

**AUTHORIZATION TO DISCHARGE WASTEWATER UNDER  
THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM AND  
THE ARKANSAS WATER AND AIR POLLUTION CONTROL ACT**

In accordance with the provisions of the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. 8-4-101 et seq.), and the Clean Water Act (33 U.S.C. § 1251 et seq.),

Southwestern Electric Power Company  
Flint Creek Power Plant

is authorized to discharge once-through cooling water; low volume wastewater consisting of demineralizer process wastewater, lab drains, boiler blowdown, filter backwash, truck washwater, various plant washwaters, plant floor drains, stack seal water overflow, hydrovactor wastewater, and reclaim basin water; coal pile runoff; treated combustion residual leachate (ash landfill leachate); treated municipal wastewater from the City of Gentry; stormwater from various plant areas; and bottom ash transport water from a facility located as follows: 21797 SWEPCO Plant Road, Gentry, AR 72734, approximately 3 miles southwest of Gentry in Benton County, Arkansas.

Facility Coordinates: Latitude: 36° 15' 24.703" N; Longitude: 94° 30' 59.407" W

Discharge is to receiving waters named:

Outfall 001: Little Flint Creek, thence to Flint Creek in Segment 3J of the Arkansas River Basin.

Outfalls 101 and 401: SWEPCO Reservoir, thence to Little Flint Creek, thence to Flint Creek in Segment 3J of the Arkansas River Basin.

The outfalls are located at the following coordinates:

Outfall 001: Latitude: 36° 14' 0.366" N; Longitude: 94° 33' 05.944" W

Outfall 101: Latitude: 36° 14' 57.55" N; Longitude: 94° 31' 34.79" W

Outfall 401: Latitude: 36° 15' 26.97" N; Longitude: 94° 31' 33.10" W

Discharge shall be in accordance with effluent limitations, monitoring requirements, and other conditions set forth in this permit. Per Part III.D.10, the permittee must re-apply 180 days prior to the expiration date below for permit coverage to continue beyond the expiration date.

Effective Date: November 1, 2020<sup>1</sup>  
Minor Modification Effective Date: April 30, 2021<sup>2</sup>  
Major Modification Effective Date: November 1, 2021  
Expiration Date: October 31, 2025

10/20/21

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Alan J. York  
Associate Director, Office of Water Quality  
Arkansas Department of Energy and Environment  
Division of Environmental Quality

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Modification Issue Date

<sup>1</sup> This Permit was the subject of an appeal, APC&EC Docket Number 20-003-P

<sup>2</sup> This minor modification was an administrative amendment to specify that in Part I, Section A1 of the Permit the reporting units for Mercury from Outfall 001 are micrograms/liter (µg/l). This change prevents an error when entering the numeric value in NetDMR.

**PART I  
 PERMIT REQUIREMENTS**

**SECTION A1. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS: OUTFALL 001 – reservoir discharge**

During the period beginning on the effective date and lasting until the date of expiration, the permittee is authorized to discharge from Outfall 001. Such discharges shall be limited and monitored by the permittee as specified below as well as Parts II and III. See Part IV for all definitions and calculations.

<u><b>Effluent Characteristics</b></u>	<u><b>Discharge Limitations</b></u>				<u><b>Monitoring Requirements</b></u>	
	Mass (lbs/day, unless otherwise specified)		Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.		
Flow <sup>1</sup>	N/A	N/A	Report, MGD	Report, MGD	continuous	record
pH	N/A	N/A	<u>Minimum</u> 6.0 s.u.	<u>Maximum</u> 9.0 s.u.	once/week	grab

<sup>1</sup> There shall be a daily average flow of at least 2 cfs (1.29 MGD) maintained through spillway overflow, seepage, or pumping into Little Flint Creek. See note below.

Oil, grease, or petrochemical substances shall not be present in receiving waters to the extent that they produce globules or other residue or any visible, colored film on the surface or coat the banks and/or bottoms of the waterbody or adversely affect any of the associated biota. There shall be no visible sheen as defined in Part IV of this permit.

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge during the entire monitoring period. Samples for pH shall be taken at the discharge weir located at the property line in Little Flint Creek at the following monitoring coordinates: Latitude: 36° 14' 0.366" N; Longitude: 94° 33' 5.944" W. Monitoring of flow to verify the minimum 2 cfs flow in Little Flint Creek may be done at the above sampling location, or at the weir on the tributary to Little Flint Creek located at the following monitoring coordinates: Latitude: 36° 14' 9.53" N; Longitude: 94° 32' 46.70" W.

**SECTION A2. INTERIM EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS<sup>1</sup>:** OUTFALL 101 – low volume wastewater consisting of demineralizer process wastewater, lab drains, boiler blowdown, filter backwash, truck washwater, various plant washwaters, plant floor drains, stack seal water overflow, hydrovactor wastewater, and reclaim basin water; coal pile runoff; treated combustion residual leachate (ash landfill leachate); treated municipal wastewater from the City of Gentry<sup>2</sup>; stormwater from various plant areas; and bottom ash transport water<sup>3</sup>

During the period beginning on the effective date, and lasting until November 29, 2022, the permittee is authorized to discharge from Outfall 101. Such discharges shall be limited and monitored by the permittee as specified below as well as Parts II and III. See Part IV for all definitions and calculations.

<u><b>Effluent Characteristics</b></u>	<u><b>Discharge Limitations</b></u>				<u><b>Monitoring Requirements</b></u>	
	Mass (lbs/day, unless otherwise specified)		Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.		
Flow	N/A	N/A	Report, MGD	Report, MGD	continuous	record
Total Suspended Solids (TSS)	N/A	N/A	31.8	92.6	once/week	grab
Oil and Grease (O&G)	N/A	N/A	10	15	once/2 months	grab
pH	N/A	N/A	<u>Minimum</u> 6.0 s.u.	<u>Maximum</u> 9.0 s.u.	once/week	grab
Chronic WET Testing <sup>5</sup>						
<u><b><i>Pimephales promelas</i> (Chronic)<sup>5</sup></b></u> Pass/Fail Lethality (7-day NOEC) TLP6C Pass/Fail Growth (7-day NOEC) TGP6C Survival (7-day NOEC) TOP6C Coefficient of Variation (Growth) TQP6C Growth (7-day NOEC) TPP6C Pass/Fail Retest 1 (7-day NOEC) 22418 Pass/Fail Retest 2 (7-day NOEC) 22419 Pass/Fail Retest 3 (7-day NOEC) 51444	N/A		<u>7-Day Minimum</u> Report (Pass=0/Fail=1) Report (Pass=0/Fail=1) Report % Report % Report %		once/quarter once/quarter once/quarter once/quarter once/month <sup>6</sup> once/month <sup>6</sup> once/month <sup>6</sup>	composite composite composite composite composite composite composite
<u><b><i>Ceriodaphnia dubia</i> (Chronic)<sup>5</sup></b></u> Pass/Fail Lethality (7-day NOEC) TLP3B Pass/Fail Reproduction (7-day NOEC) TGP3B Survival (7-day NOEC) TOP3B Coefficient of Variation (Reproduction) TQP3B Reproduction (7-day NOEC) TPP3B Pass/Fail Retest 1 (7-day NOEC) 22415 Pass/Fail Retest 2 (7-day NOEC) 22416 Pass/Fail Retest 3 (7-day NOEC) 51443			<u>7-Day Minimum</u> Report (Pass=0/Fail=1) Report (Pass=0/Fail=1) Report % Report % Report %			

<sup>1</sup> Subject to the conditions in Part II.23.C.

<sup>2</sup> The City of Gentry discharges treated municipal effluent, subject to the limitations of its NPDES Permit No. AR0020184, into Flint Creek Power Plant’s wastewater pond. Flint Creek Power Plant bears no responsibility for the quality of the City of Gentry’s effluent or for any treatment of that effluent.

<sup>3</sup> See Part IB and II.23.

<sup>4</sup> [Reserved]

<sup>5</sup> See Part II.6 (WET Testing Requirements).

<sup>6</sup> **CONDITIONAL REPORTING:** Use only if conducting retests due to a test failure (demonstration of significant toxic effects at or below the critical dilution). If testing on a quarterly basis, the permittee may substitute one of the retests in lieu of one routine toxicity test. If retests are not required, Report NODI=9 (Conditional Monitoring - Not Required This Period) under retest parameters (reported on a quarterly DMR). This condition applies to *P. promelas* and *C. dubia*.

Oil, grease, or petrochemical substances shall not be present in receiving waters to the extent that they produce globules or other residue or any visible, colored film on the surface or coat the banks and/or bottoms of the waterbody or adversely affect any of the associated biota. There shall be no visible sheen as defined in Part IV of this permit.

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge during the entire monitoring period. Samples shall be taken after the final treatment unit, prior to the receiving stream.

