

**OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY  
GENERAL WASTEWATER DISPOSAL PERMIT FOR SURFACE COAL STRIP MINES  
GENERAL PERMIT NO. OKG04**

**GENERAL PROVISIONS**

As provided by Title 27A O.S. §2-6-201 *et seq.*, as amended, and the Rules of the Department of Environmental Quality (DEQ), operators of surface coal strip mines will be authorized to discharge wastewater within the boundaries of the State of Oklahoma in accordance with effluent limitations, monitoring requirements, and other conditions set forth in Parts I, II, and III hereof.

Discharges from coal preparation plants that are located within the Oklahoma Department of Mines (ODOM) permitted boundaries of the surface mine will also be authorized by this General Permit. Discharges from coal preparation plants that are not located within the boundaries of an ODOM permitted surface strip mine will not be authorized 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.

This Permit authorizes discharges from sites that have been mined and abandoned before the Oklahoma Department of Mines bonding program requirements were implemented and which sites are being reclaimed by the Oklahoma Conservation Commission.

This general permit shall not cover those facilities discharging greater than one million gallons per day (1 mgd) or discharging to the following waters: Outstanding Resource Waters; High Quality Waters; Sensitive Public and Private Water Supplies; Appendix 'B' Waters [OAC 785:45-5-25(c) (2)]; and receiving streams included in Oklahoma's '303(d) List' of impaired water bodies with impairments due to "Manganese", "Arsenic", "Barium", "Cadmium", "Chromium", "Lead", "Mercury", "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.

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 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 to who may obtain coverage due to the discharge being located in surface waters designated sensitive by the U.S. Fish and Wildlife Service.

The written request for an Authorization shall include the name and legal address of the owner or operator, ODOM permit number and the name of the mine, legal description of all land covered by the ODOM mining permit, general location, name of the receiving stream(s), listing of sedimentation ponds with proposed outfalls including designation numbers for each, legal description down to ten (10) acres of each proposed outfall, latitude and longitude of each proposed outfall, statement of expected pH of mine drainage before any treatment, statement of expected total iron concentration of mine drainage before any treatment, and a statement specifying whether or not there will be a coal preparation plant located within the boundary of the ODOM mining permit including a description of the destination of its discharge, along with any other information specified in the application form.

Surface mines authorized by this General Permit that are expected to have a pH equal to or greater than six (6.0) and a total iron concentration of less than ten (10.0) mg/l before any treatment are considered to have alkaline mine drainage. Surface mines authorized by this General Permit that are expected to either have a pH less than six (6.0) or a total iron concentration equal to or greater than ten (10.0) mg/l before any treatment are considered to have acid or ferruginous mine drainage. Where insufficient data is provided in the application to determine whether the discharge is acid or ferruginous

mine drainage, or alkaline mine drainage, effluent limitations for acid or ferruginous mine drainage will be applied in the Authorization. The applicable effluent limitations for each type of mine drainage are set forth in Part I herein.

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. In either case, the effluent limits and monitoring requirements contained in Part I herein for coal preparation plants will apply to coal preparation plants located within the ODOM permitted boundary of the surface mine.

At no time shall the effluent cause a violation of Oklahoma's Water Quality Standards (OWQS) in the receiving stream.

The permittee shall comply with all provisions of this Permit and any Authorization issued pursuant to it.

Issuance of this Permit in no way or in any respect affects the permittee's civil or criminal responsibility regarding disposal of wastewater, except with respect to the permittee's legal responsibility under 27A O.S. §2-6-201 *et seq.* and DEQ Rules to obtain an Authorization under this Permit.

This permit supersedes General Permit OKG04 that became effective on February 5, 2008 and expired at midnight on February 4, 2013.

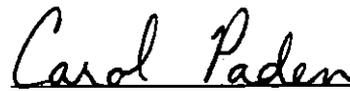
This Permit shall become effective on November 1<sup>st</sup>, 2013.

This Permit and any Authorizations issued under it shall expire at midnight, on October 31<sup>st</sup>, 2018.

