—	WQBELs
Arsenic, Total (µg/L) (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Arsenic, Total (µg/L) (Final)	—	—	10.0	20.0	—	WQBELs
Cadmium, Total (µg/L) (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Cadmium, Total (µg/L) (Final)	—	—	0.27	0.54	—	WQBELs
Chromium, Total (µg/L)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Copper, Total (µg/L) (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Copper, Total (µg/L) (Final)	—	—	9.3	18.6	—	WQBELs
Iron, Dissolved (Interim)	—	—	—	7.0	—	25 Pa. Code § 95.2(4)
Iron, Dissolved (Final)	—	—	0.3	0.6	—	WQBELs
Iron, Total (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Iron, Total (Final)	—	—	1.5	3.0	—	WQBELs
Lead, Total (µg/L) (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Lead, Total (µg/L) (Final)	—	—	3.2	6.4	—	WQBELs
Nickel, Total (µg/L)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Selenium, Total (µg/L) (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Selenium, Total (µg/L) (Final)	—	—	5.0	10.0	—	WQBELs
Silver, Total (µg/L)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Thallium, Total (µg/L) (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Thallium, Total (µg/L) (Final)	—	—	0.24	0.48	—	WQBELs
pH (s.u.)	within the range of 6.0 to 9.0					BPJ TBELs; 25 Pa. Code § 95.2(1)
Oil-bearing wastewaters shall at no time cause a film or sheen upon or discoloration of the waters of this Commonwealth or adjoining shoreline.						25 Pa. Code § 95.2(2)(i)

Table 16. Effluent Limits and Monitoring Requirements for Outfall 033

Pollutant	Mass (pounds)		Concentration (mg/L)			Basis
	Average Monthly	Daily Maximum	Average Monthly	Daily Maximum	Instant Maximum	
Flow (MGD)	Report	Report	—	—	—	25 Pa. Code § 92a.61(b)
Total Dissolved Solids	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Total Suspended Solids	—	—	30.0	60.0	—	BPJ TBELs
Aluminum, Total (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Aluminum, Total (Final)	—	—	0.75	0.75	—	WQBELs
Antimony, Total (µg/L) (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Antimony, Total (µg/L) (Final)	—	—	5.6	11.2	—	WQBELs
Arsenic, Total (µg/L) (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Arsenic, Total (µg/L) (Final)	—	—	10.0	20.0	—	WQBELs
Cadmium, Total (µg/L) (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Cadmium, Total (µg/L) (Final)	—	—	0.27	0.54	—	WQBELs
Chromium, Total (µg/L) (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Chromium, Total (µg/L) (Final)	—	—	10.4	20.8	—	WQBELs
Copper, Total (µg/L) (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Copper, Total (µg/L) (Final)	—	—	9.3	18.6	—	WQBELs
Iron, Dissolved (Interim)	—	—	—	7.0	—	25 Pa. Code § 95.2(4)
Iron, Dissolved (Final)	—	—	0.3	0.6	—	WQBELs
Iron, Total (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Iron, Total (Final)	—	—	1.5	3.0	—	WQBELs
Lead, Total (µg/L) (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Lead, Total (µg/L) (Final)	—	—	3.2	6.4	—	WQBELs
Nickel, Total (µg/L)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Selenium, Total (µg/L) (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Selenium, Total (µg/L) (Final)	—	—	5.0	10.0	—	WQBELs
Silver, Total (µg/L) (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Silver, Total (µg/L) (Final)	—	—	3.7	3.7	—	WQBELs
Thallium, Total (µg/L) (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Thallium, Total (µg/L) (Final)	—	—	0.24	0.48	—	WQBELs
pH (s.u.)	within the range of 6.0 to 9.0					BPJ TBELs; 25 Pa. Code § 95.2(1)
Oil-bearing wastewaters shall at no time cause a film or sheen upon or discoloration of the waters of this Commonwealth or adjoining shoreline.						25 Pa. Code § 95.2(2)(i)

Table 17. Effluent Limits and Monitoring Requirements for Outfalls 035, 036, 037, and 038