**SECTION A3. FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS<sup>1</sup>:** OUTFALL 101 – low volume wastewater consisting of demineralizer process wastewater, lab drains, boiler blowdown, filter backwash, truck washwater, various plant washwaters, plant floor drains, stack seal water overflow, hydrovactor wastewater, and reclaim basin water; coal pile runoff; treated combustion residual leachate (ash landfill leachate); treated municipal wastewater from the City of Gentry<sup>2</sup>; and stormwater from various plant areas<sup>3</sup>

During the period beginning November 30, 2022 and lasting until the date of expiration, the permittee is authorized to discharge from Outfall 101. Such discharges shall be limited and monitored by the permittee as specified below as well as Parts II and III. See Part IV for all definitions and calculations.

<u><b>Effluent Characteristics</b></u>	<u><b>Discharge Limitations</b></u>				<u><b>Monitoring Requirements</b></u>	
	Mass (lbs/day, unless otherwise specified)		Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.		
Flow	N/A	N/A	Report, MGD	Report, MGD	continuous	record
Total Suspended Solids (TSS)	N/A	N/A	31.8	92.2	once/week	grab
Oil and Grease (O&G)	N/A	N/A	10	15	once/2 months	grab
pH	N/A	N/A	<u>Minimum</u> 6.0 s.u.	<u>Maximum</u> 9.0 s.u.	once/week	grab
Chronic WET Testing <sup>5</sup>						
<u><b><i>Pimephales promelas</i> (Chronic)<sup>5</sup></b></u> Pass/Fail Lethality (7-day NOEC) TLP6C Pass/Fail Growth (7-day NOEC) TGP6C Survival (7-day NOEC) TOP6C Coefficient of Variation (Growth) TQP6C Growth (7-day NOEC) TPP6C Pass/Fail Retest 1 (7-day NOEC) 22418 Pass/Fail Retest 2 (7-day NOEC) 22419 Pass/Fail Retest 3 (7-day NOEC) 51444	N/A		<u>7-Day Minimum</u> Report (Pass=0/Fail=1) Report (Pass=0/Fail=1) Report % Report % Report %		once/quarter once/quarter once/quarter once/quarter once/month <sup>6</sup> once/month <sup>6</sup> once/month <sup>6</sup>	composite composite composite composite composite composite composite
<u><b><i>Ceriodaphnia dubia</i> (Chronic)<sup>5</sup></b></u> Pass/Fail Lethality (7-day NOEC) TLP3B Pass/Fail Reproduction (7-day NOEC) TGP3B Survival (7-day NOEC) TOP3B Coefficient of Variation (Reproduction) TQP3B Reproduction (7-day NOEC) TPP3B Pass/Fail Retest 1 (7-day NOEC) 22415 Pass/Fail Retest 2 (7-day NOEC) 22416 Pass/Fail Retest 3 (7-day NOEC) 51443			<u>7-Day Minimum</u> Report (Pass=0/Fail=1) Report (Pass=0/Fail=1) Report % Report % Report (Pass=0/Fail=1) Report (Pass=0/Fail=1) Report (Pass=0/Fail=1)			

<sup>1</sup> Subject to the conditions in Part II.23.C.

<sup>2</sup> The City of Gentry discharges treated municipal effluent, subject to the limitations of its NPDES Permit No. AR0020184, into Flint Creek Power Plant’s wastewater pond. Flint Creek Power Plant bears no responsibility for the quality of the City of Gentry’s effluent or for any treatment of that effluent.

<sup>3</sup> See Part IB and II.23.

<sup>4</sup> [Reserved]

<sup>5</sup> See Part II.6 (WET Testing Requirements).

<sup>6</sup> **CONDITIONAL REPORTING:** Use only if conducting retests due to a test failure (demonstration of significant toxic effects at or below the critical dilution). If testing on a quarterly basis, the permittee may substitute one of the retests in lieu of one routine toxicity test. If retests are not required, Report NODI=9 (Conditional Monitoring - Not Required This Period) under retest parameters (reported on a quarterly DMR). This condition applies to *P. promelas* and *C. dubia*.

Oil, grease, or petrochemical substances shall not be present in receiving waters to the extent that they produce globules or other residue or any visible, colored film on the surface or coat the banks and/or bottoms of the waterbody or adversely affect any of the associated biota. There shall be no visible sheen as defined in Part IV of this permit.

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge during the entire monitoring period. Samples shall be taken after the final treatment unit, prior to the receiving stream.

**SECTION A4. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS: OUTFALL 401 – once-through cooling water**

During the period beginning on the effective date and lasting until the date of expiration, the permittee is authorized to discharge from Outfall 401. Such discharges shall be limited and monitored by the permittee as specified below as well as Parts II and III. See Part IV for all definitions and calculations.

<u><b>Effluent Characteristics</b></u>	<u><b>Discharge Limitations</b></u>				<u><b>Monitoring Requirements</b></u>	
	Mass (lbs/day, unless otherwise specified)		Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.		
Flow	N/A	N/A	450 MGD	450 MGD	continuous	record <sup>1</sup>
Free Available Chlorine <sup>2</sup>	62.6	156.4	0.2	0.5	twice/month	grab <sup>3</sup>
Total Residual Chlorine (TRC) <sup>2</sup>	N/A	62.6	N/A	0.2 <sup>3</sup>	twice/month	grab <sup>4</sup>
Temperature <sup>5</sup>	N/A	N/A	N/A	129.2 °F	continuous	record
pH	N/A	N/A	<u>Minimum</u> 6.0 s.u.	<u>Maximum</u> 9.0 s.u.	twice/month	grab
Chronic WET Testing <sup>6</sup>						
<b><u>Pimephales promelas (Chronic)</u><sup>6</sup></b> Pass/Fail Lethality (7-day NOEC) TLP6C Pass/Fail Growth (7-day NOEC) TGP6C Survival (7-day NOEC) TOP6C Coefficient of Variation (Growth) TQP6C Growth (7-day NOEC) TPP6C Pass/Fail Retest 1 (7-day NOEC) 22418 Pass/Fail Retest 2 (7-day NOEC) 22419 Pass/Fail Retest 3 (7-day NOEC) 51444	N/A		<u>7-Day Minimum</u> Report (Pass=0/Fail=1) Report (Pass=0/Fail=1) Report % Report % Report % Report (Pass=0/Fail=1) Report (Pass=0/Fail=1) Report (Pass=0/Fail=1)		once/quarter once/quarter once/quarter once/quarter once/month <sup>7</sup> once/month <sup>7</sup> once/month <sup>7</sup>	composite composite composite composite composite composite composite
<b><u>Ceriodaphnia dubia (Chronic)</u><sup>6</sup></b> Pass/Fail Lethality (7-day NOEC) TLP3B Pass/Fail Reproduction (7-day NOEC) TGP3B Survival (7-day NOEC) TOP3B Coefficient of Variation (Reproduction) TQP3B Reproduction (7-day NOEC) TPP3B Pass/Fail Retest 1 (7-day NOEC) 22415 Pass/Fail Retest 2 (7-day NOEC) 22416 Pass/Fail Retest 3 (7-day NOEC) 51443			<u>7-Day Minimum</u> Report (Pass=0/Fail=1) Report (Pass=0/Fail=1) Report % Report % Report % Report (Pass=0/Fail=1) Report (Pass=0/Fail=1) Report (Pass=0/Fail=1)			

<sup>1</sup> Flow measurements may be calculated using pump records.

<sup>2</sup> Chlorine shall not be discharged from any single generating unit for more than 2 hours per day (see Part II.9).

<sup>3</sup> Chlorine shall be measured within fifteen (15) minutes of sampling.

<sup>4</sup> Sample must be representative of periods of chlorination.

<sup>5</sup> Temperature may be measured at the condenser discharge. Daily maximum temperature shall be the highest daily flow-weighted temperature calculated for the month (see Part II.22).

<sup>6</sup> See Part II.6 (WET Testing Requirements).

<sup>7</sup> **CONDITIONAL REPORTING:** Use only if conducting retests due to a test failure (demonstration of significant toxic effects at or below the critical dilution). If testing on a quarterly basis, the permittee may substitute one of the retests in lieu of one routine toxicity test. If retests are not required, Report NODI=9 (Conditional Monitoring - Not Required This Period) under retest parameters (reported on a quarterly DMR). This condition applies to *P. promelas* and *C. dubia*.

Oil, grease, or petrochemical substances shall not be present in receiving waters to the extent that they produce globules or other residue or any visible, colored film on the surface or coat the banks and/or bottoms of the waterbody or adversely affect any of the associated biota. There shall be no visible sheen as defined in Part IV of this permit.

