

**OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY  
GENERAL WASTEWATER DISCHARGE 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 of underground mine drainage will not be authorized under this Permit and shall instead apply for coverage under an individual discharge permit in accordance with the requirements to obtain a permit contained in OAC 252:606.

Discharges from coal preparation plants that are located within the Oklahoma Department of Mines (ODOM) permitted boundaries of a 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 OAC 252:606.

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

This General Permit shall not cover those facilities discharging to the following waters: Outstanding Resource Waters; High Quality Waters; Sensitive Public and Private Water Supplies, including those with Reuse; Appendix B Waters [OAC 785:45-5-25(c)(2)]; or to waterbodies included in Oklahoma's 303(d) list of impaired waterbodies with impairments due to turbidity or pH. However, the General Permit shall still apply if a Total Maximum Daily Load (TMDL) has been completed for a waterbody impaired due to turbidity and/or pH where the TMDL indicates that limits more stringent than 70 mg/l for total suspended solids (TSS) and 6.5 – 9.0 for pH are not required, provided however that there are no other restrictions on the receiving waterbody such as antidegradation requirements. This General Permit shall not apply to discharges to waterbodies impaired due to arsenic, barium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, and/or zinc when a TMDL has been completed and the TMDL indicates that limits more stringent than those included in this General Permit are required. This General Permit shall not apply to any outfalls from new or existing facilities that discharge to a waterbody within five stream miles or within one lake mile of a public water supply surface intake.

For all facilities applying for coverage under this General Permit, DEQ will determine whether the point of discharge is located in surface waters designated as sensitive by the U.S. Fish and Wildlife Service (USFWS). If the facility is a new facility and the proposed 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 a surface water designated as sensitive by the USFWS, the facility will not be eligible under for coverage under this General Permit if there has been a change in the location of the discharge or an increase in the volume of the discharge.

The written request for an Authorization shall include the name and legal address of the owner or operator, ODOM permit number, 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 (Form 606-G04).

Surface mines authorized by this General Permit that are expected to have a discharge pH equal to or greater than 6.0 and a total iron concentration of less than 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 have a discharge pH less than 6.0 or a total iron

concentration equal to or greater than 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/ferruginous or alkaline mine drainage, effluent limitations for acid/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 limitations 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 a surface mine.

At no time shall the effluent from a discharge authorized under this General Permit 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 a permittee's civil or criminal responsibility regarding disposal/discharge of wastewater, except with respect to the permittee's legal responsibility under 27A O.S. §2-6-101 *et seq.*, and DEQ Rules to obtain an Authorization under this Permit.

This Permit replaces and/or supersedes General Permit OKG04 that became effective on November 1, 2013 and expires at midnight on October 31, 2018.

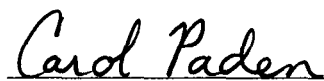
This Permit shall become effective on December 1, 2018.

This Permit and any Authorizations issued under it shall expire at midnight, on November 30, 2023.

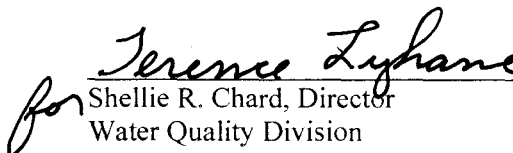
This is to certify that the wastewater discharges set forth in this Permit comply with the requirements of Oklahoma's Water Quality Standards, as amended, provided the permittee does not exceed the effluent limitations set forth in this Permit.

Issued this 7<sup>th</sup> day of November, 2018.

For Oklahoma Department of Environmental Quality,



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

  
for Shellie R. Chard, Director  
Water Quality Division

## PART I EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

### SECTION A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

#### 1. Active Mining Areas and Oklahoma Conservation Commission Reclamation Projects on Abandoned Mine Sites

During the period beginning the effective date of the Authorization and lasting through the expiration date, or lasting until the Authorization is reissued either to reflect a Surface Mining Control and Reclamation Act of 1977 (SMCRA) Phase I Bond Release or to reflect the completion of drainage of an abandoned mine site, 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 stormwater 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 undergoing reclamation by the Oklahoma Conservation Commission. The permittee shall provide written notification to DEQ whenever any sedimentation pond associated with a permitted outfall is constructed.

Such discharges shall be limited and monitored by the permittee as specified below.

##### a. Acid/Ferruginous Mine Drainage and Coal Preparation Plants

For discharges of acid/ferruginous mine drainage and/or wastewater from coal preparation plants:

#### Effluent Limitations

Parameter	Mass Loading Limits (lb/day unless otherwise specified)		Concentration Limits (mg/l unless otherwise specified)	
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum
Flow (mgd) STORET: 50050	Report	Report	---	---
Iron, total STORET: 01045	---	---	3.0	6.0
Manganese, total STORET: 01055	---	---	2.0	4.0
Total Suspended Solids STORET: 00530	---	---	35	70
pH (s.u.) STORET: 00400	---		6.5 – 9.0	

#### Monitoring Requirements

Parameter	Measurement Frequency <sup>(1)</sup>	Sample Type
Flow	1/Week	Estimate
Iron, total	1/Week	Grab
Manganese, total	1/Week	Grab
Total Suspended Solids	1/Week	Grab
pH	1/Week	Grab

<sup>(1)</sup> When discharging.

**b. Alkaline Mine Drainage**

For discharges of alkaline mine drainage:

**Effluent Limitations**

Parameter	Mass Loading Limits (lb/day unless otherwise specified)		Concentration Limits (mg/l unless otherwise specified)	
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum
Flow (mgd) STORET: 50050	Report	Report	---	---
Iron, total STORET: 01045	---	---	3.0	6.0
Total Suspended Solids STORET: 00530	---	---	35	70
pH (s.u.) STORET: 00400	---		6.5 – 9.0	

**Monitoring Requirements**

Parameter	Measurement Frequency <sup>(1)</sup>	Sample Type
Flow	1/Week	Estimate
Iron, total	1/Week	Grab
Total Suspended Solids	1/Week	Grab
pH	1/Week	Grab

<sup>(1)</sup> When discharging.

**c. Other Requirements**

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 discharges 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 Operations**

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

Such discharges shall be limited and monitored by the permittee as specified in the following tables.

#### Effluent Limitations

Parameter	Mass Loading Limits (lb/day unless otherwise specified)		Concentration Limits (ml/l unless otherwise specified)	
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum
Flow (mgd) STORET: 50050	Report	Report	---	---
Settleable Solids STORET: 00545	---	---	---	0.5
pH (s.u.) STORET: 00400	---		6.5 – 9.0	

#### Monitoring Requirements

Parameter	Measurement Frequency <sup>(1)</sup>	Sample Type
Flow	1/Month	Estimate
Settleable Solids	1/Month	Grab
pH	1/Month	Grab

<sup>(1)</sup> When discharging.