Pollutant	Mass (pounds)		Concentration (mg/L)			Basis
	Average Monthly	Daily Maximum	Average Monthly	Daily Maximum	Instant Maximum	
Flow (MGD)	Report	Report	—	—	—	25 Pa. Code § 92a.61(b)
Total Dissolved Solids	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)

Table 17 (continued). Effluent Limits and Monitoring Requirements for Outfalls 035, 036, 037, and 038

Pollutant	Mass (pounds)		Concentration (mg/L)			Basis
	Average Monthly	Daily Maximum	Average Monthly	Daily Maximum	Instant Maximum	
Total Suspended Solids	—	—	30.0	60.0	—	BPJ TBELs
Aluminum, Total (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Aluminum, Total (Final)	—	—	0.75	0.75	—	WQBELs
Antimony, Total (µg/L) (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Antimony, Total (µg/L) (Final)	—	—	5.6	11.2	—	WQBELs
Arsenic, Total (µg/L) (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Arsenic, Total (µg/L) (Final)	—	—	10.0	20.0	—	WQBELs
Cadmium, Total (µg/L) (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Cadmium, Total (µg/L) (Final)	—	—	0.27	0.54	—	WQBELs
Chromium, Total (µg/L)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Copper, Total (µg/L) (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Copper, Total (µg/L) (Final)	—	—	9.3	18.6	—	WQBELs
Iron, Dissolved (Interim)	—	—	—	7.0	—	25 Pa. Code § 95.2(4)
Iron, Dissolved (Final)	—	—	0.3	0.6	—	WQBELs
Iron, Total (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Iron, Total (Final)	—	—	1.5	3.0	—	WQBELs
Lead, Total (µg/L) (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Lead, Total (µg/L) (Final)	—	—	3.2	6.4	—	WQBELs
Nickel, Total (µg/L)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Selenium, Total (µg/L) (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Selenium, Total (µg/L) (Final)	—	—	5.0	10.0	—	WQBELs
Silver, Total (µg/L) (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Silver, Total (µg/L) (Final)	—	—	3.7	3.7	—	WQBELs
Thallium, Total (µg/L) (Interim)	—	—	Report	Report	—	25 Pa. Code § 92a.61(b)
Thallium, Total (µg/L) (Final)	—	—	0.24	0.48	—	WQBELs
pH (s.u.)	within the range of 6.0 to 9.0					BPJ TBELs; 25 Pa. Code § 95.2(1)
Oil-bearing wastewaters shall at no time cause a film or sheen upon or discoloration of the waters of this Commonwealth or adjoining shoreline.						25 Pa. Code § 95.2(2)(i)

Monitoring frequencies and sample types for all parameters will be 2/month grab sampling. Flow should be estimated at the time of sampling.

Tools and References Used to Develop Permit	
☐	WQM for Windows Model (see Attachment)
☒	Toxics Management Spreadsheet (see Attachment A)
☐	TRC Model Spreadsheet (see Attachment)
☐	Temperature Model Spreadsheet (see Attachment)
☐	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
☐	Technical Guidance for the Development and Specification of Effluent Limitations, 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:
☐	Other:

ATTACHMENT A

Toxics Management Spreadsheet Modeling Results

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.3, March 2021

Discharge Information

Instructions | Discharge | Stream

Facility: PPG SLA & SWDA NPDES Permit No.: PA0254967 Outfall No.: A.R.SEEPS

Evaluation Type: Major Sewage / Industrial Waste Wastewater Description: Groundwater seepage

Discharge Characteristics								
Design Flow (MGD)*	Hardness (mg/l)*	pH (SU)*	Partial Mix Factors (PMFs)				Complete Mix Times (min)	
			AFC	CFC	THH	CRL	Q_{7-10}	Q_h
0.28235	100	9		0.4	0.4	0.4		