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge during the entire monitoring period. Samples shall be taken prior to discharge to SWEPCO Reservoir at the following monitoring coordinates: Latitude: 36° 15' 26.99" N; Longitude: 94° 31' 32.99" W.

**SECTION A5. ALTERNATE EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS<sup>1</sup>:** OUTFALL 101 – low volume wastewater consisting of demineralizer process wastewater, lab drains, boiler blowdown, filter backwash, truck washwater, various plant washwaters, plant floor drains, stack seal water overflow, hydrovactor wastewater, and reclaim basin water; coal pile runoff; treated combustion residual leachate (ash landfill leachate); treated municipal wastewater from the City of Gentry<sup>2</sup>; stormwater from various plant areas; and bottom ash transport water<sup>3</sup>

During the period beginning on the date of receipt by the Division of a complete Notice of Planned Participation (in accordance with Part II.23.D), and lasting until the date of expiration, the permittee is authorized to discharge from Outfall 101. Such discharges shall be limited and monitored by the permittee as specified below as well as Parts II and III. See Part IV for all definitions and calculations.

<u><b>Effluent Characteristics</b></u>	<u><b>Discharge Limitations</b></u>				<u><b>Monitoring Requirements</b></u>	
	Mass (lbs/day, unless otherwise specified)		Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.		
Flow	N/A	N/A	Report, MGD	Report, MGD	continuous	record
Total Suspended Solids (TSS)	N/A	N/A	31.8	92.6	once/week	grab
Oil and Grease (O&G)	N/A	N/A	10	15	once/2 months	grab
pH	N/A	N/A	<u>Minimum</u> 6.0 s.u.	<u>Maximum</u> 9.0 s.u.	once/week	grab
Chronic WET Testing <sup>5</sup>						
<u><b><i>Pimephales promelas</i> (Chronic)<sup>5</sup></b></u> Pass/Fail Lethality (7-day NOEC) TLP6C Pass/Fail Growth (7-day NOEC) TGP6C Survival (7-day NOEC) TOP6C Coefficient of Variation (Growth) TQP6C Growth (7-day NOEC) TPP6C Pass/Fail Retest 1 (7-day NOEC) 22418 Pass/Fail Retest 2 (7-day NOEC) 22419 Pass/Fail Retest 3 (7-day NOEC) 51444	N/A		<u>7-Day Minimum</u> Report (Pass=0/Fail=1) Report (Pass=0/Fail=1) Report % Report % Report %		once/quarter once/quarter once/quarter once/quarter once/month <sup>6</sup> once/month <sup>6</sup> once/month <sup>6</sup>	composite composite composite composite composite composite composite
<u><b><i>Ceriodaphnia dubia</i> (Chronic)<sup>5</sup></b></u> Pass/Fail Lethality (7-day NOEC) TLP3B Pass/Fail Reproduction (7-day NOEC) TGP3B Survival (7-day NOEC) TOP3B Coefficient of Variation (Reproduction) TQP3B Reproduction (7-day NOEC) TPP3B Pass/Fail Retest 1 (7-day NOEC) 22415 Pass/Fail Retest 2 (7-day NOEC) 22416 Pass/Fail Retest 3 (7-day NOEC) 51443			<u>7-Day Minimum</u> Report (Pass=0/Fail=1) Report (Pass=0/Fail=1) Report % Report % Report (Pass=0/Fail=1) Report (Pass=0/Fail=1) Report (Pass=0/Fail=1)			

<sup>1</sup> Subject to the conditions in Part II.23.C.

<sup>2</sup> The City of Gentry discharges treated municipal effluent, subject to the limitations of its NPDES Permit No. AR0020184, into Flint Creek Power Plant’s wastewater pond. Flint Creek Power Plant bears no responsibility for the quality of the City of Gentry’s effluent or for any treatment of that effluent.

<sup>3</sup> See Part IB and II.23.

<sup>4</sup> [Reserved]

<sup>5</sup> See Part II.6 (WET Testing Requirements).

<sup>6</sup> **CONDITIONAL REPORTING:** Use only if conducting retests due to a test failure (demonstration of significant toxic effects at or below the critical dilution). If testing on a quarterly basis, the permittee may substitute one of the retests in lieu of one routine toxicity test. If retests are not required, Report NODI=9 (Conditional Monitoring - Not Required This Period) under retest parameters (reported on a quarterly DMR). This condition applies to *P. promelas* and *C. dubia*.

Oil, grease, or petrochemical substances shall not be present in receiving waters to the extent that they produce globules or other residue or any visible, colored film on the surface or coat the banks and/or bottoms of the waterbody or adversely affect any of the associated biota. There shall be no visible sheen as defined in Part IV of this permit.

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge during the entire monitoring period. Samples shall be taken after the final treatment unit, prior to the receiving stream.

**SECTION B. PERMIT COMPLIANCE SCHEDULE**

1. Subject to the conditions in Part II.23 (see 2 below), compliance with the requirement for no discharge of Bottom Ash Transport Water generated on and after November 30, 2022, is required by November 30, 2022. The permittee shall submit progress reports addressing the progress towards attaining the aforementioned requirement according to the following schedule:

<b><u>ACTIVITY</u></b>	<b><u>DUE DATE</u></b>
Progress Report <sup>1,2</sup>	November 30, 2021
Achieve Final Compliance <sup>1,3</sup>	November 30, 2022

All progress reports must be submitted to the Division at the following address:

Enforcement Branch  
Office of Water Quality  
Division of Environmental Quality  
5301 Northshore Drive  
North Little Rock, AR 72118-5317

Information can also be submitted electronically via email at [water-enforcement-report@adeq.state.ar.us](mailto:water-enforcement-report@adeq.state.ar.us).

- <sup>1</sup> If the permittee is already in compliance with the requirement, only documentation demonstrating compliance with the requirement will be required for the progress report.
  - <sup>2</sup> If the permittee is not in compliance with the requirement by November 30, 2021, the initial Progress Report must detail how the permittee plans to come into compliance with the requirement within the remaining year of the interim period. Options must be provided that were considered along with which option was selected.
  - <sup>3</sup> A final Progress Report must be submitted no later than 30 days following the final compliance date and include a certification that the requirement was met on the effective date and is still being met.
2. If the permittee certifies to the Division that it will permanently cease combustion of coal by December 31, 2028, pursuant to the conditions in Part II.23.D, the permittee shall submit progress reports in accordance with the requirements in Parts II.23.D.iv and v, rather than in accordance with the requirements in IB.1 above (except that submissions shall still be made to the Enforcement Branch at the address or email noted above).

## **PART II OTHER CONDITIONS**

1. The operator of this wastewater treatment facility shall hold an Advanced Industrial license from the State of Arkansas in accordance with APC&EC Rule 3.
2. In accordance with 40 C.F.R. §§ 122.62 (a)(2) and 124.5, this permit may be reopened for modification or revocation and/or reissuance to require additional monitoring and/or effluent limitations when new information is received that was not available at the time of the permit issuance that would have justified the application of different permit conditions at the time of permit issuance. The new information includes (but is not limited to):
  - a. Actual or potential exceedance of State water quality criteria and/or narrative criteria are determined to be the result of the permittee's discharge(s) to a relevant water body;
  - b. A Total Maximum Daily Load (TMDL) is established or revised for the water body;
  - c. Effluent limitation guidelines (ELGs) applicable to the facility are promulgated or are revised in a way to make reopening the permit necessary to address compliance.

### 3. Other Specified Monitoring Requirements

The permittee may use alternative appropriate monitoring methods and analytical instruments other than as specified in Part I Section A of the permit without a major permit modification under the following conditions:

- The monitoring and analytical instruments are consistent with accepted scientific practices.
- The requests shall be submitted in writing to the Permits Branch of the Office of Water Quality of the DEQ for use of the alternate method or instrument.
- The method and/or instrument is in compliance with 40 C.F.R. § 136 or approved in accordance with 40 C.F.R. § 136.5.
- All associated devices are installed, calibrated, and maintained to ensure the accuracy of the measurements and are consistent with the accepted capability of that type of device. The calibration and maintenance shall be performed as part of the permittee's laboratory Quality Control/Quality Assurance program.

Upon written approval of the alternative monitoring method and/or analytical instruments, these methods or instruments must be consistently utilized throughout the monitoring period. DEQ must be notified in writing and the permittee must receive written approval from DEQ if the permittee decides to return to the original permit monitoring requirements.

4. [Reserved]
5. [Reserved]

## 6. WHOLE EFFLUENT TOXICITY TESTING (7-DAY CHRONIC NOEC FRESHWATER)

### A. SCOPE AND METHODOLOGY

- i. The permittee shall test the effluent for toxicity in accordance with the provisions in this section.

