KPDES

KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

PERMIT

PERMIT NO.: KY0105651
AI NO.: 8752

AUTHORIZATION TO DISCHARGE UNDER THE KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

Pursuant to Authority in KRS 224,

Nally & Hamilton Enterprises Inc
PO Box 157
Bardstown, KY 40004

is authorized to discharge from a facility located at

DNR No: 860-04640 NW through MA-03
KY 15
Redfox, Knott County, Kentucky

to receiving waters named

Breeding Branch, Carr Creek Reservoir, Dead Mare Branch, UT Breeding Creek

in accordance with effluent limitations, monitoring requirements and other conditions set forth in this permit.

This permit shall become effective on.

This permit and the authorization to discharge shall expire at midnight,

{Signature}

Date Signed

Sandra L. Gruzesky, Director
Division of Water

DEPARTMENT FOR ENVIRONMENTAL PROTECTION

Division of Water, 200 Fair Oaks Lane, Frankfort, Kentucky 40601

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1. EFFLUENT AND MONITORING REQUIREMENTS

This permit establishes three types of monitoring locations: Outfalls, Instream Outfalls, and Instream Monitoring Points. Outfalls (OUT) are all point source discharge locations, generally sediment control structure overflows, where monitoring for compliance with SCMRA and CWA requirements is conducted. Instream Outfalls (IOUT) are outfalls that have been selected for additional monitoring and imposition of additional effluent limitations. Instream Monitoring Points (IMP) are those strategically located points where stream water quality and biological communities are measured to determine the impacts of the mining activity. The selected IOUTs and IMPs shall be consistent with the QAPP submitted by the permittee, as accepted. Sampling events of different frequencies must be performed concurrently.

1.1. Monitoring Locations

The following table lists the monitoring points required by this permit. The permittee did not submit a QAPP or ROUT selection prior to this application. Therefore the permittee will be required to submit to DOW a QAPP within thirty (30) days of issuance of this permit. This QAPP must be found to be acceptable by DOW within ninety (90) days of permit issuance. DOW will reopen the permit as a minor modification to add ROUTs and IMPs at that time.

MONITORING LOCATIONS						
No.	**Description of Outfall / Instream Point**	**Receiving Water**	**Latitude (N)**	**Longitude (W)**	**Status**	**Type**
001	Sedimentation 1	Carr Fork Lake	37° 13' 50.0"	82° 57' 9.0"	Active	IOUT
002	Sedimentation 2	Carr Fork Lake	37° 14' 7.0"	82° 56' 36.0"	Active	IOUT
004	Sedimentation 4	UT Breeding Creek	37° 13' 38.0"	82° 56' 49.0"	Active	OUT
005	Sedimentation 5	UT Breeding Creek	37° 13' 41.0"	82° 56' 43.0"	Active	OUT
006	Sedimentation 6	UT Breeding Creek	37° 13' 36.0"	82° 56' 42.0"	Active	OUT
007	Sedimentation 7	UT Breeding Creek	37° 13' 29.0"	82° 56' 40.0"	Active	OUT
015	Sedimentation 15	Breeding Branch	37° 13' 46.0"	82° 55' 56.0"	Active	OUT
016	Sedimentation 16	Breeding Branch	37° 13' 51.0"	82° 55' 55.0"	Active	OUT
017	Sedimentation 17	Breeding Branch	37° 13' 48.0"	82° 55' 51.0"	Active	OUT
018	Sedimentation 18	Breeding Branch	37° 13' 45.0"	82° 55' 47.0"	Active	OUT
019	Sedimentation 19	Dead Mare Branch	37° 13' 49.0"	82° 55' 39.0"	Active	OUT
020	Sedimentation 20	Dead Mare Branch	37° 13' 53.0"	82° 55' 49.0"	Active	OUT
021	Sedimentation 21	Dead Mare Branch	37° 13' 58.0"	82° 55' 52.0"	Active	OUT
022	Sedimentation 22	Dead Mare Branch	37° 14' 4.0"	82° 55' 48.0"	Active	OUT
028	Sedimentation 28	Carr Fork Lake	37° 13' 43.1"	82° 57' 4.2"	Active	OUT
029	Sedimentation 29	Carr Fork Lake	37° 13' 46.8"	82° 57' 1.3"	Active	OUT
030	Sedimentation 30	Carr Fork Lake	37° 13' 52.0"	82° 57' 1.0"	Active	OUT
031	Sedimentation 31	Carr Fork Lake	37° 13' 54.0"	82° 57' 6.9"	Active	OUT
032	Sedimentation 32	Carr Fork Lake	37° 13' 57.8"	82° 57' 8.3"	Active	OUT
033	Sedimentation 33	Carr Fork Lake	37° 13' 59.4"	82° 57' 3.5"	Active	OUT

MONITORING LOCATIONS						
No.	**Description of Outfall / Instream Point**	**Receiving Water**	**Latitude (N)**	**Longitude (W)**	**Status**	**Type**
034	Sedimentation 34	Carr Fork Lake	37° 13' 58.3"	82° 56' 55.3"	Active	OUT
035	Sedimentation 35	Carr Fork Lake	37° 14' 1.0"	82° 56' 48.3"	Active	OUT
036	Sedimentation 36	Carr Fork Lake	37° 14' 4.3"	82° 56' 44.8"	Active	OUT
037	Sedimentation 37	Carr Fork Lake	37° 14' 4.7"	82° 56' 37.5"	Active	OUT
038	Sedimentation 38	Carr Fork Lake	37° 14' 2.6"	82° 56' 30.4"	Active	OUT
039	Sedimentation 39	Carr Fork Lake	37° 14' 5.0"	82° 56' 23.5"	Active	OUT
040	Sedimentation 40	Carr Fork Lake	37° 14' 8.6"	82° 56' 26.8"	Active	OUT
041	Sedimentation 41	Carr Fork Lake	37° 14' 11.5"	82° 56' 34.1"	Active	OUT
042	Sedimentation 42	Dead Mare Branch	37° 14' 8.7"	82° 55' 49.4"	Active	OUT
043	Sedimentation 43	Carr Fork Lake	37° 13' 46.2"	82° 57' 8.9"	Active	OUT
044	Sedimentation 44	Carr Fork Lake	37° 13' 46.8"	82° 57' 20.3"	Active	OUT
103	Sedimentation H3	Breeding Branch	37° 13' 37.6"	82° 56' 23.2"	Active	IOUT
104	Sedimentation H4	Breeding Branch	37° 13' 36.4"	82° 56' 8.1"	Active	IOUT
901	Knott Co Water & Sewer District	Carr Creek Reservoir	37° 13' 58.0"	82° 59' 55.1"	Drinking Water Intake	IMP

1.2. Effluent Limitations and Monitoring Requirements

1.2.1. All Outfalls – Active Mining

Beginning on the effective date and lasting through the term of this permit or, for surface mining activities only until Reclamation Bond Release – Phase II, discharges from those monitoring locations listed OUT or IOUT in the table under Section 1.1 shall comply with the effluent limitations.

EFFLUENT LIMITATIONS						MONITORING REQUIREMENTS	
Effluent Characteristic	**Units**	**Minimum**	**Monthly Average**	**Daily Maximum**	**Maximum**	**Frequency**	**Sample Type**
Acidity[1]	mg/l $CaCO_3$	N/A	Report	Report	N/A	1/Month	Grab
Alkalinity[1]	mg/l $CaCO_3$	N/A	Report	Report	N/A	1/Month	Grab
Dissolved Oxygen	mg/l	4.0	5.0	N/A	N/A	2/Month	Grab
Flow	cfs	N/A	Report	Report	N/A	2/Month	Instantaneous
Oil & Grease[2]	mg/l	N/A	10	15	N/A	1/Month	Grab
pH[3,4]	SU	6.0	N/A	N/A	9.0	2/Month	Grab
Specific Conductivity	µS/cm	N/A	Report	N/A	N/A	2Month	Grab