					0 if left blank		*0.5 if left blank*		*0 if left blank*			*1 if left blank*	
	Discharge Pollutant	Units	Max Discharge Conc		Trib Conc	Stream Conc	Daily CV	Hourly CV	Strea m CV	Fate Coeff	FOS	Criteri a Mod	Chem Transl
Group 1	Total Dissolved Solids (PWS)	mg/L		1800									
	Chloride (PWS)	mg/L		13.6									
	Bromide	mg/L	<	0.1									
	Sulfate (PWS)	mg/L		823									
	Fluoride (PWS)	mg/L		1.46									
Group 2	Total Aluminum	µg/L		1730									
	Total Antimony	µg/L		844									
	Total Arsenic	µg/L		464									
	Total Barium	µg/L		25.8									
	Total Beryllium	µg/L	<	1									
	Total Boron	µg/L											
	Total Cadmium	µg/L	<	1									
	Total Chromium (III)	µg/L	<	4.86									
	Hexavalent Chromium	µg/L											
	Total Cobalt	µg/L		1.53									
	Total Copper	µg/L		21.8									
	Free Cyanide	µg/L											
	Total Cyanide	µg/L	<	10									
	Dissolved Iron	µg/L		1610									
	Total Iron	µg/L		2500									
	Total Lead	µg/L		14.7									
	Total Manganese	µg/L		114									
	Total Mercury	µg/L		0.218									
	Total Nickel	µg/L		7.38									
	Total Phenols (Phenolics) (PWS)	µg/L											
	Total Selenium	µg/L		49.9									
	Total Silver	µg/L	<	1									
	Total Thallium	µg/L	<	1									
	Total Zinc	µg/L		30.3									
	Total Molybdenum	µg/L											
	Acrolein	µg/L	<										
	Acrylamide	µg/L	<										
	Acrylonitrile	µg/L	<										
	Benzene	µg/L	<										
	Bromoform	µg/L	<										

Group 3	Carbon Tetrachloride	µg/L	<										
	Chlorobenzene	µg/L											
	Chlorodibromomethane	µg/L	<										
	Chloroethane	µg/L	<										
	2-Chloroethyl Vinyl Ether	µg/L	<										
	Chloroform	µg/L	<										
	Dichlorobromomethane	µg/L	<										
	1,1-Dichloroethane	µg/L	<										
	1,2-Dichloroethane	µg/L	<										
	1,1-Dichloroethylene	µg/L	<										
	1,2-Dichloropropane	µg/L	<										
	1,3-Dichloropropylene	µg/L	<										
	1,4-Dioxane	µg/L	<										
	Ethylbenzene	µg/L	<										
	Methyl Bromide	µg/L	<										
	Methyl Chloride	µg/L	<										
	Methylene Chloride	µg/L	<										
	1,1,2,2-Tetrachloroethane	µg/L	<										
	Tetrachloroethylene	µg/L	<										
	Toluene	µg/L	<										
	1,2-trans-Dichloroethylene	µg/L	<										
	1,1,1-Trichloroethane	µg/L	<										
	1,1,2-Trichloroethane	µg/L	<										
	Trichloroethylene	µg/L	<										
	Vinyl Chloride	µg/L	<										
Group 4	2-Chlorophenol	µg/L	<										
	2,4-Dichlorophenol	µg/L	<										
	2,4-Dimethylphenol	µg/L	<										
	4,6-Dinitro-o-Cresol	µg/L	<										
	2,4-Dinitrophenol	µg/L	<										
	2-Nitrophenol	µg/L	<										
	4-Nitrophenol	µg/L	<										
	p-Chloro-m-Cresol	µg/L	<										
	Pentachlorophenol	µg/L	<										
	Phenol	µg/L	<										
	2,4,6-Trichlorophenol	µg/L	<										
Group 5	Acenaphthene	µg/L	<										
	Acenaphthylene	µg/L	<										
	Anthracene	µg/L	<										
	Benzidine	µg/L	<										
	Benzo(a)Anthracene	µg/L	<										
	Benzo(a)Pyrene	µg/L	<										
	3,4-Benzofluoranthene	µg/L	<										
	Benzo(ghi)Perylene	µg/L	<										
	Benzo(k)Fluoranthene	µg/L	<										
	Bis(2-Chloroethoxy)Methane	µg/L	<										
	Bis(2-Chloroethyl)Ether	µg/L	<										
	Bis(2-Chloroisopropyl)Ether	µg/L	<										
	Bis(2-Ethylhexyl)Phthalate	µg/L	<										
	4-Bromophenyl Phenyl Ether	µg/L	<										
	Butyl Benzyl Phthalate	µg/L	<										
	2-Chloronaphthalene	µg/L	<										
	4-Chlorophenyl Phenyl Ether	µg/L	<										
	Chrysene	µg/L	<										
	Dibenzo(a,h)Anthrancene	µg/L	<										
	1,2-Dichlorobenzene	µg/L	<										
	1,3-Dichlorobenzene	µg/L	<										
	1,4-Dichlorobenzene	µg/L	<										
	3,3-Dichlorobenzidine	µg/L	<										
	Diethyl Phthalate	µg/L	<										
	Dimethyl Phthalate	µg/L	<										
	Di-n-Butyl Phthalate	µg/L	<										
	2,4-Dinitrotoluene	µg/L	<										