APPLICABLE TO FINAL OUTFALL:	101
REPORTED ON DMR AS FINAL OUTFALL:	101
CRITICAL DILUTION (%):	17
EFFLUENT DILUTION SERIES (%):	7, 10, 13, 17, 23
APPLICABLE TO FINAL OUTFALL:	401
REPORTED ON DMR AS FINAL OUTFALL:	401
CRITICAL DILUTION (%):	40
EFFLUENT DILUTION SERIES (%):	17, 23, 30, 40, 53
TESTING FREQUENCY:	once/quarter
COMPOSITE SAMPLE TYPE:	Defined in paragraph C.iv.a
TEST SPECIES/METHODS:	40 C.F.R. § 136

*Ceriodaphnia dubia* chronic static renewal survival and reproduction test, Method 1002.0, EPA-821-R-02-013, or the most recent update thereof. This test should be terminated when 60% of the surviving females in the control produce three broods or at the end of eight days, whichever comes first.

*Pimephales promelas* (Fathead minnow) chronic static renewal 7-day larval survival and growth test, Method 1000.0, EPA-821-R-02-013, or the most recent update thereof. A minimum of five (5) replicates with eight (8) organisms per replicate must be used in the control and in each effluent dilution of this test.

- ii. The NOEC (No Observed Effect Concentration) is herein defined as the greatest effluent dilution at and below which toxicity (lethal or sub-lethal) that is statistically different from the control (0% effluent) at the 95% confidence level does not occur. Chronic lethal test failure is defined as a demonstration of a statistically significant lethal effect at test completion to a test species at or below the critical dilution. Chronic sub-lethal test failure is defined as a demonstration of a statistically significant sub-lethal effect (i.e., growth or reproduction) at test completion to a test species at or below the critical dilution.
- iii. This permit may be reopened to require whole effluent toxicity limits, chemical specific effluent limits, additional testing, and/or other appropriate actions to address toxicity.

**B. PERSISTENT LETHAL and/or SUB-LETHAL EFFECTS**

The requirements of this subsection apply only when a toxicity test demonstrates significant lethal and/or sub-lethal effects at or below the critical dilution. The purpose of retests is to determine the duration of a toxic event. A test that meets all test acceptability criteria and demonstrates significant toxic effects does not need additional confirmation. Such testing cannot confirm or disprove a previous test result.

If a frequency reduction, as specified in Item F, has been granted and any valid test demonstrates significant lethal or sub-lethal effects to a test species at or below the critical dilution, the frequency of testing for that species is automatically increased to once per quarter for the life of the permit. In addition:

**i. Part I Testing Frequency Other Than Monthly**

- a. The permittee shall conduct a total of three (3) retests for any species that demonstrates significant toxic effects at or below the critical dilution. The retests shall be conducted monthly during the next three consecutive months. If testing on a quarterly basis, the permittee may substitute one of the retests in lieu of one scheduled toxicity test. A full report shall be prepared for each test required by this section in accordance with procedures outlined in Item D of this section and submitted with the period discharge monitoring report (DMR) to the permitting authority for review.
- b. **IF LETHAL EFFECTS HAVE BEEN DEMONSTRATED** If any of the retests demonstrates significant lethal effects at or below the critical dilution, the permittee shall initiate Toxicity Reduction Evaluation (TRE) requirements as specified in Item E of this section. The permittee shall notify DEQ in writing within 5 days of the failure of any retest, and the TRE initiation date will be the test completion date of the first failed retest. A TRE may also be required due to a demonstration of intermittent lethal effects at or below the critical dilution, or for failure to perform the required retests. A TRE required based on lethal effects should consider any sub-lethal effects as well.
- c. **IF SUB-LETHAL EFFECTS ONLY HAVE BEEN DEMONSTRATED** If any two of the three retests demonstrates significant sub-lethal effects at 75% effluent or lower, the permittee shall initiate the Sub-Lethal Toxicity Reduction Evaluation (TRE<sub>SL</sub>) requirements as specified in Item E of this section. The permittee shall notify DEQ in writing within 5 days of the failure of any retest, and the Sub-Lethal Effects TRE initiation date will be the test completion date of the first failed retest. A TRE may also be required for failure to perform the required retests.
- d. The provisions of Item B.i.a are suspended upon submittal of the TRE Action Plan.

### C. REQUIRED TOXICITY TESTING CONDITIONS

#### i. Test Acceptance

The permittee shall repeat a test, including the control and all effluent dilutions, if the procedures and quality assurance requirements defined in the test methods or in this permit are not satisfied, including the following additional criteria:

- a. The toxicity test control (0% effluent) must have survival equal to or greater than 80%.
- b. The mean number of *Ceriodaphnia dubia* neonates produced per surviving female in the control (0% effluent) must be 15 or more.
- c. 60% of the surviving control females must produce three broods.
- d. The mean dry weight of surviving Fathead minnow larvae at the end of the 7 days in the control (0% effluent) must be 0.25 mg per larva or greater.
- e. The percent coefficient of variation between replicates shall be 40% or less in the control (0% effluent) for: the young of surviving females in the *Ceriodaphnia dubia* reproduction test; the growth and survival endpoints of the Fathead minnow test.
- f. The percent coefficient of variation between replicates shall be 40% or less in the critical dilution, unless significant lethal or sub-lethal effects are exhibited for: the young of surviving females in the *Ceriodaphnia dubia* reproduction test; the growth and survival endpoints of the Fathead minnow test.
- g. If a test passes, yet the percent coefficient of variation between replicates is greater than 40% in the control (0% effluent) and/or in the critical dilution for: the young of surviving females in the *Ceriodaphnia dubia* reproduction test; the growth and survival endpoints of the Fathead minnow test, the test is determined to be invalid. A repeat test shall be conducted within the required reporting period of any test determined to be invalid.
- h. If a test fails, test failure may not be construed or reported as invalid due to a coefficient of variation value of greater than 40%.
- i. A Percent Minimum Significant Difference (PMSD) range of 13 - 47 for *Ceriodaphnia dubia* reproduction;
- j. A PMSD range of 12 - 30 for Fathead minnow growth.

#### ii. Statistical Interpretation

- a. For the *Ceriodaphnia dubia* survival test, the statistical analyses used to determine if there is a significant difference between the control and the critical dilution shall be Fisher's Exact Test as described in EPA/821/R-02-013 or the most recent update thereof.

- b. For the *Ceriodaphnia dubia* reproduction test and the Fathead minnow larval survival and growth test, the statistical analyses used to determine if there is a significant difference between the control and the critical dilution shall be in accordance with the methods for determining the No Observed Effect Concentration (NOEC) as described in EPA/821/R-02-013 or the most recent update thereof.
  - c. If the conditions of Test Acceptability are met in Item C.i above and the percent survival of the test organism is equal to or greater than 80% in the critical dilution concentration and all lower dilution concentrations, the test shall be considered to be a passing test, and the permittee shall report a survival NOEC of not less than the critical dilution for the DMR reporting requirements found in Item D below.
- iii. Dilution Water

- a. Dilution water used in the toxicity tests will be receiving water collected as close to the point of discharge as possible but unaffected by the discharge. The permittee shall substitute synthetic dilution water of similar pH, hardness, and alkalinity to the closest downstream perennial water for;
  - (1) toxicity tests conducted on effluent discharges to receiving water classified as intermittent streams; and
  - (2) toxicity tests conducted on effluent discharges where no receiving water is available due to zero flow conditions.
- b. If the receiving water is unsatisfactory as a result of instream toxicity (fails to fulfill the test acceptance criteria of Item C.i), the permittee may substitute synthetic dilution water for the receiving water in all subsequent tests provided the unacceptable receiving water test met the following stipulations:
  - (1) a synthetic dilution water control which fulfills the test acceptance requirements of Item C.i was run concurrently with the receiving water control;
  - (2) the test indicating receiving water toxicity has been carried out to completion (i.e., 7 days);
  - (3) the permittee includes all test results indicating receiving water toxicity with the full report and information required by Item D below; and
  - (4) the synthetic dilution water shall have a pH, hardness, and alkalinity similar to that of the receiving water or closest downstream perennial water not adversely affected by the discharge, provided the magnitude of these parameters will not cause toxicity in the synthetic dilution water.