This is to certify that the wastewater discharges set forth in this Permit comply with the requirements of Oklahoma's Water Quality Standards, as amended, provided the permittee does not exceed the effluent limitations set forth in this permit.

Issued this 15<sup>th</sup> day of October, 2013.

For Oklahoma Department of Environmental Quality,



Carol Paden, P.E., Manager  
Industrial Permits Section  
Water Quality Division



Shellie Chard-McClary, Director  
Water Quality Division

**PART I**  
**EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

**SECTION A: EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

1. Active Mining Prior to Phase I SMCRA Bond Release or Oklahoma Conservation Commission Projects on Abandoned Mine Sites

During the period beginning the effective date (for existing outfalls) or the date when the sedimentation pond associated with the outfall is constructed (for outfalls which have yet to be constructed at the time of Authorization issuance), and lasting through the date of the Surface Mining Control and Reclamation Act of 1977 (SMCRA) Phase I Bond Release or the completion of the drainage of the abandoned mine site or the expiration date, whichever occurs first, the permittee is authorized to discharge from all outfalls as described in the Appendix of the Authorization. The discharge consists of mine drainage and storm water runoff from the active mining area of a surface coal strip mine prior to the Phase I SMCRA Bond release or from an abandoned mine site. The permittee shall provide written notification to the DEQ whenever any sedimentation pond associated with a permitted outfall is constructed.

Such discharges shall be limited and monitored by the permittee as specified in Tables 1-4 below. Monitoring requirements contained in Tables 2 and 4 shall become effective in conjunction with the applicable effluent limitations listed in Tables 1 and 3.

**TABLE 1**  
**EFFLUENT LIMITATIONS FOR ALL OUTFALLS FROM**  
**ACTIVE MINING OPERATIONS/**  
**OKLAHOMA CONSERVATION COMMISSION PROJECTS ON ABANDONED SITES**  
**WITH**  
**ALKALINE MINE DRAINAGE**

PARAMETERS	DISCHARGE LIMITATIONS			
	MASS LOADINGS (lbs/day unless otherwise specified)		CONCENTRATION LIMITS (mg/l unless otherwise specified)	
	MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM
Flow STORET: 50050	Report mgd	Report mgd	N/A	N/A
Iron, Total STORET: 01045	N/A	N/A	3.0	6.0
Total Suspended Solids STORET: 00530	N/A	N/A	35	70
pH STORET: 00400	N/A	N/A	Between 6.5 - 9.0 standard units.	

**TABLE 2**  
**MONITORING REQUIREMENTS FOR ALL OUTFALLS FROM**  
**ACTIVE MINING OPERATIONS/**  
**OKLAHOMA CONSERVATION COMMISSION PROJECTS ON ABANDONED MINE SITES**  
**WITH**  
**ALKALINE MINE DRAINAGE**

MONITORING REQUIREMENTS		
PARAMETERS	MEASUREMENT FREQUENCY*	SAMPLE TYPE
Flow	Daily	Estimate
Iron, Total	1/Week	Grab
Total Suspended Solids	1/Week	Grab
pH	1/Week	Grab

\* When discharging

NOTE: See Parts II and III for Additional Requirements.

There shall be no discharge of a visible sheen of oil or globules of oil or grease on or in the water. Oil and grease shall not be present in quantities that adhere to stream banks and coat bottoms of watercourses. Surface waters of the State shall be maintained free from oil and grease and taste and odors.

There shall be no discharge of floating solids or visible foam in other than trace amounts. Discharges shall be free of noxious odors and taste and objectionable color and turbidity.

The discharge shall not contain chemical, physical, or biological substances in concentrations that are irritating to skin or sense organs or are toxic or cause illness upon ingestion by human beings.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the locations described in the Appendix of the Authorization.

