KPDES

KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

FACT SHEET

General Permit For
Coal Mining, Processing, and Associated Activities
Located in the Eastern Kentucky Coal Field

KPDES No.: KYGE40000

AI No.: 35050

Date: January 31, 2025

Public Notice Information

Public Notice Start Date: September 30, 2024

Comment Due Date: October 30, 2024

General information concerning the public notice process may be obtained on the Division of Water's Public Notice Webpage at the following address:
https://eec.ky.gov/Environmental-Protection/Water/Pages/Water-Public-Notices-and-Hearings.aspx

Public Notice Comments
Comments must be received by the Division of Water no later than 4:30 PM on the closing date of the comment period. Comments may be submitted by e-mail at: DOWPublicNotice@ky.gov or written comments may be submitted to the Division of Water at 300 Sower Blvd, Frankfort, Kentucky 40601.

Reference Documents
A copy of this proposed fact sheet, proposed permit, the application, other supporting material and the current status of the application may be obtained from the Department for Environmental Protection's Pending Approvals Search Webpage: https://dep.gateway.ky.gov/eSearch/Approvals/Pending

Open Records

Copies of publicly-available documents supporting this fact sheet and proposed permit may also be obtained from the Department for Environmental Protection Central Office. Information regarding these materials may be obtained from the Open Records Coordinator at (502) 782-6849 or by e-mail at EEC.KORA@ky.gov.

DEPARTMENT FOR ENVIRONMENTAL PROTECTION
Division of Water, 300 Sower Blvd, Frankfort, Kentucky 40601

THIS KPDES FACT SHEET CONSISTS OF THE FOLLOWING SECTIONS:

SECTION 1

FACILITIES COVERED

1. FACILITIES COVERED

Establishments engaged in the mining and/or processing of coal and associated activities within the counties of Bath, Bell, Boyd, Breathitt, Carter, Clay, Cumberland, Elliott, Estill, Floyd, Greenup, Harlan, Jackson, Johnson, Knott, Knox, Laurel, Lawrence, Lee, Leslie, Letcher, Lewis, Madison, Magoffin, Martin, McCreary, Menifee, Montgomery, Morgan, Owsley, Perry, Pike, Powell, Pulaski, Rockcastle, Rowan, Wayne, Whitley or Wolfe. At any time after coverage under this general permit is granted to a facility, the permittee may elect to opt out of the general permit by filing Forms 1 and C to obtain an individual KPDES permit. The general permit coverage will remain in effect until the individual permit becomes effective.

1.1. Eligibility

Only those coal mining and/or processing operations meeting the following requirements are eligible for coverage under KYGE40000 (KYGE4):

1) are physically located within the Kentucky counties listed in Section 1, and
2) have obtained a Surface Mining Control and Reclamation Act (SMCRA) permit from Department for Natural Resources (DNR) or are in the process of obtaining a SMCRA permit.

1.2. Exclusions

The following are excluded from coverage under this general permit:

1) Coal mining and/or processing operations that directly discharge to or propose to directly discharge to a receiving water body that has been categorized as an “Impaired Water” for a pollutant or pollutants of concern that may be associated with such activities and for which an approved Total Maximum Daily Load (TMDL) has been developed;
2) Coal mining and/or processing operations that directly discharge to or propose to directly discharge to a receiving water body that has been designated as Coldwater Aquatic Habitat (CAH) as listed in 401 KAR 10:026, Section 5 Table C;
3) Coal mining and/or processing operations that directly discharge to or propose to directly discharge to a receiving water body that has been designated as an Outstanding State Resource Water (OSRW) due to its support of a federally listed Threatened or Endangered Species as listed in 401 KAR 10:026, Section 5 Table C;
4) Coal mining and/or processing operations that directly discharge to or propose to directly discharge to a receiving water body that has been categorized as an Outstanding National Resource Water (ONRW) as listed in 401 KAR 10:030, Section 1 Table 1;
5) New or expanded coal mining and/or processing operations that propose to discharge within five (5) miles upstream of any existing domestic water supply intake as listed in 401 KAR 10:026, Section 5 Table B; or
6) Coal mining and/or processing activities that the Division of Water (DOW) has determined would be more appropriately addressed by an individual permit or an alternate general permit.

1.3. Treatment Provided

Sedimentation

1.4. Permitting Action

This is a reissuance of the general KPDES permit KYGE40000 addressing the discharge of treated wastewaters from existing source and new source coal mining and/or coal processing operations within the 39 counties of the Eastern Kentucky coal field.

SECTION 2

RECEIVING WATER INFORMATION

2. RECEIVING / INTAKE WATERS

2.1. Receiving Waters

Various water bodies within the Big Sandy, Little Sandy, Tygarts, and Upper Cumberland River basins, and portions of the Kentucky and Licking River basins.

2.2. Stream Segment Use Classifications

Includes all water bodies that have been designated by DOW singularly or in combination thereof as: Warmwater Aquatic Habitat, Primary Contact Recreation, Secondary Contact Recreation, Domestic Water Supply and/or Outstanding State Resource Water other than those listed as Threatened or Endangered Species.

2.3. Stream Segment Antidegradation Categorization

Included are those water bodies which have been categorized as High Quality Waters, Impaired Waters, or Exceptional Waters.

2.4. Stream Low Flow Condition

The 7-day, 10-year low flow conditions of the receiving streams vary from zero (0) cubic feet per second (cfs) to over 500 cfs.

SECTION 3

EFFLUENT REQUIREMENTS

3. EFFLUENT REQUIREMENTS

The effluent requirements are divided into the following categories;

1) underground workings and coal preparation plants and associated areas;
2) continuous flow sediment control structures;
3) non-continuous flow sediment control structures; and
4) reclamation areas

Continuous flow sediment control structures are those sediment control structures that are including but not limited to, constructed within the natural drainage way of a water body, have a continuous discharge or have an average discharge duration of 96 hours or more, or receive the drainage from the underdrain of a hollow fill. Non-continuous flow sediment control structures are sediment control structures that do not meet the definition of a continuous flow sediment control structure.

Reclamation areas are defined in 401 KAR 5:065, Section 2(9) [40 CFR 434.11(l)] as the “surface area of a coal mine which has been returned to required contour and on which revegetation (specifically, seeding or planting) work has commenced”. Non-reclamation areas are all other areas that do not meet the definition of a reclamation area, i.e. underground workings of an underground mine both active and post mining, coal preparation plants and coal preparation plant associated areas, and surface areas of coal mines where reclamation activities have not yet commenced.

3.1. Underground Workings, and Coal Preparation Plants and Associated Areas

The following effluent limitations and monitoring requirements are imposed on discharges from any KPDES Outfall that receives drainage from underground workings of an underground mine both active and post mining, coal preparation plants, and/or coal preparation plant associated areas.

TABLE 1.

