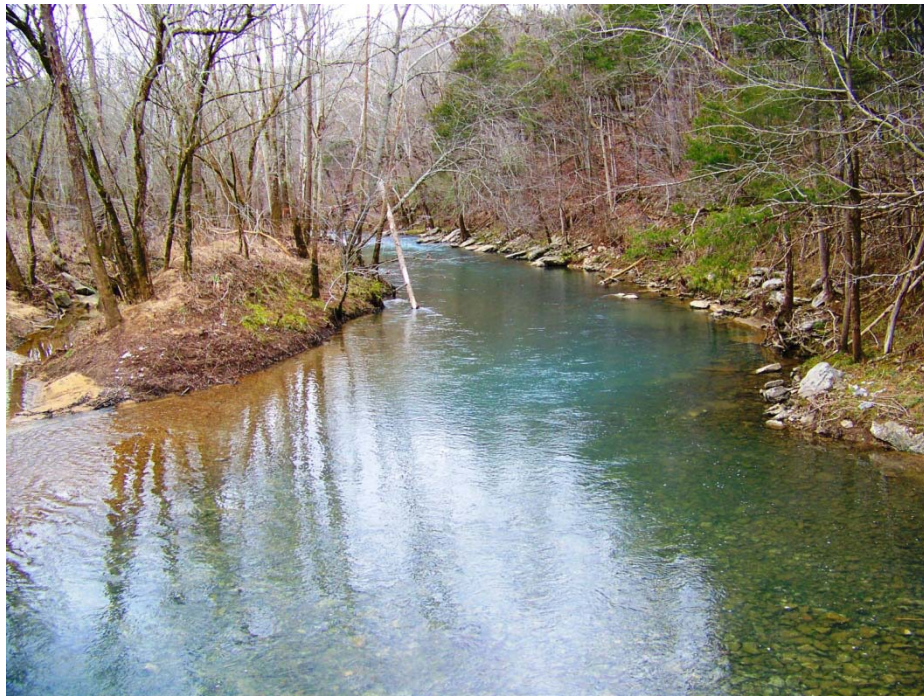


FREQUENTLY ASKED QUESTIONS  
ABOUT  
THE KPDES COAL GENERAL PERMIT  
ISSUED ON  
AUGUST 1, 2009.



Kentucky Department for Environmental Protection  
300 Fair Oaks Ln.  
Frankfort, KY 40601

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# I. KPDES COAL GENERAL PERMIT EFFLUENT LIMITATIONS

## **Q1. What are the KPDES Coal General Permit Effluent Limits?**

**ACTIVE MINING** (Permit Subparts A.1 thru A.4) & **UNDERGROUND POST MINING** (Permit Subparts A.7 & A.8)

These limits apply until receipt of Phase I Bond Release for surface areas or Phase III bond release for underground mines.

<b>TABLE 1</b>				
<b>Parameter</b>	<b>Monthly Average</b>	<b>Daily Maximum</b>	<b>Frequency</b>	<b>Sample Type</b>
Flow (MGD)	Report	Report	2/Month	Instantaneous
Total Suspended Solids (mg/L)	35	70	2/Month	Grab
Total Recoverable Iron (mg/L)	3.0	4.0	2/Month	Grab
Total Recoverable Manganese (mg/L)	2.0	4.0	2/Month	Grab
Oil & Grease <sup>1</sup>	10	15	1/Month	Grab
Conductivity (µS/cm)	Report	Report	1/Month	Grab
Acidity (as mg/L CaCO <sub>3</sub> ) <sup>2</sup>	Report	Report	1/Month	Grab
Alkalinity (as mg/L CaCO <sub>3</sub> ) <sup>2</sup>	Report	Report	1/Month	Grab
pH (std units)	Between 6.0 to 9.0 at all times		2/Month	Grab
<sup>1</sup> The limits and monitoring for Oil & Grease 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.				
<sup>2</sup> Alkalinity shall be greater than acidity at all times				

**POST MINING** (Permit Subparts A.5 & A.6)

These limits apply to those surface areas of a coal mine which have been returned to the required contour, upon which revegetation (seeding and planting) has commenced (i.e. after receipt of Phase I Bond Release).