**TABLE 3**  
**EFFLUENT LIMITATIONS FOR ALL OUTFALLS FROM:**  
**(1) ACTIVE MINING OPERATIONS /**  
**OKLAHOMA CONSERVATION COMMISSION PROJECTS ON ABANDONED SITES**  
**WITH ACID/FERRUGINOUS MINE DRAINAGE,**  
**AND/OR**  
**(2) COAL PREPARATION PLANTS**

PARAMETERS	DISCHARGE LIMITATIONS			
	MASS LOADINGS (lbs/day unless otherwise specified)		CONCENTRATION LIMITS (mg/l unless otherwise specified)	
	MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM
Flow STORET: 50050	Report mgd	Report mgd	N/A	N/A
Iron, Total STORET: 01045	N/A	N/A	3.0	6.0
Manganese, Total STORET: 01055	N/A	N/A	2.0	4.0
Total Suspended Solids STORET: 00530	N/A	N/A	35	70
pH STORET: 00400	N/A	N/A	Between 6.5 - 9.0 standard units.	

**TABLE 4**  
**MONITORING REQUIREMENTS FOR ALL OUTFALLS FROM:**  
**(1) ACTIVE MINING OPERATIONS/**  
**OKLAHOMA CONSERVATION COMMISSION PROJECTS ON ABANDONED SITES**  
**WITH ACID OR FERRUGINOUS MINE DRAINAGE,**  
**AND/OR**  
**(2) COAL PREPARATION PLANTS**

<b>MONITORING REQUIREMENTS</b>		
<b>PARAMETERS</b>	<b>MEASUREMENT FREQUENCY*</b>	<b>SAMPLE TYPE</b>
Flow	Daily	Estimate
Iron, Total	1/Week	Grab
Manganese, Total	1/Week	Grab
Total Suspended Solids	1/Week	Grab
pH	1/Week	Grab

When discharging

NOTE: See Parts II and III for Additional Requirements.

There shall be no discharge of a visible sheen of oil or globules of oil or grease on or in the water. Oil and grease shall not be present in quantities that adhere to stream banks and coat bottoms of watercourses. Surface waters of the State shall be maintained free from oil and grease and taste and odors.

There shall be no discharge of floating solids or visible foam in other than trace amounts. Discharges shall be free of noxious odors and taste and objectionable color and turbidity.

The discharge shall not contain chemical, physical, or biological substances in concentrations that are irritating to skin or sense organs or are toxic or cause illness upon ingestion by human beings.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the locations described in the Appendix of the Authorization.

## 2. Post-Mining Prior to Phase II SMCRA Bond Release

During the period beginning the date of the Phase I SMCRA Bond Release and lasting through the date that the outfall meets the Phase II performance standards (as certified by the ODOM) or the expiration date, the permittee is authorized to discharge from all outfalls as described in the Appendix of the Authorization. The discharge consists of mine drainage and storm water runoff from the post-mining area of a coal strip mine prior to meeting Phase II performance standards.

Such discharges shall be limited and monitored by the permittee as specified in Tables 5 and 6 below. Monitoring requirements contained in Table 6 shall become effective in conjunction with the effluent limitations listed in Table 5.

**TABLE 5**  
**EFFLUENT LIMITATIONS FOR ALL OUTFALLS FROM POST-MINING OPERATIONS**

PARAMETERS	DISCHARGE LIMITATIONS			
	MASS LOADINGS (lbs/day unless otherwise specified)		CONCENTRATION LIMITS (mg/l unless otherwise specified)	
	MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM
Flow STORET: 50050	Report mgd	Report mgd	N/A	N/A
Settleable Solids STORET: 00545	N/A	N/A	N/A	0.5 ml/l
pH STORET: 00400	N/A	N/A	Between 6.5 - 9.0 standard units.	

**TABLE 6**  
**MONITORING REQUIREMENTS FOR ALL OUTFALLS FROM POST-MINING OPERATIONS**

PARAMETERS	MONITORING REQUIREMENTS	
	MEASUREMENT FREQUENCY*	SAMPLE TYPE
Flow	1/Month	Estimate
Settleable Solids	1/Month	Grab
pH	1/Month	Grab

\* When discharging

NOTE: See Parts II and III for Additional Requirements.

