

## FACT SHEET

FOR THE RENEWAL OF THE GENERAL WASTEWATER DISPOSAL PERMIT FOR SURFACE COAL STRIP MINES TO DISCHARGE TO WATERS OF THE UNITED STATES UNDER THE OKLAHOMA POLLUTANT DISCHARGE ELIMINATION SYSTEM (OPDES).

ODEQ Permit No.:	OKG04
Applicant:	Operators of Surface Coal Strip Mines in Oklahoma
Prepared and Issued By:	Wastewater Discharge Permit Section Water Quality Division Department of Environmental Quality P. O. Box 1677 707 N. Robinson Ave. Oklahoma City, OK 73101-1677
Permit Action:	Issuance of a renewed general discharge permit for Surface Coal Strip Mines

### I. SCOPE OF PERMIT

The activity regulated by this General Permit Number OKG04 (Permit) is the discharge of industrial wastewater from surface coal strip mining operations (SIC Code 1221) to waters of the United States.

The mining operation itself will be permitted by the Oklahoma Department of Mines (ODOM). The ODOM permit will cover a specific expanse of land to be mined, and regulate the mining operation including the sedimentation ponds and coal preparation plants from which discharges covered by this Permit will originate.

Discharges from coal preparation plants that are located within the ODOM permitted boundaries of the surface mine will be regulated by this Permit. Discharges from coal preparation plants that are not located within the boundaries of an ODOM permitted surface strip mine will not be covered by this Permit and shall instead apply for coverage under an individual discharge permit in accordance with requirements to obtain a permit contained in "Oklahoma Administrative Code" (OAC) 252:606.

Discharges from sites that have been abandoned prior to the Oklahoma Department of Mines bonding requirements and are being reclaimed by the Oklahoma Conservation Commission will be regulated by this Permit. All discharges from such sites will be treated similarly to discharges from active mining areas.

Surface coal strip mines that are currently permitted by the Oklahoma Department of Environmental Quality (DEQ) through individual wastewater discharge permits may request that the individual permit be revoked and apply for coverage under this Permit no later than 180 days prior to the expiration of their current individual discharge permits, or they may elect to continue coverage under their individual permits. Existing surface coal strip mines that are not currently permitted by the DEQ may apply either for individual permits or coverage under this Permit. New surface coal strip mines and abandoned mine sites being reclaimed by the Oklahoma

Conservation Commission shall apply for coverage under this Permit and obtain an Authorization or apply for an individual permit prior to commencing discharge.

## **II. APPLICANT ACTIVITY**

Surface coal strip mines begin operations by digging from the surface down to the coal formation in a specific area, then removing the coal. The soil and rock that are dug up in order to reach the coal is called overburden. Once the overburden has been removed and the coal seam reached, a strip pit is created. Under regulation of the ODOM permit, the strip pit will migrate across the permitted land. As the strip pit progresses and the coal is removed, the overburden and top soil are replaced in accordance with ODOM requirements.

The drainage areas on the ODOM permitted land are identified in the ODOM permit. Each drainage area is serviced by one or more sedimentation pond. All runoff is routed through the sedimentation pond(s). The strip pit will migrate across the permitted landscape as mining progresses. The sedimentation ponds will begin to receive stormwater runoff and mine drainage when the strip pit migrates into their respective drainage basins.

The discharge from the sedimentation pond(s) will be through the designed outfall(s) for each sedimentation pond. Construction details of the sedimentation ponds including outfalls are regulated in the ODOM mining permit. This Permit will regulate only the final discharge of wastewater from the sedimentation ponds.

Under the Surface Mining Control and Reclamation Act of 1977 (SMCRA), coal mine operators are required to post a performance bond prior to commencing mining operations. Once active mining has been completed in a drainage basin, the operator must return the surface area to a required contour and commence revegetation work. At this point, the operator may receive a Phase I Bond Release, at which time a portion of the bond money is refunded. Once the revegetation work has met the required performance standard, the operator may receive a Phase II Bond Release, at which time additional bond money is refunded. Finally, after the vegetative cover has been maintained for the required number of years, the operator may receive a Phase III Bond Release, at which time the final portion of the bond money is refunded and the ODOM mining permit is discontinued. If the coal mine operator fails to meet the required reclamation performance standards, the unrefunded portion of the bond money may be used by ODOM to complete the reclamation work.

Under this Permit, the effluent limitations for active mining shall apply until such time as the Phase I Bond Release is received, at which time the effluent limitations shall switch from the active mining limitations to the post-mining limitations. The post-mining effluent limitations shall apply until such time as the Phase II Performance Standards are met, at which time the Authorization to discharge under this Permit will be discontinued. For larger mines it is possible that different portions of the mine may be in different stages of SMCRA Bond Release, and thus subject to different effluent limitations. As outfalls meet the Phase II Performance Standards, they will be removed from the Authorization; only when all outfalls have met the Phase II Performance Standards will the Authorization be discontinued in its entirety.