<b>TABLE 2</b>				
<b>Parameter</b>	<b>Monthly Average</b>	<b>Daily Maximum</b>	<b>Frequency</b>	<b>Sample Type</b>
Flow (MGD)	Report	Report	1/Month	Instantaneous
Settleable Solids (ml/L)	0.5 instantaneous maximum		1/Month	Grab
Oil & Grease <sup>1</sup>	10	15	1/Month	Grab
Conductivity (µS/cm)	Report	Report	1/Month	Grab
Acidity (as mg/L CaCO <sub>3</sub> ) <sup>2</sup>	Report	Report	1/Month	Grab
Alkalinity (as mg/L CaCO <sub>3</sub> ) <sup>2</sup>	Report	Report	1/Month	Grab
pH (std units)	Between 6.0 to 9.0 at all times		2/Month	Grab
<sup>1</sup> The limits and monitoring for Oil & Grease 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.				
<sup>2</sup> Alkalinity shall be greater than acidity at all times				

## II. ALTERNATE PRECIPITATION EFFLUENT LIMITATIONS (APELS)

### **Q2. What are Alternate Precipitation Effluent Limitations (APELS)?**

APELS are allowable modifications to the monitoring and effluent requirements of the coal general permit as a result of a qualifying precipitation event.

### **Q3. How do APELS affect monitoring and reporting requirements?**

The parameters affected depend on the “Type of Discharge” and the size of the qualifying precipitation event. The monitoring and effluent requirements and the effect of APELS are summarized in Table 3 on page 6.

### **Q4. What is a qualifying precipitation event?**

A precipitation event is the amount of precipitation (inches) measured during the 24 hours preceding the sampling event. A qualifying precipitation event is where the measured precipitation is of sufficient quantity and duration as described in Engineering Memorandum # 2. The permit includes only 24 hour precipitation events. The regulations and the permit recognize five (5) possible size ranges for 24 hour precipitation events and they are as follows:

- 1 year, 24 hour event < PE ≤ 10 year, 24 hour event
- PE ≤ 2 year, 24 hour event
- 2 year, 24 hour event < PE ≤ 10 year, 24 hour event
- PE ≤ 10 year, 24 hour event
- PE > 10 year, 24 hour event

Note: PE stands for precipitation event.

The type(s) of drainage will determine which “qualifying precipitation event” categories will be used. The permittee shall have the burden of proof that the discharge or increase in the discharge was caused by the applicable precipitation event. Such proof shall take the form of a daily precipitation log or equivalent.

### **Q5. What are the types of discharges/drainages?**

- Discharges from underground workings of underground mines not commingled including alkaline mines. (no alternative limits)
- Discharges of dredge return water. (no alternative limits)
- Discharges from underground workings of underground mines commingled.
- Controlled surface mine drainage (except steep slope and mountaintop removal).
- Non-controlled surface mine drainage (except steep slope and mountaintop removal).
- Discharges from coal refuse disposal piles.
- Discharges from steep slope and mountaintop removal areas.
- Discharges from preparation plant associated areas (excluding coal refuse disposal piles).
- Alkaline mine drainage. (exempt from coverage under the KPDES Coal General Permit)
- Reclamation areas.