There shall be no discharge of a visible sheen of oil or globules of oil or grease on or in the water. Oil and grease shall not be present in quantities that adhere to stream banks and coat bottoms of watercourses. Surface waters of the State shall be maintained free from oil and grease and taste and odors.

There shall be no discharge of floating solids or visible foam in other than trace amounts. Discharges shall be free of noxious odors and taste and objectionable color and turbidity.

The discharge shall not contain chemical, physical, or biological substances in concentrations that are irritating to skin or sense organs or are toxic or cause illness upon ingestion by human beings.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the locations described in the Appendix of the Authorization.

3. Alternative Effluent Limitations During Precipitation > 10-Year, 24-Hour Precipitation Event

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 limitations specified below instead of the otherwise applicable limitations. The operator shall have the burden of proof that the discharge or increase in discharge was caused by the applicable precipitation event described above.

Such discharges shall be limited and monitored by the permittee as specified in Tables 7 and 8 below. Monitoring requirements contained in Table 8 shall become effective in conjunction with the effluent limitations listed in Table 7.

**TABLE 7**  
EFFLUENT LIMITATIONS DURING PRECIPITATION  
> 10-YEAR, 24-HOUR PRECIPITATION EVENT.

PARAMETERS	DISCHARGE LIMITATIONS			
	MASS LOADINGS (lbs/day unless otherwise specified)		CONCENTRATION LIMITS (mg/l unless otherwise specified)	
	MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM
Flow STORET: 50050	Report mgd	Report mgd	N/A	N/A
Rainfall STORET: 46529	N/A	N/A	N/A	Report inches
pH STORET: 00400	N/A	N/A	Between 6.5 - 9.0 standard units.	

**TABLE 8**  
MONITORING REQUIREMENTS FOR PRECIPITATION  
> 10-YEAR, 24-HOUR PRECIPITATION EVENT

PARAMETERS	MONITORING REQUIREMENTS	
	MEASUREMENT FREQUENCY*	SAMPLE TYPE
Flow	Once for the event	Estimate
Rainfall	Total for a 24-hour period	Rain gauge located in drainage area of affected outfall(s)
pH	Once for the event	Grab

\*When discharging

NOTE: See Parts II and III for Additional Requirements.

There shall be no discharge of a visible sheen of oil or globules of oil or grease on or in the water. Oil and grease shall not be present in quantities that adhere to stream banks and coat bottoms of water courses. Surface waters of the State shall be maintained free from oil and grease and taste and odors.

There shall be no discharge of floating solids or visible foam in other than trace amounts. Discharges shall be free of noxious odors and taste and objectionable color and turbidity.

The discharge shall not contain chemical, physical, or biological substances in concentrations that are irritating to skin or sense organs or are toxic or cause illness upon ingestion by human beings.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the locations described in the Appendix of the Authorization.

## SECTION B. SCHEDULE OF COMPLIANCE

The permittee shall complete a one-time sampling for the metals list below during the fourth year of the permit. Only one outfall at the facility needs to be tested. The analysis needs to be done by a laboratory certified by DEQ and meet the MQL's listed below. The lab sheets for this testing will be submitted with the renewal application. If any additional analyses for metals beyond the minimum one-time requirement are performed by the facility, those results also need to be submitted with the renewal application.

<u>Pollutant</u>	<u>MQL</u>
• Manganese	50 µg/l
• Arsenic	10 µg/l
• Barium	5.0 µg/l
• Cadmium	1.0 µg/l
• Chromium	10 µg/l
• Lead	5.0 µg/l
• Mercury	0.2 µg/l

## SECTION C. REPORTING OF MONITORING RESULTS

Monitoring results shall be reported in accordance with the provisions of Part III. E.4 of the permit. Monitoring results obtained during the previous month shall be summarized and reported on the Discharge Monitoring Report (DMR) forms due to the Oklahoma Department of Environmental Quality, Water Quality Division, Wastewater Compliance Tracking Section postmarked or received no later than the 15<sup>th</sup> day of the following month. If no discharge occurs during the reporting period, DMR forms stating "No Discharge" shall be submitted according to the above schedule.