EFFLUENT LIMITATIONS						MONITORING REQUIREMENTS	
Effluent Characteristic	**Units**	**Minimum**	**Monthly Average**	**Daily Maximum**	**Maximum**	**Frequency**	**Sample Type**
Temperature	°C	N/A	Report	Report	N/A	2/Month	Grab
Total Dissolved Solids	Mg/l	N/A	Report	Report	N/A	2/Month	Grab
Total Hardness	mg/l $CaCO_3$	N/A	Report	Report	N/A	2/Month	Grab
Total Recoverable Antimony	µg/l	N/A	N/A	Report	N/A	1/Quarter	Grab
Total Recoverable Arsenic	µg/l	N/A	N/A	340	N/A	1/Quarter	Grab
Total Recoverable Beryllium	µg/l	N/A	N/A	Report	N/A	1/Quarter	Grab
Total Recoverable Cadmium	µg/l	N/A	N/A	2.133	N/A	1/Quarter	Grab
Total Recoverable Chromium	µg/l	N/A	N/A	Report	N/A	1/Quarter	Grab
Total Recoverable Copper	µg/l	N/A	N/A	13.999	N/A	1/Quarter	Grab
Total Recoverable Iron[4]	mg/l	N/A	3.0	4.0	N/A	2/Month	Grab
Total Recoverable Lead	µg/l	N/A	N/A	81.645	N/A	1/Quarter	Grab
Total Recoverable Manganese[4]	mg/l	N/A	2.0	4.0	N/A	2/Month	Grab
Total Recoverable Mercury	µg/l	N/A	N/A	1.4	N/A	1/Quarter	Grab
Total Recoverable Nickel	µg/l	N/A	N/A	469.174	N/A	1/Quarter	Grab
Total Recoverable Selenium	µg/l	N/A	N/A	20	N/A	1/Quarter	Grab
Total Recoverable Silver	µg/l	N/A	N/A	3.784	N/A	1/Quarter	Grab
Total Recoverable Thallium	µg/l	N/A	N/A	Report	N/A	1/Quarter	Grab
Total Recoverable Zinc	µg/l	N/A	N/A	119.816	N/A	1/Quarter	Grab
Total Suspended Solids[4]	mg/l	N/A	N/A	70.0	N/A	2/Month	Grab

[1]At all times Acidity shall be less than Alkalinity.
[2]The limits and monitoring do not apply if the permittee has developed and implemented a "Best Management Practices" (BMP) plan as required by this permit. The BMP plan shall include a specific section that addresses the handling, storage and disposal of petroleum products and the maintenance procedures for mining equipment.
[3]Discharges from this operation shall not cause more than a 1.0 standard unit fluctuation of the receiving stream over a period of 24 hours.
[4]See Section 2.2.5.3 for alternate monitoring and effluent limitations for these parameters that are available for a qualifying precipitation event.

1.2.2. All Outfalls – Post Mining

Beginning on the effective date or, for surface mining activities only following Reclamation Bond Release – Phase II and lasting through the term of this permit, discharges from those monitoring locations listed OUT or IOUT in the table under Section 1.1 shall comply with the permit effluent limitations.

EFFLUENT LIMITATIONS						MONITORING REQUIREMENTS	
Effluent Characteristic	**Units**	**Minimum**	**Monthly Average**	**Daily Maximum**	**Maximum**	**Frequency**	**Sample Type**
Acidity[1]	mg/l $CaCO_3$	N/A	Report	Report	N/A	1/Month	Grab
Alkalinity[1]	mg/l $CaCO_3$	N/A	Report	Report	N/A	1/Month	Grab
Flow	cfs	N/A	Report	Report	N/A	1/Month	Instantaneous
Oil & Grease[2]	mg/l	N/A	10	15	N/A	1/Month	Grab
pH[3,4]	SU	6.0	N/A	N/A	9.0	1/Month	Grab
SS[4]	ml/l	N/A	N/A	N/A	0.5	1/Month	Grab

[1]At all times Acidity shall be less than Alkalinity.
[2]The limits and monitoring do not apply if the permittee has developed and implemented a "Best Management Practices" (BMP) plan as required by this permit. The BMP plan shall include a specific section that addresses the handling, storage and disposal of petroleum products and the maintenance procedures for mining equipment.
[3]Discharges from this operation shall not cause more than a 1.0 standard unit fluctuation of the receiving stream over a period of 24 hours.
[4]See Section 2.2.5.3 for alternate monitoring and effluent limitations for these parameters that are available for a qualifying precipitation event.

1.2.3. Instream Outfalls Only – Active Mining

Beginning on the effective date and lasting through the term of this permit or, for surface mining activities only until Reclamation Bond Release – Phase II, discharges from those monitoring locations listed IOUT in the table under Section 1.1 shall comply with these additional permit effluent limitations.

EFFLUENT LIMITATIONS						MONITORING REQUIREMENTS	
Effluent Characteristic	**Units**	**Minimum**	**Monthly Average**	**Daily Maximum**	**Maximum**	**Frequency**	**Sample Type**
Acute WET[1]	TU_A	N/A	N/A	N/A	1.00	1/Quarter	See 1.4.2
Chronic WET[1]	TU_C	N/A	N/A	N/A	Report	1/Quarter	See 1.4.2
Discharge Duration[2]	Hours	Report	N/A	N/A	Report	2/Month	Timed
Total Calcium	µg/l	N/A	Report	Report	N/A	2/Month	Grab
Total Chloride	mg/l	N/A	Report	Report	N/A	2/Month	Grab

EFFLUENT LIMITATIONS						MONITORING REQUIREMENTS	
Effluent Characteristic	**Units**	**Minimum**	**Monthly Average**	**Daily Maximum**	**Maximum**	**Frequency**	**Sample Type**
Total Magnesium	µg/l	N/A	Report	Report	N/A	2/Month	Grab
Total Potassium	µg/l	N/A	Report	Report	N/A	2/Month	Grab
Total Sodium	µg/l	N/A	Report	Report	N/A	2/Month	Grab
Total Sulfate	mg/l SO_4	N/A	Report	Report	N/A	2/Month	Grab

[1]WET testing shall be performed simultaneously from a single discharge event. If the discharge is of sufficient duration to complete the chronic WET test, the chronic endpoint result shall be reported on the DMR. If the discharge is not of sufficient duration to complete the chronic test, then the applicant shall report 'no discharge' on the DMR and shall have met the requirements for chronic WET testing for that reporting period.

[2]Discharge Duration shall be determined by daily visual inspections of the outfall from commencement of a discharge event until cessation of that discharge event. The duration shall be reported in increments of 24 hours on the DMR for that outfall, For example an outfall begins discharging, the time is noted and visual inspection the next day is conducted to determine status of the discharge. Should the discharge have ceased then '24 hours' shall be reported on the DMR for Discharge Duration. However, should the daily visual inspections verify that a discharge event of longer duration, each subsequent day of discharge will result in an additional 24 hours being added to the Discharge Duration. For example, if a discharge is verified each day for 4 days after commencement of the discharge event for a total of 5 consecutive days of discharge, then '96 hours' shall be reported on the DMR for that outfall. The permittee may propose an alternate method of determining discharge duration.

1.2.4. Instream Monitoring Points

Beginning on the effective date and lasting through the term of this permit, instream monitoring locations shall be monitored in accordance with the QAPP, as accepted.

EFFLUENT LIMITATIONS						MONITORING REQUIREMENTS	
Effluent Characteristic	**Units**	**Daily Minimum**	**Monthly Average**	**Daily Maximum**	**Maximum**	**Frequency**	**Sample Type**
Alkalinity	mg/l $CaCO_3$	N/A	Report	Report	N/A	2/Month	Grab
Biological Assessment	None	See Section 1.2.5	N/A	N/A	N/A	1/Year	N/A
Dissolved Oxygen	mg/l	4.0	5.0	N/A	N/A	2/Month	Grab
Flow	cfs	N/A	Report	Report	N/A	2/Month	Instantaneous
pH	SU	Report	N/A	N/A	Report	2/Month	Grab
Specific Conductivity	µS/cm	N/A	Report	Report	N/A	2/Month	Grab
Temperature	°C	N/A	Report	Report	N/A	2/Month	Grab