**TABLE 3 - ALTERNATE PRECIPITATION LIMITS AND MONITORING REQUIREMENTS**

		TSS (mg/L)		Settleable Solids (mg/L)	Total Recoverable Iron (mg/L)		Total Recoverable Manganese (mg/L)		pH (su)		Oil & Grease (mg/L)		Flow (MGD)		Acidity (mg/L CaCO <sub>3</sub> )		Alkalinity (mg/L CaCO <sub>3</sub> )		Conductivity (uS/cm)	
TYPE OF DISCHARGE	PRECIPITATION EVENT (PE)	Avg.	Max.	Max.	Avg.	Max.	Avg.	Max.	Min.	Max.	Avg.	Max.	Avg.	Max.	Avg.	Max.	Avg.	Max.	Avg.	Max.
Discharges from underground workings of mines not comingled including alkaline mines.	NORMAL LIMITS																			
	ANY PRECIPITATION	35.0	70.0		3.0	4.0	2.0	4.0	6.0	9.0	10.0	15.0	Report	Report	Report	Report	Report	Report	Report	Report
Discharges of dredge return water.	NORMAL LIMITS																			
	ANY PRECIPITATION	35.0	70.0		3.0	4.0	2.0	4.0	6.0	9.0	10.0	15.0	Report	Report	Report	Report	Report	Report	Report	Report
Discharges from underground workings of underground mines comingled.	NORMAL LIMITS																			
	PE ≤ 10 YR/24HR	35.0	70.0		3.0	4.0	2.0	4.0	6.0	9.0	10.0	15.0	Report	Report	Report	Report	Report	Report	Report	Report
	PE > 10YR/24HR																			
Controlled surface mine drainage (except steep slope and mountaintop removal).	NORMAL LIMITS																			
	PE ≤ 10 YR/24HR	35.0	70.0		3.0	4.0	2.0	4.0	6.0	9.0	10.0	15.0	Report	Report	Report	Report	Report	Report	Report	Report
	PE > 10YR/24HR																			
Non-controlled surface mine drainage (except steep slope and mountaintop removal).	NORMAL LIMITS	35.0	70.0		3.0	4.0	2.0	4.0					Report	Report	Report	Report	Report	Report	Report	Report
	PE ≤ 2YR/24HR			0.5		7.0			6.0	9.0	10.0	15.0	Report	Report	Report	Report	Report	Report	Report	Report
	2YR/24HR < PE ≤ 10YR/24HR																			
	PE > 10YR/24HR																			
Discharges from coal refuse disposal piles.	NORMAL LIMITS	35.0	70.0		3.0	4.0	2.0	4.0					Report	Report	Report	Report	Report	Report	Report	Report
	PE ≤ 1YR/24HR																			
	1YR/24HR < PE ≤ 10YR/24HR			0.5					6.0	9.0	10.0	15.0	Report	Report	Report	Report	Report	Report	Report	Report
	PE > 10YR/24HR																			
Discharges from steep slope and mountaintop removal areas.	NORMAL LIMITS	35.0	70.0		3.0	4.0	2.0	4.0					Report	Report	Report	Report	Report	Report	Report	Report
	PE ≤ 10YR/24HR			0.5					6.0	9.0	10.0	15.0	Report	Report	Report	Report	Report	Report	Report	Report
	PE > 10YR/24HR																			
Discharges from preparation plant associated areas.	NORMAL LIMITS	35.0	70.0		3.0	4.0	2.0	4.0					Report	Report	Report	Report	Report	Report	Report	Report
	PE ≤ 10YR/24HR			0.5					6.0	9.0	10.0	15.0	Report	Report	Report	Report	Report	Report	Report	Report
	PE > 10YR/24HR																			
Reclamation areas (including underground mine drainage).	NORMAL LIMITS	35.0	70.0		3.0	4.0	2.0	4.0					Report	Report	Report	Report	Report	Report	Report	Report
	PE ≤ 10YR/24HR								6.0	9.0	10.0	15.0	Report	Report	Report	Report	Report	Report	Report	Report
	PE > 10YR/24HR																			
Reclamation areas (excluding underground mine drainage).	NORMAL LIMITS			0.5									Report	Report	Report	Report	Report	Report	Report	Report
	PE ≤ 10YR/24HR								6.0	9.0	10.0	15.0	Report	Report	Report	Report	Report	Report	Report	Report
	PE > 10YR/24HR																			

#### **Q6. When do APELs apply?**

The KPDES Coal General Permit (KYG040000) allows alternate effluent limits when there is a qualifying precipitation event. The “qualifying precipitation event” is the amount of precipitation listed in *Rainfall Frequency Values for Kentucky, Engineering Memorandum No. 2* (Commonwealth of Kentucky, Department for Natural Resources and Environmental Protection, 04/30/1971, rev. 06/01/1979). This precipitation must occur within 24 hours prior to sample collection.

#### **Q7. Where do I find the qualifying precipitation events for my county?**

These applicable precipitation events, which are listed in *Rainfall Frequency Values for Kentucky, Engineering Memorandum No. 2* (Commonwealth of Kentucky, Department for Natural Resources and Environmental Protection, 04/30/1971, rev. 06/01/1979) can be found online at:

[http://water.ky.gov/permitting/Documents/WRRainfall\\_Frequency.pdf](http://water.ky.gov/permitting/Documents/WRRainfall_Frequency.pdf)

#### **Q8. How do I submit APELs?**

When making use of the APELs, the permittee will need to submit the “Alternate Precipitation Event Effluent Limitations Request” with the electronic DMRs submitted to the Department for Natural Resources. The form is included with the Coal GP DMRs workbook and is available at DNR’s electronic forms page at:

<http://dmre.ky.gov/Pages/DMREElectronicForms.aspx>

#### **Q9. When does the Department for Environmental Protection (DEP) approve the use of APELs?**

The use of alternate effluent limitations is conditionally approved with the submittal of DMRs. The conditional approval is in effect until the Cabinet reviews the DMRs and determines from supporting documentation whether or not the permittee qualified for APELs.