Surface coal mines that have been abandoned prior to the ODOM bonding requirements are reclaimed by the Oklahoma Conservation Commission and the activity usually involves draining water from old mine pits and revegetating the surface. Effluent limitations for active mining shall apply to these discharges and when the draining is completed, Authorization to discharge under this Permit will be discontinued.

### **III. RECEIVING WATERBODY INFORMATION**

The mines covered by this Permit will be discharging to various Waters of the State. These waters will have varying beneficial uses as designated by the “Oklahoma Water Quality Standards”. This Permit will regulate discharges to Waters of the State with any or all of the following designated beneficial uses as listed in OAC 785, Chapter 45:

- Public and Private Water Supplies (OAC 785:45-5-10);
- Emergency public and private water supplies (OAC 785:45-5-11);
- Fish and Wildlife Propagation (OAC 785:45-5-12);
- Agriculture/Livestock and Irrigation (OAC 785:45-5-13);
- Hydroelectric Power Generation (OAC 785:45-5-14);
- Industrial and Municipal Process and Cooling Water (OAC 785:45-5-15);
- Primary Body Contact Recreation (OAC 785:45-5-16);
- Secondary Body Contact Recreation (OAC 785:45-5-17);
- Navigation (OAC 785:45-5-18);
- Aesthetics (OAC 785:45-5-19); and
- Fish Consumption (OAC 785:45-5-20).

Discharges to Waters of the State with any of the following designated uses are not allowed under this Permit:

- Outstanding Resource Waters (OAC 785:45-5-25(c)(1));
- Appendix B Waters (OAC 785:45-5-25(c)(2));
- High Quality Waters (OAC 785:45-5-25(c)(3)); or
- Sensitive Public and Private Water Supplies (OAC 785:45-5-25(c)(4)).

Mines located along receiving waters with these additional limitations shall instead apply for coverage under an individual discharge permit in accordance with requirements to obtain a permit contained in OAC 252:606. Depending on the additional limitations applicable, mines located along these receiving waters may be prohibited from any new point source discharge in accordance with Oklahoma’s antidegradation policy statement (OAC 785:45-5-25).

### **IV. DISCHARGE INFORMATION**

#### **A. DISCHARGE LOCATION**

For each proposed outfall, the discharge location shall be specified in the application and the authorization to discharge under the general permit. The discharge locations shall be specified to within ten acres by use of legal description and specified by latitudes and longitudes.

#### **B. DISCHARGE DESCRIPTION**

Wastewater discharges are generated from mine drainage and stormwater from the active mining and post-mining areas. Coal mine discharges are classified in 40 CFR Part 434 by the type of mine drainage expected. Mine drainage is defined in 40 CFR Part 434.11(h) as “any drainage, and any water pumped or siphoned, from an active mining area or a post-mining area”.

Wastewater also may be discharged from coal preparation plants located within the permitted boundary of the mine. Coal preparation plants are defined at 40 CFR Part 434.11(e) as facilities

“where coal is subjected to cleaning, concentrating, or other processing or preparation in order to separate coal from its impurities and then is loaded for transit to a consuming facility”. Outfalls from coal preparation plants that are routed to sedimentation ponds that receive mine drainage shall be considered internal outfalls. Outfalls from coal preparation plants that are not routed to sedimentation ponds that receive mine drainage shall be considered separate final outfalls.

### **C. WASTEWATER CHARACTERISTICS**

Wastewater discharges are characterized by mine drainage with acidic/ferruginous characteristics or with alkaline characteristics. “Acid or ferruginous mine drainage” is defined in 40 CFR Part 434.11(a) as “mine drainage that is expected before treatment to have a pH of less than 6.0 or a total iron concentration equal to or greater than 10 mg/l”. “Alkaline mine drainage” is defined in 40 CFR Part 434.11(c) as “mine drainage which before any treatment, has a pH equal to or greater than 6.0 and a total iron concentration of less than 10 mg/l”.

Where insufficient data is provided in the application to determine whether the discharge is acidic/ ferruginous mine drainage, or alkaline mine drainage, effluent limitations for acidic/ ferruginous mine drainage will be applied in the Authorization, since these limits are more stringent. To reclassify a previously determined acidic/ferruginous mine drainage discharge to an alkaline mine drainage, the permittee must satisfactorily demonstrate to the DEQ that the mine drainage prior to treatment has a pH greater than or equal to 6.0 standard units, and a total iron concentration less than 10 mg/l. This will require the submittal of at least six months of data to characterize the pH and the total iron concentration of the influent or untreated effluent.