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 discharges 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. Requirements for 10-Year, 24-Hour Precipitation Events

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 the following tables.

**Effluent Limitations**

Parameter	Mass Loading Limits (lb/day unless otherwise specified)		Concentration Limits (mg/l unless otherwise specified)	
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum
Flow (mgd) STORET: 50050	Report	Report	---	---
Rainfall (inches) STORET: 46529	---	---	---	Report
pH (s.u.) STORET: 00400	---		6.5 – 9.0	

**Monitoring Requirements**

Parameter	Measurement Frequency <sup>(1)</sup>	Sample Type
Flow	Once for the event	Estimate
Rainfall	Total for a 24-hour period	Rain gauge located in drainage area of the affected outfall(s)
pH	Once for the event	Grab

<sup>(1)</sup> When discharging.

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 discharges 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.

**4. Discharges to Impaired Waterbodies**

In addition to the effluent limitations described in the preceding sections, all discharges to or within five miles upstream of waterbodies listed as impaired due to arsenic, barium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, and/or zinc are subject to additional effluent limitations and/or monitoring requirements.

Such discharges shall be limited and monitored by the permittee as specified in the following tables:

## Potential Effluent Limitations

Parameter	Mass Loading Limits (lb/day unless otherwise specified)		Concentration Limits (µg/l unless otherwise specified)	
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum
Arsenic, total STORET: 01002	---	---	Report <sup>(1)</sup>	(2)
Barium, total STORET: 01007	---	---	Report <sup>(1)</sup>	(2)
Cadmium, total STORET: 01027	---	---	Report <sup>(1)</sup>	(2)
Chromium, total STORET: 01034	---	---	Report <sup>(1)</sup>	(2)
Chromium III STORET: 01033	---	---	Report <sup>(1)</sup>	(2)
Chromium VI STORET: 01032	---	---	Report <sup>(1)</sup>	(2)
Copper, total STORET: 01042	---	---	Report <sup>(1)</sup>	(2)
Lead, total STORET: 01051	---	---	Report <sup>(1)</sup>	(2)
Mercury, total STORET: 71900	---	---	Report <sup>(1)</sup>	(2)
Nickel, total STORET: 01067	---	---	Report <sup>(1)</sup>	(2)
Selenium, total STORET: 01147	---	---	Report <sup>(1)</sup>	(2)
Silver, total STORET: 01077	---	---	Report <sup>(1)</sup>	(2)
Thallium, total STORET: 01059	---	---	Report <sup>(1)</sup>	(2)
Zinc, total STORET: 01092	---	---	Report <sup>(1)</sup>	(2)

<sup>(1)</sup> The Report requirement shall only apply in cases where the monitoring frequency is greater than 1/month (see the following table).

<sup>(2)</sup> When the discharge is to or within one mile upstream of an impaired waterbody, the smallest applicable numerical criterion for the parameter(s) causing the impairment shall be applied as the daily maximum concentration limit(s). When the discharge is within five miles upstream, but not within one mile upstream of an impaired waterbody, the Authorization shall contain a daily maximum monitoring requirement for the cause(s) of impairment.

## Monitoring Requirements

Parameter	Measurement Frequency <sup>(1)</sup>	Sample Type
Any parameter with a numerical limit; discharges from active mining areas and/or coal preparation plants	1/Week	Grab
Any parameter with monitoring only; discharges from active mining areas and/or coal preparation plants	1/Month	Grab
Any parameter; discharges from post-mining operations	1/Month	Grab

<sup>(1)</sup> When discharging. These limitations and monitoring requirements shall apply to all discharges, including those discharges that result from precipitation events greater than the 10-year, 24-hour event.

**SECTION B. SCHEDULE OF COMPLIANCE**

The permittee shall complete a one-time sampling for the metals listed below during the fourth year of the permit. Only one outfall at the facility needs to be tested. The analysis must be performed by a laboratory certified by DEQ, and must meet the Minimum Quantification Levels (MQLs) listed for the relevant parameters in OAC 252:690 Appendix B. Lab sheets for this testing shall be submitted by November 30, 2022, one year before the expiration date of the permit. If any additional analyses for metals beyond the minimum one-time requirement are performed by the facility, excluding monitoring done due to receiving waterbody impairments, those results also need to be included in the submission. The parameters that must be tested for are:

- Arsenic, total
- Barium, total
- Cadmium, total
- Chromium, total
- Trivalent Chromium (see note)
- Hexavalent Chromium
- Copper, total
- Lead, total
- Mercury, total
- Nickel, total
- Selenium, total
- Silver, total
- Thallium, total
- Zinc, total

Note: Trivalent chromium is calculated as the difference between total chromium and hexavalent chromium.

**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 electronically reported on an electronic Discharge Monitoring Report (eDMR) form due to the Oklahoma Department of Environmental Quality, Water Quality Division, Wastewater Compliance Tracking Section no later than the 15<sup>th</sup> day of the month following the completed monthly test. If no discharge occurs during the reporting period, an eDMR form stating "No Discharge" shall be electronically submitted according to the above schedule. Instructions on how to register as a Preparer or Signatory for eDMRs, as well as how to prepare and submit eDMRs, can be found on DEQ's website at <http://www.deq.state.ok.us/wqdnew/ereporting/index.html>. Assistance is also available by contacting DEQ at (405) 702-8100 or [deqreporting@deq.ok.gov](mailto:deqreporting@deq.ok.gov).



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

**A. REGULATORY NOTICE**

The DEQ Rules, as amended, are applicable to and are incorporated by reference into this General Permit and any Authorization under it. The permittee is hereby given notice that this 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 rules of the Oklahoma Department of Environmental Quality, and Oklahoma's Water Quality Standards. The absence of any express reference within this Permit to any particular statutory requirement(s), rule(s), regulation(s), and/or standard(s) shall in no respect be deemed or construed to exempt or preclude the application of such requirement(s), rule(s), regulation(s), and/or standard(s) to this Permit or to the permittee. By the Director's approval, grant and issuance of this Permit, the permittee acknowledges receipt of true, correct, and current copies of Oklahoma's Water Quality Standards, and the rules of the Oklahoma Department of Environmental Quality, provided, however, that the permittee further acknowledges that any and all amendments thereto shall become part of this Permit.

**B. 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 124.5.

**C. LABORATORY CERTIFICATION**

All laboratory analyses for the parameters specified in this Permit must be performed by a laboratory certified by DEQ for those parameters.