iv. Samples and Composites

- a. The permittee shall collect a minimum of three flow-weighted composite samples from the outfall(s) listed at Item A.i above. Unless otherwise stated in this section, a composite sample for WET shall consist of a minimum of 12 subsamples gathered at equal time intervals during a 24-hour period.
- b. The permittee shall collect second and third composite samples for use during 24-hour renewals of each dilution concentration for each test. The permittee must collect the composite samples such that the effluent samples, on use, are representative of any periodic episode of chlorination, biocide usage or other potentially toxic substance discharged on a regular or intermittent basis.
- c. The permittee must collect all three flow-weighted composite samples within the monitoring period. Second and/or third composite samples shall not be collected into the next monitoring period; such tests will be determined to not meet either reporting period requirements. Monitoring period definitions are listed in Part IV.
- d. The permittee must collect the composite samples so that the maximum holding time for any effluent sample shall not exceed 72 hours. The permittee must have initiated the toxicity test within 36 hours after the collection of the last portion of the first composite sample. Samples shall be chilled to between 0 and 6 degrees Centigrade during collection, shipping, and/or storage.
- e. If the flow from the outfall(s) being tested ceases during the collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum number of effluent portions and the sample holding time are waived during that sampling period. However, the permittee must have collected an effluent composite sample volume during the period of discharge that is sufficient to complete the required toxicity tests with daily renewal of effluent. When possible, the effluent samples used for the toxicity tests shall be collected on separate days if the discharge occurs over multiple days. The effluent composite sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report required in Item D of this section.
- f. MULTIPLE OUTFALLS: If the provisions of this section are applicable to multiple outfalls, the permittee shall combine the composite effluent samples in proportion to the average flow from the outfalls listed in Item A.i. above for the day the sample was collected. The permittee shall perform the toxicity test on the flow-weighted composite of the outfall samples.
- g. If chlorination is part of the treatment process, the permittee shall not allow the sample to be dechlorinated at the laboratory. At the time of sample collection the permittee shall measure the TRC of the effluent. The measured concentration of TRC for each sample shall be included in the lab report submitted by the permittee.

#### D. REPORTING

- i. The permittee shall prepare a full report of the results of all tests conducted pursuant to this section in accordance with the Report Preparation Section of EPA/821/R-02-013, or the most current publication, for every valid or invalid toxicity test initiated whether carried to completion or not. The permittee shall retain each full report pursuant to the provisions of PART III.C.7 of this permit. The permittee shall submit full reports. For any test or retest which fails, is considered invalid or which is terminated early for any reason, the full report must be submitted for agency review.
- ii. A valid test for each species must be reported on the DMR during each reporting period specified in PART I of this permit. The full reports for all valid tests, invalid tests, repeat tests (for invalid tests), and retests (for tests previously failed) performed during the reporting period must be attached to the DMR for Agency review.
- iii. The permittee shall submit the results of each valid toxicity test and retest on the subsequent DMR for that reporting period in accordance with PART III.D.4 of this permit, as follows below. Only results of valid tests are to be reported on the DMR.
  - a. *Pimephales promelas* (Fathead minnow)
    - (1) If the No Observed Effect Concentration (NOEC) for survival is less than the critical dilution, enter a '1'; otherwise, enter a '0' for Parameter No. TLP6C
    - (2) Report the NOEC value for survival, Parameter No. TOP6C
    - (3) Report the NOEC value for growth, Parameter No. TPP6C
    - (4) If the NOEC for growth is less than the critical dilution, enter a '1'; otherwise, enter a '0' for Parameter No. TGP6C
    - (5) Report the highest (critical dilution or control) Coefficient of Variation for growth, Parameter No. TQP6C
    - (6) If conducting retests due to a test failure (demonstration of significant toxic effects at or below the critical dilution):
      - (A) Consecutive Monthly Retest 1: If the NOEC (lowest lethal or sub-lethal) for *P. promelas* is less than the critical dilution, enter a '1'; otherwise, enter a '0' under Parameter No. 22418 (reported on quarterly DMR);
      - (B) Consecutive Monthly Retest 2: If the NOEC (lowest lethal or sub-lethal) for *P. promelas* is less than the critical dilution, enter a '1'; otherwise, enter a '0' under Parameter No. 22419 (reported on quarterly DMR);
      - (C) Consecutive Monthly Retest 3: If the NOEC (lowest lethal or sub-lethal) for *P. promelas* is less than the critical dilution, enter a '1'; otherwise, enter a '0' under Parameter No. 51444 (reported on quarterly DMR);

- (D) If testing on a quarterly basis, the permittee may substitute one of the retests in lieu of one scheduled toxicity test;
- (E) If retests are not required, Report NODI=9 (Conditional Monitoring - Not Required This Period) under Parameter Nos. 22418, 22419, 51444 (reported on quarterly DMR)

b. *Ceriodaphnia dubia*

- (1) If the NOEC for survival is less than the critical dilution, enter a '1'; otherwise, enter a '0' for Parameter No. TLP3B
- (2) Report the NOEC value for survival, Parameter No. TOP3B
- (3) Report the NOEC value for reproduction, Parameter No. TPP3B
- (4) If the NOEC for reproduction is less than the critical dilution, enter a '1'; otherwise, enter a '0' for Parameter No. TGP3B
- (5) Report the higher (critical dilution or control) Coefficient of Variation for reproduction, Parameter No. TQP3B
- (6) If conducting retests due to a test failure (demonstration of significant toxic effects at or below the critical dilution):
  - (A) Consecutive Monthly Retest 1: If the NOEC (lowest lethal or sub-lethal) for *C. dubia* is less than the critical dilution, enter a '1'; otherwise, enter a '0' under Parameter No. 22415 (reported on quarterly DMR);
  - (B) Consecutive Monthly Retest 2: If the NOEC (lowest lethal or sub-lethal) for *C. dubia* is less than the critical dilution, enter a '1'; otherwise, enter a '0' under Parameter No. 22416 (reported on quarterly DMR);
  - (C) Consecutive Monthly Retest 3: If the NOEC (lowest lethal or sub-lethal) for *C. dubia* is less than the critical dilution, enter a '1'; otherwise, enter a '0' under Parameter No. 51443 (reported on quarterly DMR);
- (D) If testing on a quarterly basis, the permittee may substitute one of the retests in lieu of one scheduled toxicity test;
- (E) If retests are not required, Report NODI=9 (Conditional Monitoring - Not Required This Period) under Parameter Nos. 22415, 22416, and 51443 (reported on quarterly DMR)

## E. TOXICITY REDUCTION EVALUATIONS (TREs)

TREs for lethal and sub-lethal effects are performed in a very similar manner. EPA Region 6 is currently addressing TREs as follows: a sub-lethal TRE (TRE<sub>SL</sub>) is triggered based on three sub-lethal test failures while a lethal effects TRE (TRE<sub>L</sub>) is triggered based on only two test failures for lethality. In addition, EPA Region 6 will consider the magnitude of toxicity and use flexibility when considering a TRE<sub>SL</sub> where there are no effects at effluent dilutions of 75% or lower.

- i. Within ninety (90) days of confirming toxicity, as outlined above, the permittee shall submit a Toxicity Reduction Evaluation (TRE) Action Plan and Schedule for conducting a TRE. The TRE Action Plan shall specify the approach and methodology to be used in performing the TRE. A Toxicity Reduction Evaluation is an investigation intended to determine those actions necessary to achieve compliance with water quality-based effluent limits by reducing an effluent's toxicity to an acceptable level. A TRE is defined as a step-wise process which combines toxicity testing and analyses of the physical and chemical characteristics of a toxic effluent to identify the constituents causing effluent toxicity and/or treatment methods which will reduce the effluent toxicity. The goal of the TRE is to maximally reduce the toxic effects of effluent at the critical dilution and includes the following:
  - a. Specific Activities. The plan shall detail the specific approach the permittee intends to utilize in conducting the TRE. The approach may include toxicity characterizations, identifications and confirmation activities, source evaluation, treatability studies, or alternative approaches. When the permittee conducts Toxicity Characterization Procedures the permittee shall perform multiple characterizations and follow the procedures specified in the documents 'Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures' (EPA-600/6-91/003) and 'Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I' (EPA-600/6-91/005F), or alternate procedures. When the permittee conducts Toxicity Identification Evaluations and Confirmations, the permittee shall perform multiple identifications and follow the methods specified in the documents 'Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity' (EPA/600/R-92/080) and 'Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity' (EPA/600/R-92/081), as appropriate.