**PART II**  
**OTHER PERMIT REQUIREMENTS**

1. This General Permit does not convey any exclusive privileges or authorize any injury to property or invasion of rights or any infringement of federal, state, or local laws or regulations nor does it obviate the requirement to obtain permission from any landowners whose property will be affected by this Permit.
2. The term "active mining area" means the area, on or beneath land, used or disturbed in activity related to the extraction, removal, or recovery of coal from its natural deposits. This term excludes coal preparation plants, coal preparation plant associated areas and post-mining areas.
3. The term "bond release" means the time at which the appropriate regulatory authority returns a reclamation or performance bond based upon its determination that reclamation work has been satisfactorily completed.
4. The term "controlled surface mine drainage" means any surface mine drainage that is pumped or siphoned from the active mining area.
5. The term "reclamation area" means the surface area of a coal mine that has been returned to the required contour and on which revegetation (specifically, seeding or planting) work has commenced.
6. The term "10-year, 24-hour precipitation event" means the maximum 24-hour precipitation event with a probable recurrence interval of once in ten years as defined by the National Weather Service and Technical Paper No. 40, "Rainfall Frequency Atlas of the U.S.," May 1961, or equivalent regional or rainfall probability information developed therefrom.
7. Methods of flow estimating shall be by the "California Pipe Method" as described in Section 7.4.2.2. of the Handbook for Monitoring Industrial Wastewater, August 1973, U.S. Environmental Protection Agency, Technology Transfer or an equivalent method approved by the DEQ.
8. The following procedure (or an equivalent method approved by the DEQ) shall be used to determine Settleable Solids.  
  
Fill an Imhoff cone to the one-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 in the reading.  
  
The method detection limit for measuring settleable solids shall be 0.4 ml/l.
9. All laboratory analyses for the parameters specified in this permit must be performed by a laboratory certified by the Oklahoma Department of Environmental Quality for those parameters.
10. The permittee shall notify the DEQ when each SMCRA Phase I or Phase II bond is released. The notification should be addressed to the attention of the Industrial Permits Section of the Water Quality Division of the Department of Environmental Quality.

11. Locations may be revised by the permittee if it becomes necessary to eliminate or establish new holding ponds. For any revision, the permittee shall submit appropriate maps to the DEQ Oklahoma City office and DEQ district office redesignating the holding pond locations. The permittee shall also maintain a map at the mine site that shows the location of all ponds. This map shall be available to DEQ inspectors.

Any revised pond or outfall location should be consistent with and fall within the mining area boundary as permitted by the ODOM.

12. Unless otherwise specified in this permit, monitoring shall be conducted according to analytical, apparatus and materials, sample collection, preservation, handling, etc., procedures listed at 40 CFR Part 136 in effect on the effective date of this permit. Appendices A, B, and C to 40 CFR Part 136 are specifically referenced as part of this requirement.
13. To reclassify a previously determined acid or 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.
14. Any permittee authorized by this Permit may request to be excluded from the coverage of this General Permit by applying for an individual permit. The permittee shall submit the appropriate OPDES application forms together with the reasons supporting the request to the Water Quality Division. When an individual OPDES permit is issued to a permittee otherwise subject to this General Permit, the applicability of this Permit to that owner or permittee is automatically terminated on the effective date of the individual permit. A source excluded from coverage under this General permit solely because it already has an individual permit may request that its individual permit be revoked, and that it be covered by this General Permit. Upon revocation of the individual permit, this General Permit shall apply to the source.
15. The DEQ Rules, as amended, are applicable to and are incorporated by reference into this General Permit and any Authorizations under it. The permittee is hereby given notice that this General Permit is in all respects subject to compliance with and actions under any and all applicable and relevant terms, conditions, provisions and requirements and any and all amendments of the laws of the State of Oklahoma, the Department of Environmental Quality Rules, and Oklahoma's Water Quality Standards. The absence of any express reference within this Permit to any particular statutory requirement, rule(s), regulation(s), or standard(s) shall in no respect be deemed or construed to exempt or preclude the application of such requirement, rule(s), regulation(s), or standard(s) to this Permit or the permittee. By DEQ approval, grant and issuance of this Permit, permittee acknowledges responsibility to obtain correct and current copies of applicable DEQ Rules (as amended), provided, however, that the permittee further acknowledges that any and all amendments thereto shall become a part of this General Permit.
16. 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.