**D. ANALYTICAL REQUIREMENTS**

Unless otherwise specified in this Permit, monitoring shall be conducted according to analytical, apparatus and materials, sample collection, preservation, handling, etc. procedures listed in the most current version of 40 CFR 136 in effect on the effective date of this Permit. Appendices A, B, and C to 40 CFR 136 are specifically referenced as part of this requirement. Amendments to 40 CFR 136 promulgated and incorporated by reference into OAC 252:606 after the effective date of this permit shall supersede these requirements as applicable.

**E. FLOW CALCULATION**

The method of estimating flow shall be 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 any equivalent method approved by DEQ.

**F. SETTLEABLE SOLIDS**

The following procedure (or an equivalent method approved by 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 material occurs, do not include the floating material in the reading.

The method detection limit for measuring settleable solids shall be 0.4 ml/l.

#### **G. MINIMUM QUANTIFICATION LEVEL**

If any individual analytical test result taken for compliance with this Permit is less than the corresponding minimum quantification level listed in OAC 252:690 Appendix B, a value of zero (0) may be used for that individual result for the DMR calculations and reporting requirements.

#### **H. BOND RELEASE STATUS**

The permittee shall notify DEQ when each SMCRA Phase I or Phase II bond is released within fifteen (15) days of the bond release. The notification should be addressed to the attention of the Industrial Permits Section of the Water Quality Division of DEQ.

#### **I. NEW OUTFALLS**

The permittee shall notify DEQ at least thirty (30) days *before* an inactive outfall becomes active. Discharge from such outfalls shall be prohibited until the permittee has received a reissued Authorization from DEQ and until said Authorization becomes effective. Note that Authorizations shall only become effective on the first date of a calendar month and will not be backdated. Discharges shall not commence until an updated Authorization has been issued and become effective.

#### **J. OUTFALL LOCATION MODIFICATION**

Outfall 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 both DEQ's Oklahoma City office and the district office redesignating the holding pond locations. The permittee shall also maintain a map at the mine site that shows the locations 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 ODOM.

#### **K. RECLASSIFICATION OF MINE DRAINAGE TYPE**

To reclassify a previously determined acid or ferruginous mine drainage discharge to an alkaline mine drainage discharge, the permittee must satisfactorily demonstrate to DEQ that the mine drainage prior to treatment has a pH greater than or equal to 6.0, and a total iron concentration of 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.

#### **L. INDIVIDUAL PERMITS**

1. 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.
2. 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.
3. 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.

**M.** 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.

**N. DEFINITIONS**

1. The term "acid or ferruginous mine drainage" means mine drainage which, before any treatment, either has a pH of less than 6.0 or a total iron concentration equal to or greater than 10 mg/l.
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 "alkaline mine drainage" means 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.
4. 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.
5. The term "controlled surface mine drainage" means any surface mine drainage that is pumped or siphoned from the active mining area.
6. 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.
7. The term "10-year, 24-hour precipitation event" means the maximum 24-hour precipitation event with a probably 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.

## FACT SHEET

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

DEQ Permit Number: OKG04

Applicant: Operators of Surface Coal Strip Mines in Oklahoma

Issuing Office: Oklahoma Department of Environmental Quality  
Water Quality Division  
707 N. Robinson  
P.O. Box 1677  
Oklahoma City, OK 73101-1677

Prepared By: Matt Butner  
Industrial Permits Section  
Water Quality Division

Date Prepared: February 7, 2018

Permit Action: Renewal of a 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. Discharges of underground mine drainage will not be authorized under this Permit and shall instead apply for coverage under an individual discharge permit in accordance with the requirements to obtain a permit contained in OAC 252:606.

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 permitting 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 ODOM 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 their individual permits be revoked and apply for coverage under this Permit no later than 180 days prior to the expiration date 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 DEQ may apply either for individual permits or coverage under this Permit. New surface coal strip mines and abandoned mining 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(s). All runoff is routed through the sedimentation pond(s). The strip pit migrates across the permitted landscape as mining progresses; sedimentation ponds will begin to receive stormwater runoff and main 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 the 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 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 at 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 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. Reclamation activities generally involve draining water from old mine pits and revegetating the surface. Effluent limitations for active mining sites shall apply to these discharges. When draining is complete, the 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 (OWQS). 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 Supply (OAC 785:45-5-10);
- Emergency Public and Private Water Supply (OAC 785:45-5-11);
- Fish and Wildlife Propagation (OAC 785:45-5-12);
- Agriculture (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).

This Permit will not regulate discharges to Waters of the State designated with any of the following additional limitations:

- Outstanding Resource Water (OAC 785:45-5-25(c)(1));
- Appendix B Water (OAC 785:45-5-25(c)(2));
- High Quality Water (OAC 785:45-5-25(c)(3)); or
- Sensitive Water Supply (OAC 785:45-5-25(c)(4));
- Sensitive Water Supply with Reuse (SWS-R; OAC 785:45-5-25(c)(8)).

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 further described by latitudes and longitudes.

##### B. DISCHARGE DESCRIPTION

Wastewater discharges are generated from main 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 434.11(h) as "any drainage, and any water pumped or siphoned, from an active mining area or post-mining area."

Wastewater also may be discharged from coal preparation plants located within the permitting boundary of the mine. Coal preparation plants are defined at 40 CFR 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 main drainage with acidic/ferruginous characteristics or with alkaline characteristics. "Acid or ferruginous mine drainage" is defined in 40 CFR 434.11(a) as "mine drainage which, before any treatment, either has 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 434.11(c) as "mine drainage which, before any treatment, has a pH equal to or greater than 6.0 and total iron concentration of less than 10 mg/l."

Where insufficient data is provided in the permit application to determine whether the discharge is acidic/ferruginous drainage or alkaline drainage, effluent limitations for acidic/ferruginous mine drainage will be applied in the Authorization because 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 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 of less than 10 mg/l. This will require the submittal of at least six months of data to characterize the pH and 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 into the water. Groundwater entering a surface mine is also subject to acid formation.

The wastewater situation 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 thereby 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 solids, dissolved solids, pH, and some 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 by long contact time between water and the pyritic material.

Suspended solids result from erosion of areas where vegetation has been removed. The amount of sediment in runoff from such areas is dependent on multiple factors, including the 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 dissolved solids.

Data contained in the Development Document indicates that concentrations of organics tend to be 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 (TSS), and iron (in addition to manganese for acid/ferruginous mine drainage and coal preparation plants) should also effectively control toxic metals. Reasonable potential screening using data submitted by the currently-permitted facilities will be utilized to determine if this assumption is valid.

## **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 low for alkaline mine drainage. Further, concentrations of conventional pollutants, save for TSS, are also low. Reasonable potential screening will be performed to determine if the effluent from any permitted facilities shows potential to violate water quality standards.