#### **Q10. What documentation is required when I submit a request for APELs?**

The documentation shall 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. (Precipitation date and the amount of precipitation in inches)
- Date and time of the sample that APELs are being requested. Must sample within 24 hours of precipitation event.
- Type(s) of Discharge(s) associated with that outfall’s drainage area must be listed on the request.
- Sample results.

Note: Lab analysis sheets, while not mandatory, are the most effective way to demonstrate date, time, and sample results. Required supporting documentation shall be submitted electronically with the Discharge Monitoring Report (DMR).

### III. NO DISCHARGE EVENTS

#### **Q11. How many samples shall be collected per month?**

Active mining areas are required to collect at least two samples per month for effluent characteristics such as Flow, Total Suspended Solids (TSS), Total Recoverable Iron (TRFe), Total Recoverable Manganese (TRMn), and pH. Active mining areas are required to collect at least one sample per month for effluent characteristics such as Oil & Grease, Conductivity, Acidity, and Alkalinity. Post Mining areas are required to collect at least one sample per month for effluent characteristics such as Flow, Settleable Solids (SS), Oil & Grease, Acidity, Alkalinity, and Conductivity. Post mining areas are required to collect at least two samples per month for pH.

Note: These requirements may not be fully applicable in the event that APELs apply (see Table 3). If the cabinet finds that the APELs are not applicable or the documentation is not sufficient; the normal permitted effluents limitations and monitoring requirements (as stated above) are required to be submitted on the DMR.

#### **Q12. What do I do if there was only one or no discharge for the monitoring period?**

The permittee shall submit: (1) a statement certifying the ponds were constructed, maintained and operated in accordance with DNR approved performance standards; and (2) Submit daily precipitation information, with the DMR, for the month indicating that no storm event exceeded the 10 year, 24 hour precipitation event.

Note: Precipitation information and supporting documentation can be submitted with the DMR excel file. If the precipitation data and documentation are submitted as a separate file, then the file must be compatible with the document management system. Compatible file extensions are .xls, .pdf, .jpeg, or .doc. Contact your regional office for more information.

If there is no discharge for the monitoring period, place an “X” in the no discharge box of the Discharge Monitoring Report (DMR). This box should not be marked if there are one or more discharges associated with that particular KPDES outfall during the monitoring period.

Note: Except for controlled discharges, never force a discharge in order to take a sample.

#### **Q13. How do I report on my DMR when I am unable to obtain required monitoring and reporting data?**

When data cannot be obtained to meet the monitoring and reporting requirements of a KPDES permit, “No Discharge Indicator” (NODI) codes may be used in place of a data result. NODI codes may be used for the entire DMR by filling in the “No Discharge” box or by writing the NODI code in the data field on the DMR.

When using a NODI code, always write the NODI code as follows: “NODI = \_\_\_\_\_”. If the NODI code is not written this way, the NODI code may be interpreted as an analytical result. For example, writing “NODI = 5” is clear in communicating that a sample could not be taken due to frozen conditions. Writing a “5” in a data field instead of “NODI = 5” will be interpreted by KDEP as an analytical result of “5 mg/L” being reported for that parameter and could result in a violation being cited.



A succinct explanation for the use of a NODI code needs to be included in the “Comments” section of the DMR or as a separate attachment submitted with the DMR.

Table 4 lists NODI codes that would be common to surface coal mining operations.