EFFLUENT LIMITATIONS						MONITORING REQUIREMENTS	
Effluent Characteristic	**Units**	**Daily Minimum**	**Monthly Average**	**Daily Maximum**	**Maximum**	**Frequency**	**Sample Type**
Total Calcium	µg/l	N/A	Report	Report	N/A	2/Month	Grab
Total Chloride	mg/l	N/A	Report	Report	N/A	2/Month	Grab
Total Dissolved Solids	mg/l	N/A	Report	Report	N/A	2/Month	Grab
Total Hardness	mg/l $CaCO_3$	N/A	Report	Report	N/A	2/Month	Grab
Total Magnesium	µg/l	N/A	Report	Report	N/A	2/Month	Grab
Total Potassium	µg/l	N/A	Report	Report	N/A	2/Month	Grab
Total Recoverable Antimony	µg/l	N/A	N/A	Report	N/A	1/Quarter	Grab
Total Recoverable Arsenic	µg/l	N/A	N/A	Report	N/A	1/Quarter	Grab
Total Recoverable Beryllium	µg/l	N/A	N/A	Report	N/A	1/Quarter	Grab
Total Recoverable Cadmium	µg/l	N/A	N/A	Report	N/A	1/Quarter	Grab
Total Recoverable Chromium	µg/l	N/A	N/A	Report	N/A	1/Quarter	Grab
Total Recoverable Copper	µg/l	N/A	N/A	Report	N/A	1/Quarter	Grab
Total Recoverable Lead	µg/l	N/A	N/A	Report	N/A	1/Quarter	Grab
Total Recoverable Mercury	µg/l	N/A	N/A	Report	N/A	1/Quarter	Grab
Total Recoverable Nickel	µg/l	N/A	N/A	Report	N/A	1/Quarter	Grab
Total Recoverable Selenium	µg/l	N/A	N/A	Report	N/A	1/Quarter	Grab
Total Recoverable Silver	µg/l	N/A	N/A	Report	N/A	1/Quarter	Grab
Total Recoverable Thallium	µg/l	N/A	N/A	Report	N/A	1/Quarter	Grab
Total Recoverable Zinc	µg/l	N/A	N/A	Report	N/A	1/Quarter	Grab
Total Sodium	µg/l	N/A	Report	Report	N/A	2/Month	Grab
Total Sulfate	mg/l SO_4	N/A	Report	Report	N/A	2/Month	Grab

1.2.5. Baseline MBI/IBI Scores

The permittee shall report the annual biological assessment score(s) on the discharge monitoring report. Annual score(s) lower than baseline are subject to BMP evaluation as described in Section 3.1.1.5.6.1. A violation of the permit is present where a comparison of the baseline score(s) to the annual score(s) shows a categorical decline. A categorical decline is determined by comparing the annual score against the lower limit of the category corresponding to the baseline score, as determined using Sections 1.2.5 and 1.2.6. The permittee may attempt to demonstrate that causes other than the discharge of pollutants from the permitted activity were the principal source of the categorical decline in order to resolve the reported violation by submitting supporting evidence within thirty (30) days of

the determination of the annual score. The permittee may file a petition for administrative appeal if the permittee disagrees with the permitting authority's findings in response to the permittee's submission.

Baseline scores must be submitted to DOW as described in Section 2.3.4 no later than the 28th day of the month following the quarter during which monitoring results were obtained, within one (1) year of QAPP acceptance. No new disturbance is permitted until the biological assessment is received, reviewed, and accepted by DOW and the permit is modified to reflect the appropriate baseline score.

The following table lists the biological assessment monitoring points established for this permitted activity and the applicable baseline scores.

Pre-mining Baseline MBI/IBI Scores						
No.	**Receiving Water**	**Latitude (N)**	**Longitude (W)**	**MBI or IBI**	**Headwater or Wadeable Stream**	**Score**
901	Carr Creek Reservoir	37° 13' 58.0"	82° 59' 55.1"	To be determined after permit issuance		

1.2.6. Kentucky MBI and IBI Categories

The Kentucky MBI, as incorporated by reference in 401 KAR 10:030 Section 3, lists the following ranges of scores to evaluate stream conditions for meeting the designated uses for streams supporting macroinvertebrate communities.

MBI Ranges by Category, Mountain Bioregion				
Category	**Headwater Streams**		**Wadeable Streams**	
	Minimum	**Maximum**	**Minimum**	**Maximum**
Excellent	83		82	
Good	72	82	75	81
Fair	48	71	50	74
Poor	24	47	25	49
Very Poor	0	23	0	24

The KIBI, as incorporated by reference in 401 KAR 10:030 Section 3, lists the following ranges of scores to evaluate stream conditions for meeting the designated uses for streams supporting invertebrate communities.

IBI Ranges by Category, Mountain Bioregion		
Category	**Minimum**	**Maximum**
Excellent	71	
Good	59	70
Fair	39	58
Poor	19	38

IBI Ranges by Category, Mountain Bioregion		
Category	**Minimum**	**Maximum**
Very Poor	0	18

1.3. Standard Effluent Requirements

The discharges to waters of the Commonwealth shall not produce floating solids, visible foam or a visible sheen on the surface of the receiving waters.

Samples and measurements taken in accordance with the requirements of Section 1.2 shall be representative of the volume and nature of the monitored discharge and shall be taken at nearest accessible point after final treatment, but prior to actual discharge to or mixing with the receiving waters or wastestreams from other outfalls.

1.4. Whole Effluent Toxicity Testing

Within thirty (30) days of the effective date of this permit the permittee shall initiate quarterly WET testing as described in the following subsections to evaluate the acute/chronic toxicity of the discharge from each of the monitoring points designated as IOUT in the table under Section 1.1 of this permit.

1.4.1. WET Testing Requirements

The permittee shall perform a chronic 7-day static renewal life cycle test on both the fathead minnow (*Pimephales promelas*- EPA Method 1000.0) and the water flea (*Ceriodaphnia dubia*-EPA method 1002.0) for reporting chronic toxicity. The first 48 hours of the chronic test shall be considered an acute test for lethality and used to demonstrate compliance to the acute toxicity unit limit of not greater than 1.00. Two (2) simultaneous tests, one on each species, for a total of 2 tests shall be considered one round of testing. The worst result from the two (2) tests shall determine whether the test (i.e., round) passed or failed to meet the permit limit for toxicity.

1.4.2. Sampling Requirements

During a period of discharge the permittee shall collect a set of two (2) grab samples (GS) on days 1, 3, and 5 of the discharge. The second GS of each set shall be collected between two (2) and twenty-four (24) hours of the first. Each set of two (2) grabs shall be composited. The composite collected on day 1 shall be used to initiate the WET test. The second and third composites shall be used for renewal of test solutions. The elapsed time between the collection of the second GS of a composite and use in the test shall not exceed thirty-six (36) hours. Should the discharge cease prior to a sixth day of discharge, the chronic test shall be terminated early with results considered for acute only as in 1.4.1. Each GS of effluent shall be maintained at a temperature not to exceed 6^{o}C during transport and storage until use in the test.

1.4.3. Serial Dilutions

In addition to use of a control, effluent concentrations tested must include the concentration equal to the permit limit, (i.e., 100% effluent) and at least four (4) additional effluent concentrations. (20%, 40%, 60%, and 80%).Selection of different effluent concentrations may be acceptable, but must be approved by DOW prior to testing.

1.4.4. Controls

Controls shall be tested concurrent with effluent testing using synthetic water. The analysis will be deemed reasonable and good only if the minimum control requirements are met:

1.4.4.1. Minimum Acute Control Requirements (applicable to first 48 hours of chronic test when determining the acute toxicity):

(i) Control survival is 90% or greater in test organisms held in synthetic water.

(ii) Any test, (i.e., round of tests) that does not meet the control acceptability criteria shall be considered an invalid test and repeated as soon as practicable within the required monitoring period (e.g., within the month or quarter as stated in the permit) or during the first subsequent discharge event.

1.4.4.2. Minimum Chronic Control Requirements

(i) For the *Ceriodaphnia dubia* test: at least 80% survival of all control organisms and an average of fifteen (15) or more young per surviving female in the control solutions; and 60% of surviving control females must produce three (3) broods. For the fathead minnow test: at least 80% survival in controls and the average dry weight per surviving organism in control chambers equals or exceeds 0.25 mg. If cessation of discharge occurs too soon for completion of the chronic test and the first 48 hours are considered as an acute test, survival of all control organisms must be at least 90%.

(ii) Any test, (i.e., round of tests) that does not meet the control acceptability criteria shall be considered an invalid test and repeated as soon as practicable within the required monitoring period, (e.g., within the month or quarter as stated in the permit).