Effluent Characteristic	EFFLUENT LIMITATIONS						MONITORING REQUIREMENTS	
	Loadings (lb/day)		Concentrations					
	Monthly Average	Daily Maximum	Units	Minimum	Monthly Average	Daily Maximum	Frequency	Sample Type
Flow	Report	Report	MGD	N/A	N/A	N/A	2/Month	Calculated
Total Suspended Solids[1]	N/A	N/A	mg/l	N/A	35	70	2/Month	Grab
Total Recoverable Iron[1]	N/A	N/A	mg/l	N/A	3.0	4.0	2/Month	Grab
Total Recoverable Manganese[1]	N/A	N/A	mg/l	N/A	2.0	4.0	2/Month	Grab
pH	N/A	N/A	SU	6.0	N/A	9.0	2/Month	Grab
Acute WET[2]	N/A	N/A	TU_A	N/A	N/A	1.00	1/Quarter	Grab
Report Due (W)[3]	N/A	N/A	Yes=1 No=0	N/A	Report	N/A	1/Quarter	N/A
Specific Conductivity	N/A	N/A	µS/cm	N/A	Report	Report	2/Month	Grab
Total Sulfate (as SO_4)	N/A	N/A	mg/l	N/A	Report	Report	2/Month	Grab
Total Recoverable Selenium	N/A	N/A	µg/l	N/A	5.0 (4)	Report	1/Quarter	Grab
Total Recoverable Selenium Fish Tissue[4]								
Whole-Body Fish Tissue (Sample 1)	N/A	N/A	mg/kg dry wt.	N/A	N/A	8.6	([4])	([4])
Whole-Body Fish Tissue (Sample 2)	N/A	N/A	mg/kg dry wt.	N/A	N/A	8.6	([4])	([4])
Fish Fillet (Sample 1)	N/A	N/A	mg/kg dry wt.	N/A	N/A	11.3(5)	([4])	([4])
Fish Fillet (Sample 2)	N/A	N/A	mg/kg dry wt.	N/A	N/A	11.3(5)	([4])	([4])
Precipitation Volume[6]	N/A	Report	Inches	N/A	N/A	N/A	([1])	Grab
Settleable Solids[6]	N/A	N/A	ml/l	N/A	N/A	0.5	([1])	Grab
Date of Storm Event[6]	N/A	N/A	Day	N/A	Report	N/A	([1])	N/A
Date of Sample Collection[6]	N/A	N/A	Day	N/A	Report	N/A	([1])	N/A

TABLE 1.								
EFFLUENT LIMITATIONS							MONITORING REQUIREMENTS	
Effluent Characteristic	Loadings (lb/day)		Concentrations				Frequency	Sample Type
	Monthly Average	Daily Maximum	Units	Minimum	Monthly Average	Daily Maximum		

[1]See Section 4 of this permit for Alternate Precipitation Effluent Limitations (APELs) available for a qualifying precipitation event.
[2]See Section 3 of this permit for additional requirements related to Whole Effluent Toxicity (WET) Testing including sampling requirements.
[3]Report if WET Testing report has been submitted as required in Section 3.2 of this permit. DMR Location Code is "W".
[4]Should the monthly average concentration trigger of 5.0 µg/l for Total Recoverable Selenium be exceeded, Whole-Body Fish Tissue **or** Fish Fillet sampling shall be performed, see Section 2.9 for additional requirements. If trigger is not exceeded, use No Data Indicator (NODI) Code 9 for Fish Tissue reporting.
[5]This value is the concentration in mg/kg (dry weight) of skinless, boneless fish fillet which may be analyzed instead of whole-body tissue when predator or bottom-feeding fish exceed twelve (12) inches in length. Use NODI Code 9 for Fish Tissue category when not sampled.
[6]These parameters are required only when applying for an APEL. DMRs to show 2 sets of these parameters for 2/Month sampling. Permittees shall report one set of dates for each sampling event. If not applying for APELs, use NODI Code 9 for reporting.

3.2. Continuous Flow Sediment Control Structures

The following effluent limitations and monitoring requirements apply to discharges from any KPDES Outfall classified as a continuous flow continuous flow sediment control structure that receives drainage from active surface mining activities. For the purposes of this permit, continuous flow sediment control structures are those sediment control structures that are including but are not limited to, constructed within the natural drainage way of a water body, have a continuous discharge or have an average discharge duration of 96 hours or more, or receive the drainage from the underdrain of a hollow fill.

TABLE 2.								
EFFLUENT LIMITATIONS							MONITORING REQUIREMENTS	
Effluent Characteristic	Loadings (lb/day)		Concentrations				Frequency	Sample Type
	Monthly Average	Daily Maximum	Units	Minimum	Monthly Average	Daily Maximum		
Flow	Report	Report	MGD	N/A	N/A	N/A	2/Month	Calculated
Total Suspended Solids[1]	N/A	N/A	mg/l	N/A	35	70	2/Month	Grab
Total Recoverable Iron[1]	N/A	N/A	mg/l	N/A	3.0	4.0	2/Month	Grab
Total Recoverable Manganese[1]	N/A	N/A	mg/l	N/A	2.0	4.0	2/Month	Grab
pH	N/A	N/A	SU	6.0	N/A	9.0	2/Month	Grab
Chronic WET[2]	N/A	N/A	TU_A	N/A	N/A	1.0	1/Quarter	Grab
Report Due (W)[3]	N/A	N/A	Yes=1	N/A	Report	N/A	1/Quarter	N/A

TABLE 2.								
EFFLUENT LIMITATIONS							MONITORING REQUIREMENTS	
Effluent Characteristic	Loadings (lb/day)		Concentrations				Frequency	Sample Type
	Monthly Average	Daily Maximum	Units	Minimum	Monthly Average	Daily Maximum		
			No=0					
Specific Conductivity	N/A	N/A	µS/cm	N/A	Report	Report	2/Month	Grab
Total Sulfate (as SO_4)	N/A	N/A	mg/l	N/A	Report	Report	2/Month	Grab
Total Recoverable Selenium	N/A	N/A	µg/l	N/A	5.0 [(4)]	Report	1/Quarter	Grab
Total Recoverable Selenium Fish Tissue[4]								
Whole-Body Fish Tissue (Sample 1)	N/A	N/A	mg/kg dry wt.	N/A	N/A	8.6	([4])	([4])
Whole-Body Fish Tissue (Sample 2)	N/A	N/A	mg/kg dry wt.	N/A	N/A	8.6	([4])	([4])
Fish Fillet (Sample 1)	N/A	N/A	mg/kg dry wt.	N/A	N/A	11.3[(5)]	([4])	([4])
Fish Fillet (Sample 2)	N/A	N/A	mg/kg dry wt.	N/A	N/A	11.3[(5)]	([4])	([4])
Precipitation Volume[6]	N/A	Report	Inches	N/A	N/A	N/A	([1])	Grab
Settleable Solids[6]	N/A	N/A	ml/l	N/A	N/A	0.5	([1])	Grab
Date of Storm Event[6]	N/A	N/A	Day	N/A	Report	N/A	([1])	N/A
Date of Sample Collection[6]	N/A	N/A	Day	N/A	Report	N/A	([1])	N/A

[1]See Section 4 of this permit for Alternate Precipitation Effluent Limitations (APELs) available for a qualifying precipitation event.
[2]See Section 3 of this permit for additional requirements related to Whole Effluent Toxicity (WET) Testing including sampling requirements.
[3]Report if WET Testing report has been submitted as required in Section 3.2 of this permit. DMR Location Code is "W".
[4]Should the monthly average concentration trigger of 5.0 µg/l for Total Recoverable Selenium be exceeded, Whole-Body Fish Tissue **or** Fish Fillet sampling shall be performed, see Section 2.9 for additional requirements. If trigger is not exceeded, use No Data Indicator (NODI) Code 9 for Fish Tissue reporting.
[5]This value is the concentration in mg/kg (dry weight) of skinless, boneless fish fillet which may be analyzed instead of whole-body tissue when predator or bottom-feeding fish exceed twelve (12) inches in length. Use NODI Code 9 for Fish Tissue category when not sampled.
[6]These parameters are required only when applying for an APEL. DMRs to show 2 sets of these parameters for 2/Month sampling. Permittees shall report one set of dates for each sampling event. If not applying for APELs, use NODI Code 9 for reporting.