### **3. Coal Preparation Plants**

The wastewater generated from coal preparation plants results from the process of cleaning coal. Wastewater flow rates vary significantly 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 coal cleaning operations, this separation of impurities is based on a specific gravity difference between the less dense coal and heavier contaminants such as sulfur, ash, and rock. In the physical cleaning process, water is most often used to assist in the removal of unwanted components. Effluents are most often laden with suspended coal particles and refuse fines. This slurry is generally routed to one or more surface impoundments for solids settling. Clarified water from the impoundment(s) can often be recycled back into the preparation plant to reduce makeup water needs as well as to lessen the quantity of final discharge to the 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 level in some of these slurries can be quite high if no fines are recovered or removed prior to discharge. Therefore, the limits for active coal preparation plants will be the same as those for active mines with acid/ferruginous mine drainage.

### **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. Therefore, the limits for abandoned mine sites are the same as those for active mining areas.

### **5. Summary of Analytical Data**

The General Permit that became effective on November 1, 2013 included a schedule of compliance requiring all facilities with authorizations under the General Permit to sample wastewater from at least one outfall, per facility, for the parameters listed below, and submit the analytical results as part of the renewal application.

- Manganese
- Arsenic
- Barium
- Cadmium
- Chromium
- Lead
- Mercury



A summary of the submitted data is as follows.

Permit	Concentration (µg/l)						
	Manganese	Arsenic <sup>(1)</sup>	Barium	Cadmium	Chromium	Lead <sup>(1)</sup>	Mercury <sup>(1)</sup>
OKG040003	43	1.2	27	< 0.5	< 7	< 0.5	< 0.2
OKG040005	140	< 0.5	26	< 0.5	< 7	< 0.5	< 0.2
OKG040021	52	< 5	27	< 0.5	< 7	< 0.5	< 0.2
OKG040022	483	< 5	17.2	< 1	< 10	< 5	< 0.1
OKG040024	--- <sup>(2)</sup>	0.9	67	< 0.5	< 10	< 0.5	< 0.2
OKG040025	230	1.5	24	< 0.5	< 7	< 0.5	< 0.2
OKG040026	41	1.0	55	< 0.5	< 10	< 0.5	< 0.2
OKG040028	70.1	< 5	52.8	< 1	< 10	< 5	< 0.1
OKG040034	350	1.1	25	< 0.5	< 7	< 0.5	< 0.2
OKG040038	120	1.2	42	< 0.5	< 7	< 0.5	< 0.2
OKG040040	58	< 5	20	< 0.5	< 7	< 0.5	< 0.2
OKG040041	26	0.56	38	< 0.5	< 7	< 0.5	< 0.2
OKG040048	740	23	69	< 0.5	< 10	< 0.5	< 0.2

<sup>(1)</sup> The minimum quantification levels (MQLs) the permittees were required to test to in the previous General Permit for these parameters do not match the MQLs in the current version of OAC 252:690 Appendix B.

<sup>(2)</sup> This facility did not submit test data for manganese to fulfill the requirement of the Schedule of Compliance. However, this facility has manganese limits at all outfalls; therefore, DMR data for manganese is available for use.

This information will be used to ascertain whether additional water-quality based limits may be warranted.

## 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 General Permit. Also set forth are any calculations or other necessary explanations of the derivation of specific effluent limitations or conditions, including a citation to the applicable effluent limitation guideline or performance standard provisions as required under 40 CFR 122.44 and the 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 122.44 and reasons why they are applicable or an explanation of how alternative effluent limitations were developed.

In accordance with regulations promulgated at 40 CFR 122.44(d), the Permit limitations 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 application, or Best Professional Judgement (BPJ) in the absence of guidelines, or on a combination of the two.

#### 2. Definitions

- The term "active mining area" means the area, on and beneath the 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.
- 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.

- c. The term "controlled surface mine drainage" means any surface mine drainage that is pumped or siphoned from the active mining area.
- d. 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.
- e. 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.

### 3. Applicable Effluent Limitations Guidelines

All mines that apply for coverage under this General Permit will be subject to new source performance standards (NSPS) effluent limitations promulgated in 40 CFR 434.

#### a. Effluent Limitations Applying to Active Mining Areas

As specified in 40 CFR 434.25(a) and 40 CFR 434.35, the following effluent limitations shall apply to all outfalls from active mining areas with acid or ferruginous mine drainage, and from outfalls from coal preparation plants:

Parameter	Concentration Limitation (mg/l unless otherwise specified)	
	Monthly Average	Daily Maximum
Iron, total	3.0	6.0
Manganese, total	2.0	4.0
Total Suspended Solids	35	70
pH (s.u.)	6.0 – 9.0	

As specified in 40 CFR 434.45, the following effluent limitations shall apply to all outfalls from active mining areas with alkaline mine drainage:

Parameter	Concentration Limitation (mg/l unless otherwise specified)	
	Monthly Average	Daily Maximum
Iron, total	3.0	6.0
Total Suspended Solids	35	70
pH (s.u.)	6.0 – 9.0	

#### b. Effluent Limitations Applying to Post-Mining Operations

As specified in 40 CFR 434.55(a), the following effluent limitations shall apply to all outfalls from post-mining operations areas:

Parameter	Concentration Limitation (ml/l unless otherwise specified)	
	Monthly Average	Daily Maximum
Settleable Solids	---	0.5
pH (s.u.)	6.0 – 9.0	

**c. Alternate Effluent Limitations for Precipitation Events**

As specified in 40 CFR 434.63(d), the following effluent limitations shall apply to any discharge or increase in volume of discharge due to a 24-hour precipitation event greater than the 10-year, 24-hour precipitation event in lieu of any other applicable technology-based limitations:

Parameter	Concentration Limitation	
	Monthly Average	Daily Maximum
pH (s.u.)	6.0 – 9.0	

**4. Best Professional Judgement**

In accordance with DEQ's antibacksliding policy, the following effluent limitations applying to outfalls from Oklahoma Conservation Commission reclamation projects on abandoned mine sites are retained from the previous Permit:

For sites with acid or ferruginous mine drainage:

Parameter	Concentration Limitation (mg/l unless otherwise specified)	
	Monthly Average	Daily Maximum
Iron, total	3.0	6.0
Manganese, total	2.0	4.0
Total Suspended Solids	35	70
pH (s.u.)	6.0 – 9.0	

For sites with alkaline mine drainage:

Parameter	Concentration Limitation (mg/l unless otherwise specified)	
	Monthly Average	Daily Maximum
Iron, total	3.0	6.0
Total Suspended Solids	35	70
pH (s.u.)	6.0 – 9.0	