The documents referenced above may be obtained through the National Technical Information Service (NTIS) by phone at (703) 487-4650, or by writing:

U.S. Department of Commerce  
National Technical Information Service  
5285 Port Royal Road  
Springfield, VA 22161

- b. Sampling Plan (e.g., locations, methods, holding times, chain of custody, preservation, etc.). The effluent sample volume collected for all tests shall be adequate to perform the toxicity test, toxicity characterization, identification and confirmation procedures, and conduct chemical specific analyses when a probable toxicant has been identified;
  - c. Where the permittee has identified or suspects specific pollutant(s) and/or source(s) of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical specific analyses for the identified and/or suspected pollutant(s) and/or source(s) of effluent toxicity. Where lethality was demonstrated within 48 hours of test initiation, each composite sample shall be analyzed independently. Otherwise the permittee may substitute a composite sample, comprised of equal portions of the individual composite samples, for the chemical specific analysis;
  - d. Quality Assurance Plan (e.g., QA/QC implementation, corrective actions, etc.); and
  - e. Project Organization (e.g., project staff, project manager, consulting services, etc.).
- ii. The permittee shall initiate the TRE Action Plan within thirty (30) days of plan and schedule submittal. The permittee shall assume all risks for failure to achieve the required toxicity reduction.
  - iii. The permittee shall submit a quarterly TRE Activities Report, with the Discharge Monitoring Report in the months of January, April, July and October, containing information on toxicity reduction evaluation activities including:
    - a. any data and/or substantiating documentation which identifies the pollutant(s) and/or source(s) of effluent toxicity;
    - b. any studies/evaluations and results on the treatability of the facility's effluent toxicity; and
    - c. any data which identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to meet no significant toxicity at the critical dilution.
  - iv. The permittee shall submit a Final Report on Toxicity Reduction Evaluation Activities no later than twenty-eight (28) months from confirming toxicity in the retests, which provides information pertaining to the specific control mechanism selected that will, when implemented, result in reduction of effluent toxicity to no significant toxicity at the critical dilution. The report will also provide a specific corrective action schedule for implementing the selected control mechanism.
  - v. Quarterly testing during the TRE is a minimum monitoring requirement. EPA recommends that permittees required to perform a TRE not rely on quarterly testing alone to ensure success in the TRE, and that additional screening tests be performed to capture toxic samples for identification of toxicants. Failure to identify the specific chemical compound causing toxicity test failure will normally result in a permit limit for whole effluent toxicity limits per federal regulations at 40 C.F.R. § 122.44(d)(1)(v).

## F. MONITORING FREQUENCY REDUCTION

- i. The permittee may apply for a testing frequency reduction upon the successful completion of the first four consecutive quarters of testing after the expiration date of the previous permit, for one or both test species, provided that all of the following conditions are met:
  - a. The permittee tested quarterly upon the expiration date of that permit, and
  - b. The issuance of the renewed permit was not delayed by any fault of the permittee, and
  - c. No lethal or sub-lethal effects are demonstrated at or below the critical dilution for the first four consecutive quarters of testing after the expiration date of the previous permit.

If any of the above conditions are not met, standard WET testing frequency reduction conditions apply.

If granted, the monitoring frequency for that test species may be reduced to not less than once per year for the less sensitive species (usually the Fathead minnow) and not less than twice per year for the more sensitive test species (usually the *Ceriodaphnia dubia*).

- ii. **CERTIFICATION** - The permittee must certify in writing that no test failures have occurred and that all tests meet all test acceptability criteria in Item C.i. above. In addition the permittee must provide a list with each test performed including test initiation date, species, NOECs for lethal and sub-lethal effects and the maximum coefficient of variation for the controls. Upon review and acceptance of this information the agency will issue a letter of confirmation of the monitoring frequency reduction. A copy of the letter will be forwarded to the agency's Permit Compliance System section to update the permit reporting requirements.
  - iii. **SUB-LETHAL OR SURVIVAL FAILURES** - If any test fails the lethal or sub-lethal endpoint at any time during the life of this permit, three consecutive monthly retests are required and the monitoring frequency for the affected test species may be increased to once per quarter until the permit is re-issued. Monthly retesting is not required if the permittee is performing a TRE.
  - iv. Any monitoring frequency reduction granted applies only until the expiration date of this permit, at which time the monitoring frequency for both test species reverts to once per quarter until the permit is re-issued.
7. Stormwater runoff commingling with other process wastewater discharged from Outfall 101 shall be managed in accordance with the Best Management Practices (BMPs) in the form of a pollution prevention plan (SWPPP) required by the Arkansas Industrial Stormwater General Permit ARR000000 to control the quality of stormwater discharges associated with industrial activity based on 40 C.F.R. § 122.44(k).

8. There shall be no discharge of polychlorinated biphenyl transformer fluid.
9. The terms “Total Residual Chlorine” (TRC), and “Free Available Chlorine” (FAC), are defined as follows:
  - a. TRC: the value obtained using any of the “chlorine—total residual” methods in Table IB in 40 C.F.R. § 136.3(a). [ref. 40 C.F.R. § 423.11(a)]
  - b. FAC: the value obtained using any of the “chlorine—free available” methods in Table IB in 40 C.F.R. § 136.3(a) where the method has the capability of measuring free available chlorine. [ref. 40 C.F.R. § 423.11(l)]

Chlorine may not be discharged from any unit for more than two hours per day in any one day unless the discharger demonstrates to the permitting authority that discharge for more than two hours is required for macroinvertebrate control.

10. The term “low volume waste sources” means, taken collectively as if from one source, wastewater from all sources except those for which specific limitations or standards are otherwise established in 40 C.F.R. § 423. Low volume waste sources include, but are not limited to, the following: wastewaters from ion exchange water treatment systems, water treatment evaporator blowdown, laboratory and sampling streams, boiler blowdown, floor drains, cooling tower basin cleaning wastes, recirculating house service water systems, and wet scrubber air pollution control systems whose primary purpose is particulate removal. Sanitary wastes, air conditioning wastes, and wastewater from carbon capture or sequestration systems are not included in this definition. [ref. 40 C.F.R. § 423.11(b)]
11. The term “bottom ash” means the ash, including boiler slag, which settles in the furnace or is dislodged from furnace walls. Economizer ash is included in this definition when it is collected with bottom ash. [ref. 40 C.F.R. § 423.11(f)]
12. The term “transport water” means any wastewater that is used to convey fly ash, bottom ash, or economizer ash from the ash collection or storage equipment, or boiler, and has direct contact with the ash. Transport water does not include low volume, short duration discharges of wastewater from minor leaks (e.g., leaks from valve packing, pipe flanges, or piping), minor maintenance events (e.g., replacement of valves or pipe sections), FGD paste equipment cleaning water, or bottom ash purge water. [ref. 40 C.F.R. § 423.11(p)]
13. The term “coal pile runoff” means the rainfall runoff from or through any coal storage pile. [ref. 40 C.F.R. § 423.11(m)]
14. The term “once through cooling water” means water passed through the main cooling condensers in one or two passes for the purpose of removing waste heat. [ref. 40 C.F.R. § 423.11(g)]

15. The term “combustion residual leachate” means leachate from landfills or surface impoundments containing combustion residuals. Leachate is composed of liquid, including any suspended or dissolved constituents in the liquid, that has percolated through waste or other materials emplaced in a landfill, or that passes through the surface impoundment's containment structure (e.g., bottom, dikes, berms). Combustion residual leachate includes seepage and/or leakage from a combustion residual landfill or impoundment unit. Combustion residual leachate includes wastewater from landfills and surface impoundments located on non-adjointing property when under the operational control of the permitted facility. [ref. 40 C.F.R. § 423.11(r)]

16. Cooling Water Intake Structure (CWIS) Flow Monitoring

- A. The facility shall operate and maintain a closed-cycle recirculating cooling water system as defined in 40 C.F.R. § 125.92(c)(2) in accordance with Best Management Practices (BMPs) that will minimize any Adverse Environmental Impacts (AEI) from the cooling water intake structure (CWIS).
- B. The facility shall monitor the actual intake flows, in million gallons per day (MGD), at a minimum frequency of daily. The monitoring must be representative of normal operating conditions.

Actual intake flows may be calculated using the pump run time and pump capacity. The actual intake flows determined under this condition will satisfy the monitoring requirements under this condition. The daily monitoring records shall be retained in accordance with Part III.C.7 of this permit.

- C. Pursuant to 40 C.F.R. § 125.98(b)(1), nothing in this permit authorizes take for the purposes of a facility's compliance with the Endangered Species Act.

17. Cooling Water Intake Structure (CWIS) Annual Certification Statement and Report

An annual certification statement and report must be submitted to the Division each year by the anniversary date of the effective date of the permit. The certification statement and report must be signed by the Responsible Official for the permit.

- A. The report must include a summary of any modifications to, or changes in the operation of, the CWIS at your facility that impacts cooling water withdrawals. In addition, any revisions to the information required in 40 C.F.R. § 122.21(r) must be submitted with the next permit renewal application.
- B. If the information contained in the previous year's annual certification statement and report is still pertinent, a letter stating such, signed by the Responsible Official for the permit, may be submitted to the Division, along with any applicable data. The letter will meet the requirements of this part for an annual certification statement and report.

18. Visual inspections of the Cooling Water Intake Structure (CWIS)

Visual inspections of the CWIS shall be conducted during the period the CWIS is in operation. Inspections shall be conducted at least weekly to ensure that any technologies operated to comply with 40 C.F.R. § 125.94 are maintained and operated to function as designed. Records of the inspections shall be maintained on-site until the subsequent permit is issued.