3.3. Non-Continuous Flow Sediment Control Structures

Non-continuous flow sediment control structures are sediment control structures that do not meet the definition of a continuous flow sediment control structure. The following effluent limitations and monitoring requirements apply to discharges from any KPDES Outfall classified as a non-continuous flow sediment control structure that receives drainage from active surface mining activities.

TABLE 3.

Effluent Characteristic	EFFLUENT LIMITATIONS						MONITORING REQUIREMENTS	
	Loadings (lb/day)		Concentrations					
	Monthly Average	Daily Maximum	Units	Minimum	Monthly Average	Daily Maximum	Frequency	Sample Type
Flow	Report	Report	MGD	N/A	N/A	N/A	2/Month	Calculated
Total Suspended Solids[1]	N/A	N/A	mg/l	N/A	35	70	2/Month	Grab
Total Recoverable Iron[1]	N/A	N/A	mg/l	N/A	3.0	4.0	2/Month	Grab
Total Recoverable Manganese[1]	N/A	N/A	mg/l	N/A	2.0	4.0	2/Month	Grab
pH	N/A	N/A	SU	6.0	N/A	9.0	2/Month	Grab
Specific Conductivity	N/A	N/A	µS/cm	N/A	Report	Report	2/Month	Grab
Total Sulfate (as SO_4)	N/A	N/A	mg/l	N/A	Report	Report	2/Month	Grab
Precipitation Volume[2]	N/A	Report	Inches	N/A	N/A	N/A	([1])	Grab
Settleable Solids[2]	N/A	N/A	ml/l	N/A	N/A	0.5	([1])	Grab
Date of Storm Event[2]	N/A	N/A	Day	N/A	Report	N/A	([1])	N/A
Date of Sample Collection[2]	N/A	N/A	Day	N/A	Report	N/A	([1])	N/A

[1]See Section 4 of this permit for Alternate Precipitation Effluent Limitations (APELs) available for a qualifying precipitation event.
[2]These parameters are required only when applying for an APEL. DMRs to show 2 sets of these parameters for 2/Month sampling. Permittees shall report one set of dates for each sampling event. If not applying for APELs, use NODI Code 9 for reporting.

3.4. Reclamation Areas

The following effluent limitations and monitoring requirements apply to discharges from any KPDES Outfall classified as a continuous flow or non-continuous flow sediment control structure that receives drainage from reclamation areas only. Reclamation areas are defined in Section 3 above.

TABLE 4.

Effluent Characteristic	EFFLUENT LIMITATIONS						MONITORING REQUIREMENTS	
	Loadings (lb/day)		Concentrations				Frequency	Sample Type
	Monthly Average	Daily Maximum	Units	Minimum	Monthly Average	Daily Maximum		
Flow	Report	Report	MGD	N/A	N/A	N/A	1/Month	Calculated
Settleable Solids[1]	N/A	N/A	ml/l	N/A	N/A	0.5	1/Month	Grab
pH	N/A	N/A	SU	6.0	N/A	9.0	1/Month	Grab
Specific Conductivity	N/A	N/A	µS/cm	N/A	Report	Report	1/Month	Grab
Total Sulfate (as SO_4)	N/A	N/A	mg/l	N/A	Report	Report	1/Month	Grab
Precipitation Volume[2]	N/A	Report	Inches	N/A	N/A	N/A	([1])	Grab
Date of Storm Event[2]	N/A	N/A	Day	N/A	Report	N/A	([1])	N/A
Date of Sample Collection[2]	N/A	N/A	Day	N/A	Report	N/A	([1])	N/A

[1]See Section 4 of this permit for APELs available for a qualifying precipitation event.
[2]These parameters are required only when applying for an APEL. DMRs to show 2 sets of these parameters for 2 samples/Month. Permittees shall report one set of dates for each sampling event. If not applying for APELs, use NODI Code 9 for reporting.

To transition from active mining effluent limitations and monitoring requirements to reclamation area effluent limitations and monitoring requirements, the following conditions apply:

1) There is no drainage from:
    a) Active surface mine areas,
    b) Underground workings of underground mines (active or post mining), or
    c) Coal preparation plant or coal preparation plant associated areas; and
2) The effluent from the sediment control structure has been substantially in compliance with the water quality-based effluent limitations (WQBELs) without treatment other than sedimentation.
3) If a representative Reasonable Potential Analysis (RPA) sample was submitted with the renewal application for a continuous flow sediment structure, an RPA sample will still be required from each structure before it can transition to reclamation status.

For the effluent from the sediment control structure to qualify for substantially in compliance, the following conditions must be met:

1) There must be 75% compliance with the WQBELs for the last 12 months (9 out of 12 months).
2) There can be no 3 consecutive months of non-compliance with the WQBELs in the last 12 months.
3) There can be no non-compliance with the WQBELs in the last 3 months. If no discharge was reported, then the last reported discharge must be in compliance.

If there has been no discharge from a non-continuous flow structure during the last 12 months, it can be determined to be in compliance.

DOW reserves its authority to determine if the structure should remain in active status.

The permittee shall provide certification to DOW that the required conditions are met using the eNOI-KYG04 form found at: https://eec.ky.gov/Environmental-Protection/Water/PermitCert/KPDES/Documents/KYG04PermitPage.pdf.

Reporting of reclamation area requirements shall not commence before DOW's approval.

3.5. Reclamation Areas with Treatment

The following effluent limitations and monitoring requirements apply to discharges from any KPDES Outfall classified as a continuous flow or non-continuous flow sediment control structure that receives drainage from reclamation areas only, and drainage from a pond that is designated as a long-term treatment pond by the Kentucky Department of Natural Resources, shall comply with the following effluent limitations and monitoring requirements. Reclamation areas are defined in Section 3 above.

TABLE 5.

Effluent Characteristic	EFFLUENT LIMITATIONS						MONITORING REQUIREMENTS	
	Loadings (lb/day)		Concentrations				Frequency	Sample Type
	Monthly Average	Daily Maximum	Units	Minimum	Monthly Average	Daily Maximum		
Flow	Report	Report	MGD	N/A	N/A	N/A	1/Month	Calculated
Total Recoverable Iron[1]	N/A	N/A	mg/l	N/A	3.0	4.0	1/Month	Grab
Total Recoverable Manganese[1]	N/A	N/A	mg/l	N/A	2.0	4.0	1/Month	Grab
Settleable Solids[1]	N/A	N/A	ml/l	N/A	N/A	0.5	1/Month	Grab
pH	N/A	N/A	SU	6.0	N/A	9.0	1/Month	Grab
Specific Conductivity	N/A	N/A	µS/cm	N/A	Report	Report	1/Month	Grab
Total Sulfate (as SO_4)	N/A	N/A	mg/l	N/A	Report	Report	1/Month	Grab
Precipitation Volume[2]	N/A	Report	Inches	N/A	N/A	N/A	([1])	Grab
Date of Storm Event[2]	N/A	N/A	Day	N/A	Report	N/A	([1])	N/A
Date of Sample Collection[2]	N/A	N/A	Day	N/A	Report	N/A	([1])	N/A

TABLE 5.								
EFFLUENT LIMITATIONS							MONITORING REQUIREMENTS	
Effluent Characteristic	Loadings (lb/day)		Concentrations				Frequency	Sample Type
	Monthly Average	Daily Maximum	Units	Minimum	Monthly Average	Daily Maximum		
[1]See Section 4 of this permit for APELs available for a qualifying precipitation event. [2]These parameters are required only when applying for an APEL. DMRs to show 2 sets of these parameters for 2 samples/Month. Permittees shall report one set of dates for each sampling event. If not applying for APELs, use NODI Code 9 for reporting.								