TABLE 4 – NO DISCHARGE INDICATOR (NODI) CODES		
NODI CODE	DEFINITION	EXPLANATION
2	Operation Shutdown	Use when the operation has been shutdown as a result of enforcement action or bond forfeiture and the permittee is denied access to the site. Additional documentation shall include the notice issued by the enforcing agency denying access.
5	Frozen Conditions	This code is to be used when the discharge or outfall structure is frozen. Additional documentation includes: (1) dated photographs; and (2) a narrative of the severity and duration of the condition shall be included.
9	Conditional Monitoring – Not Required This Period	<p>The use of this code serves two purposes:</p> <p>(1) On a parameter by parameter basis when making use of the alternate effluent limitations due to a precipitation event for settleable solids, total recoverable manganese, and total suspended solids;</p> <p>(2) On a discharge basis when factors beyond the control of the permittee prevent the collection of required number of samples during a monitoring period.</p> <p>Additional documentation required for the alternate effluent limitations includes:</p> <ul style="list-style-type: none"> <li>• The accumulated precipitation volume during the 24 hours preceding the commencement or increase in discharge and</li> <li>• The source of the precipitation data. In the second case the permittee shall provide as additional documentation: (1) an explanation of the factors that prevented the collection of the minimum number of samples; and (2) what actions the permittee may take to address future occurrences.</li> </ul>
C	No Discharge	<u>This code is to used when there are no discharges during the monitoring period</u> from a sediment control structure due to its’ design, construction, maintenance and operation. Additional documentation includes: (1) Certification the ponds were constructed, maintained and operated in accordance with DNR approved performance standards; and (2) Daily precipitation information indicating that no storm event exceeded the 10 year, 24 hour precipitation event.
F	Insufficient Flow For Sampling	This code is to be used when there is insufficient flow from the outfall to collect the volume of sample required for analysis.
I	Land Applied	This code is to be used when a sediment control structure does not discharge during a monitoring period due to the land application of the effluent to the surface of a fill or other mining area. Additional documentation includes: (1) description of application area; (2) daily application rates; (3) daily precipitation volumes; and (4) the source of the precipitation data.
J	Recycled –Water-Closed System	This code is to be used when water from slurry disposal areas or sediment control structures associated with a coal preparation plant (coal washer) is utilized as make-up water, i.e. recycled within the washer circuitry. Additional documentation includes: (1) designed make-up water rate required for washer; (2) sources of make-up water; (3) daily volume removed from structure; (4) daily precipitation volumes; and (5) the source of the precipitation data.
K	Natural Disaster	This code is to be used when the outfall is destroyed or inaccessible due to a natural disaster such as flooding, tornado, etc. Additional documentation includes: (1) dated photographs; and (2) a narrative of the severity and duration of the condition shall be included.
Q	Not Quantifiable	This code is to be used when an outfall is discharging however due to the shallowness of the discharge a valid sample could not be collected. Additional documentation includes: (1) dated photographs; and (2) estimated flow rate.
V	Weather Related	This code is to be used when outfalls are inaccessible due to extreme weather conditions. Additional documentation includes: (1) a description of the weather conditions; (2) dated photographs of the conditions; and (3) duration of the conditions preventing access.

## IV. CHANGES IN MINING PHASES

### **Q14. When do my sampling requirements change?**

Monitoring and reporting changes from “active mining” to “post-mining” requirements upon receipt of Phase I bond release.

### **Q15. What are the changes in sampling requirements from active mining to reclamation areas (Phase I bond release)?**

The changes in these limitations include the substitution of settleable solids requirements for total suspended solids and the removal of iron and manganese requirements. All other effluent limits remain the same.

Underground mines have the same sampling requirements for active and post mining until Phase III bond release is achieved.

Note: Under the Coal General Permit, pH is required to be sampled twice a month regardless of mining phase.

### **Q16. How do I know what phase of mining an outfall is in?**

The permittee applies for each phase of bond release through DNR. DNR grants Phases I, II, & III bond release and Surface Mining Information System (SMIS) is updated accordingly. Contact DNR for more information.

## V. SAMPLING AND FLOW MEASUREMENT

### **Q17. What is meant by a “representative flow” from the permitted outfall?**

A “representative flow” means a discharge from the permitted outfall that shows the chemical, physical, and biological properties of the effluent under normal (i.e. within the design capacity) treatment conditions. A representative flow is meant to give a good indication of the treatment capabilities of the control structure.

“Representative flow” is an indication of the quality of the effluent from the structure when it discharges. It does not factor in the frequency of discharge from the structure.

### **Q18. Where must I collect an effluent sample when the control structure discharges?**

The effluent sample must be taken at the nearest accessible point after the final treatment of the effluent, but prior to the actual discharge to or mixing with the receiving waters.

### **Q19. Should I sample a pond that hasn’t discharged?**

No. Samples shall be collected only if there is a discharge from the structure.

### **Q20. How often am I required to sample an outfall?**

Please see question 11.

An attempt to sample does not count as a required sample. You must either collect the required number of samples, or sufficiently demonstrate that the pond discharged fewer times than the required number of samples. At a minimum, you must certify that the pond is adequately maintained and demonstrate that there was not a precipitation event during the monitoring period that was large enough to exceed the designed retention capacity of the pond. (Please see question 12)

All analytical results from samples collected from the KPDES discharge point for those permitted parameters required by the KPDES Coal General Permit, must be included in the calculations for the data reported on the discharge monitoring report [see 40 CFR 122.41(l)(4)(ii)].

### **Q21. What parameters are measured in the field when I collect a sample?**

Flow and pH are to be measured immediately when the sample is collected. Conductivity may be measured at the time the sample is collected, or it may be sent to the laboratory for analysis.