	2,6-Dinitrotoluene	µg/L	<										
	Di-n-Octyl Phthalate	µg/L	<										
	1,2-Diphenylhydrazine	µg/L	<										
	Fluoranthene	µg/L	<										
	Fluorene	µg/L	<										
	Hexachlorobenzene	µg/L	<										
	Hexachlorobutadiene	µg/L	<										
	Hexachlorocyclopentadiene	µg/L	<										
	Hexachloroethane	µg/L	<										
	Indeno(1,2,3-cd)Pyrene	µg/L	<										
	Isophorone	µg/L	<										
	Naphthalene	µg/L	<										
	Nitrobenzene	µg/L	<										
	n-Nitrosodimethylamine	µg/L	<										
	n-Nitrosodi-n-Propylamine	µg/L	<										
	n-Nitrosodiphenylamine	µg/L	<										
	Phenanthrene	µg/L	<										
	Pyrene	µg/L	<										
	1,2,4-Trichlorobenzene	µg/L	<										
Group 6	Aldrin	µg/L	<										
	alpha-BHC	µg/L	<										
	beta-BHC	µg/L	<										
	gamma-BHC	µg/L	<										
	delta BHC	µg/L	<										
	Chlordane	µg/L	<										
	4,4-DDT	µg/L	<										
	4,4-DDE	µg/L	<										
	4,4-DDD	µg/L	<										
	Dieldrin	µg/L	<										
	alpha-Endosulfan	µg/L	<										
	beta-Endosulfan	µg/L	<										
	Endosulfan Sulfate	µg/L	<										
	Endrin	µg/L	<										
	Endrin Aldehyde	µg/L	<										
	Heptachlor	µg/L	<										
	Heptachlor Epoxide	µg/L	<										
	PCB-1016	µg/L	<										
	PCB-1221	µg/L	<										
	PCB-1232	µg/L	<										
	PCB-1242	µg/L	<										
	PCB-1248	µg/L	<										
	PCB-1254	µg/L	<										
	PCB-1260	µg/L	<										
	PCBs, Total	µg/L	<										
	Toxaphene	µg/L	<										
	2,3,7,8-TCDD	ng/L	<										
Group 7	Gross Alpha	pCi/L											
	Total Beta	pCi/L	<										
	Radium 226/228	pCi/L	<										
	Total Strontium	µg/L	<										
	Total Uranium	µg/L	<										
	Osmotic Pressure	mOs/kg											

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.3, March 2021

Stream / Surface Water Information

PPG SLA & SWDA, NPDES Permit No. PA0254967, Outfall A.R.SEEPS

Instructions | Discharge | *Stream*

Receiving Surface Water Name: **Allegheny River**

No. Reaches to Model: 1

- (●) Statewide Criteria
- ( ) Great Lakes Criteria
- ( ) ORSANCO Criteria

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi^2)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	042122	40.25	769	8989	0.001		Yes
End of Reach 1	042122	40	768.95	8990	0.001		Yes

$Q_{7\text{-}10}$

Location	RMI	LFY (cfs/mi^2)*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness*	pH*	Hardness	pH
Point of Discharge	40.25	0.1	2250			1295	13.85					100	7		
End of Reach 1	40	0.1													

Q_h

Location	RMI	LFY (cfs/mi^2)	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness	pH	Hardness	pH
Point of Discharge	40.25														
End of Reach 1	40														

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Toxics Management Spreadsheet
Version 1.3, March 2021