Water enters surface mines by groundwater infiltration, precipitation and surface runoff. Surface runoff can become contaminated with suspended solids from sediment. If pyritic material (material containing iron sulfide) is exposed on the mine bottom, highwall or spoil piles, oxidation and acid formation can occur and leach toxic metals. Groundwater entering a surface mine is also subject to acid formation.

The wastewater situation at coal mines is notably different from that found in most other industries. No process water is used in coal extraction, except for minor use in dust suppression, equipment cooling and firefighting needs. Water is an operational hindrance to a coal mine, and requires careful management to minimize water entering the active mining area. As indicated in the “Development Document for Effluent Limitations Guidelines and Standards for the Coal Mining Point Source Category,” EPA 440/1-81/057-b (Development Document), the quantities of water generated at a mine site do not correlate with the coal production rate. This again differs from most other industries, where flow, and thus pollutant loadings, can be linked with the rate of production.

A final major difference with water management in the coal industry is the possibility of continuing discharges of polluted wastewater after the facility has ceased production. Control practices can be implemented to minimize or treat these discharges during and after the active mining phase.

#### **1. CHARACTERISTICS OF ACID MINE DRAINAGE**

The principal pollutants in surface water from mines exhibiting acid mine drainage include suspended and dissolved solids, pH, and certain metals. Acid is formed as water drains across or percolates through sulfur-containing pyritic material (including overburden, coal storage and refuse piles) in the presence of oxygen. The acid formed is an effective extraction agent, causing

trace elements to be leached and dissolved into solution. The solubilities of these substances, mostly heavy metals, are very sensitive to changes in pH. Leaching is promoted when there is a long contact time for water and the sulfur-containing material.

Suspended solids result from erosion of scarified areas, where vegetation has been removed. The level of sediment concentration in runoff is a function of several factors, including slope of the area, residual vegetation, soil type, drainage area, and precipitation intensity and duration. These variables render wide variations in raw wastewater from day to day in any one mine, and from mine to mine in a given region.

Dissolved solids can result from infiltration of precipitation that leaches through spoil and coal piles. Acid leaching of soil and coal, and ion exchange reactions of runoff and soil also cause the formation of this pollutant. Calcium, magnesium and sodium are the principal dissolved materials in surface runoff.

Data contained in the Development Document indicates that concentrations of organics are very low in untreated acid mine drainage, while concentrations of conventional and toxic metals are often quite substantial. However, toxic metals were not found uniformly throughout the industry. Therefore, only limits for iron and manganese along with TSS are included in the permit for active acid/ferruginous mining areas.

## 2. ALKALINE MINE DRAINAGE

The discussion on sediment concentrations in the acid mine drainage subsection is also applicable to alkaline mine drainage. Data contained in the Development Document indicates that the concentrations of organics and metals are both very low for alkaline mine drainage. Further, concentrations of conventional pollutants, with the exception of TSS, are also very low. Therefore, only limits for iron and TSS are included in the permit for active alkaline mining areas.

## 3. COAL PREPARATION PLANTS

Wastewater is generated in a coal preparation plant from the coal cleaning process. Flow rates vary widely depending upon certain factors such as degree of cleaning, the equipment or processes used, and the characteristics of the coal. Physical coal cleaning removes impurities from coal via a mechanical separation process. In most cleaning operations, this separation of impurities is based on a specific gravity difference between less dense coal and heavier contaminants such as sulfur, ash and rock. In the physical cleaning processes, water is most often used to assist in the removal of unwanted components. Effluents are most often laden with suspended coal and refuse fines. This slurry is generally routed to one or more surface impoundments for settling of solids. Clarified water from the impoundment(s) can often be recycled to the preparation plant to reduce makeup water needs as well as lessen the quantity of final discharge to a receiving stream.

Data contained in the Development Document indicates that concentrations of metals can be high in untreated wastewater. The high concentrations of metals are the result of coal and refuse fines found in a preparation process slurry effluent. The suspended solids levels in some of these slurries can be quite high if no fines recovery or removal is practiced. Therefore, the limits for active coal preparation plants is the same as for active acid/ferruginous mining areas.

4. OKLAHOMA CONSERVATION COMMISSION RECLAMATION PROJECTS ON ABANDONED MINE SITES

Abandoned mine sites contain pits where untreated wastewater has collected from prior active mining operations. Although this wastewater has likely undergone dilution, concentrations of metals and suspended solids can still be high in this water. Therefore, the limits for abandoned mine sites are the same as for active mining areas.