## 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. 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 ponds. 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);
- 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, 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) should also effectively control toxic metals. 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 are 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 System 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 at 40 CFR 122.44(a) and OAC 252:606-5-2(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, 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.

The following narrative requirements are implemented in the permit.

*"Surface waters of the State shall be maintained free from oil and grease and taste and odors."*

b. Emergency Public and Private Water Supplies (OAC 785:45-5-11)

Emergency public and private water supply use is determined in accordance with OAC 785:45-5-11(a), which states that during emergencies, those waters designated Emergency Public and Private Water Supplies may be put to use. Wastewater discharged through the proposed outfalls should not affect this designated beneficial use.

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

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

(1) Dissolved Oxygen

OAC 785:45-5-12(f)(1) requires that where DO-demanding substances are present in an effluent at significant levels, a waste load allocation (WLA) must be established according to certain seasonal criteria dependent on the receiving water's aquatic community subcategory.

Based on the nature of the wastewater generated at surface coal strip mines, the wastewater that will be discharged through the proposed outfalls should not contain oxygen demanding substances at levels which would have reasonable potential to violate numerical criteria.

Thus, permit action for dissolved oxygen is not necessary.

(2) 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.

### (3) 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.

### (4) Oil and Grease

According to OAC 785:45-5-12(f)(4), "All waters having the designated beneficial use of any subcategory of fish and wildlife propagation shall be maintained free of oil and grease to prevent a visible sheen of oil or globules of oil or grease on or in the water. Oil and grease shall not be present in quantities that adhere to stream banks and coat bottoms of water courses or which cause deleterious effects to the biota."

The following narrative requirements are implemented in the permit.

*"There shall be no discharge of visible sheen of oil or globules of oil or grease on or in the water. Oil and grease shall not be present in quantities that adhere to stream banks and coat bottoms of water courses."*

### (5) Biological Criteria

Pursuant to OAC 785:45-5-12(f)(5), aquatic life in all water bodies with the beneficial use designation of Fish and Wildlife Propagation (excluding waters designated "Trout, put-and-take") shall not exhibit degraded conditions. Based on the nature of surface coal strip mine wastewater, the wastewater is not expected to degrade the diversity, similarity, community structure, species tolerance, trophic structure, dominant species, indices of biotic integrity, indices of well being, or other measures.

Thus, permit action for biological criteria is not necessary.

### (6) Toxic Substances

Based on information contained in the Development Document, 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. To confirm this determination on toxic metals the DEQ will require all facilities to do a one-time toxic metals test from one outfall at each facility. The test will take place on the 4<sup>th</sup> year of the permit and will be submitted with the renewal application.

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 toxic substances is not necessary for this beneficial use.

#### (7) Turbidity

The Permit includes a daily maximum limit of 70 mg/l for total suspended solids. This limit on total suspended solids should adequately control turbidity in the discharges from surface coal strip mines.

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

Based on information contained in the Development Document, 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.

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

OAC 785:45-5-16(a) states that waters designated with this beneficial use shall not contain chemical, physical, or biological substances in concentrations that are irritating to skin or sense organs or are toxic or cause illness upon ingestion by human beings. The following narrative requirement is implemented in the Permit.