### **Q22. How much effluent must I collect when I sample?**

The amount of effluent required for sample analysis varies by parameter. You should consult your laboratory for their specific requirements. Below are minimum required volumes used by the Kentucky Department for Environmental Protection’s laboratory:

TABLE 5 – MINIMUM SAMPLE VOLUMES	
PARAMETER	MINIMUM REQUIRED SAMPLE VOLUME
Total Suspended Solids	200 ml
Total Recoverable Iron	500 ml
Total Recoverable Manganese	500 ml
Conductivity	100 ml
Acidity	100 ml
Alkalinity	100 ml
Total Settleable Solids	1000 ml
Oil and Grease	1000 ml

**Q23. Do I need to collect my samples in special containers?**

Your laboratory should provide the appropriate containers for sample collections. The type of container required varies by parameter. Sample containers may require special preparation for use with some parameters. Below are the sample container requirements used by the Kentucky Department for Environmental Protection’s laboratory:

TABLE 6 – APPROPRIATE SAMPLE CONTAINERS	
PARAMETER	CONTAINER
Total Suspended Solids	Plastic or glass
Total Recoverable Iron	Plastic or glass
Total Recoverable Manganese	Plastic or glass
Conductivity	Plastic or glass
Acidity	Plastic or glass
Alkalinity	Plastic or glass
Total Settleable Solids	Plastic or glass
Oil and Grease	Glass

**Q24. Do I need to preserve my samples?**

The need and method of preserving samples varies by parameter. You should consult your laboratory about how your samples need to be preserved. Below are the sample preservative requirements used by the Kentucky Department for Environmental Protection’s laboratory:

TABLE 7 – APPROPRIATE SAMPLE PRESERVATIVES	
PARAMETER	PRESERVATIVE
Total Suspended Solids	Iced in cooler
Total Recoverable Iron	Nitric acid (HNO <sub>3</sub> )
Total Recoverable Manganese	Nitric acid (HNO <sub>3</sub> )
Conductivity	Iced in cooler
Acidity	Iced in cooler
Alkalinity	Iced in cooler
Total Settleable Solids	Iced in cooler
Oil and Grease	Sulfuric Acid (H <sub>2</sub> SO <sub>4</sub> )

When samples are preserved using acid, the pH of the sample should be lowered to 2.0 or less. This must be checked using hydriion paper. When checking pH:

1. Pour out a small portion of the preserved sample into the clean lid to the sample bottle.
2. Check the pH using the sample amount in the bottle lid. Record the results in the field log. Never put the hydriion paper directly in the sample bottle.
3. Discard the sample remaining in the bottle lid.
4. Rinse the bottle lid with a small amount of sample from the sample bottle.
5. Cap the bottle with the lid.

**Q25. How long may I keep my samples before analyzing them?**

The length of time a properly preserved sample may be held varies by parameter. You should consult your laboratory about specific holding times. Below are the sample holding times used by the Kentucky Department for Environmental Protection’s laboratory:

PARAMETER	HOLDING TIME
pH	15 minutes
Total Suspended Solids	7 days
Total Recoverable Iron	6 months
Total Recoverable Manganese	6 months
Conductivity	28 days
Acidity	14 days
Alkalinity	14 days
Total Settleable Solids	48 hours
Oil and Grease	28 days

**Q26. What are proper sample collection and holding protocols?**

Here are some specific practices that need to be incorporated in sampling protocols and implemented during sample collection:

- Make sure samples are properly identified so that they can be traced from collection through analysis.
  - Mark the sample bottle using a waterproof marker or affix a label to the bottle that can resist the wetness and handling associated with transporting and storing samples.
  - The bottle needs to be labeled with the following information:
    - A sample identification that is unique to that sample.
    - The date the sample was collected.
    - The time the sample was collected.
    - Identify who collected the sample.
    - List the preservative used on the sample (including ice, if used).
    - The parameters that are to be analyzed.
    - Other information of importance to the collection and analysis of the sample.

- Maintain a log book of field activities
  - The log book must document the same information as the sample bottle label.
  - The log book must include a record of any results from field measurements (i.e. pH, temperature, conductivity, flow).
  - Record of the calibration of field meters.
  - Lot numbers of preservative used.
  - Other information of importance to the collection and analysis of the sample.
- Properly fill out and maintain chain-of-custody forms. Critical information includes:
  - Sample date.
  - Sample time.
  - Parameters sampled and/or analysis required.
  - Field measurement results.
  - The person who collected the sample
  - Signatures of each person who relinquishes and accepts the sample(s) each time the sample is transferred.