Model Results

PPG SLA & SWDA, NPDES Permit No. PA0254967, Outfall A.R.SEEPS

Instructions | Results | RETURN TO INPUTS | SAVE AS PDF | PRINT | ◉ All ○ Inputs ○ Results ○ Limits

☐ ***Hydrodynamics***

☑ ***Wasteload Allocations***

☑ ***AFC*** CCT (min): 15 PMF: 0.103 Analysis Hardness (mg/l): 100 Analysis pH: 7.00

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Fluoride (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	750	750	399,269	
Total Antimony	0	0		0	1,100	1,100	585,595	
Total Arsenic	0	0		0	340	340	181,002	Chem Translator of 1 applied
Total Barium	0	0		0	21,000	21,000	11,179,541	
Total Cadmium	0	0		0	2.014	2.13	1,136	Chem Translator of 0.944 applied
Total Chromium (III)	0	0		0	569.763	1,803	959,869	Chem Translator of 0.316 applied
Total Cobalt	0	0		0	95	95.0	50,574	
Total Copper	0	0		0	13.439	14.0	7,453	Chem Translator of 0.96 applied
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	64.581	81.6	43,465	Chem Translator of 0.791 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	1.400	1.65	877	Chem Translator of 0.85 applied
Total Nickel	0	0		0	468.236	469	249,769	Chem Translator of 0.998 applied
Total Selenium	0	0		0	N/A	N/A	N/A	Chem Translator of 0.922 applied
Total Silver	0	0		0	3.217	3.78	2,015	Chem Translator of 0.85 applied
Total Thallium	0	0		0	65	65.0	34,603	
Total Zinc	0	0		0	117.180	120	63,785	Chem Translator of 0.978 applied

☑ ***CFC*** CCT (min): 720 PMF: 0.400 Analysis Hardness (mg/l): 100 Analysis pH: 7.00

Pollutants	Stream Conc	Stream	Trib Conc	Fate	WQC	WQ Obj	WLA (µg/L)	Comments

Pollutants	Conc (µg/L)	CV	(µg/L)	Coef	(µg/L)	(µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Fluoride (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	220	220	453,521	
Total Arsenic	0	0		0	150	150	309,219	Chem Translator of 1 applied
Total Barium	0	0		0	4,100	4,100	8,451,990	
Total Cadmium	0	0		0	0.246	0.27	558	Chem Translator of 0.909 applied
Total Chromium (III)	0	0		0	74.115	86.2	177,656	Chem Translator of 0.86 applied
Total Cobalt	0	0		0	19	19.0	39,168	
Total Copper	0	0		0	8.956	9.33	19,231	Chem Translator of 0.96 applied
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	1,500	1,500	7,728,229	WQC = 30 day average; PMF = 1
Total Lead	0	0		0	2.517	3.18	6,559	Chem Translator of 0.791 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	0.770	0.91	1,867	Chem Translator of 0.85 applied
Total Nickel	0	0		0	52.007	52.2	107,532	Chem Translator of 0.997 applied
Total Selenium	0	0		0	4.600	4.99	10,285	Chem Translator of 0.922 applied
Total Silver	0	0		0	N/A	N/A	N/A	Chem Translator of 1 applied
Total Thallium	0	0		0	13	13.0	26,799	
Total Zinc	0	0		0	118.139	120	246,997	Chem Translator of 0.986 applied

☑ ***THH*** CCT (min): 720 PMF: 0.400 Analysis Hardness (mg/l): N/A Analysis pH: N/A

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	500,000	500,000	N/A	
Chloride (PWS)	0	0		0	250,000	250,000	N/A	
Sulfate (PWS)	0	0		0	250,000	250,000	N/A	
Fluoride (PWS)	0	0		0	2,000	2,000	N/A	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	5.6	5.6	11,544	
Total Arsenic	0	0		0	10	10.0	20,615	
Total Barium	0	0		0	2,400	2,400	4,947,506	
Total Cadmium	0	0		0	N/A	N/A	N/A	
Total Chromium (III)	0	0		0	N/A	N/A	N/A	
Total Cobalt	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	N/A	N/A	N/A	
Dissolved Iron	0	0		0	300	300	618,438	
Total Iron	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	N/A	N/A	N/A	
Total Manganese	0	0		0	1,000	1,000	2,061,461	
Total Mercury	0	0		0	0.050	0.05	103	