**V. RATIONALE FOR DETERMINING DISCHARGE PERMIT LIMITS**

The following sections set forth the principal facts and the significant factual, legal, methodological and policy questions considered in preparing the draft general permit. Also set forth are any calculations or other necessary explanations of the derivation of specific effluent limitations and conditions, including a citation to the applicable effluent limitation guideline or performance standard provisions as required under 40 CFR Part 122.44 and Oklahoma Pollutant Discharge Elimination Act (OPDES) OAC 252:606-5-2 including a citation to the applicable effluent limitation guideline or performance standard provisions as required under 40 CFR Part 122.44 and reasons why they are applicable or an explanation of how the alternative effluent limitations were developed.

In accordance with regulations promulgated at 40 CFR Part 122.44(d), the draft permit limits are based on the more stringent of technology-based limitations or applicable water quality-based limitations.

**A. TECHNOLOGY-BASED EFFLUENT LIMITATIONS AND CONDITIONS**

1. GENERAL COMMENTS

Regulations promulgated in 40 CFR 122.44(a) and OAC 252:5-2(a)(1) require technology-based effluent limitations to be placed in OPDES permits based on effluent limitations guidelines where applicable, on Best Professional Judgment (BPJ) in the absence of guidelines, or on a combination of the two.

2. APPLICABLE EFFLUENT LIMITATIONS GUIDELINES

All the mines that apply for this general permit will be considered new source discharges and are subject to effluent limitations promulgated in 40 CFR Part 434.

**TABLE 1**  
TECHNOLOGY BASED EFFLUENT LIMITATIONS FOR ALL OUTFALLS FROM ACTIVE MINING OPERATIONS WITH ALKALINE MINE DRAINAGE

<i>From 40 CFR Part 434 Subpart D</i>		
<b>Parameter</b>	<b>Monthly Average</b>	<b>Daily Maximum</b>
Flow	Report mgd	Report mgd
Iron, Total	3.0 mg/l	6.0 mg/l
Total Suspended Solids (TSS)	35 mg/l	70 mg/l
pH	6.0 to 9.0 at all times	

**TABLE 2**

TECHNOLOGY BASED EFFLUENT LIMITATIONS FOR ALL OUTFALLS FROM:  
(1) ACTIVE MINING OPERATIONS WITH ACID OR FERRUGINOUS MINE DRAINAGE  
(2) COAL PREPARATION PLANTS

<i>From 40 CFR Part 434 Subpart B,C</i>		
<b>Parameter</b>	<b>Monthly Average</b>	<b>Daily Maximum</b>
Flow	Report mgd	Report mgd
Iron, Total	3.0 mg/l	6.0 mg/l
Manganese, Total	2.0 mg/l	4.0 mg/l
Total Suspended Solids (TSS)	35 mg/l	70 mg/l
pH	6.0 to 9.0 at all times	

**TABLE 3**

TECHNOLOGY BASED EFFLUENT LIMITATIONS FOR ALL OUTFALLS FROM  
POST-MINING OPERATIONS

<i>From 40 CFR Part 434 Subpart E</i>		
<b>Parameter</b>	<b>Monthly Average</b>	<b>Daily Maximum</b>
Flow	Report mgd	Report mgd
Settleable Solids	N/A	0.5 ml/l
pH	6.0 to 9.0 at all times	

**TABLE 4**

ALTERNATIVE TECHNOLOGY BASED EFFLUENT LIMITATIONS FOR ALL OUTFALLS  
DURING PRECIPITATION GREATER THAN THE  
10-YEAR, 24-HOUR PRECIPITATION EVENT

<i>From 40 CFR Part 434 Subpart F</i>		
<b>Parameter</b>	<b>Monthly Average</b>	<b>Daily Maximum</b>
Flow	Report mgd	Report mgd
pH	6.0 to 9.0 at all times	

3. BEST PROFESSIONAL JUDGMENT OF THE PERMIT DRAFTER

**TABLE 5**  
**BPJ EFFLUENT LIMITATIONS FOR ALL OUTFALLS FROM**  
**OKLAHOMA CONSERVATION COMMISSION RECLAMATION PROJECTS ON**  
**ABANDONED MINE SITES**  
**WITH**  
**ALKALINE MINE DRAINAGE**

<i>BPJ Limits</i>		
<b>Parameter</b>	<b>Monthly Average</b>	<b>Daily Maximum</b>
Flow	Report mgd	Report mgd
Iron, Total	3.0 mg/l	6.0 mg/l
Total Suspended Solids (TSS)	35 mg/l	70 mg/l
pH	6.0 to 9.0 at all times	