*"The discharge shall not contain chemical, physical, or biological substances in concentrations that are irritating to skin or sense organs or are toxic or cause illness upon ingestion by human beings."*

Based on information contained in the Development Document, the wastewater that will be discharged through the proposed outfalls should not contain bacteria at significant levels.

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

f. Secondary Body Contact Recreation (OAC 785:45-5-17)

OAC 785:45-5-17(d) states that "Waters so designated shall be maintained to be free from human pathogens in numbers which may produce adverse health effects in humans." Based on information contained in the Development Document, the wastewater that will be discharged through the proposed outfalls should not contain bacteria at significant levels.

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

g. Navigation (OAC 785:45-5-18)

Navigation use is determined in accordance with OAC 785:45-5-18, which states that this beneficial use is generally more dependent upon quantity than quality of water.

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

h. Aesthetics (OAC 785:45-5-19)

◆ **General**

Aesthetics use is determined in accordance with OAC 785:45-5-19(a), which states that "...the surface waters of the State must be free from floating materials and suspended substances that produce objectionable color and turbidity." In accordance with OAC 785:45-5-19(b), the water must be free from noxious odors and tastes, from materials that settle to form objectionable deposits, and discharges that produce undesirable effects or are a nuisance to aquatic life. The effluent limit of 70 mg/l daily maximum for total suspended solids should control turbidity in the discharge. In addition, the following narrative requirements are implemented in the Permit.

*"There shall be no discharge of floating solids or visible foam in other than trace amounts. Discharges shall be free of noxious odors and taste and objectionable color and turbidity."*

◆ **Nutrients**

Based on information contained in the Development Document, the wastewater that will be discharged through the proposed outfalls should not contain nutrients at significant levels.

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

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

Based on information contained in the Development Document, the wastewater which will be discharged through the proposed outfalls should not contain substances listed in Appendix G 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 is not authorized for discharges 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. The General Permit is also not authorized for discharges of wastewater to 303(d) listed streams due to Manganese, Arsenic, Barium, Cadmium, Chromium, Lead, or Mercury.

### **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 not authorized 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 OWQS.

**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 are 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**

<b>Parameters</b>	<b>Measurement Frequency *</b>	<b>Sample Type</b>
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**

<b>Parameters</b>	<b>Technology-based/ BPJ based</b>		<b>Water-Quality-based</b>		<b>Draft Permit Effluent Limitations</b>	
	<b>Monthly Avg.</b>	<b>Daily Max.</b>	<b>Monthly Avg.</b>	<b>Daily Max.</b>	<b>Monthly Avg.</b>	<b>Daily Max.</b>
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**

<b>Parameters</b>	<b>Measurement Frequency *</b>	<b>Sample Type</b>
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 14 shall become effective in conjunction with the effluent limitations listed in Table 13.

**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. SUMMARY OF CHANGES FROM PREVIOUS PERMIT**

The following narrative requirements have been added to the discharges in the permit:  
 "Oil and grease shall not be present in quantities that adhere to stream banks and coat bottoms of water courses." "Discharges shall be free of noxious odors and taste and objectionable color and

turbidity.” “The discharge shall not contain chemical, physical, or biological substances in concentrations that are irritating to skin or sense organs or are toxic or cause illness upon ingestion by human beings.”

The following was added to the 303(d) LISTING STATUS to the discharges in the permit:  
“The General Permit is also not authorized for discharges of wastewater to 303(d) listed streams due to Manganese, Arsenic, Barium, Cadmium, Chromium, Lead, or Mercury.”

The following was added to the discussion of Toxic Substances under Water-Quality-Based Effluent Limitations and/or Conditions in the Fact Sheet and in Part I of the permit:

“To assure water quality based effluent limitations and/or conditions are taken into account, DEQ will require all facilities to do a one-time toxic metals test from one outfall. The test will take place during the 4<sup>th</sup> year of the permit and will be submitted with the renewal application.”

## **XI. 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
- Oklahoma's Water Quality Standards, as amended
- Oklahoma Continuing Planning Process Document (CPP), as amended.

## **XII 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.