Total Nickel	0	0		0	610	610	1,257,491	
Total Selenium	0	0		0	N/A	N/A	N/A	
Total Silver	0	0		0	N/A	N/A	N/A	
Total Thallium	0	0		0	0.24	0.24	495	
Total Zinc	0	0		0	N/A	N/A	N/A	

☑ ***CRL*** CCT (min): ###### PMF: 0.400 Analysis Hardness (mg/l): N/A Analysis pH: N/A

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Fluoride (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	N/A	N/A	N/A	
Total Arsenic	0	0		0	N/A	N/A	N/A	
Total Barium	0	0		0	N/A	N/A	N/A	
Total Cadmium	0	0		0	N/A	N/A	N/A	
Total Chromium (III)	0	0		0	N/A	N/A	N/A	
Total Cobalt	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	N/A	N/A	N/A	
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	N/A	N/A	N/A	
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	N/A	N/A	N/A	
Total Nickel	0	0		0	N/A	N/A	N/A	
Total Selenium	0	0		0	N/A	N/A	N/A	
Total Silver	0	0		0	N/A	N/A	N/A	
Total Thallium	0	0		0	N/A	N/A	N/A	
Total Zinc	0	0		0	N/A	N/A	N/A	

☑ ***Recommended WQBELs & Monitoring Requirements***

No. Samples/Month: 4

Pollutants	*Mass Limits* AML (lbs/day)	*Mass Limits* MDL (lbs/day)	*Concentration Limits* AML	*Concentration Limits* MDL	*Concentration Limits* IMAX	*Concentration Limits* Units	Governing WQBEL	WQBEL Basis	Comments

☑ ***Other Pollutants without Limits or Monitoring***

The following pollutants do not require effluent limits or monitoring based on water quality because reasonable potential to exceed water quality criteria was not determined and the discharge concentration was less than thresholds for monitoring, or the pollutant was not detected and a sufficiently sensitive analytical method was used (e.g., <= Target QL).

Pollutants	Governing WQBEL	Units	Comments
Total Dissolved Solids (PWS)	N/A	N/A	PWS Not Applicable
Chloride (PWS)	N/A	N/A	PWS Not Applicable
Bromide	N/A	N/A	No WQS
Sulfate (PWS)	N/A	N/A	PWS Not Applicable
Fluoride (PWS)	N/A	N/A	PWS Not Applicable
Total Aluminum	255,916	µg/L	Discharge Conc ≤ 10% WQBEL
Total Antimony	11,544	µg/L	Discharge Conc ≤ 10% WQBEL
Total Arsenic	20,615	µg/L	Discharge Conc ≤ 10% WQBEL
Total Barium	4,947,506	µg/L	Discharge Conc ≤ 10% WQBEL
Total Beryllium	N/A	N/A	No WQS
Total Cadmium	558	µg/L	Discharge Conc ≤ 10% WQBEL
Total Chromium (III)	177,656	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cobalt	32,416	µg/L	Discharge Conc ≤ 10% WQBEL
Total Copper	4,777	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cyanide	N/A	N/A	No WQS
Dissolved Iron	618,438	µg/L	Discharge Conc ≤ 10% WQBEL
Total Iron	7,728,229	µg/L	Discharge Conc ≤ 10% WQBEL
Total Lead	6,559	µg/L	Discharge Conc ≤ 10% WQBEL
Total Manganese	2,061,461	µg/L	Discharge Conc ≤ 10% WQBEL
Total Mercury	103	µg/L	Discharge Conc ≤ 10% WQBEL
Total Nickel	107,532	µg/L	Discharge Conc ≤ 10% WQBEL
Total Selenium	10,285	µg/L	Discharge Conc ≤ 10% WQBEL
Total Silver	1,291	µg/L	Discharge Conc ≤ 10% WQBEL
Total Thallium	495	µg/L	Discharge Conc < TQL
Total Zinc	40,884	µg/L	Discharge Conc ≤ 10% WQBEL