**TABLE 6**  
**BPJ BASED EFFLUENT LIMITATIONS FOR ALL OUTFALLS FROM**  
**OKLAHOMA CONSERVATION COMMISSION PROJECTS ON ABANDONED MINE**  
**SITES**  
**WITH ACID/FERRUGINOUS MINE DRAINAGE**

<i>BPJ Limits</i>		
<b>Parameter</b>	<b>Monthly Average</b>	<b>Daily Maximum</b>
Flow	Report mgd	Report mgd
Iron, Total	3.0 mg/l	6.0 mg/l
Manganese, Total	2.0 mg/l	4.0 mg/l
Total Suspended Solids (TSS)	35 mg/l	70 mg/l
pH	6.0 to 9.0 at all times	

**B. WATER-QUALITY-BASED EFFLUENT LIMITATIONS AND/OR CONDITIONS**

1. GENERAL COMMENTS

Section 101 of the Clean Water Act (CWA) states that "...it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited...". A permit that contains technology-based permit limits alone may not adequately protect the quality of the receiving stream. Thus, additional water quality-based effluent limitations and/or conditions are considered in the general permit using State narrative and numerical water quality standards (Oklahoma's Water Quality Standards, as amended). This is to insure that no point source discharge (1) results in instream aquatic toxicity; (2) causes a violation of an applicable narrative or numerical State water quality standard; or (3) results in aquatic bioaccumulation that threatens human health.

2. WATER QUALITY STANDARDS REQUIREMENTS

The narrative and numerical stream standards are provided in "Oklahoma's Water Quality Standards, as amended".

a. Public and Private Water Supplies (OAC 785:45-5-10)

Based on information contained in the Development Document and in past applications for individual discharge permits, the wastewater which will be discharged through the proposed outfalls should not contain substances listed in Raw Water Numerical Criteria (785:45-5-10(1)) and Water Column Criteria to protect for the Consumption of Fish Flesh and Water (785:45-5-10(6)) at levels which would have reasonable potential to violate numerical criteria. Based on data contained in the Development Document, technology-based controls for pH, Total Suspended Solids, and Iron (and Manganese for acid or ferruginous mine drainage and coal preparation plants) proposed in the draft general permit should also effectively control toxic metals.

Where actual or potential exceedances of State water quality criteria for Public and Private Water Supplies are determined to be the result of the facility's discharge to the receiving water(s), the DEQ may determine that the facility is no longer eligible for coverage under this Permit and require the facility to apply for an individual discharge permit with additional chemical-specific limits or toxicity testing requirements as necessary to maintain the beneficial uses of the receiving stream.

Thus, additional permit action is not necessary for this beneficial use.

b. Fish and Wildlife Propagation (OAC 785:45-5-12(d))

*Toxics* -- Based on information contained in the Development Document and in past applications for individual discharge permits, the wastewater that will be discharged through the proposed outfalls should not contain substances listed in Toxic Substances (785:45-5-12(f)(6)) and Water Column Criteria to Protect for the Consumption of Fish Flesh (785:45-5-20) at levels which would have reasonable potential to violate numerical criteria. Based on data contained in the Development Document, technology-based controls for pH, Total Suspended Solids, and Iron (and Manganese for acid or ferruginous mine drainage and coal preparation plants) proposed in the draft general permit should also effectively control toxic metals.

Where actual or potential exceedances of State water quality criteria are determined to be the result of the facility's discharge to the receiving water(s), the DEQ may determine that the facility is no longer eligible for coverage under this Permit and require the facility to apply for an individual discharge permit with additional chemical-specific limits or toxicity testing requirements as necessary to maintain the beneficial uses of the receiving stream.

Thus, additional permit action for toxics is not necessary for this beneficial use.

*Temperature* -- According to OAC 785:45-5-12(e)(2)(A), at no time shall heat be added to any surface water in excess of the amount that will raise the temperature of the receiving water more than 2.8 °C at the edge of the mixing zone. However, OAC 785:46-11-1(c) applies specific antidegradation maximum limits of 52 °C to all waters of the state including privately owned cooling water reservoirs.

Since heat is not added to the wastewater being discharged and all discharges should essentially be at ambient temperature, there is no reasonable potential to violate temperature criteria.

Thus, permit action for temperature is not necessary.

*pH* -- According to OWQS, OAC 785:45-5-12, "The pH values shall be between 6.5 and 9.0 in waters designated for fish and wildlife propagation; unless pH values outside that range are due to natural conditions."