For any discharge or increase in volume of discharge due to a 24-hour precipitation event greater than the 10-year, 24-hour precipitation event:

Parameter	Concentration Limitation	
	Monthly Average	Daily Maximum
pH (s.u.)	6.0 – 9.0	

**B. WATER QUALITY-BASED EFFLUENT LIMITATIONS AND 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 effluent limitations 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 ensure 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 Implementation Process**

To achieve the objectives stated above, each pollutant present at measureable levels in the facilities' effluent or which has technology-based concentration limitations, for which there is one or more applicable numerical water quality criteria, is screened against the applicable numerical criteria to determine whether the pollutant has reasonable potential (RP) to exceed any of the criteria. In individual discharge permits, the screens are performed in accordance with the OWQS, OWQS implementation criteria in OAC 785:46 and OAC 252:690, and the Continuing Planning Process (CPP) document. In the RP screening process, the 95<sup>th</sup> percentile effluent concentration, or estimate thereof if the effluent data set is not sufficiently large to determine it directly, is used to compute an instream concentration according to regulatory mixing zone equations defined in OAC 785:46. Calculated instream concentrations are then compared with applicable criteria to determine whether RP is exhibited for any of the screened pollutants. If RP is exhibited, in accordance with 40 CFR 122.44(d)(1)(vi) and OAC 252:690, a wasteload allocation and criterion long term average is computed for each applicable criterion. Water quality-based permit limitations are calculated for each pollutant exhibiting RP for all applicable criteria. The most stringent of the resulting monthly average permit limitations is established in the draft permit for each pollutant requiring such limitations.

## **3. Reasonable Potential Screening**

The RP screening is performed at all of the permitted facilities' outfalls that have discharged within the two year period of record (September 2015 – September 2017). The effluent concentrations reported by each facility to fulfill the conditions of the schedule of compliance in the previous Permit are assumed to be the conditions at all of the facility's outfalls.

The results of the RP screening are summarized in the table on the following page, organized by facility. For brevity's sake, not all permitted outfalls are listed; the summary instead focuses on each permitted facility. If any of a facility's outfalls demonstrated RP, either for water quality-based numerical limitations or effluent monitoring, the summary will indicate it.

A complete record of reasonable potential screening results, including results for each individual outfall and effluent monitoring data is available upon request for review.

Permit	RP Screening Results for Each Parameter:						
	Manganese	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury
OKG040003	---	---	---	---	---	---	(2)
OKG040005	---	---	---	---	---	---	(2)
OKG040021	---	(2)	---	---	---	---	(2)
OKG040022	(1)	(2)	---	---	---	(2)	(2)
OKG040024	(1)	---	---	---	---	---	(2)
OKG040025	(1)	---	---	---	---	---	(2)
OKG040026	---	---	---	---	---	---	(2)
OKG040028	(1)	(2)	---	---	---	(2)	(2)
OKG040034	(1)	---	---	---	---	---	(2)
OKG040038	(1)	---	---	---	---	---	(2)
OKG040040	---	(2)	---	---	---	---	(2)
OKG040041	---	---	---	---	---	---	(2)
OKG040048	(1)	---	---	---	---	---	(2)

(1) Reasonable potential to violate manganese criterion shown. RP for manganese determined by comparing the calculated instream concentration with the National Recommended Water Quality Criteria (NRWQC) of 0.1 mg/l. NRWQC are not binding upon individual states. In an individual permit, when reasonable potential to violate this criterion is shown for manganese, an effluent monitoring requirement is implemented in the permit. However, because this data cannot be used to determine limitations, it is the best professional judgement of the permit writer that effluent monitoring is not warranted, save for the cases where such monitoring is required by technology-based limitations.

(2) The MQL this parameter was tested to does not meet the MQLs listed in OAC 252:690 Appendix B. In this scenario, DEQ would normally assume that the parameter was present at the reported MQL concentration for the purposes of reasonable potential screening. However, the MQL this parameter was tested to does satisfy the requirements of the previous General Permit. To avoid penalizing permittees for meeting the requirements of the previous General Permit instead of the requirements of OAC 252:690 Appendix B, the concentration of this parameter has been assumed to be zero for the purposes of reasonable potential screening.

The table above shows that, based on available data, reasonable potential screening does not show there to be any need for water quality-based numerical effluent limitations or monitoring at any currently-permitted facility. To ensure that this remains the case in future permit renewals, the following schedule of compliance will be included in the renewed Permit:

The permittee shall complete a one-time sampling for the metals listed below during the fourth year of the permit. Only one outfall at the facility needs to be tested. The analysis must be performed by a laboratory certified by DEQ, and must meet the Minimum Quantification Levels (MQLs) listed for the relevant parameters in OAC 252:690 Appendix B. Lab sheets for this testing shall be submitted one year before the expiration date of the permit. If any additional analyses for metals beyond the minimum one-time requirement are performed by the facility, excluding monitoring done due to receiving waterbody impairments, those results also need to be included in the submission. The parameters that must be tested for are:

- Arsenic, total
- Barium, total
- Cadmium, total
- Chromium, total
- Trivalent Chromium (see note)
- Hexavalent Chromium
- Copper, total
- Lead, total
- Mercury, total
- Nickel, total
- Selenium, total
- Silver, total
- Thallium, total
- Zinc, total

Note: Trivalent chromium is calculated as the difference between total chromium and hexavalent chromium.

Copper, nickel, selenium, silver, thallium, and zinc were not included in the compliance schedule requirement from the previous General Permit. However, the Development Document for the final rule indicates that these metals can be present in discharges containing both acid/ferruginous and alkaline mine drainage, potentially at levels exceeding state water quality criteria. Therefore, these parameters have been added to the compliance schedule. Additionally, Oklahoma's Water Quality Standards now include criteria for tri- and hexavalent chromium in addition to criteria for total chromium. As such, these parameters have also been added to the compliance schedule.

#### **4. Additional Protection of Beneficial Uses**

##### **a. Public and Private Water Supply (OAC 785:45-5-10)**

RP screening has shown that the wastewater discharged from facilities currently permitted under the General Permit does not show reasonable potential to violate water quality criteria for the protection of the Public and Private Water Supply (PPWS) beneficial use; the technology-based effluent limitations should be sufficient to ensure the maintenance of this use.

Where actual or potential exceedances of water quality criteria for PPWS are determined to be the result of a facility's discharge to the receiving water(s), 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 PPWS beneficial use of the receiving waterbody.