1.4.5. Acceptable Test Methods, Laboratory Approval, and Reference Toxicant Testing

All test organisms, procedures and quality assurance criteria used shall be in accordance with Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, EPA-821-R-02-012 (5th edition); Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms (Fourth Edition), EPA-821-R-02-013; the most recent EPA updates of these publications or methods; or as approved in advance by DOW.

Toxicity testing for compliance to KPDES discharge limits shall be performed by a laboratory approved by DOW to conduct the required toxicity tests.

Within each toxicity report to DOW, the permittee must demonstrate successful performance of reference toxicant testing by the laboratory that conducts their effluent toxicity tests. Within thirty (30) days prior to initiating an effluent toxicity test, a reference toxicant test must be completed for the method(s) used; alternatively, the reference toxicant test may be run concurrent with the effluent toxicity test. In addition, for each test method, at least five (5) acceptable reference toxicant tests must be completed by the laboratory during the six (6) months prior to performing the effluent toxicity test. A control chart including the most recent reference toxicant test endpoints for the effluent test method (minimum of five [5], up to twenty [20] if available) shall be part of the permittee's report.

1.4.6. Reduction to Single Species Testing

After at least six (6) consecutive passing toxicity tests using the water flea and the fathead minnow, a request for testing with only the most sensitive species may be submitted to DOW. Upon approval, the most sensitive species may be considered as representative and all subsequent compliance tests may be conducted using only that species unless directed at any time by DOW to change or revert to both.

1.4.7. Test Results

1.4.7.1. Chronic Test Results

If the IC_{25} for reproduction by water fleas or growth of fathead minnows is less than 100% effluent, (i.e., $TU_C > 1.00$) then that round of testing has demonstrated toxicity for purposes of determining reasonable potential.

1.4.7.2. Acute Test Results

The first 48 hours of the chronic test is considered as an acute test and the LC_{50} shall be determined. If the LC_{50} for either species is less than the permit limit of 1.00 TU_A, then that round of testing has failed and noncompliance with the effluent limit demonstrated.

1.4.7.2.1. Follow-up to a Failed Acute Test

Following a failed acute test, a follow-up round of testing shall be performed within 15 days of completing the failed initial test or as soon as possible subject to a subsequent discharge. If two consecutive acute toxicity tests fail then the permittee shall be required to evaluate the effectiveness of the BMPs employed for SC control in accordance with the requirements of Section 3.1.1.5.6.1.

2. STANDARD CONDITIONS

2.1. Schedule of Compliance

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

2.2. Standard Conditions for KPDES Permit

2.2.1. Other Permits

This permit has been issued under the provisions of KRS Chapter 224 and regulations promulgated pursuant thereto. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits or licenses required by this Cabinet and other state, federal, and local agencies.

2.2.2. Sufficiently Sensitive Analytical Methods

Analytical methods utilized to demonstrate compliance with the effluent limitations established in this permit shall be sufficiently sensitive to detect pollutant levels at or below the required effluent limit, i.e. the Method Detection Limit (MDL) shall be at or below the effluent limit. In those instances where an EPA approved method does exist that has an MDL at or below the established effluent limitation the permit shall: (1) use the method specified in the permit; or (2) the EPA approved method with an MDL that is nearest to the established effluent limit.

2.2.3. Antidegradation

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
- Best management practices including but not limited to contemporaneous reclamation and proper operation and maintenance
- Water reuse including hydroseeding and dust suppression

2.2.4. Conditions Applicable to All Permits

The following conditions apply to all KPDES permits.

2.2.4.1. Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of KRS Chapter 224 and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. Any person who violates applicable statutes or who fails to perform any duty imposed, or who violates any determination, permit, administrative regulation, or order of the cabinet promulgated pursuant thereto shall be liable for a civil penalty as provided at KRS 224.99.010.

2.2.4.2. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for a new reissued permit.

2.2.4.3. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

2.2.4.4. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

2.2.4.5. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

2.2.4.6. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

2.2.4.7. Property Rights

This permit does not convey any property rights of any sort, or any exclusive privilege.

2.2.4.8. Duty to Provide Information

The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Director upon request, copies of records required to be kept by this permit.

2.2.4.9. Inspection and Entry

The permittee shall allow the Director, or an authorized representative (including an authorized contractor acting as a representative of the Director), upon presentation of credentials and other documents as may be required by law, to:

(1) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

(2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

(3) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

(4) Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by KRS 224, any substances or parameters at any location.

2.2.4.10. Monitoring and Records

(1) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

(2) Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five (5) years (or longer as required by 401 KAR 5:065 Section 2(10) [40 CFR 503]), the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time.

(3) Records of monitoring information shall include:

(i) The date, exact place, and time of sampling or measurements;
(ii) The individual(s) who performed the sampling or measurements;
(iii) The date(s) analyses were performed;
(iv) The individual(s) who performed the analyses;
(v) The analytical techniques or methods used; and
(vi) The results of such analyses.

(4) Monitoring must be conducted according to test procedures approved under 401 KAR 5:065 Section 2(8) [40 CFR 136] unless another method is required under 401 KAR 5:065 Section 2(9) or (10) [40 CFR subchapters N or O].

(5) KRS 224.99-010 provides that any person who knowingly violates KRS 224.70-110 or other enumerated statutes, or who knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall be guilty of a Class D felony and, upon conviction, shall be punished by a fine of not more than $25,000, or by imprisonment for not more than one (1) year, or both. Each day upon which a violation occurs shall constitute a separate violation.

2.2.4.11. Signatory Requirement

(1) All applications, reports, or information submitted to the Director shall be signed and certified pursuant to 401 KAR 5:060, Section 4 [40 CFR 122.22].

(2) KRS 224.99-010 provides that any person who knowingly provides false information in any document filed or required to be maintained under KRS Chapter 224 shall be guilty of a Class D felony and upon conviction thereof, shall b punished by a fine not to exceed twenty-five thousand dollars ($25,000), or by imprisonment, or by fine and imprisonment, for each separate violation. Each day upon which a violation occurs shall constitute a separate violation..

2.2.4.12. Reporting Requirements

2.2.4.12.1. Planned Changes

The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

(i) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in KRS 224.16-050 [40 CFR122.29(b); or
(ii) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under KRS 224.16-050 [40 CFR 122.42(a)(1)].
(iii) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan;

2.2.4.12.2. Anticipated Noncompliance

The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

2.2.4.12.3. Transfers

This permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under KRS 224 [CWA; see 40 CFR 122.61; in some cases, modification or revocation and reissuance is mandatory].

2.2.4.12.4. Monitoring Reports

Monitoring results shall be reported at the intervals specified elsewhere in this permit.

(i) Monitoring results must be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by the Director for reporting results of monitoring of sludge use or disposal practices.
(ii) If the permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 401 KAR 5:065 Section 2(8) [40 CFR 136], or another method required for an industry-specific waste stream under 401 KAR 5:065 Section 2(9) or (10) [40 CFR subchapters N or O], the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Director.
(iii) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the permit.

2.2.4.12.5. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than fourteen (14) days following each schedule date.

2.2.4.12.6. Twenty-four Hour Reporting

(i) The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within twenty-four (24) hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
(ii) The following shall be included as information which must be reported within twenty-four (24) hours under this paragraph.
(A) Any unanticipated bypass which exceeds any effluent limitation in the permit.
(B) Any upset which exceeds any effluent limitation in the permit.
(C) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in the permit to be reported within twenty-four (24) hours.
(iii) The Director may waive the written report on a case-by-case basis for reports under paragraph ii of this section if the oral report has been received within twenty-four (24) hours.

2.2.4.12.7. Other Noncompliance

The permittee shall report all instances of noncompliance not reported under Sections 2.2.4.12.1, 2.2.4.12.4, 2.2.4.12.5, and 2.2.4.12.6, at the time monitoring reports are submitted. The reports shall contain the information listed in Section 2.2.4.12.6.

2.2.4.12.8. Other Information

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.

2.2.4.13. Bypass

2.2.4.13.1. Definitions

(i) Bypass means the intentional diversion of waste streams from any portion of a treatment facility.
(ii) Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

2.2.4.13.2. Bypass Not Exceeding Limitations

The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Section 2.2.4.13.1.

2.2.4.13.3. Notice

(i) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.

(ii) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Section 2.2.4.12.6.