**Q27. Should I measure the sample temperature in the field?**

Temperature measurement in the field is strongly recommended, but not required. The temperature measurement needs to be recorded in the field log or on the chain-of-custody form. The advantage to measuring temperature in the field, especially with samples that are preserved by ice, is that it documents the initial sample conditions and gives an indication as to how long the sample may have taken to reach the preservative temperature.

**Q28. How should the laboratory be analyzing the samples?**

The KPDES permit requires that samples for each parameter be analyzed using a method specified in 40 CFR 136 or an alternate test methodology (ATM) that has been approved by the U.S. EPA. Your laboratory can explain the methodologies they use to analyze your samples and how those methodologies meet the criteria above.

**Q29. How do I measure pH when I take my samples?**

Understanding and following the manufacturer’s instructions for your pH meter is essential in measuring pH in the field. Make sure the pH meter can read down to 2 decimal places (i.e. 1.00). If possible, select a pH meter that is equipped with automatic temperature compensation (ATC). The pH meter should periodically be checked against a NIST traceable thermometer to ensure that it is accurately reading temperature.

The pH meter must be calibrated daily prior to use. Calibration is to be done with using two calibration standards. One calibration standard needs to have a pH lower than the pH anticipated in the sample. The other calibration standard needs to have a pH that is higher than the pH anticipated in the sample. The pH standards must not be past the expiration date stated on the bottle. All calibration information needs to be recorded in the field log.

It is a good practice to measure the pH standards at the end of the testing day to check that the pH meter is holding calibration.

### **Q30. How do I measure conductivity?**

Conductivity may be done either in the field or at the laboratory. Understanding and following the manufacturer's instructions for your conductivity meter is essential in measuring conductivity in the field.

Conductivity meters need to be calibrated at the beginning of each day they are used. They need to be calibrated to a standard that is in the approximate range of the waters being measured. Common standards are 0 uS/cm, 100 uS/cm, 1,000 uS/cm, and 10,000 uS/cm. The 1,000 uS/cm standard is the most commonly used. The conductivity standards must be within the expiration date stated on the bottle. All calibration information needs to be recorded in the field log.

Conductivity standards are prepared to be accurate at 21°C. Standards will come with a chart that will show what the meter will read at different temperatures for that standard.

It is a good practice to measure the conductivity standards at the end of the testing day to check that the conductivity meter is holding calibration.

### **Q31. How do I measure flow?**

Flow must be measured or calculated using a scientifically defensible method. These methods can include:

- Use of a flow meter.
- Measuring the amount of time it takes to fill a container of known volume and calculating the flow from this data.
- Calculating the flow using geometric calculations.
- Other scientifically defensible methods.

Whichever method is chosen, it is recommended that you maintain a written procedure on how to perform and calculate the flow measurement.

### **Q32. How do I report flow on the DMR?**

Flow must be reported in the units specified in the KPDES permit. This is usually in millions of gallons per day (MGD). If you are measuring your flow in "gallons per minute" (GPM) or "gallons per day" (GPD), you will need to convert that measurement to MGD.

### **Q33. How do I report pH on the DMR?**

For each outfall, you will look at all of the pH measurements taken during the monitoring period. You will report the lowest value (minimum) and the highest value (maximum) on the DMR.

### **Q34. How do I report a sample analysis that is less than the detection limit of the analytical method?**

These sample results shall be reported as "BDL" (below detection limit) in the data field on the DMR. The detection limit for the parameter shall be stated in comments section of the DMR.

**Q35. What do I do if the outfall is not safely accessible for the collection of samples or measurement of flow?**

It is a KPDES permit requirement that all outfalls are to be sampled if discharge occurs. The company should make every effort to ensure that these outfalls are accessible under normal to most weather conditions.

If the outfall is not safely accessible at the time a sample needs to be taken, then a detailed explanation shall be given on the bottom of the DMR explaining why a sample was unable to be achieved.

**Q36. What results do I report if I sample more frequently than required by my permit?**

All analytical results from samples collected from the KPDES discharge point for those permitted parameters required by the KPDES Coal General Permit, must be included in the calculations for the data reported on the discharge monitoring report [see 40 CFR 122.41(l)(4)(ii)]. The actual number of samples taken should be reported in the “Frequency of Analysis” field on the DMR form.