Permit limitations for pH of 6.5 to 9.0 standard units were placed in this Permit based on a reasonable potential to violate water quality standards due to the alkaline/acidic nature of discharge. The sole exception is for the alternative limits applicable during precipitation greater than the 10-year, 24-hour precipitation event. In this latter case, sufficient dilution capacity should be available to insure that the technology-based limitations of 6.0 to 9.0 standard units will maintain the instream criteria of 6.5 to 9.0 standard units.

c. Agriculture/Livestock and Irrigation (OAC 785:45-5-13)

Based on information contained in the Development Document and in past applications for individual discharge permits, the wastewater which will be discharged through the proposed outfalls should not contain substances listed in Appendix F of OWQS at levels which would have reasonable potential to violate numerical criteria.

Where actual or potential exceedances of State water quality criteria for the Agricultural beneficial use are determined to be the result of the facility's discharge to the receiving water(s), the DEQ may determine that the facility is no longer eligible for coverage under this General Permit and require the facility to apply for an individual discharge permit with additional chemical-specific limits or toxicity testing requirements as necessary to maintain the beneficial uses of the receiving stream.

Thus, additional permit action is not necessary for this beneficial use.

d. Primary Body Contact Recreation (OAC 785:45-5-16)

Based on information contained in the Development Document and in past applications for individual discharge permits, the wastewater that will be discharged through the proposed outfalls should not contain coliform bacteria, *Escherichia coli*, and *Enterococci* at significant levels.

Thus, permit action is not necessary this beneficial use.

e. Fish Consumption (785:45-5-20)

Based on information contained in the Development Document and in past applications for individual discharge permits, the wastewater which will be discharged through the proposed outfalls should not contain substances listed in Appendix F of OWQS at levels which would have reasonable potential to violate numerical criteria.

Where actual or potential exceedances of State water quality criteria for the Fish Consumption beneficial use are determined to be the result of the facility's discharge to the receiving water(s), the DEQ may determine that the facility is no longer eligible for coverage under this General Permit and require the facility to apply for an individual discharge permit with additional chemical-specific limits or toxicity testing requirements as necessary to maintain the beneficial uses of the receiving stream.

Thus, additional permit action is not necessary for this beneficial use.

## **VI. 303(d) LISTING STATUS**

### **1. DISCHARGES TO 303(d) RECEIVING STREAMS**

Discharges contributing to any impairment of streams on Oklahoma's '303(d) List' of impaired water bodies will not be covered by this Permit. In particular, this General Permit does not allow discharge of wastewater to receiving streams included in the 303(d) list with impairments due to "Turbidity" or "pH" for which a Total Maximum Daily Load (TMDL) has not been performed or the result of the TMDL indicates that discharge limits more stringent than 70 mg/l for Total Suspended Solids (TSS) or pH more stringent than 6.5-9.0 standard units are required.

### **2. REOPENER CLAUSE**

The draft permit also contains a reopener clause should any 303(d) list permitting actions be required in the future.

## **VII. ENDANGERED SPECIES ACT**

For all facilities applying for coverage under this General Permit, the DEQ will determine whether the point of discharge is located in surface waters designated sensitive by the U.S. Fish and Wildlife Service. If the facility is a new facility and the discharge is to a sensitive water, the facility will not be eligible for an Authorization under this General Permit. If the facility is an existing facility and the point of discharge is located in surface waters designated sensitive by the U.S. Fish and Wildlife Service, the facility will not be eligible for coverage under this General Permit if there has been a change in the location of the discharge point or an increase in the volume of the discharge. Otherwise, there are no restrictions in obtaining coverage due to endangered species considerations.

## **VIII. ANTIDEGRADATION PROVISIONS**

Appendix A of OAC 252:690 describes the processes, procedures and methodologies utilized to ensure that programs within jurisdictional areas of environmental responsibility comply with antidegradation standards and lead to: (A) maintenance of water quality where beneficial uses are supported, (B) removal of threats to water quality where beneficial uses are in danger of not being supported and (C) restoration of water quality where beneficial uses are not being supported.

The antidegradation policy in the OWQS also prohibits an increase in loading that would impair or further impair an existing use. In addition, the policy prohibits degradation of outstanding resource waters and high-quality waters, even if existing and designated uses would still be attained. To insure that these requirements are met, discharge of wastewater to streams identified as Outstanding Resource Waters, Appendix B Waters, High Quality Waters, and Sensitive Public and Private Water Supplies is prohibited under this General Permit. These uses are identified in OAC 785:46-13-4 and 13-5 as requiring Tier 2 and Tier 3 levels of protection respectively by the OWQS.

For all other beneficial uses identified in Part III, OAC 785:46-13 states that the beneficial uses will be maintained and protected. This level of protection is identified as Tier I by the OQWS.