2.2.4.13.4. Prohibition of Bypass

(i) Bypass is prohibited, and the Director may take enforcement action against a permittee for bypass, unless:
(A) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
(B) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
(C) The permittee submitted notices as required under Section 2.2.4.13.3.
(ii) The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in Section 2.2.4.13.3.

2.2.4.13.5. Upset

2.2.4.13.5.1. Definition

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

2.2.4.13.5.2. Effect of an Upset

An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of Section 2.2.4.13.5.3 are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review

2.2.4.13.5.3. Conditions Necessary for a Demonstration of Upset

A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

(i) An upset occurred and that the permittee can identify the cause(s) of the upset;
(ii) The permitted facility was at the time being properly operated; and
(iii) The permittee submitted notice of the upset as required in Section 2.2.4.12.6;
(iv) The permittee complied with any remedial measures required under Section 2.2.4.4.

2.2.4.13.5.4. Burden of Proof

In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

2.2.4.14. Discharge and Monitoring Point Accessibility

The permittee is required to conduct monitoring that is representative of the regulated discharges. Additionally in accordance with the conditions that apply to all permits, as stated in Section 2.2.4.9, the permittee shall allow authorized agency representatives to inspect the facility and collect samples to determine compliance. In order for such monitoring to be conducted either by the permittee or authorized agency personnel all monitoring and discharge points required by this permit shall be readily and safely accessible in all weather conditions.

2.2.5. Additional Conditions Specific to Mining Permits

The permittee shall notify the Director as soon as they know or have reason to believe that toxic pollutants not limited in the permit have been or shall be discharge in excess of the highest of the following notification levels:

POLLUTANT	ROUTINE/FREQUENT BASIS	NON-ROUTINE/INFREQUENT BASIS
Any Toxic Pollutant	100 µg/l or level established by the Director	500 µg/l or level established by the Director
Acrolein	200 µg/l	500 µg/l or level established by the Director
Acrylonitrile	200 µg/l	500 µg/l or level established by the Director
2,4-dinitrophenol	500 µg/l	500 µg/l or level established by the Director
2-methyl-4,6-dinitrophenol	500 µg/l	500 µg/l or level established by the Director
Antimony	1 mg/l	1 mg/l
Pollutant reported in permit application	Five (5) times the maximum concentration value	Ten (10) times the maximum concentration value

2.2.5.1. Alkaline Mine Reclassification

401 KAR 5:065 Section 2(9) [40 CFR 434.11] defines “alkaline mine drainage” as mine drainage, before any treatment, has a pH equal to or greater than 6.0 standard units and a total iron concentration of 10 mg/l. As information is unavailable at the time the permittee submits an application for an individual permit, the default classification for all mine drainage is “acid or ferruginous”. Should the permittee have reason to believe the drainage from an operation would be more appropriately classified as “alkaline,” the permittee must satisfactorily demonstrate to DOW that the mine drainage, prior to treatment, has a pH greater than or equal to 6.0 standard units and a total recoverable iron concentration less than 10 mg/l.

This demonstration shall consist of a mine map with the monitoring locations clearly labeled, including the latitude and longitude in decimal degrees. There shall be a sufficient number of monitoring locations to adequately characterize any variations within the drainage from all parts of the mining activity. These monitoring locations **MAY NOT COINCIDE** with any sediment structure discharge point, as untreated drainage must be collected for the demonstration. At least six (6) months of data to characterize the flow, pH and the total recoverable iron concentration of the influent or untreated effluent shall be collected and submitted as part of this demonstration.

The effect of reclassifying the mine from “acid or ferruginous” to “alkaline” is to remove the effluent limitations and monitoring requirements for total recoverable manganese, which constitutes a major modification and necessitates the reopening of the KPDES permit.

2.2.5.2. Alternate Effluent Limitations - pH

Pursuant to 401 KAR 5:065, Section 2(9) [40 CFR 434.62], the permit-issuing authority may allow the pH level in the final effluent to exceed 9.0 standard units to a small extent in order that the manganese limitations may be achieved when the application of neutralization and sedimentation treatment technology results in the inability to comply. This alternate pH limitation shall be granted upon request for a specific discharge, provided the operator submits sufficient documentation, with the Discharge Monitoring Report (DMR), that an effluent pH of greater than 9.0 standard units was required to achieve the manganese limitation. However, under no circumstances shall the pH exceed 10.0 standard units.

This documentation shall include sample results utilized to determine that additional pH adjustment to between 9.0 and 10.0 standard units was required. This data shall include flow, pH, and total recoverable manganese concentration. In the event the Cabinet determines this condition to be chronic, the permittee shall submit plans for a permanent a solution.

2.2.5.3. Alternate Effluent Limitations - Precipitation

Pursuant to the requirements of 401 KAR 5:065, Section 2(9) [40 CFR 434.63], precipitation-induced discharges are eligible for alternate effluent limits and monitoring requirements. **These alternate effluent limits and monitoring requirements are available only for those parameters included in 40 CFR 434 Coal Mining Point Source Category and for which the final effluent limits are TBELs. The parameters eligible for precipitation based alternate effluent limits and monitoring are: Total Recoverable Manganese, Total Suspended Solids and Settleable Solids.** The applicable alternate limits are a function of the size of the precipitation event and the type of operation, and shall be granted on an event-by-event basis, provided the operator requests alternate precipitation limitations and provides sufficient proof that the discharge or increase in the discharge was caused by the applicable precipitation event described. This proof must include precipitation data from a precipitation gauge maintained on the permit site or within a five (5) mile radius that can be corroborated with NOAA or other official precipitation data, and may be supported by weir flow measurements, dated photographs, or equivalent proof of record. This information shall be submitted with the Discharge Monitoring Report (DMR). The following alternate limitations are available:

(a)(1) The alternate limitations specified in paragraph (a)(2) of this section apply with respect to:

(i) All discharges of alkaline mine drainage except discharges from underground workings of underground mines that are not commingled with other discharges eligible for these alternate limitations;
(ii) All discharges from steep slope areas, (as defined in section 515(d)(4) of the Surface Mining Control and Reclamation Act of 1977, as amended (SMCRA)), and from mountaintop removal operations (conducted pursuant to section 515(c) of SMCRA);
(iii) Discharges from coal preparation plants and preparation plant associated areas (excluding acid or ferruginous mine drainage from coal refuse disposal piles).

(2) Any discharge or increase in the volume of a discharge caused by precipitation within any 24-hour period less than or equal to the 10-year, 24-hour precipitation event (or snowmelt of equivalent volume) may comply with the following limitations instead of the otherwise applicable limitations:

EFFLUENT LIMITATIONS DURING PRECIPITATION	
POLLUTANT OR POLLUTANT PROPERTY	**EFFLUENT LIMITATIONS**
Settleable Solids	0.5 ml/l maximum not to be exceeded
pH	6.0 to 9.0 at all times

Acidity, Alkalinity, Oil & Grease, Total Recoverable Iron, and Pollutants of Concern for which WQBELs have been imposed	As limited in Sections 1.2.1 and 1.2.2

(b) The following alternate limitations apply with respect to acid or ferruginous drainage from coal refuse disposal piles:

Any discharge or increase in the volume of a discharge caused by precipitation within any 24-hour period greater than the 1-year, 24-hour precipitation event, but less than or equal to the 10-year, 24-hour precipitation event (or snowmelt of equivalent volume) may comply with the following limitations instead of the otherwise applicable limitations:

EFFLUENT LIMITATIONS DURING PRECIPITATION	
POLLUTANT OR POLLUTANT PROPERTY	**EFFLUENT LIMITATIONS**
Settleable Solids	0.5 ml/l maximum not to be exceeded
pH	6.0 to 9.0 at all times
Acidity, Alkalinity, Oil & Grease, Total Recoverable Iron, and Pollutants of Concern for which WQBELs have been imposed	As limited in Sections 1.2.1 and 1.2.2

(c) The following alternate limitations apply with respect to acid or ferruginous mine drainage, except for discharges addressed in paragraphs (a) (mountaintop removal and steep slope areas), (d) (controlled surface mine discharges) and (f) (discharges from underground workings of underground mines) of this section:

(1) Any discharge or increase in the volume of a discharge caused by precipitation within any 24-hour period less than or equal to the 2-year, 24-hour precipitation event (or snowmelt of equivalent volume) may comply with the following limitations instead of the otherwise applicable limitations:

EFFLUENT LIMITATIONS DURING PRECIPITATION	
POLLUTANT OR POLLUTANT PROPERTY	**EFFLUENT LIMITATIONS**
Total Recoverable Iron	4.0 mg/l maximum for any 1 day
Settleable Solids	0.5 ml/l maximum not to be exceeded
pH	6.0 to 9.0 at all times
Acidity, Alkalinity, Oil & Grease, and Pollutants of Concern for which WQBELs have been imposed	As limited in Sections 1.2.1 and 1.2.2

(2) Any discharge or increase in the volume of a discharge caused by precipitation within any 24-hour period greater than the 2-year, 24-hour precipitation event, but less than or equal to the 10-year, 24-hour precipitation event (or snowmelt of equivalent volume) may comply with the following limitations instead of the otherwise applicable limitations:

EFFLUENT LIMITATIONS DURING PRECIPITATION	
POLLUTANT OR POLLUTANT PROPERTY	**EFFLUENT LIMITATIONS**
Settleable Solids	0.5 ml/l maximum not to be exceeded

pH	6.0 to 9.0 at all times
Acidity, Alkalinity, Oil & Grease, Total Recoverable Iron, and Pollutants of Concern for which WQBELs have been imposed	As limited in Sections 1.2.1 and 1.2.2

(d)(1) The alternate limitations specified in paragraph (d)(2) of this section apply with respect to all discharges described in paragraphs (a), (b) and (c) of this section and to:

(i) Discharges of acid or ferruginous mine drainage from underground workings of underground mines which are commingled with other discharges eligible for these alternate limitations; and
(ii) Controlled acid or ferruginous surface mine discharges; and
(iii) Discharges from reclamation areas.

(2) Any discharge or increase in the volume of a discharge caused by precipitation within any 24-hour period greater than the 10-year, 24-hour precipitation event (or snowmelt of equivalent volume) may comply with the following limitations instead of the otherwise applicable limitations:

EFFLUENT LIMITATIONS DURING PRECIPITATION	
POLLUTANT OR POLLUTANT PROPERTY	**EFFLUENT LIMITATIONS**
pH	6.0 to 9.0 at all times
Acidity, Alkalinity, Oil & Grease, Total Recoverable Iron, and Pollutants of Concern for which WQBELs have been imposed	As limited in Sections 1.2.1 and 1.2.2

(e) The operator shall have the burden of proof that the discharge or increase in the discharge was caused by the applicable precipitation event described in the previous paragraphs. Such proof shall take the form of a daily precipitation log maintained in accordance with the requirements of 401 KAR Section 5:065 Section 2(1)[40 CFR 122.41(j)] or local NOAA weather station records or equivalent. For alternate precipitation event limits related to self monitoring this information shall be submitted with the Discharge Monitoring Report at the end of the monthly monitoring period. For compliance samples collected by any representative of the EEC the permittee has seven (7) calendar days from the date of the mine inspection report to submit proof of a qualifying event has occurred. For all other events the precipitation logs shall be provided upon request to any representative of the EEC.

(f) Discharges of mine drainage from underground workings of underground mines, which are not commingled with discharges eligible for the alternate limitations, shall in no event be eligible for the alternate limitations.

(g) The applicable alternate limits are a function of the size of the precipitation event and the type of operation. These alternate limits shall be granted on an event-by-event basis, provided the operator requests them and submits sufficient documentation as specified above in paragraph (e) above. Alternate limits are not available for the parameters of Flow, Oil & Grease, Acidity, and Alkalinity.

The following table summarizes these alternate precipitation effluent limitations.

TYPE OF DISCHARGE	**PRECIPITATION EVENT**

	Discharge Caused by Precipitation	1-yr, 24-hr	2-yr, 24-hr	10-yr, 24-hr
Discharges from underground workings of underground mines not commingled including alkaline mines	NO ALTERNATE LIMITATIONS	NO ALTERNATE LIMITATIONS	NO ALTERNATE LIMITATIONS	NO ALTERNATE LIMITATIONS
Discharges of dredge return water	NO ALTERNATE LIMITATIONS	NO ALTERNATE LIMITATIONS	NO ALTERNATE LIMITATIONS	NO ALTERNATE LIMITATIONS
Discharges from underground workings of underground mines commingled	NO ALTERNATE LIMITATIONS	NO ALTERNATE LIMITATIONS	NO ALTERNATE LIMITATIONS	pH
Controlled surface mine drainage (except steep slope and mountaintop removal)	NO ALTERNATE LIMITATIONS	NO ALTERNATE LIMITATIONS	NO ALTERNATE LIMITATIONS	pH
Non-controlled surface mine drainage (except steep slope and mountaintop removal)	SS, pH, Iron	SS, pH, Iron	SS, pH	pH
Discharges from coal refuse disposal piles	NO ALTERNATE LIMITATIONS	SS, pH	SS, pH	pH
Discharges from steep slope and mountaintop removal areas	SS, pH	SS, pH	SS, pH	pH
Discharges from preparation plant associated areas (excluding coal refuse disposal piles)	SS, pH	SS, pH	SS, pH	pH
Alkaline Mine Drainage	SS, pH	SS, pH	SS, pH	pH
Reclamation Areas	SS, pH	SS, pH	SS, pH	pH
The applicable alternate limits are a function of the size of the precipitation event and the type of operation and shall be granted on an event-by-event basis, provided the operator requests alternate precipitation limitations and provides sufficient proof that the discharge or increase in the discharge was caused by the applicable precipitation event described.				
These alternate limits do not affect Acidity, Alkalinity, Oil & Grease, Total Recoverable Iron, and Pollutants of Concern for which WQBELs have been imposed.				

2.2.5.4. Authorization to Discharge

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

2.2.5.5. Commingling of Wastestreams

Where wastestreams from any facility covered by this permit are combined for treatment or discharge with wastestreams from another facility, the concentration of each pollutant in the combined discharge may not exceed the most stringent limitations for that pollutant applicable to any component wastestream of the discharge. This requirement is consistent with the requirements of 401 KAR 5:065 Section 2(9) [40 CFR 434.61].

2.2.5.6. Instream Treatment or Disposal Facilities

This permit does not authorize the construction or use of instream treatment or disposal facilities (sediment ponds, hollow fills, valley fills, slurry ponds, etc.). Such authorization is within the jurisdiction of the COE and is implemented through the Section 404 permitting program of the Clean Water Act. Since the COE is a federal agency, this permitting action requires the issuance of a Section 401 Water Quality Certification by DNR. The requirements of the 401 Water Quality Certification issued for this operation are hereby incorporated by reference into the KPDES permit as enforceable requirements.

2.2.5.7. Department of the Army, Corps of Engineers Condition

The following special condition is applicable to certain coal mining operations, which affect anchorage and navigation of any waters of the United States, which are under the jurisdiction of the COE. The applicability of this condition to specific dischargers will be included in the written notice from DOW that authorizes discharge under this permit.

The permittee shall undertake erosion control practices which utilize proper sedimentation control measures in order to minimize resultant sedimentation in navigable waters which occur as a result of discharges from both point and non-point sources connected with the overall operations. The practices will apply to existing and future facilities and activities, and will, at a minimum, provide for the control of erosion and runoff from access and haul roads, coal handling structures, utility right-of-way easements, and excavations. The permittee will also provide adequate ditching, culverts, sediment traps and ponds, and other structures or procedures necessary to minimize sedimentation in navigable waters. DOW shall have the right to inspect the sediment control measures being undertaken by the permittee and, in consultation with the COE, direct any additional measures which are necessary to comply with the requirements of this condition. Should this discharge result in sufficient deposition of solids material to create a hazard to anchorage or navigation on any navigable water, such deposits will be removed by the permittee without expense to the United States Government. Further, the time and manner of such removal, as well as the location and manner of its disposal, must receive the prior written approval by the District Engineer of the COE.

2.2.5.8. SS Testing Procedure

Test procedures for the determination of settleable solids, as described in c., shall conform to 401 KAR 5:065, Section 2(9) [40 CFR 434.64].

Fill an Imhoff cone to the one (1)-liter mark with a thoroughly mixed sample. Allow to settle undisturbed for 45 minutes. Gently stir along the inside surface of the cone with a stirring rod. Allow to settle undisturbed for 15 minutes longer. Record the volume of settled material in the cone as milliliters per liter. Where a separation of settleable and floating materials occurs do not include the floating material.