To transition from active mining effluent limitations and monitoring requirements to reclamation area effluent limitations and monitoring requirements, the following conditions apply:

1) There is no drainage from:
    a) Active surface mine areas,
    b) Underground workings of underground mines (active or post mining), or
    c) Coal preparation plant or coal preparation plant associated areas; and
2) The effluent from the sediment control structure has been substantially in compliance with the water quality-based effluent limitations (WQBELs) without treatment other than sedimentation.
3) If a representative Reasonable Potential Analysis (RPA) sample was submitted with the renewal application for a continuous flow sediment structure, an RPA sample will still be required from each structure before it can transition to reclamation status.

For the effluent from the sediment control structure to qualify for substantially in compliance, the following conditions must be met:

1) There must be 75% compliance with the WQBELs for the last 12 months (9 out of 12 months).
2) There can be no 3 consecutive months of non-compliance with the WQBELs in the last 12 months.
3) There can be no non-compliance with the WQBELs in the last 3 months. If no discharge was reported, then the last reported discharge must be in compliance.

If there has been no discharge from a non-continuous flow structure during the last 12 months, it can be determined to be in compliance.

DOW reserves its authority to determine if the structure should remain in active status.

The permittee shall provide certification to DOW that the required conditions are met using the eNOI-KYG04 form found at: https://eec.ky.gov/Environmental-Protection/Water/PermitCert/KPDES/Documents/KYG04PermitPage.pdf.

Reporting of reclamation area requirements shall not commence before DOW's approval.

3.6. Sanitary Wastewater

The following effluent limitations and monitoring requirements apply to the direct discharge of treated sanitary wastewaters to a water of the Commonwealth. These limits apply before discharge to or mixing with the waters of the receiving stream.

TABLE 6.

EFFLUENT LIMITATIONS							MONITORING REQUIREMENTS	
Parameter Description	Loadings (lb/day)		Concentrations				Frequency	Sample Type
	Monthly Average	Daily Maximum	Units	Minimum	Monthly Average	Weekly Average		
Flow	Report	Report	MGD	N/A	N/A	N/A	1/Month	Calculated
pH	N/A	N/A	SU	6.0	N/A	9.0[1]	1/Month	Grab
$CBOD_5$[2]	N/A	N/A	mg/l	N/A	10	15	1/Month	Grab
Total Suspended Solids	N/A	N/A	mg/l	N/A	30	45	1/Month	Grab
Nitrogen, Ammonia total [as N]								
May 1 – October 31	N/A	N/A	mg/l	N/A	2.0	3.0	1/Month	Grab
November 1 – April 30	N/A	N/A	mg/l	N/A	5.0	7.5	1/Month	Grab
Dissolved Oxygen	N/A	N/A	mg/l	7.0	N/A	N/A	1/Month	Grab
E. coli[3]	N/A	N/A	#/100 ml	N/A	130	240	1/Month	Grab
Total Residual Chlorine	N/A	N/A	mg/l	N/A	0.011	0.019	1/Month	Grab

[1]Monthly Maximum
[2]$CBOD_5$ – Carbonaceous Biochemical Oxygen Demand, 5-day
[3]E. coli – *Escherichia coli* Bacteria

The following effluent limitations and monitoring requirements apply to the discharge of treated sanitary wastewaters to another treatment system. These limits apply before commingling with waters of the other treatment system.

TABLE 7.

EFFLUENT LIMITATIONS							MONITORING REQUIREMENTS	
Effluent Characteristic	Loadings (lb/day)		Concentrations				Frequency	Sample Type
	Monthly Average	Daily Maximum	Units	Minimum	Monthly Average	Daily Maximum		
Flow	Report	Report	MGD	N/A	N/A	N/A	1/Month	Calculated
BOD_5[1]	N/A	N/A	mg/l	N/A	30	45	1/Month	Grab

TABLE 7.								
EFFLUENT LIMITATIONS							MONITORING REQUIREMENTS	
Effluent Characteristic	Loadings (lb/day)		Concentrations				Frequency	Sample Type
	Monthly Average	Daily Maximum	Units	Minimum	Monthly Average	Daily Maximum		
Total Suspended Solids	N/A	N/A	mg/l	N/A	30	45	1/Month	Grab
[1]Biochemical Oxygen Demand (5-day) The permittee shall provide disinfection of the treated effluent prior to commingling with waters of the sediment basin.								

SECTION 4

IN-STREAM MONITORING REQUIREMENTS

4. IN-STREAM MONITORING REQUIREMENTS

The requirements of an in-stream monitoring program are imposed to address the protection of narrative water quality standards and is based on site specific conditions. These requirements are applicable to drainage from new or expanded active surface mining areas draining to a continuous flow sediment control structure, new or expanded underground mines, and/or new or expanded coal preparation plants. New and expanded discharges are defined in Section 2.11. of this permit.

In accordance with procedures established in Section 6 of this permit, biological and chemical trends are used to determine the effect the permittee's activities are having on the receiving waters. The following sections address the sampling requirements of each of these analytical techniques.

4.1. Pre-Mining Survey

Prior to submission of the permit application, the applicant shall submit to DOW for review and concurrence a plan that outlines the scope of the pre-mining survey that will determine the background conditions. The Pre-Mining Survey form (PMSM) is found at: https://eec.ky.gov/Environmental-Protection/Water/PermitCert/KPDES/Documents/KYG04PermitPage.pdf
The form shall be submitted to the Surface Water Permits Branch, Stormwater Section. Upon DOW's concurrence with the monitoring locations, the applicant shall conduct the pre-mining survey consisting of a minimum of a single sampling event at each in-stream monitoring point identified in the pre-mining survey during the appropriate biological index period to determine the physical, chemical, and biological background conditions. Results of analysis of the data collected shall be submitted with the eNOI-KYG04 form. The permittee shall submit the biological background report to "DOW-Biological Reports" through the DEP portal found at:
https://dep.gateway.ky.gov/ePortal/DesktopDefault.aspx

4.2. Biological Trend Sampling

The permittee shall commence annual physical, chemical and biological monitoring at the in-stream monitoring locations for comparison with the pre-mining background conditions as shown on the Eastern Kentucky Coal General Permit Coverage Letter (EKCL). The data collection required in this section shall be performed concurrently with the collection of discharge samples from the contributing KPDES outfalls in accordance with the protocols established in the pre-mining survey and shall continue until cessation of active mining.

The pre-mining survey establishes the background benthic macroinvertebrate index score. The Minimum Benthic Macroinvertebrate Index Threshold is established as a minimum in-stream benthic macroinvertebrate index score which shall not be lowered through the actions of the permittee. See Section 6 of this permit for additional requirements related to biological trends, i.e., changes in the benthic macroinvertebrate index score from the pre-mining background score.

The following table(s) lists the required pollutants or pollutant characteristics to be monitored at each in-stream monitoring location.

TABLE 8.