**IX. DRAFT PERMIT LIMITS AND OTHER REQUIREMENTS**

**A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS FOR ACTIVE MINING AREAS/OKLAHOMA CONSERVATION COMMISSION RECLAMATION PROJECTS ON ABANDONED MINE SITES**

The effluent limitations for active mining areas (Table 7 for alkaline drainage and Table 9 for acid drainage) shall become effective when the sedimentation pond associated with any of the permitted outfalls is constructed and shall remain in effect until SMCRA Phase I Bond Release is complete for the sedimentation pond associated with that outfall.

The effluent limitations for abandoned mine sites being reclaimed by the Oklahoma Conservation Commission is identical to sites with active mining areas. These shall remain in effect until complete drainage of the site is completed.

Monitoring requirements contained in Tables 8 and 10 shall become effective in conjunction with the effluent limitations listed in Table 7 and Table 9.

**TABLE 7**

**EFFLUENT LIMITATIONS FOR ALL OUTFALLS FROM ACTIVE MINING OPERATIONS/OKLAHOMA CONSERVATION COMMISSION RECLAMATION PROJECTS ON ABANDONED SITES WITH ALKALINE MINE DRAINAGE**

Parameters	Technology-based/ BPJ based		Water-Quality-based		Draft Permit Effluent Limitations	
	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.
Flow	Report mgd	Report mgd	-	-	Report mgd	Report mgd
Iron, Total	3.0 mg/l	6.0 mg/l	-	-	3.0 mg/l	6.0 mg/l
TSS	35 mg/l	70 mg/l	-	-	35 mg/l	70 mg/l
pH	between 6.0 - 9.0 s.u.		between 6.5 - 9.0 s.u.		between 6.5 - 9.0 s.u.	

**TABLE 8**

MONITORING REQUIREMENTS FOR ALL OUTFALLS FROM  
ACTIVE MINING OPERATIONS/OKLAHOMA CONSERVATION COMMISSION  
RECLAMATION PROJECTS ON ABANDONED SITES  
WITH ALKALINE MINE DRAINAGE

Parameters	Measurement Frequency *	Sample Type
Flow	1/ Week	Estimate
Iron, Total	1/ Week	Grab
TSS	1/Week	Grab
pH	1/Week	Grab

\* When discharging

**TABLE 9**

EFFLUENT LIMITATIONS FOR ALL OUTFALLS FROM:  
(1) ACTIVE MINING OPERATIONS/OKLAHOMA CONSERVATION COMMISSION  
RECLAMATION PROJECTS ON ABANDONED SITES  
WITH ACID/FERRUGINOUS MINE DRAINAGE  
AND/OR  
(2) COAL PREPARATION PLANTS

Parameters	Technology-based/ BPJ based		Water-Quality-based		Draft Permit Effluent Limitations	
	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.
Flow	Report mgd	Report mgd	-	-	Report mgd	Report mgd
Iron	3.0 mg/l	6.0 mg/l	-	-	3.0 mg/l	6.0 mg/l
Manganese	2.0 mg/l	4.0 mg/l	-	-	2.0 mg/l	4.0 mg/l
TSS	35 mg/l	70 mg/l	-	-	35 mg/l	70 mg/l
pH	between 6.0 - 9.0		between 6.5 - 9.0		between 6.5 - 9.0	

**TABLE 10**

MONITORING REQUIREMENTS FOR ALL OUTFALLS FROM:  
(1) ACTIVE MINING OPERATIONS/OKLAHOMA CONSERVATION COMMISSION  
RECLAMATION PROJECTS ON ABANDONED SITES  
WITH ACID/FERRUGINOUS MINE DRAINAGE  
AND/OR  
(2) COAL PREPARATION PLANTS

Parameters	Measurement Frequency *	Sample Type
Flow	1/ Week	Estimate
Iron	1/ Week	Grab
Manganese	1 / Week	Grab

TSS	1/Week	Grab
pH	1/Week	Grab

\* When discharging

**B. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS FOR POST- MINING AREAS**

The effluent limitations for post-mining areas listed in Table 11 shall become effective upon notification to the DEQ that SMCRA Phase I Bond release is complete for the sedimentation pond associated with the outfall and shall remain in effect until notification to the DEQ that the SMCRA Phase II performance standards have been met for the sedimentation pond associated with the outfall.

Monitoring requirements contained in Table 12 shall become effective in conjunction with the effluent limitations listed in Table 11.