In accordance with OAC 785:45-5-10(4), the following narrative requirement will be included 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 Supply (OAC 785:45-5-11)**

The Emergency Public and Private Water Supply Use is determined in accordance with OAC 785:45-5-11(a), which state that during emergencies, those waters designated Emergency Public and Private Water Supplies may be put to use. OAC 785:45-5-11(b) states that such situations shall be handled on a case-by-case basis. Therefore, no requirements need to be included in the Permit to maintain this beneficial use of the receiving waterbody.

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

###### **(1) Dissolved Oxygen**

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

The wastewater discharges regulated by this Permit are not expected to contain oxygen demanding substances at levels which would have reasonable potential to violate numeric criteria. Therefore, no permit requirements for dissolved oxygen are necessary.

###### **(2) Temperature**

OAC 785:45-5-12(f)(2)(A) states "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 outside the mixing zone." Because no heat is added to the discharged wastewater, all discharges permitted by this Permit are expected to be at or near ambient temperature. Therefore, no permit requirements for temperature are necessary.

**(3) pH**

OAC 785:45-5-12(f)(3) states "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." This requirement is applied to all discharges regulated by this Permit.

**(4) Oil and Grease**

OAC 785:45-5-12(f)(4) states "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 on or in the water," and "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."

Therefore, the following narrative requirement will be included 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 or which cause deleterious effects to the biota."

**(5) Biological Criteria**

OAC 785:45-5-12(f)(5) states "Aquatic life in all waterbodies with the beneficial use designation of Fish and Wildlife Propagation (excluding waters designated 'Trout, put-and-take') shall not exhibit degraded conditions," based on "diversity, similarity, community structure, species tolerance, trophic structure, dominant species, indices of biotic integrity, indices of well-being, or other measures." The RP screening results and other numerical and narrative limitations and requirements should serve to ensure that the wastewater discharged under this Permit does not cause such degradation of receiving waterbodies.

**(6) Toxic Substances**

OAC 785:45-5-12(f)(6) states "Surface waters of the state shall not exhibit acute toxicity and shall not exhibit chronic toxicity outside the chronic regulatory mixing zone." The RP screening results indicate that no limits are necessary to ensure the maintenance of this beneficial use. The Permit will include a requirement for permitted facilities to conduct one-time sampling for the parameters listed in Section V.B.3 of this Fact Sheet, which will allow reasonable potential calculations to be performed in the next General Permit renewal to assess if limits or monitoring requirements are necessary.

Where actual or potential exceedances of State water quality criteria for the Fish and Wildlife Propagation beneficial use are determined to be the result of a facility's discharge to a receiving water(s), 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 Fish and Wildlife Propagation beneficial use of the receiving waterbody.

**(7) Turbidity**

The Permit will include a daily maximum limit of 70 mg/l for total suspended solids. This limit should adequately control turbidity in the wastewater discharged from permitted facilities.

**d. Agriculture (OAC 785:45-5-13)**

OAC 785:45-5-13(a) states "The surface waters of the State shall be maintained so that toxicity does not inhibit continued ingestion by livestock or irrigation of crops." Total dissolved solids (TDS), sulfate, and chloride criteria are established to protect this beneficial use.

Based on information contained in the Development Document, the wastewater discharges authorized under this General Permit are not expected to contain dissolved solids at high enough concentrations to cause criteria violations in receiving waterbodies.

Where actual or potential exceedances of State water quality criteria for the Agriculture beneficial use are determined to be the result of a facility's discharge to a receiving water(s), 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 Agriculture beneficial use of the receiving waterbody.

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

OAC 785:45-5-16(a) states "Primary Body Contact Recreation involves direct body contact with the water where a possibility of ingestion exists. In these cases the water 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." This will be included as a narrative requirement in the Permit.

Because the Permit will not authorize the discharge of sanitary wastewater, in inclusion of bacteriological limits and monitoring is not necessary.

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

OAC 785:45-5-17(d) states "Waters so designated shall be maintained free from human pathogens in numbers which may produce adverse health effects in humans." As with the Primary Body Contact Recreation Use, the inclusion of bacteriological limits and monitoring is not necessary because the Permit will not authorize the discharge of sanitary wastewater.

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

OAC 785:45-5-18 states "This beneficial use is generally more dependent upon quantity than quality of water." Therefore, permit requirements are not necessary to maintain this beneficial use.

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

**(1) General**

OAC 785:45-5-19 states "To be aesthetically enjoyable, the surface waters of the state must be free from floating materials and suspended substances that produce objectionable color and turbidity," and "the water must also 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."

Therefore, the following narrative requirement will be included 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."

**(2) Nutrients**

The Development Document does not indicate that nutrients are expected to be present in mine drainage in significant amounts. Therefore, permit requirements are not necessary to limit the discharge of nutrients.



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

OAC 785:45-5-20(a) states "The surface waters of the state shall be maintained so that toxicity does not inhibit ingestion of fish and shellfish by humans." The RP screening results indicate that no limits are necessary to ensure the maintenance of this beneficial use. The Permit will include a requirement for permitted facilities to conduct one-time sampling for the parameters listed in Section V.B.3 of this Fact Sheet, which will allow reasonable potential calculations to be performed in the next General permit renewal to assess if limits or monitoring requirements are necessary.

Where actual or potential exceedances of State water quality criteria for the Fish Consumption beneficial use are determined to be the result of a facility's discharge to a receiving water(s), 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 Fish Consumption beneficial use of the receiving waterbody.

**C. 303(D) LISTING STATUS****1. Discharges to 303(d)-Listed Receiving Waterbodies**

Discharges to waterbodies listed on Oklahoma's 303(d) list may be covered under this Permit, provided that one or more of the following requirements is satisfied:

- The impairment is not due to turbidity, pH, arsenic, barium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, or zinc.
- A Total Maximum Daily Load (TMDL) has not been completed for the receiving waterbody;
- The completed TMDL indicates that limits more stringent than those already in this Permit are not required.

If none of these conditions are satisfied, then the discharge to the 303(d)-listed waterbody will not be authorized under this General Permit, and any permittee performing or seeking to perform such a discharge will be required to apply for an individual discharge permit.

In cases where a receiving waterbody is impaired due to one or more of the metals listed above, an Authorization under this General Permit will include limits based on the most stringent water quality criteria for the receiving waterbody based on the beneficial uses of the waterbody. The most stringent criterion will be applied as an end-of-pipe daily maximum limit in the Authorization. Monitoring shall be performed once per week for discharges from active mining areas and/or coal preparation plants, and once per month for discharges from post-mining operations.