2.2.6. Publicly-Owned Lake

Carr Creek Reservoir is recognized by DOW as a Publicly-Owned Lake. A 100-foot horizontal and 150-foot vertical buffer about the lake and its first- and second-order blue-line tributaries shall be maintained, thus prohibiting any instream disturbances or structures. The permittee may request a variance from this condition provided an alternative analysis is performed and appropriate mitigation is proposed and implemented. This variance shall be in the form of a 401 Water Quality Certification, if a USCOE permit is obtained, or similar Division of Water approval. The conditions of the 401 Water Quality Certification or Division of Water approval shall be automatically incorporated as conditions of this permit.

2.3. Reporting of Monitoring Results

2.3.1. DMRs for Effluent Conditions Specified in 1.2.1 All Outfalls – Active Mining and 1.2.2 All Outfalls – Post Mining

Monitoring results obtained during each monitoring period must be reported on a standard electronic DMR Form, available from the DMRE webpage at http://dmre.ky.gov/Pages/default.aspx. The completed DMR for each monitoring period must be submitted to the DMRE FTP site, available at kyftp.ky.gov, no later than the 28th day of the month following the monitoring period for which monitoring results were obtained.

2.3.2. DMRs for Effluent Conditions Specified in 1.2.3 Instream Outfalls Only – Active Mining and 1.2.4 Instream Monitoring Points

Monitoring results obtained during each monitoring period must be reported on a standard electronic DMR Form, available from the DOW mining webpage at http://water.ky.gov/permitting/Pages/Mining.aspx. The completed DMR for each monitoring period and lab reporting sheets must be submitted to the DEP electronic submittal site, available at https://dep.gateway.ky.gov/eportal/default.aspx, using the document type "Representative & Instream DMRs" no later than the 28th day of the month following the monitoring period for which monitoring results were obtained.

2.3.3. WET Testing

Test results obtained during each monitoring period for WET testing must be reported according to the most recent format provided by DOW. Copies of all toxicity test reports, including incomplete or invalid tests, must be submitted to the DEP electronic submittal site, available at https://dep.gateway.ky.gov/eportal/default.aspx, using the document type "WET Testing" within thirty (30) days of the completion or termination of the test.

2.3.4. Instream Assessment Reports

Instream assessment reports developed during each monitoring period must be reported as required in the applicable SOP, available from the DOW mining webpage at http://water.ky.gov/permitting/Pages/Mining.aspx. The completed report and spreadsheet for each monitoring period must be submitted to DOW in electronic and hard copy at the address listed below no later than the 28th day of the month following the monitoring period for which monitoring results were obtained.

Division of Water
Water Quality Branch
Monitoring Section
200 Fair Oaks Lane
Frankfort, Kentucky 40601
Attention: Coal Permitting Coordinator

2.4. Reopener Clause

This permit shall be modified, or alternatively revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved in accordance with 401 KAR 5:050 through 5:080, if the effluent standard or limitation so issued or approved:

1. Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or

2. Controls any pollutant not limited in the permit.

This permit may be reopened to implement the findings of a reasonable potential analysis performed by DOW.

This permit shall be reopened if DOW determines surface waters are aesthetically or otherwise degraded by substances that:

(a) Settle to form objectionable deposits;
(b) Float as debris, scum, oil, or other matter to form a nuisance;
(c) Produce objectionable color, odor, taste, or turbidity;
(d) Injure, are chronically or acutely toxic to or produce adverse physiological or behavioral responses in humans, animals, fish, and other aquatic life;
(e) Produce undesirable aquatic life or result in the dominance of nuisance species; or
(f) Cause fish flesh tainting

The permit as modified or reissued under this paragraph shall also contain any other requirements of KRS Chapter 224 when applicable.

3. SPECIAL CONDITIONS

3.1. Best Management Practices

The permittee shall develop and implement a Best Management Practices Plan (BMPP) consistent with 401 KAR 5:065 Section 2(4) [40 CFR 122.44(k)] for the control of acid mine drainage, conductivity, total dissolved solids and sediment released from the operation. Additionally the BMPP shall address the use, storage, and disposal of petroleum-based products, toxic or hazardous substances. The BMPP shall include: erosion prevention measures; sediment control measures; fill minimization and optimization measures; and other site management practices that are protective of the instream water quality and the “designated use” of the receiving waters affected by the mining operation.

3.1.1. General Conditions

3.1.1.1. Applicability

These conditions apply to all permittees who use, manufacture, store, handle, or discharge any pollutant listed as: (1) toxic under Section 307(a)(1) of the Clean Water Act; (2) oil, as defined in Section 311(a)(1) of the Act; (3) any pollutant listed as hazardous under Section 311 of the Act; or (4) is defined as a pollutant pursuant to KRS 224.01-010(35) and who have ancillary manufacturing operations which could result in (1) the release of a hazardous substance, pollutant, or contaminant, or (2) an environmental emergency, as defined in KRS 224.01-400, as amended, or any regulation promulgated pursuant thereto (hereinafter, the "BMP pollutants"). These operations include material storage areas; plant site runoff; in-plant transfer, process and material handling areas; loading and unloading operations, and sludge and waste disposal areas.

3.1.1.2. Plan

The permittee shall develop and implement a Best Management Practices (BMP) plan consistent with 401 KAR 5:065, Section 2(10) pursuant to KRS 224.70-110, which prevents or minimizes the potential for the release of "BMP pollutants" from ancillary activities through site runoff; spillage or leaks, sludge or waste disposal; or drainage from raw material storage.

3.1.1.3. Implementation

If this is the first time for the BMP requirement, then the plan shall be developed and submitted to DOW at least 90 days prior to the start of active coal removal. Implementation shall be required concurrent with the start of active coal removal. For permit renewals the plan in effect at the time of permit reissuance shall remain in effect. Modifications to the plan as a result of ineffectiveness or plan changes to the facility shall be submitted to DOW and DNR and implemented as soon as possible.

3.1.1.4. General Requirements

The BMP plan shall:

a. Be documented in narrative form, and shall include any necessary plot plans, drawings, or maps.

b. Establish specific objectives for the control of toxic and hazardous pollutants.

(1) Each facility component or system shall be examined for its potential for causing a release of "BMP pollutants" due to equipment failure, improper operation, natural phenomena such as rain or snowfall, etc.
(2) Where experience indicates a reasonable potential for equipment failure (e.g., a tank overflow or leakage), natural condition (e.g., precipitation), or other circumstances which could result in a release of "BMP pollutants," the plan should include a prediction of the direction, rate of flow, and total quantity of the pollutants which could be released from the facility as result of each condition or circumstance.

c. Establish specific Best Management Practices to meet the objectives identified under paragraph b of this section, addressing each component or system capable of causing a release of "BMP pollutants."

d. Include any special conditions established in part b of this section.

e. Be reviewed by plant engineering staff and the site manager.

3.1.1.5. Specific Requirements

The plan shall be consistent with the general guidance contained in the publication entitled "NPDES Best Management Practices Guidance Document," and shall include the following baseline BMPs as a minimum.

(1) Site description
(2) Site Maps
(3) BMP Selection
(4) Inspection, Records, and Documentation
(5) Evaluation of BMP Effectiveness
(6) Modification for Ineffectiveness

3.1.1.5.1. Site Description

The BMPP shall include a copy of the DNR-approved mine plan submitted as part of the Surface Mining Control and Reclamation Act (SMCRA) permit. In addition to the DNR-approved mine plan, the BMPP shall include:

(1) List of outfalls (latitude, longitude, receiving water, DNR Pond Number, KPDES Outfall Number, and projected activation date)
(2) List of representative outfalls (latitude, longitude, receiving water, DNR Pond Number, KPDES Outfall Number, and projected activation date)
(3) List of instream monitoring locations (latitude, longitude, and water body name)

3.1.1.5.2. Site Maps

The BMPP shall include:

(1) Mining and Reclamation Plan (MRP) map;
(2) Environmental Resources Information (ERI) map; and
(3)Site map indicating the location of any and all storage and disposal areas for petroleum base products or toxic or hazardous substances utilized at the mine.