**TABLE 11**

**EFFLUENT LIMITATIONS FOR ALL OUTFALLS FROM POST-MINING OPERATIONS**

Parameters	Technology-based		Water-Quality-based		Draft Permit Effluent Limitations	
	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.
Flow	Report mgd	Report Mgd	-	-	Report mgd	Report mgd
Settleable Solids	-	0.5 ml/l	-	-	-	0.5 ml/l
pH	between 6.0 - 9.0		between 6.5 - 9.0		between 6.5 - 9.0	

**TABLE 12**

**MONITORING REQUIREMENTS FOR ALL OUTFALLS FROM POST-MINING OPERATIONS**

Parameters	Measurement Frequency *	Sample Type
Flow	1 / Month	Estimate
Settleable Solids	1 / Month	Grab
pH	1 / Month	Grab

\* When discharging

**C. ALTERNATIVE EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS FOR 10-YEAR, 24-HOUR PRECIPITATION EVENTS**

Alternative effluent limitations for the 10-year, 24-hour precipitation event listed in Table 11 shall become effective when the sedimentation pond associated with any of the proposed outfalls is constructed and shall remain in effect until the DEQ has been notified that the SMCRA Phase II performance standards have been met for the sedimentation pond associated with the outfall. The authorization will specify the amount of rainfall required for these limits to be applicable.

Any discharge or increase in the volume of a discharge caused by precipitation within any 24 hour period greater than the amount specified in the authorization shall comply with the following limitations instead of the otherwise applicable limitations.

Monitoring requirements contained in Table 13 shall become effective in conjunction with the effluent limitations listed in Table 12.

**TABLE 13**

**EFFLUENT LIMITATIONS DURING PRECIPITATION  
GREATER THAN THE 10-YEAR, 24-HOUR PRECIPITATION EVENT  
FOR ALL OUTFALLS FROM ACTIVE MINING, POST-MINING, OKLAHOMA  
CONSERVATION COMMISSION RECLAMATION PROJECTS ON ABANDONED SITES  
AND COAL PREPARATION PLANTS**

Parameters	Technology-based		Water-Quality-based		Draft Permit Effluent Limitations	
	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.
Flow	Report mgd	Report Mgd	-	-	Report mgd	Report mgd
Rainfall	-	-	-	-	Report Inches	Report Inches
pH	between 6.0 - 9.0		*		between 6.0 - 9.0	

\*During the 10-year, 24-hour precipitation event, sufficient dilution and buffering capacity should be available to insure that the technology-based pH limits of 6.0-9.0 s.u. will maintain the instream criteria of 6.5-9.0 s.u.

**TABLE 14**

**MONITORING REQUIRMENTS FOR PRECIPITATION  
GREATER THAN THE 10-YEAR, 24-HOUR PRECIPITATION EVENT**

Parameters	Measurement Frequency	Sample Type
Rainfall	Total for 24-hour period	Rain gauge located in drainage area of affected outfalls
Flow	Once for the event	Estimate
pH	Once for the event	Grab

#### D. REOPENER CLAUSE

This permit may be reopened for modification or revocation and reissuance to require additional monitoring and/or effluent limitations where actual or potential exceedances of state water quality criteria are determined, or when required by changes to technology based limits. Modification or revocation and reissuance of the permit shall follow regulations listed at 40 CFR Part 124.5.

### **X. ADMINISTRATIVE RECORD**

The following sources were used to prepare this general permit and constitute a part of the administrative record for this general permit:

#### A. DEQ RECORDS

- Industrial Permit files containing permits, applications and monitoring data.

#### B. CLEAN WATER ACT CITATIONS

- Section 301 and 402(a).

#### C. 40 CFR CITATIONS

- 40 CFR, in particular, Parts 122, 124, 136
- 40 CFR Part 434

#### D. STATE LAW, STANDARDS, AND RULES AND REGULATIONS

- Oklahoma Pollutant Discharge Elimination System (OPDES) Act, 27A O.S. , §2-6-201 et seq.
- OAC 252:606, and OAC 252:616
- Oklahoma's Water Quality Standards, as amended
- Oklahoma Continuing Planning Process Document (CPP), as amended.

### **XI. REVIEW BY OTHER AGENCIES AND FINAL DETERMINATION**

If comments are received from State or Federal agencies with jurisdiction over fish, wildlife, or public health, additional conditions may be included in accordance with regulations promulgated under 40 CFR Part 124.59.

The public notice describes the procedures for the formulation of final determinations.

### **XII. SUMMARY OF CHANGES FROM PREVIOUS PERMIT**

1. Abandoned mine sites being reclaimed by the Oklahoma Conservation Commission have been included in this permit. The permit limits for these sites are the same as for active mining areas.
2. In the previous permit, discharges to streams listed on the 303(d) list for 'Total Suspended Solids' and 'pH' were not authorized. In this permit, the impairment 'Total Suspended Solids' has been replaced by its updated equivalent, 'Turbidity'.