19. Recordkeeping for the CWIS

- A. Records must be kept of all submissions that are part of the permit application until the subsequent permit is issued to document compliance with the requirements of this permit.
- B. All records supporting the Director's Determination of BTA for Entrainment under §125.98(f) must be retained until such time as the Director revises the Determination of BTA for Entrainment in the permit.
- C. Discharge Monitoring Reports (DMRs), and results of all monitoring, demonstrations, and other information required by the permit sufficient to determine compliance with the permit conditions and requirements established under §125.94 shall be submitted to the Director. The daily intake flows, and the weekly visual inspections, shall be submitted to DEQ with each monthly DMR.

20. Contact Stormwater Pond

Any discharge of the stormwater contained in the contact water pond through the emergency spillway must be reported to the Enforcement Branch of the Office of Water Quality within 24 hours of the commencement of this discharge. Each discharge will be evaluated to determine if a violation occurred.

21. Leachate Pond

Any discharge of leachate through the emergency spillway into the contact water pond is considered a violation of this NPDES permit. The Enforcement Branch of the Office of Water Quality must be notified of this event within 24 hours of the commencement of this event.

22. For the purpose of this permit, the daily maximum temperature discharged at Outfall 401 shall be calculated once per day as a flow weighted average temperature (FWAT). Each instantaneous flow and temperature shall be recorded each day at equal time intervals throughout the day at intervals not exceeding two hours. The FWAT shall be determined using the following formula:

$$\text{FWAT} = \frac{\sum (\text{Instantaneous Flow} \times \text{Instantaneous Temperature})}{\sum (\text{Instantaneous Flows})}$$

The monthly average temperature discharged from Outfall 401 shall be determined by the arithmetic mean of all FWATs determined during the calendar month.

### 23. Bottom Ash Transport Water

- A. Bottom ash transport water generated prior to November 30, 2022 may be discharged in accordance with the requirements in Part I, Section A2.
- B. The discharge of bottom ash transport water generated on and after November 30, 2022 is prohibited, unless the permittee has certified to the Division that it will cease combustion of coal pursuant to the conditions in Part II.23.D. [ref. 40 C.F.R. § 423.19(f)]
- C. If the permittee has certified to the Division that it will permanently cease combustion of coal by December 31, 2028, pursuant to the conditions in Part II.23.D, bottom ash transport water generated on or before December 30, 2028 may be discharged in accordance with the requirements in Part I, Section A5. Part I Section A5 will supersede Part I Section A2 and Section A3. [ref. 40 C.F.R. § 423.13(k)(2)(i)(B)(ii)]
- D. Permanent Cessation of Coal Combustion
  - i. The term “permanent cessation of coal combustion” means the owner or operator certifies under Parts II.23.D.ii-v, that an electric generating unit will cease combustion of coal no later than December 31, 2028. [ref. 40 C.F.R. § 423.11(w)]
  - ii. Notice of Planned Participation – A Notice of Planned Participation shall be made to the Division no later than October 13, 2021.
  - iii. Contents. A Notice of Planned Participation shall:
    - a. Identify the electric generating units intended to achieve the permanent cessation of coal combustion.
    - b. Include the expected date that each electric generating unit is projected to achieve permanent cessation of coal combustion, whether each date represents a retirement or a fuel conversion, whether each retirement or fuel conversion has been approved by a regulatory body, and what the relevant regulatory body is.
    - c. Include a copy of the most recent integrated resource plan for which the Arkansas Public Service Commission approved the retirement or repowering of the unit subject to the ELGs, certification of electric generating unit cessation under 40 C.F.R. § 257.103(b), or other documentation supporting that the electric generating unit will permanently cease the combustion of coal by December 31, 2028.
    - d. Include, for each such electric generating unit, a timeline to achieve the permanent cessation of coal combustion. Each timeline shall include interim milestones and the projected dates of completion.
  - iv. Annual Progress Report. Annually, after submission of the Notice of Planned Participation in Part II.23.D.ii , a progress report shall be filed with the Division.
  - v. Contents. An Annual Progress Report shall detail the completion of any interim milestones listed in the Notice of Planned Participation since the previous progress report, provide a narrative discussion of any completed, missed, or delayed milestones, and provide updated milestones.

[Parts II.23.D.ii-v – ref. 40 C.F.R. § 423.19(f)]

24. Specific Conditions required by 40 C.F.R. § 423.18, promulgated October 13, 2020.

- A. An electric generating unit shall qualify as a low utilization electric generating unit or permanently ceasing the combustion of coal by December 31, 2028, if such qualification would have been demonstrated absent the following qualifying event:
  - a. An emergency order issued by the Department of Energy under Section 202(c) of the Federal Power Act,
  - b. A reliability must run agreement issued by a Public Utility Commission, or
  - c. Any other reliability-related order or agreement issued by a competent electricity regulator (e.g., an independent system operator) which results in that electric generating unit operating in a way not contemplated when the certification was made; or
  - d. The operation of the electric generating unit was necessary for load balancing in an area subject to a declaration under 42 U.S.C. 5121 et seq., that there exists:
    - 1. An “Emergency,” or
    - 2. A “Major Disaster,” and
    - 3. That load balancing was due to the event that caused the “Emergency” or “Major Disaster” in paragraph (a)(4) of this section to be declared,
- B. Any facility providing the required documentation pursuant to 40 C.F.R. § 423.19(g) may avail itself of the protections of this permit condition.

## PART III STANDARD CONDITIONS

### SECTION A – GENERAL CONDITIONS

#### 1. Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the federal Clean Water Act and the Arkansas Water and Air Pollution Control Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; and/or for denial of a permit renewal application. **Any values reported in the required Discharge Monitoring Report (DMR) which are in excess of an effluent limitation specified in Part I shall constitute evidence of violation of such effluent limitation and of this permit.**

#### 2. Penalties for Violations of Permit Conditions

The Arkansas Water and Air Pollution Control Act provides that any person who violates any provisions of a permit issued under the Act shall be guilty of a misdemeanor and upon conviction thereof shall be subject to imprisonment for not more than one (1) year, or a fine of not more than twenty-five thousand dollars (\$25,000) or by both such fine and imprisonment for each day of such violation. Any person who violates any provision of a permit issued under the Act may also be subject to civil penalty in such amount as the court shall find appropriate, not to exceed ten thousand dollars (\$10,000) for each day of such violation. The fact that any such violation may constitute a misdemeanor shall not be a bar to the maintenance of such civil action.

#### 3. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause including, but not limited to the following:

- A. Violation of any terms or conditions of this permit.
- B. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts.
- C. A change in any conditions that requires either a temporary or permanent reduction or elimination of the authorized discharge.
- D. A determination that the permitted activity endangers human health or the environment and can only be regulated to acceptable levels by permit modification or termination.
- E. Failure of the permittee to comply with the provisions of APC&EC Rule 9 (Permit fees) as required by Part III.A.11 herein.

The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

#### 4. **Toxic Pollutants**

Notwithstanding Part III.A.3, if any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under APC&EC Rule 2, as amended, or Section 307(a) of the Clean Water Act for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitations on the pollutant in this permit, this permit shall be modified or revoked and reissued to conform to the toxic effluent standards or prohibition and the permittee so notified.

The permittee shall comply with effluent standards, narrative criteria, or prohibitions established under APC&EC Rule 2, as amended, or Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

#### 5. **Civil and Criminal Liability**

Except as provided in permit conditions for “Bypass of Treatment Facilities” (Part III.B.4), and “Upset” (Part III.B.5), nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance. Any false or materially misleading representation or concealment of information required to be reported by the provisions of this permit or applicable state and federal statutes or regulations which defeats the regulatory purposes of the permit may subject the permittee to criminal enforcement pursuant to the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. § 8-4-101 et seq.).

#### 6. **Oil and Hazardous Substance Liability**

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject to under Section 311 of the Clean Water Act.

#### 7. **State Laws**

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Clean Water Act.

#### 8. **Property Rights**

The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State, or local laws or regulations.

## 9. **Severability**

The provisions of this permit are severable, and if any provision of this permit, or the application of any provisions of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

## 10. **Applicable Federal, State or Local Requirements**

Permittees are responsible for compliance with all applicable terms and conditions of this permit. Receipt of this permit does not relieve any operator of the responsibility to comply with any other applicable federal requirements such as endangered species, state or local statute, ordinance or regulation.

## 11. **Permit Fees**

The permittee shall comply with all applicable permit fee requirements (i.e., including annual permit fees following the initial permit fee that will be invoiced every year the permit is active) for wastewater discharge permits as described in APC&EC Rule 9 (Regulation for the Fee System for Environmental Permits). Failure to promptly remit all required fees shall be grounds for the Director to initiate action to terminate this permit under the provisions of 40 C.F.R. §§ 122.64 and 124.5(d), as adopted in APC&EC Rule 6 and the provisions of APC&EC Rule 8.