IN-STREAM MONITORING REQUIREMENTS							MONITORING REQUIREMENTS	
In-stream Characteristic	Loadings (lb/day)		Concentrations				Frequency	Sample Type
	Monthly Average	Daily Maximum	Units	Minimum	Monthly Average	Daily Maximum		
Flow	Report	Report	MGD	N/A	N/A	N/A	1/Quarter	Calculated
Total Suspended Solids[1]	N/A	N/A	mg/l	N/A	Report	Report	1/Quarter	Grab
Specific Conductivity[1]	N/A	N/A	µS/cm	N/A	Report	Report	1/Quarter	Grab
Total Sulfate (as SO_4)[1]	N/A	N/A	mg/l	N/A	Report	Report	1/Quarter	Grab
Biotic Index[2]	N/A	N/A	None	Report[3]	N/A	N/A	1/Year	Grab
Report Due[4]	N/A	N/A	Yes=1 No=0	N/A	Report	N/A	1/Year	N/A
Total Recoverable Iron	N/A	N/A	mg/l	N/A	Report	Report	1/Year	Grab
pH	N/A	N/A	SU	Report	N/A	Report	1/Year	Grab
Total Recoverable Selenium	N/A	N/A	µg/l	N/A	Report	Report	1/Year	Grab
Turbidity	N/A	N/A	NTU	N/A	Report	Report	1/Year	Grab
Alkalinity (as $CaCO_3$)	N/A	N/A	mg/l	N/A	Report	Report	1/Year	Grab
Dissolved Oxygen	N/A	N/A	mg/l	Report	N/A	N/A	1/Year	Grab
Temperature	N/A	N/A	^oF	N/A	Report	Report	1/Year	Grab
Total Hardness (as $CaCO_3$)	N/A	N/A	mg/l	N/A	Report	Report	1/Year	Grab

[1]Background benchmarks are shown on the EKCL.
[2]Biotic Index represents the Benthic Macroinvertebrate Index Score. See Section 7.5 of this permit for more information regarding this stream characteristic and the sampling requirements.
[3]Background Benthic Macroinvertebrate Index Score and Minimum Benthic Macroinvertebrate Index Threshold are shown on the EKCL.
[4]Report if Benthic Macroinvertebrate Survey report has been submitted as required in Section 5.2 of this permit.

SECTION 5

JUSTIFICATION OF REQUIREMENTS

5. JUSTIFICATION OF REQUIREMENTS

The Kentucky Administrative Regulations (KARs) cited have been duly promulgated pursuant to the requirements of Chapter 224 of the Kentucky Revised Statutes (KRSs). Pursuant to 401 KAR 5:065, Section 2(4) [40 CFR 122.44], each federally or delegated state-issued NPDES permit shall include conditions meeting technology-based effluent limitations and standards and water quality standards and State requirements.

The Best Practicable Control Technology Currently Available (BPT) and the Best Available Technology Economically Achievable (BAT) requirements for existing sources have not been included for these parameters. DOW has elected not to include these limitations due to the new source determination dates for: coal preparation plants (January 31, 1982) and the initiation or major alteration of coal mining activities (May 4, 1984). Permittees with operations that can qualify as an existing source are required to obtain an individual KPDES permit in order to avail themselves of these limitations.

This general permit includes only requirements for acid mine drainage and acid coal preparation plants and coal preparation plant associated areas. DOW has elected to not include alkaline mine drainage or alkaline coal preparation plants and coal preparation plant associated areas under this general permit due to the minimal number of operations previously classified as such. Alkaline mine drainage [40 CFR 434 Subpart D, 40 CFR 434.52(b)(2), 40 CFR 434.53(b)(2), and 40 CFR 434.55(b)(2)] and alkaline coal preparation plants and coal preparation plant associated areas [40 CFR 434.22(b), 40 CFR 434.23(b) and 40 CFR 434.25(b)] do not include requirements for total recoverable manganese. Permittees with operations that can qualify as alkaline are required to obtain an individual KPDES permit in order to avail themselves of this reduction in effluent requirements.

5.1. Pertinent Factors

The effluent limitations for this outfall were developed in accordance with DOW's General Procedures for Limitations Development located on DOW's webpage at:

https://eec.ky.gov/Environmental-Protection/Water/PermitCert/KPDES/Pages/default.aspx.

5.2. Reasonable Potential Analysis

The parameters selected for effluent limitations and monitoring were primarily determined based on a reasonable potential analysis (RPA) performed by DOW utilizing data submitted in response to the requirements of the current Coal General Permit and submitted as part of the Notice of Intent (NOI) process for seeking coverage under that permit. The RPA compares the discharge levels of a pollutant to the calculated WQBEL for that pollutant. In accordance with DOW's RPA procedures, if the pollutant concentration of the discharge is 70% or greater of the calculated WQBEL, then a permit monitoring requirement for that pollutant may be appropriate. If the pollutant concentration of the discharge is greater than 90% of the calculated WQBEL, then a permit effluent limitation for that pollutant is required.

Table 8 summarizes the RPA for WQBELs performed on the data submitted in compliance with the requirements of the Coal General Permit (effective 10/1/2019). In performing the RPA, DOW assumed the worst-case scenario for receiving water 7Q10 low flow conditions, where the effluent comprises the stream. Under such conditions the discharge concentrations are compared directly to the water quality standards for human health, fish consumption, and acute and chronic aquatic life criteria. Although the human health domestic water supply criteria apply at the point of withdrawal, DOW compared the discharge concentrations directly to these values. Based on the RPA information summarized in Table 8, DOW did not impose effluent limitations or monitoring in this general permit for the following pollutants: (1) Antimony, (2) Arsenic, (3) Beryllium, (4) Cadmium, (5) Chromium, (6) Copper, (7) Free Cyanide, (8) Lead, (9) Mercury, (10) Nickel, (11) Phenol, (12) Silver, (13) Thallium, or (14) Zinc.

The pollutants for which reasonable potential was performed are those for which analytical effluent data must be provided in accordance with the application requirements in 40 C.F.R. § 122.21(g)(7)(v) as amended by Note 1. [At 46 FR 2046, Jan. 8, 1981, the Environmental Protection Agency suspended until further notice §122.21(g)(7)(v)(A)] and the corresponding portions of Item V-C of the NPDES application Form C as they apply to coal mines. This suspension continues in effect. These required pollutants are consistent with those reviewed by The Environmental Protection Agency (EPA) during the development of the effluent limitation guidelines for the coal mining industry and contemplated by DOW in developing this general permit. Other pollutants that produce an acute or chronic toxic effect are addressed by WET testing pursuant to 401 KAR 10:031, Sections 2 and 4.

DOW will perform RPA on operations required to submit an electronic NOI (eNOI) and should reasonable potential (RP) be demonstrated such that an effluent limitation is required for one or more of these pollutants, an individual permit will be required pursuant to exclusion 6 under Section 1.2 of this permit. Should DOW determine that an individual KPDES is required, the applicant shall submit completed Forms 1 and C within 30 days of notification by DOW.

TABLE 9.

PERCENTILE EXCEEDING STANDARD

Pollutant	DWS RP**			Fish RP			Effluent Hardness					
							RP Acute			RP Chronic		
	70%	90%	100%	70%	90%	100%	70%	90%	100%	70%	90%	100%
Antimony	2%	2%	1%	0%	0%	0%	N/A	N/A	N/A	N/A	N/A	N/A
Arsenic	3%	2%	2%	N/A	N/A	N/A	0%	0%	0%	0%	0%	0%
Beryllium	2%	2%	2%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cadmium*	0%	0%	0%	N/A	N/A	N/A	0%	0%	0%	0%	0%	0%
Chromium	1%	1%	1%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Copper*	0%	0%	0%	N/A	N/A	N/A	1%	1%	1%	2%	2%	2%
Cyanide, Free	0%	0%	0%	0%	0%	0%	1%	1%	1%	4%	4%	3%
Lead*	1%	1%	1%	N/A	N/A	N/A	0%	0%	0%	1%	1%	1%
Mercury	1%	1%	0%	28%	22%	20%	1%	1%	1%	2%	1%	1%
Nickel*	1%	0%	0%	0%	0%	0%	0%	0%	0%	2%	2%	1%
Phenol	0%	0%	0%	0%	0%	0%	N/A	N/A	N/A	N/A	N/A	N/A
Silver*	N/A	N/A	N/A	N/A	N/A	N/A	0%	0%	0%	N/A	N/A	N/A
Thallium	30%	23%	20%	15%	12%	11%	N/A	N/A	N/A	N/A	N/A	N/A
Zinc*	0%	0%	0%	0%	0%	0%	1%	1%	1%	1%	1%	1%

*Hardness based parameters.
**DWS comparisons are direct comparisons to the Water Quality Standards (WQS) which is applicable at the point of withdrawal.
N/A means not applicable due to no water quality criterion.