3.1.1.5.3. BMP Selection

Best Management Practices (BMPs) shall be selected to address the major areas of concern related to mining activities: acid mine drainage; sediment control; total dissolved solids and conductivity control; and the management of petroleum-based products and toxic or hazardous substances. The selection, design, construction, implementation, operation, maintenance, and effectiveness of best management practices is a critical component to the mine's successful compliance with the SCMRA and Clean Water Act (CWA) requirements. The permittee must be judicious in the selection of BMPs to prevent incompatible or counterproductive results. The BMPP shall describe the selected BMPs, provide the rationale for selection, and discuss the objective of the BMPs.

3.1.1.5.4. Domestic Water Supply Conditions

The proposed discharge points for this facility are located within 5 miles upstream of a domestic water supply intake. The BMP plan shall include, under Specific Conditions of the BMP Plan, specific language addressing the protection of the public water supply's source waters. At a minimum this section should provide for notification procedures in the event of a catastrophic release from the operation. The notification procedures shall detail the criteria by which a release is considered a catastrophic event, the methods which will be utilized to notify the impacted water supplier that such an event has occurred, and the names, telephone numbers, and e-mail addresses of the contacts with the subject water supply and those responsible persons representing the permittee.

3.1.1.5.5. Inspection, Records, and Documentation

The BMPP shall establish inspection records, procedure and frequency and identify the location where these records will be stored.

3.1.1.5.6. Evaluation of BMP Effectiveness

The BMPP shall establish protocols, procedures, and a schedule of review for the evaluation of the effectiveness of the selected BMPs.

Protocols: The protocols are a set of performance benchmarks which shall be narrative, numeric, biological assessment, or a combination thereof, against which the effectiveness of the BMPs are to be judged. Due to the variability of a number of factors influencing the selection of BMPs, universal performance benchmarks are not feasible therefore site-specific standards shall be developed. The performance benchmarks are to be consistent with the goals of the CWA and SMCRA

Procedures: The procedures shall document the process for comparing the success of the actual BMP performance versus the stated benchmark. Discharge data, receiving stream biological assessments, inspections, etc., are among the tools to be utilized in this evaluation process. If these assessments indicate that impacts to the aquatic community are occurring, then the permittee shall evaluate the BMPs employed and determine if modifications to the BMP plan and selected BMPs are required.

Schedule of Review: The schedule of review shall include both fixed and episode- derived dates for review. Quarterly and annual evaluations of the effectiveness of the BMPs shall be performed. Episodic events, such as precipitation events of 1 inch or more, changes in the mine plan, inspections by regulatory agencies, etc., may necessitate a review of BMP performance.

3.1.1.5.6.1. SC Benchmark and Management

Compliance with the narrative water quality standard and permit requirements for these parameters shall be determined by comparing the baseline biological assessment score(s) with the annual score(s) determined during the term of the permit, as well as WET testing. The tables in Sections 1.2.5 and 1.2.6 will be used

in the permit in determining compliance. The BMP requirements of the permit include benchmarks that are clear, specific, measurable, and enforceable permit requirements for these parameters. These benchmarks are as follows:

1) **Single annual score lower than the baseline score but in the same baseline category:**
   a) Does not constitute a violation of the permit.
   b) Within thirty (30) days of the determination of the annual score, the permittee shall evaluate the effectiveness of BMPs for SC control.
   c) Within sixty (60) days of the determination of the annual score, the permittee shall submit to DOW the findings of this evaluation.
   d) Within one-hundred-eighty (180) days of the determination of the annual score, the permittee shall implement any proposed modifications to the BMPs that do not require modification of the SMCRA permit. If modifications of the SMCRA permit are required, the permittee shall implement the modified BMPs as soon as practicable after authorization by DNR.
2) **Two consecutive annual scores lower than the baseline score but in the same baseline category:**
   a) Does not constitute a violation of the permit.
   b) Within thirty (30) days of the determination of the annual score, the permittee shall evaluate the effectiveness of BMPs for SC control and propose BMP modifications.
   c) Within sixty (60) days of the determination of the annual score, the permittee shall submit to DOW the findings of this evaluation.
   d) Within one-hundred-eighty (180) days of the determination of the annual score, the permittee shall implement any proposed modifications to the BMPs that do not require modification of the SMCRA permit. If modifications of the SMCRA permit are required, the permittee shall implement the modified BMPs as soon as practicable after authorization by DNR.
3) **Single annual score lower than the baseline category, or two consecutive failed acute WET tests:**
   a) Constitutes a violation of the permit unless the permittee can show that causes other than the discharge of pollutants from the permitted activity were the principal source of the categorical decline.
   b) Within five (5) days of the determination of the annual score or the second of two consecutive failed acute WET tests, the permittee shall notify DOW that the event has occurred.
   c) Within thirty (30) days of the determination of the annual score or the second of two consecutive failed acute WET tests, the permittee may attempt to demonstrate that causes other than the permitted activity were the source of the categorical decline or shall otherwise commence evaluation of the effectiveness of the current BMPs employed and propose BMP modifications.
   d) Within sixty (60) days of the determination of the annual score or the second of two consecutive failed acute WET tests, the permittee shall submit to DOW the findings of this evaluation.

e) Within one-hundred-eighty (180) days of the determination of the annual score or the second of two consecutive failed acute WET tests, the permittee shall implement any proposed modifications to the BMPs that do not require modification of the SMCRA permit. If modifications of the SMCRA permit are required, the permittee shall implement the modified BMPs as soon as practicable after authorization by DNR.

3.1.1.5.6.1.1. SC BMP Plan Evaluation

At a minimum, the findings of this evaluation shall include:

(1) A list of known, practicable measures to reduce SC in discharges from surface coal mining, including measures to sequester known sources of high SC to prevent entrance to the sedimentation ponds;
(2) Identification of the order of implementing identified SC control measures;
(3) Monitoring plans and schedules to support evaluating the effectiveness of each control measure;
(4) A description of decision-making criteria and timelines for evaluating whether a particular measure has been effective and whether additional or different measures are required, including instream or effluent monitoring; and
(5) Identification of a process for revising the BMP Plan should data obtained from monitoring the effectiveness of particular SC control measures warrant such revisions.

3.1.1.5.6.1.2. SC BMP Plan Modification

At this time, there is no completed, conclusive research evaluating the environmental impact of SC or the effectiveness of source-control measures in reducing SC from mining operations, and SMCRA law precludes others from being used. Accordingly, the options available to permittees to reduce SC in discharges are currently limited. The implementation of the BMP is an iterative process and provides an opportunity to evaluate potential SC control measures for wider applicability within the mining community.

3.1.1.5.7. Modification for Ineffectiveness

The BMPs and the BMPP shall be reviewed and appropriate modifications implemented to utilize other practicable measures if any of the following events occur:

(1) As a result of either a fixed or episodic event-driven evaluation, the permittee determines the selected BMPs are not achieving the established performance benchmarks; or
(2) As a result of an evaluation or inspection by Cabinet personnel; or
(3) If biological assessments indicate the indigenous aquatic community are being adversely affected; or
(4) If discharge and instream data indicate a negative trend in water quality; or
(5) A release of any petroleum-based product, toxic or hazardous substance.
(6) Failure of two consecutive Acute WET Tests

3.1.1.5.8. Documentation

The permittee shall maintain a description of the BMP plan at the facility and shall make the plan available upon request to EEC personnel. Initial copies and modifications thereof shall be sent to the following addresses when required by Section 3.1.1.6:

Division of Water
Surface Water Permits Branch
Operational Permits Section
200 Fair Oaks Lane
Frankfort, Kentucky 40601

Department for Natural Resources
No 2 Hudson Hollow Rd
Frankfort, Kentucky 40601

3.1.1.6. Modification

The permittee shall amend the BMP plan whenever there is a change in the facility or change in the operation of the facility which materially increases the potential for the ancillary activities to result in the release of "BMP pollutants."

4. STATE CONDITIONS

4.1. Discharge and Monitoring Point Accessibility

As previously stated in Section 2.2.4.9, the permittee shall allow authorized agency representatives to inspect the facility and collect samples to determine compliance. In order for such monitoring to be conducted either by the permittee or authorized agency personnel all monitoring and discharge points required by this permit shall be readily and safely accessible in all weather conditions.

4.2. Outfall Signage

The KPDES permit establishes monitoring points, effluent limitations, and other conditions to address discharges from the permitted facility. In an effort to better document and clarify these locations the permittee should place and maintain a permanent marker at each of the monitoring locations.