## Candidate Criteria

Parameter	Beneficial Use				
	Public and Private Water Supply <sup>(1), (2)</sup>		Fish and Wildlife Propagation <sup>(1), (2)</sup>		Fish Consumption <sup>(1), (2)</sup>
	Raw Water	Human Health/Fish Flesh and Water	Aquatic Toxicity		Human Health/Fish Flesh
			Acute	Chronic	
Arsenic, total	40	---	340	150	205
Barium, total	1,000	---	---	---	---
Cadmium, total	20	14.49	(3)	(3)	84.13
Chromium, total <sup>(4)</sup>	50	166.3	---	---	3,365
Chromium III <sup>(4)</sup>	---	---	(3)	(3)	---
Chromium VI <sup>(4)</sup>	---	---	16.29	11.43	---
Copper, total	1,000	---	(3)	(3)	---
Lead, total	100	5	(3)	(3)	25
Mercury, total	2.0	0.05	2.4	1.302	0.051
Nickel, total	---	607.2	(3)	(3)	4,583
Selenium, total	10	---	20	5	---
Silver, total	50	104.8	(4)	---	64,620
Thallium, total	---	0.24	1,400	---	0.47
Zinc, total	5,000	---	(4)	---	---

(1) All criteria are in µg/l.

(2) Should Oklahoma's Water Quality Standards be modified to change any of the above criteria, any Authorization issued after such a change shall base limitations off of the criteria listed in Oklahoma's Water Quality Standards rather than those listed in the above table.

(3) Aquatic toxicity criteria for these parameters are hardness-based. Because many of the existing discharges authorized under the previous General Permit are to intermittent/ephemeral unnamed tributaries, the collection of site-specific hardness data for the calculation of aquatic toxicity criteria is not likely to be feasible. Therefore, segment-averaged hardness values in OAC 785:46 Appendix B shall be utilized to determine appropriate aquatic toxicity criteria when the criteria are hardness-based.

(4) Because chromium criteria apply to total, trivalent, and hexavalent chromium, facilities that are required to test for total chromium shall also test for hexavalent chromium. The amount of trivalent chromium is calculated as the difference between total chromium and hexavalent chromium.

## Hardness-based Criteria

Parameter	Acute Toxicity Criterion (µg/l) <sup>(1)</sup>	Chronic Toxicity Criterion (µg/l) <sup>(1)</sup>
Cadmium, total	$e^{(1.0166 \times \ln(\text{hardness}) - 5.924)}$	$e^{(0.7409 \ln \times (\text{hardness}) - 4.719)}$
Chromium III	$e^{(0.819 \times \ln(\text{hardness}) + 5.7256)}$	$e^{(0.819 \times \ln(\text{hardness}) + 0.6848)}$
Copper, total	$e^{(0.9422 \times \ln(\text{hardness}) - 1.3844)}$	$e^{(0.8545 \times \ln(\text{hardness}) - 1.386)}$
Lead, total	$e^{(1.273 \times \ln(\text{hardness}) - 1.46)}$	$e^{(1.273 \ln \times (\text{hardness}) - 4.705)}$
Nickel, total	$e^{(0.846 \times \ln(\text{hardness}) + 2.255)}$	$e^{(0.846 \times \ln(\text{hardness}) + 0.0584)}$
Silver, total	$e^{(1.72 \times \ln(\text{hardness}) - 6.59)}$	---
Zinc, total	$e^{(0.8473 \times \ln(\text{hardness}) + 0.884)}$	---

(1) Should Oklahoma's Water Quality Standards be modified to change any of the above equations, any Authorization issued after such a change shall base criteria and limitations off of the equations listed in Oklahoma's Water Quality Standards rather than those listed in the above table.

In cases where the impairment is due to pH and/or to turbidity, the Authorization will not contain limits any more stringent than the technology-based limitations for TSS and the water quality-based pH limitation of 6.5 – 9.0. If a completed TMDL for turbidity and/or for pH indicates that more stringent limits are needed, the facility will be required to apply for an individual discharge permit.

## **2. Proximity of Discharges to 303(d)-Listed Waterbodies**

If a facility discharges to a segment of a receiving waterbody that is not itself listed as impaired, but is no more than one mile upstream of an impaired segment, then the discharge will be treated as though it were to the impaired segment.

If a facility discharges to a segment of a receiving waterbody that is not itself listed as impaired, but is between one and five miles upstream of an impaired segment, then the Authorization shall include effluent monitoring for the cause of impairment for the affected outfall(s). In this event, monitoring shall be performed at a frequency of once per month.

No additional requirements will apply to discharges to receiving waterbodies further than five miles upstream of an impaired waterbody.

## **3. Reopener Clause**

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

## **D. DISCHARGE PROXIMITY TO PUBLIC WATER SUPPLY INTAKES**

This Permit shall not apply to any outfalls from new or existing facilities that discharge to a waterbody within five stream miles upstream or within one lake mile of a public water supply surface intake. Any existing facility that discharges through an outfall within these distances to a public water supply surface intake must apply for an individual permit, either for the entire facility or for the outfall(s) in question.

## **E. ENDANGERED SPECIES ACT**

For existing facilities, DEQ has concluded that the issuance of this Permit is unlikely to adversely affect any endangered or threatened species or critical habitat. The effluent limitations established in the Permit ensure protection of aquatic life and maintenance of the receiving waterbodies' beneficial uses.

For new facilities, if the discharge is to an area designated as sensitive by the U.S. Fish and Wildlife Service (USFWS), the facility will not be eligible for an Authorization under this Permit. Also, existing facilities that discharge into an area designated as sensitive by the USFWS that propose a new outfall or an increase in flow to an existing outfall will not be eligible for an Authorization under this Permit.

## **F. 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 Oklahoma's Water Quality Standards prohibits an increase in loading that would impair or further impair an existing use. In addition, the policy prohibits degradation of Outstanding Resource Waters (ORW) and High Quality Waters (HQW), even if existing and designated uses would still be attained. To ensure that these requirements are met, discharge of wastewater to streams identified as ORW, HQW, Appendix B Waters, or 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.

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.

## VI. DRAFT PERMIT LIMITS AND OTHER REQUIREMENTS

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

#### 1. Acid/Ferruginous Mine Drainage and Coal Preparation Plants

The effluent limitations listed in the following tables 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 the drainage of the site is completed.

##### a. Limited Parameters

Parameter <sup>(1)</sup>	Technology/BPJ Basis		Water Quality Basis		General Permit	
	Monthly Avg.	Daily Max	Monthly Avg.	Daily Max	Monthly Avg.	Daily Max
Flow (mgd)	Report	Report	---	---	Report	Report
Iron, total	3.0	6.0	---	---	3.0	6.0
Manganese, total	2.0	4.0	---	---	2.0	4.0
Total Suspended Solids	35	70	---	---	35	70
pH (s.u.)	6.0 – 9.0		6.5 – 9.0		6.5 – 9.0	

<sup>(1)</sup> Units are mg/l unless otherwise indicated.