## VI. OTHER

### **Q37. What if the facility has changed ownership?**

If the permit has changed in ownership, a “Change in Ownership Certificate” form must be filled out and submitted to the DOW Surface Water Permits Branch, Resource Extraction Section. This information shall be reflected on the DMR Cover sheet and the actual DMR form itself with the correct Permittees name. The proper form can be found at:

[http://www.water.ky.gov/homepage\\_repository/kpdes\\_permit\\_aps.htm](http://www.water.ky.gov/homepage_repository/kpdes_permit_aps.htm).

### **Q38. What if a company changes laboratories?**

If the permittee changes laboratories, this information shall be sent to DOW’s Surface Water Permits Branch, Resource Extraction Section and also shall be reported on the DMR beside the Lab Name in the upper left hand corner.

### **Q39. How do I correct an error in the data I’ve reported on a DMR form?**

Correct the DMR data, mark the DMR as “REVISED”, and explain the correction in comments section of the DMR. Send the revised DMR through the FTP submittal system.

### **Q40. What are the most common errors made on Coal DMRs?**

- Forgetting to print the name on the bottom left of the DMR form.
- Forgetting to sign the bottom right of the DMR Cover Sheet.
- Not providing explanations for exceedances and permit violations in the “Comment and Explanation” box.
- Forgetting to ensure that data regarding the correct DNR Permit number; the correct KPDES Permit number; and the correct KPDES Outfall numbers coincide.
- Not reporting flow correctly, or leaving flow results off of the DMR.
- Leaving DMR required form fields blank or empty.
- Not listing the name of the receiving stream on the upper left corner of the DMR.
- Not reporting the correct latitude and longitude (or not reporting in decimal degrees)
- Not reporting correct frequency of analysis on the DMR form.
- Reporting the average as half of the maximum, instead of correctly reporting the same data for both the maximum and the average if only 1 sample was collected.
- Forgetting to mark an “X” in the NO DISCHARGE BOX, if there was no discharge for the entire month.
- Not correctly reporting the number of Excursions on the DMR.
- Not proofreading the DMR, before submittal. When moving from monthly DMR to monthly DMR, sometimes data gets carried over from form to form, and information doesn’t get changed which can make it very unclear as to what the actual results are for that month. (FOR EXAMPLE: Sometimes the NO DISCHARGE BOX is marked, even though there is data on the DMR. Or, only one set of flow data or results are reported for a parameter, even through the Frequency of Analysis states that 2 samples were taken.)
- Reporting sites as “Existing Sources”, when they are actually “New Sources”.

**Q41. Who can sign a DMR form?**

The description of who can act as a signatory official on the DMR form is found in the KPDES permit. Generally, such a person is responsible corporate official (for example, an officer of the corporation), partner, sole proprietor, or a designated individual such as the head engineer or environmental manager (Must be someone who can independently make financial decisions for the company). Contract laboratory personnel may not sign the DMRs. Requirements defining who can sign a DMR are found in 40 CFR 122.22.

**Q42. Can signatory authority be delegated?**

Yes, a duly authorized signatory official may also sign DMR forms. Permission must be given in writing from an authorized signatory official. The letter granting permission must specify an individual by name or a position having responsibility for the overall operation of the company or the mining facility. This letter must be signed by an authorized signatory official and submitted to the Division of Water's Surface Water Permits Branch. Requirements for delegating authority for signing DMRs are found in 40 CFR 122.22.

**Q43. Is my outfall a New Source or Existing Source?**

A New Source is any activity that commenced or was modified after May 04, 1984. Most active operations today are New Sources.

**Q44. What do I need to do for exceedances of effluent limits?**

If a discharge exceeds the applicable effluent limits, an explanation of why the exceedance occurred and the actions taken by the permittee to correct the exceedance is to be reported on the comments section at the bottom of the DMR or in a separate attachment.

**Q45. If the Point Source (Outfall) is removed prior to the end of the calendar quarter (reporting period), what am I to report?**

The reports for the monitoring periods(s) or months completed prior to the removal of the Outfall are to be prepared and submitted as usual. For the monitoring period(s) that were not completed attach to the DMR a copy of the DMRE Pond Removal Authorization and any monitoring data collected prior to removal along with the DMR. Be sure to mention the actual date the Outfall was removed on that month's DMR. All future DMRs and their cover sheets should also indicate the outfall was removed (REM). When Phase III bond release is obtained then a copy of the bond release is to be attached to the final set of DMR reports and a separate copy sent directly to the DOW's Surface Permitting Branch, Resource Extraction Section.