5.3. Conductivity

Based on the data available to DOW for surface waters in eastern Kentucky and their related certain coal mine discharges, DOW has determined that reasonable potential exists for continuous flow sediment control structures, as defined by this permit, to cause or contribute to an excursion of the narrative water quality standard for specific conductance.

5.4. Flow Duration

The aquatic life water quality criteria are developed on magnitude, duration and frequency. Chronic criteria are expressed as maximum four day average concentrations that are not to be exceeded more than once every three years on average. Acute criteria are expressed as the maximum one hour average concentration not to be exceeded more than once every three years on average. Therefore, the duration of a discharge is essential in determining the applicability of a criterion. Discharges that are continuous would be subject to both chronic and acute criteria. Sporadic short term discharges would not be of sufficient duration to cause chronic concerns. Therefore, acute concerns will be evaluated for such discharges.

To determine if chronic concerns exist, DOW is including within the eNOI questions related to flow duration. The applicant will be required to indicate if a sediment control structure has a continuous flow discharge with average discharge duration of 96 hours or greater in length, or non-continuous flow with average discharge duration that is less than 96 hours in length.

All continuous flow sediment control structures that exhibits either continuous or average discharge durations of greater than 96 hours in length shall be subject to both chronic and acute WQBELs. All non-continuous flow sediment structures shall be subject to acute WQBELs only.

5.5. Underground Workings, and Coal Preparation Plants and Associated Areas

5.5.1. Flow

The monitoring requirements for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(4) [40 CFR 122.44(i)(1)(ii)] and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48].

5.5.2. Total Suspended Solids

The effluent limitations for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(4) [40 CFR 122.44] and 401 KAR 5:065, Section 2(9) [40 CFR 434] and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48]. The limitations are representative of the New Source Performance Standards (NSPS) applicable to coal preparation plants and coal preparation plant associated areas [40 CFR 434.25], acid mine drainage from active surface mining and underground mining operations [40 CFR 434.35], and acid mine drainage from post mining drainage from the underground workings of an underground mine [40 CFR 434.55].

5.5.3. Total Recoverable Iron

The effluent limitations for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(4) [40 CFR 122.44], 401 KAR 5:065, Section 2(9) [40 CFR 434] and 401 KAR 10:031, Section 4 and 5, and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48]. The limitations are representative of the NSPS applicable to coal preparation plants and coal preparation plant associated areas [40 CFR 434.25], acid mine drainage from active surface mining and underground mining operations [40 CFR 434.35], and acid mine drainage from post mining drainage from the underground workings of an underground mine [40 CFR 434.55]. The daily maximum concentration has been set at 4.0 mg/l to protect water quality.

5.5.4. Total Recoverable Manganese

The effluent limitations for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(4) [40 CFR 122.44] and 401 KAR 5:065, Section 2(9) [40 CFR 434] and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48]. The limitations are

representative of the NSPS requirements applicable to coal preparation plants and coal preparation plant associated areas [40 CFR 434.25(a)], acid mine drainage from active surface mining and underground mining operations [40 CFR 434.35], and acid mine drainage from post mining drainage from the underground workings of an underground mine [40 CFR 434.55(b)(1)].

5.5.5. pH

The effluent limitations for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(4) [40 CFR 122.44], 401 KAR 5:065, Section 2(9) [40 CFR 434], and 401 KAR 10:031, Section 4 and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48].

5.5.6. Acute WET

The effluent limitations for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(4) [40 CFR 122.44(d)] and 401 KAR 10:031, Section 4 and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48].

5.5.7. Report Due (W)

The reporting requirement for this parameter is consistent with the KPDES permit program for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48].

5.5.8. Specific Conductivity and Total Sulfate

The monitoring requirements for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(4) [40 CFR 122.44] and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48].

5.5.9. Total Recoverable Selenium, Total Recoverable Selenium (Whole-Body Fish Tissue), and Total Recoverable Selenium (Fish Fillet)

The quarterly average effluent limitations for these parameters are consistent with the requirements of 401 KAR 5:065, Section 2(4) [40 CFR 122.44(d)] and 401 KAR 10:031, Section 4 and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48]. The quarterly average concentration of 5 µg/l serves both as a trigger for the collection of adequate number of fish to conduct selenium residue in fish tissue testing, and as a limitation in the event the permittee is unable to obtain fish tissue. The fish tissue results are to be reported as Whole-Body or Fish Fillet Fish Tissue as required. These limitations are consistent with Kentucky's water quality standards for Total Recoverable Selenium.

5.5.10. Precipitation Volume

The monitoring requirements for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(4) [40 CFR 122.44] and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48] and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48]. Monitoring and reporting of precipitation volume is a conditional requirement that applies when the permittee is seeking alternate precipitation effluent limitations for a specific discharge event. The precipitation volume along with the type of drainage received by the sediment control structure determines eligibility.

5.5.11. Settleable Solids

The effluent limitations for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(4) [40 CFR 122.44] and 401 KAR 5:065, Section 2(9) [40 CFR 434] and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48].

5.5.12. APELs

The coal mining effluent guidelines authorizes the use of APELs on a case-by-case basis when a precipitation event has occurred during the 24 hour period prior to the sampling event. The availability of the APELs are a function of the size of the precipitation event and the type of drainage 401 KAR 5:065, Section 2(9) [40 CFR 434. 63].

5.5.13. Date of Storm Event and Date of Sample Collection

The reporting requirement for these parameters are consistent with the KPDES permit program for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48].

5.6. Continuous Flow Sediment Control Structures – Active Mining

5.6.1. Flow

The monitoring requirements for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(4) [40 CFR 122.44(i)(1)(ii)] and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48].

5.6.2. Total Suspended Solids

The effluent limitations for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(4) [40 CFR 122.44] and 401 KAR 5:065, Section 2(9) [40 CFR 434] and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48]. The limitations are representative of the NSPS acid mine drainage from active surface mining operations [40 CFR 434.35].

5.6.3. Total Recoverable Iron

The effluent limitations for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(4) [40 CFR 122.44], 401 KAR 5:065, Section 2(9) [40 CFR 434] and 401 KAR 10:031, Section 4 and 5, and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48]. The limitations are representative of the NSPS applicable to acid mine drainage from active surface mining operations [40 CFR 434.35]. The daily maximum concentration has been set at 4.0 mg/l to protect water quality.

5.6.4. Total Recoverable Manganese

The effluent limitations for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(4) [40 CFR 122.44] and 401 KAR 5:065, Section 2(9) [40 CFR 434] and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48]. The limitations are representative of the NSPS requirements applicable to acid mine drainage from active surface mining operations [40 CFR 434.35].

5.6.5. pH

The effluent limitations for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(4) [40 CFR 122.44], 401 KAR 5:065, Section 2(9) [40 CFR 434] and 401 KAR 10:031, Section 4 and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48].

5.6.6. Chronic WET

The effluent limitations for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(4) [40 CFR 122.44(d)] and 401 KAR 10:031, Section 4 and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48]. Chronic whole effluent toxicity is imposed in lieu of acute whole effluent toxicity due to continuous flow sediment control structures exhibit base flows during dry weather conditions.

5.6.7. Report Due (W)

The reporting requirement for this parameter is consistent with the KPDES permit program for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48].