##### b. Monitoring Frequencies and Sample Types

Parameter	Measurement Frequency <sup>(1)</sup>	Sample Type
Flow	1/Week	Estimate
Iron, total	1/Week	Grab
Manganese, total	1/Week	Grab
Total Suspended Solids	1/Week	Grab
pH	1/Week	Grab

<sup>(1)</sup> When discharging.

#### 2. Alkaline Mine Drainage

The effluent limitations listed in the following tables 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 the drainage of the site is completed.

**a. Limited Parameters**

Parameter <sup>(1)</sup>	Technology/BPJ Basis		Water Quality Basis		General Permit	
	Monthly Avg.	Daily Max	Monthly Avg.	Daily Max	Monthly Avg.	Daily Max
Flow (mgd)	Report	Report	---	---	Report	Report
Iron, total	3.0	6.0	---	---	3.0	6.0
Total Suspended Solids	35	70	---	---	35	70
pH (s.u.)	6.0 – 9.0		6.5 – 9.0		6.5 – 9.0	

<sup>(1)</sup> Units are mg/l unless otherwise indicated.

**b. Monitoring Frequencies and Sample Types**

Parameter	Measurement Frequency <sup>(1)</sup>	Sample Type
Flow	1/Week	Estimate
Iron, total	1/Week	Grab
Total Suspended Solids	1/Week	Grab
pH	1/Week	Grab

<sup>(1)</sup> When discharging.

**B. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS FOR POST-MINING OPERATIONS****1. Limited Parameters**

The effluent limitations listed in the following table shall become effective upon notification to 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 DEQ to the SMCRA Phase II performance standards have been met for the sedimentation pond associated with the outfall.

Parameter	Technology/BPJ Basis		Water Quality Basis		General Permit	
	Monthly Avg.	Daily Max	Monthly Avg.	Daily Max	Monthly Avg.	Daily Max
Flow (mgd)	Report	Report	---	---	Report	Report
Settleable Solids (ml/l)	---	0.5	---	---	---	0.5
pH (s.u.)	6.0 – 9.0		6.5 – 9.0		6.5 – 9.0	

**2. Monitoring Frequencies and Sample Types**

Parameter	Measurement Frequency <sup>(1)</sup>	Sample Type
Flow	1/Month	Estimate
Settleable Solids	1/Month	Grab
pH	1/Month	Grab

<sup>(1)</sup> When discharging.

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

#### 1. Limited Parameters

Alternative effluent limitations for the 10-year, 24-hour precipitation event shall become effective when the sedimentation pond associated with any of the proposed outfalls is constructed and shall remain in effect until 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 volume of discharge caused by precipitation within a 24-hour period that is greater than the amount specified in the Authorization shall comply with the following limitations instead of the otherwise applicable limitations.

Parameter	Technology/BPJ Basis		Water Quality Basis		General Permit	
	Monthly Avg.	Daily Max	Monthly Avg.	Daily Max	Monthly Avg.	Daily Max
Flow (mgd)	Report	Report	---	---	Report	Report
Rainfall (inches)	---	---	---	---	Report	Report
pH (s.u.)	6.0 – 9.0		6.5 – 9.0		6.5 – 9.0	

<sup>(1)</sup> The previous General Permit's Fact Sheet indicated that the final limit was 6.0 – 9.0, but the Permit itself included a limit of 6.5 – 9.0. The limit of 6.5 – 9.0 is required by Oklahoma's Water Quality Standards, and as such is the limit implemented in the permit for all discharges from all outfalls.

#### 2. Monitoring Frequencies and Sample Types

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

### D. ADDITIONAL LIMITATIONS AND MONITORING REQUIREMENTS FOR DISCHARGES TO IMPAIRED WATERBODIES

#### 1. Limited Parameters

Discharges directly to or near to receiving waterbodies listed as impaired due to arsenic, barium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, and/or zinc are subject to additional limitations and monitoring requirements. These limitations are determined based on the beneficial uses for the receiving waterbody. Authorization limitations shall be the most stringent criteria for the relevant parameter(s) for the receiving waterbody. All criteria shall be applied as daily maximum limitations, and shall remain in effect until SMCRA Phase I Bond Release is complete for the sedimentation pond associated with that outfall.

Limitations and monitoring requirements shall be determined in accordance with Section V.C of this Fact Sheet.

**2. Monitoring Frequencies and Sample Types**

Parameter	Measurement Frequency <sup>(1)</sup>	Sample Type
Numerical Limitation	1/Week <sup>(2)</sup>	Grab
	1/Month <sup>(3)</sup>	
Effluent Monitoring	1/Month	Grab

<sup>(1)</sup> Discharges due to precipitation greater than the 10-year, 24-hour precipitation event are not exempt from these monitoring requirements.

<sup>(2)</sup> Discharges from active mining areas and/or coal preparation plants.

<sup>(3)</sup> Discharges from post-mining areas.

**VII. SUMMARY OF CHANGES FROM PREVIOUS PERMIT**

- Reasonable potential analysis added based on results submitted by permittees to fulfill the requirements of the compliance schedule in the previous General Permit. No new permit limitations were determined to be needed based on this analysis.
- Compliance schedule requirement from previous General Permit retained and expanded to apply to copper, nickel, selenium, silver, thallium, and zinc. Manganese removed from compliance schedule, as Oklahoma has no water quality criteria for manganese.
- Requirements concerning discharges to impaired waterbodies revised; such dischargers are now allowed, but are subject to additional limitations and monitoring requirements.
- Condition added to the General Permit preventing it from covering new or existing discharges to waterbodies within five stream miles or within one lake mile of a public water supply surface intake.

**VIII. ADMINISTRATIVE RECORD****A. DEQ RECORDS**

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

**B. CLEAN WATER ACT CITATIONS**

- Section 301, 303, and 402(a).

**C. 40 CFR CITATIONS**

- 40 CFR, in particular, Parts 122, 124, 136, and 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 Pollutant Discharge Elimination System Standards (DEQ)
- OAC 252:690, Water Quality Standards Implementation (DEQ)
- OAC 785:45, Oklahoma's Water Quality Standards (OWRB)
- OAC 785:46, Implementation of Oklahoma's Water Quality Standards (OWRB)
- Oklahoma Continuing Planning Process (CPP) Document (DEQ)

**E. MISCELLANEOUS**

- Development Document for Effluent Limitations Guidelines and Standards for the Coal Mining Point Source Category, EPA 440/1-82/057

**IX. 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 124.59.

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