5.6.8. Specific Conductivity and Total Sulfate

The monitoring requirements for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(4) [40 CFR 122.44] and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48].

5.6.9. Total Recoverable Selenium, Total Recoverable Selenium (Whole-Body Fish Tissue), and Total Recoverable Selenium (Fish Fillet)

The quarterly average effluent limitations for these parameters are consistent with the requirements of 401 KAR 5:065, Section 2(4) [40 CFR 122.44(d)] and 401 KAR 10:031, Section 4 and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48]. The quarterly average concentration of 5 µg/l serves both as a trigger for the collection of adequate number of fish to conduct selenium residue in fish tissue testing, and as a limitation in the event the permittee is unable to obtain fish tissue. The fish tissue results are to be reported as Whole-Body or Fish Fillet Fish Tissue as required. These limitations are consistent with Kentucky's water quality standards for Total Recoverable Selenium.

5.6.10. Precipitation Volume

The monitoring requirements for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(4) [40 CFR 122.44] and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48]. Monitoring and reporting of precipitation volume is a conditional requirement that applies when the permittee is seeking APELs for a specific discharge event. The precipitation volume along with the type of drainage received by the sediment control structure determines eligibility.

5.6.11. Settleable Solids

The effluent limitations for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(4) [40 CFR 122.44] and 401 KAR 5:065, Section 2(9) [40 CFR 434] and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48].

5.6.12. APELs

The coal mining effluent guidelines authorizes the use of APELs on a case-by-case basis when a precipitation event has occurred during the 24 hour period prior to the sampling event. The availability of the APELs are a function of the size of the precipitation event and the type of drainage 401 KAR 5:065, Section 2(9) [40 CFR 434. 63].

5.6.13. Date of Storm Event and Date of Sample Collection

The reporting requirement for these parameters are consistent with the KPDES permit program for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48].

5.7. Non-Continuous Sediment Control Structures – Active Mining

5.7.1. Flow

The monitoring requirements for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(4) [40 CFR 122.44(i)(1)(ii)] and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48].

5.7.2. Total Suspended Solids

The effluent limitations for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(4) [40 CFR 122.44] and 401 KAR 5:065, Section 2(9) [40 CFR 434] and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48]. The limitations are representative of the NSPS acid mine drainage from active surface mining operations [40 CFR 434.35].

5.7.3. Total Recoverable Iron

The effluent limitations for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(4) [40 CFR 122.44], 401 KAR 5:065, Section 2(9) [40 CFR 434] and 401 KAR 10:031, Section 4 and 5, and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48]. The limitations are representative of the NSPS applicable to acid mine drainage from active surface mining operations [40 CFR 434.35]. The daily maximum concentration has been set at 4.0 mg/l to protect water quality.

5.7.4. Total Recoverable Manganese

The effluent limitations for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(4) [40 CFR 122.44] and 401 KAR 5:065, Section 2(9) [40 CFR 434] and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48]. The limitations are representative of the NSPS requirements applicable to acid mine drainage from active surface mining operations [40 CFR 434.35].

5.7.5. pH

The effluent limitations for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(4) [40 CFR 122.44], 401 KAR 5:065, Section 2(9) [40 CFR 434] and 401 KAR 10:031, Section 4 and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48].

5.7.6. Specific Conductivity and Total Sulfate

The monitoring requirements for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(4) [40 CFR 122.44] and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48].

5.7.7. Precipitation Volume

The monitoring requirements for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(4) [40 CFR 122.44] and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48]. Monitoring and reporting of precipitation volume is a conditional requirement that applies when the permittee is seeking APELs for a specific discharge event. The precipitation volume along with the type of drainage received by the sediment control structure determines eligibility.

5.7.8. Settleable Solids

The effluent limitations for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(4) [40 CFR 122.44] and 401 KAR 5:065, Section 2(9) [40 CFR 434] and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48].

5.7.9. APELs

The coal mining effluent guidelines authorizes the use of APELs on a case-by-case basis when a precipitation event has occurred during the 24 hour period prior to the sampling event. The availability of

the APELs are a function of the size of the precipitation event and the type of drainage 401 KAR 5:065, Section 2(9) [40 CFR 434. 63].

5.7.10. Date of Storm Event and Date of Sample Collection

The reporting requirement for these parameters are consistent with the KPDES permit program for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48].

5.8. Continuous and Non-Continuous Sediment Control Structures – Reclamation Areas

5.8.1. Flow

The monitoring requirements for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(4) [40 CFR 122.44(i)(1)(ii)] and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48].

5.8.2. Settleable Solids

The effluent limitations for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(4) [40 CFR 122.44] and 401 KAR 5:065, Section 2(9) [40 CFR 434] and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48]. The limitations are representative of the NSPS applicable to reclamation areas [40 CFR 434.55(a)].

5.8.3. pH

The effluent limitations for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(4) [40 CFR 122.44], 401 KAR 5:065, Section 2(9) [40 CFR 434] and 401 KAR 10:031, Section 4 and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48].

5.8.4. Specific Conductivity and Total Sulfate

The monitoring requirements for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(4) [40 CFR 122.44] and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48].

5.8.5. Precipitation Volume

The monitoring requirements for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(4) [40 CFR 122.44] and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48]. Monitoring and reporting of precipitation volume is a conditional requirement that applies when the permittee is seeking alternate precipitation effluent limitations for a specific discharge event. The precipitation volume along with the type of drainage received by the sediment control structure determines eligibility.

5.8.6. APELs

The coal mining effluent guidelines authorizes the use of APELs on a case-by-case basis when a precipitation event has occurred during the 24 hour period prior to the sampling event. The availability of the APELs are a function of the size of the precipitation event and the type of drainage 401 KAR 5:065, Section 2(9) [40 CFR 434. 63].

5.8.7. Date of Storm Event and Date of Sample Collection

The reporting requirement for these parameters are consistent with the KPDES permit program for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48].

5.9. Continuous and Non-Continuous Sediment Control Structures – Reclamation Areas with Treatment

5.9.1. Flow

The monitoring requirements for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(4) [40 CFR 122.44(i)(1)(ii)] and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48].

5.9.2. Total Recoverable Iron

The effluent limitations for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(4) [40 CFR 122.44], 401 KAR 5:065, Section 2(9) [40 CFR 434] and 401 KAR 10:031, Section 4 and 5, and Section 5 and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48]. The limitations are representative of the NSPS applicable to acid mine drainage from active surface mining operations [40 CFR 434.35]. The daily maximum concentration has been set at 4.0 mg/l to protect water quality. These effluent limitations are required at the outfall that receives drainage from ponds that require treatment to meet the technology-based effluent limits as required under this permit.

5.9.3. Total Recoverable Manganese

The effluent limitations for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(4) [40 CFR 122.44] and 401 KAR 5:065, Section 2(9) [40 CFR 434] and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48]. The limitations are representative of the NSPS requirements applicable to acid mine drainage from active surface mining operations [40 CFR 434.35]. These effluent limitations are required at the outfall that receives drainage from ponds that require treatment to meet the technology-based effluent limits as required under this permit.

5.9.4. Settleable Solids

The effluent limitations for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(4) [40 CFR 122.44] and 401 KAR 5:065, Section 2(9) [40 CFR 434] and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48]. The limitations are representative of the NSPS applicable to reclamation areas [40 CFR 434.55(a)].

5.9.5. pH

The effluent limitations for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(4) [40 CFR 122.44], 401 KAR 5:065, Section 2(9) [40 CFR 434] and 401 KAR 10:031, Section 4 and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48].

5.9.6. Specific Conductivity and Total Sulfate

The monitoring requirements for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(4) [40 CFR 122.44] and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48].

5.9.7. Precipitation Volume

The monitoring requirements for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(4) [40 CFR 122.44] and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48]. Monitoring and reporting of precipitation volume is a conditional requirement that applies when the permittee is seeking alternate precipitation effluent limitations for a

specific discharge event. The precipitation volume along with the type of drainage received by the sediment control structure determines eligibility.

5.9.8. APELs

The coal mining effluent guidelines authorizes the use of APELs on a case-by-case basis when a precipitation event has occurred during the 24 hour period prior to the sampling event. The availability of the APELs are a function of the size of the precipitation event and the type of drainage 401 KAR 5:065, Section 2(9) [40 CFR 434. 63].

5.9.9. Date of Storm Event and Date of Sample Collection

The reporting requirement for these parameters are consistent with the KPDES permit program for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48].

5.10. Sanitary Wastewaters

Sanitary wastewaters are biochemically degradable wastewaters generated by bathhouses and offices located on a mine site or at a coal preparation plant. Such effluents shall, at a minimum, meet the technology-based treatment standards of secondary treatment defined in 401 KAR 5:045, Section 2.

5.10.1. Discharge to Water Body

5.10.1.1. Flow

The monitoring requirements for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(4) [40 CFR 122.44(i)(1)(ii)] and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48].

5.10.1.2. Carbonaceous Biochemical Oxygen Demand (5-Day)

The effluent limitations for this parameter are consistent with the biochemically degradable waste requirements of 401 KAR 5:045, Section 2(1) and water quality standards in 401 KAR 10:031, Section 4 and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48].

5.10.1.3. Total Suspended Solids

The effluent limitations for this parameter are consistent with the biochemically degradable waste requirements of 401 KAR 5:045, Section 2(2) and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48].

5.10.1.4. Ammonia, Dissolved Oxygen, pH and Total Residual Chlorine

The effluent limitations for these parameters consistent with the water quality standards for unionized ammonia in 401 KAR 10:031, Section 4 and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48].

5.10.1.5. E. coli

The effluent limitations for this parameter consistent with the water quality standards for dissolved oxygen in 401 KAR 10:031, Section 7(1) & (2) and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48].

5.10.2. Discharge to Another Treatment System

When wastewaters subject to technology-based effluent limitations are commingled with other wastewaters in another treatment system such as a sediment control pond, determination of compliance

with the technology-based standards may not be possible. Therefore in such cases 401 KAR 5:065, Section 2(5) [40 CFR 122.45(h)] requires the imposition of the technology-based standards at an internal monitoring point.

5.10.2.1. Flow

The monitoring requirements for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(4) [40 CFR 122.44(i)(1)(ii)] and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48].

5.10.2.2. Biochemical Oxygen Demand (5-Day)

The effluent limitations for this parameter are consistent with the secondary treatment for biochemically degradable waste requirements of 401 KAR 5:045, Section 2(1) and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48].

5.10.2.3. Total Suspended Solids

The effluent limitations for this parameter are consistent with the biochemically degradable waste requirements of 401 KAR 5:045, Section 2(2) and requirements for recording and reporting of monitoring results 401 KAR 5:050, Section 4 [40 CFR 122.48].

SECTION 6

SCHEDULE OF COMPLIANCE
AND
OTHER CONDITIONS

6. SCHEDULE OF COMPLIANCE AND OTHER CONDITIONS

6.1. Schedule of Compliance

The permittee shall attain compliance with all requirements of this permit on the effective date of this permit unless otherwise stated.

6.2. Antidegradation

The conditions of 401 KAR 10:029, Section 1 have been satisfied. In accordance with 401 KAR 10:030, Section 1(3)(b)(2), DOW is requiring new and expanded operations to submit with the eNOI, a Socioeconomic Demonstration and Alternatives Analysis (SDAA). It is the practice of DOW to public notice the acceptance of a SDAA for a period of 15 days to meet the public participation requirements of 401 KAR 10:029, Section 1(2).

For those discharges subject to the provisions of 401 KAR 10:030 Section 1(3)(b)5, the permittee shall install, operate, and maintain wastewater treatment facilities consistent with those identified below:

Sedimentation

6.3. Authorization to Discharge

The permittee is authorized to discharge under the terms of the permit, upon receipt of written notification by the DOW, and upon the issuance of a fully effective permanent program permit by DNR.

6.4. Commingling of Wastestreams

When wastestreams from different facilities covered by this permit are combined for treatment or discharge, the concentration of each pollutant in the combined discharge cannot exceed the most stringent limitations for that pollutant. This requirement is consistent with the requirements of 401 KAR 5:065, Section 2(9) [40 CFR Part 434.61].

6.5. In-Stream Monitoring Requirements

The imposition of in-stream biological trending and water quality trending requirements is consistent with the requirements of 401 KAR 5:065, Section 2(4) [40 CFR 122.44(d)]. These requirements are implemented through Section 5 and Subsection 6.8 of this permit, and are in the judgment of DOW necessary to determine compliance with the narrative standards for specific conductance.

6.6. Best Management Practices Plan (BMPP)

Permits are to include BMPs to control or abate the discharge of pollutants when: 1) authorized under section 304(e) of the CWA for the control of toxic pollutants and hazardous substances from ancillary industrial activities; 2) authorized under Section 402(p) of the CWA for the control of storm water discharges; 3) numeric effluent limitations are infeasible; or 4) the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA 401 KAR 5:065, Section 2(4) [40 CFR 122.44(k)].

6.7. Notice of Intent

The information requirements of the Notice of Intent are consistent with the requirements of 401 KAR 5:055, Section 8 [40 CFR 122.28].

6.8. Certified Operator

The operation of a sanitary wastewater treatment plant requires a cabinet-certified operator. This requirement for the operation of a sanitary wastewater treatment plant is consistent with 401 KAR 5:010.

6.9. Certified Laboratory

All environmental analysis to be performed by a certified laboratory is consistent with the certified wastewater laboratory requirements of 401 KAR 5:320, Section 2.

6.10. Continuation of Expiring Permit

Continuation of coverage under this permit after its expiration is consistent with the 401 KAR 5:060, Section 2(4).

6.11. Substantially Identical Outfalls (SIOs)

SIOs are outfalls that receive drainage from the same type of activities, utilize the same type of sediment control structures, are within the same watershed, are expected to produce similar effluents and would be subject to the same effluent limitations. In such cases, DOW may authorize the permittee, upon request, to monitor representative outfalls for compliance purposes (CROs). Such requests shall be made at the time of coverage or modification of coverage under this general permit, and shall include sufficient documentation to justify the selection of the representative outfalls. If approved, the permittee shall submit the data from the CRO on the DMRs for each outfall substantially similar to the representative outfall. Violations, corrective actions, and/or selenium fish tissue monitoring triggered by monitoring results from the CRO, shall apply to all substantially identical outfalls. The EKCL will identify the DOW approved CROs and those outfalls deemed to be substantially identical to it.

DOW is providing this option to permittees to address logistics and costs associated with the sampling and monitoring of the conditions of this permit. The use of representative outfalls is consistent with the requirements of 401 KAR 5:065, Section 2(1) [40 CFR 122.41(j)(1)].

No new Continuous flow sediment control structures receiving Active mine drainage (i.e. UGNC, UGC, CSMD, NSMD, SSMR and PPAA) will be eligible for SIOs.

6.12. Effluent Data Required

Within two (2) years of commencing discharge from new or expanded operations, the permittee shall submit to DOW actual discharge data for the pollutants required by the eNOI.

New and expanded discharges are defined in Section 2.11. of this permit.