# **SECTION B – OPERATION AND MAINTENANCE OF POLLUTION CONTROLS**

## 1. **Proper Operation and Maintenance**

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

B. The permittee shall provide an adequate operating staff which is duly qualified to carryout operation, maintenance, and testing functions required to ensure compliance with the conditions of this permit.

## 2. **Need to Halt or Reduce not a Defense**

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. Upon reduction, loss, or failure of the treatment facility, the permittee shall, to the extent necessary to maintain compliance with its permit, control

production or discharges or both until the facility is restored or an alternative method of treatment is provided. This requirement applies, for example, when the primary source of power for the treatment facility is reduced, is lost, or alternate power supply fails.

3. **Duty to Mitigate**

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

4. **Bypass of Treatment Facilities**

“Bypass” means the intentional diversion of waste streams from any portion of a treatment facility, as defined at 40 C.F.R. § 122.41(m)(1)(i).

A. Bypass not exceeding limitation

The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Parts III.B.4.B and 4.C.

B. Notice

1. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.
2. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Part III.D.6 (24-hour notice).

C. Prohibition of bypass

1. Bypass is prohibited and the Director may take enforcement action against a permittee for bypass, unless:
  - (a) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage.
  - (b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if the permittee could have installed adequate backup equipment to prevent a bypass which occurred during normal or preventive maintenance.
  - (c) The permittee submitted notices as required by Part III.B.4.B.
2. The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in Part III.B.4.C(1).

## 5. Upset Conditions

- A. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Part III.B.5.B of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
- B. Conditions necessary for demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
1. An upset occurred and that the permittee can identify the specific cause(s) of the upset.
  2. The permitted facility was at the time being properly operated.
  3. The permittee submitted notice of the upset as required by Part III.D.6.
  4. The permittee complied with any remedial measures required by Part III.B.3.
- C. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

## 6. Removed Substances

- A. Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering waters of the State. The Permittee must comply with all applicable state and Federal regulations governing the disposal of sludge, including but not limited to 40 C.F.R. § 503, 40 C.F.R. § 257, and 40 C.F.R. § 258.
- B. Any changes to the permittee's disposal practices described in the Fact Sheet, as derived from the permit application, will require at least 180 days prior notice to the Director to allow time for additional permitting. Please note that the 180 day notification requirement may be waived if additional permitting is not required for the change.

## 7. Power Failure

The permittee is responsible for maintaining adequate safeguards to prevent the discharge of untreated or inadequately treated wastes during electrical power failure either by means of alternate power sources, standby generators, or retention of inadequately treated effluent.

## SECTION C – MONITORING AND RECORDS

### 1. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge during the entire monitoring period. All samples shall be taken at the monitoring points specified in this permit and, unless otherwise specified,

before the effluent joins or is diluted by any other waste stream, body of water, or substance. Monitoring points shall not be changed without notification to and the approval of the Director. Intermittent discharge shall be monitored.

## 2. **Flow Measurement**

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated, and maintained to ensure the accuracy of the measurements are consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than +/- 10% from true discharge rates throughout the range of expected discharge volumes and shall be installed at the monitoring point of the discharge.

### Calculated Flow Measurement

For calculated flow measurements that are performed in accordance with either the permit requirements or a Division approved method (i.e., as allowed under Part II.3), the +/- 10% accuracy requirement described above is waived. This waiver is only applicable when the method used for calculation of the flow has been reviewed and approved by the Division.

## 3. **Monitoring Procedures**

Monitoring must be conducted according to test procedures approved under 40 C.F.R. § 136, unless other test procedures have been specified in this permit. The permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals frequent enough to ensure accuracy of measurements and shall ensure that both calibration and maintenance activities will be conducted. An adequate analytical quality control program, including the analysis of sufficient standards, spikes, and duplicate samples to ensure the accuracy of all required analytical results shall be maintained by the permittee or designated commercial laboratory. At a minimum, spikes and duplicate samples are to be analyzed on 10% of the samples.

## 4. **Penalties for Tampering**

The Arkansas Water and Air Pollution Control Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under the Act shall be guilty of a misdemeanor and upon conviction thereof shall be subject to imprisonment for not more than one (1) year or a fine of not more than ten thousand dollars (\$10,000) or by both such fine and imprisonment.

## 5. **Reporting of Monitoring Results**

40 C.F.R. § 127.11(a)(1) and 40 C.F.R. § 127.16(a) require that monitoring reports must be reported on a Discharge Monitoring Reports (DMR) and filed electronically. Signatory Authorities must initially request access for a NetDMR account. Once a NetDMR account is

established, access to electronic filing should use the following link <https://cdx.epa.gov>. Permittees who are unable to file electronically may request a waiver from the Director in accordance with 40 C.F.R. § 127.15. Monitoring results obtained during the previous monitoring period shall be summarized and reported on a DMR dated and submitted no later than the 25<sup>th</sup> day of the month, following the completed reporting period beginning on the effective date of the permit.

6. **Additional Monitoring by the Permittee**

If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 C.F.R. § 136 or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR. Such increased frequency shall also be indicated on the DMR.

7. **Retention of Records**

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit for a period of at least 3 years from the date of the sample, measurement, report, or application. This period may be extended by request of the Director at any time.

8. **Record Contents**

Records and monitoring information shall include:

- A. The date, exact place, time and methods of sampling or measurements, and preservatives used, if any.
- B. The individual(s) who performed the sampling or measurements.
- C. The date(s) and time analyses were performed.
- D. The individual(s) who performed the analyses.
- E. The analytical techniques or methods used.
- F. The measurements and results of such analyses.

9. **Inspection and Entry**

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

- A. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit.
- B. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit.
- C. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit.

- D. Sample, inspect, or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

## **SECTION D – REPORTING REQUIREMENTS**

### **1. Planned Changes**

The Permittee shall give notice to the Director as soon as possible but no later than 180 days prior to any planned physical alterations or additions to the permitted facility [40 C.F.R. § 122.41(l)]. Notice is required only when:

- A. The alteration or addition to a permitted facility may meet one of the criteria for new sources at 40 C.F.R. § 122.29(b).
- B. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants subject to effluent limitations in the permit, or to the notification requirements under 40 C.F.R. § 122.42(b).

### **2. Anticipated Noncompliance**

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

### **3. Transfers**

The permit is nontransferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Act.

### **4. Monitoring Reports**

Monitoring results shall be reported at the intervals and in the form specified in Part III.C.5. **Discharge Monitoring Reports must be submitted even when no discharge occurs during the reporting period.**

### **5. Compliance Schedule**

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date. Any reports of noncompliance shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

## 6. **Twenty-four Hour Report**

- A. The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain the following information:
1. A description of the noncompliance and its cause.
  2. The period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue.
  3. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
- B. The following shall be included as information which must be reported within 24 hours:
1. Any unanticipated bypass which exceeds any effluent limitation in the permit.
  2. Any upset which exceeds any effluent limitation in the permit.
  3. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in Part I of the permit to be reported within 24 hours to the Enforcement Branch of the Office of Water Quality of the DEQ.
- C. The Director may waive the written report on a case-by-case basis if the oral report has been received within 24 hours to the Enforcement Branch of the Office of Water Quality of the DEQ.

## 7. **Other Noncompliance**

The permittee shall report all instances of noncompliance not reported under Parts III.D.4, 5, and 6, at the time monitoring reports are submitted. The reports shall contain the information listed at Part III.D.6.

## 8. **Changes in Discharge of Toxic Substances for Industrial Dischargers**

The Director shall be notified as soon as the permittee knows or has reason to believe:

- A. That any activity has occurred or will occur which would result in the discharge on a routine or frequent basis of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the "notification levels" described in 40 C.F.R. § 122.42(a)(1).
- B. That any activity has occurred or will occur which would result in any discharge on a non-routine or infrequent basis of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the "notification levels" described in 40 C.F.R. § 122.42(a)(2).

## 9. **Duty to Provide Information**

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

## 10. **Duty to Reapply**

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. The complete application shall be submitted at least 180 days before the expiration date of this permit. The Director may grant permission to submit an application less than 180 days in advance but no later than the permit expiration date. Continuation of expiring permits shall be implemented through procedures outlined by APC&EC Rule 6.

## 11. **Signatory Requirements**

All applications, reports, or information submitted to the Director shall be signed and certified as follows:

A. All **permit applications** shall be signed as follows:

1. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:
  - (a) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation.
  - (b) The manager of one or more manufacturing, production, or operation facilities, provided: the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
2. For a partnership or sole proprietorship: by a general partner or proprietor, respectively.

3. For a municipality, State, Federal, or other public agency, by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:
  - (a) The chief executive officer of the agency.
  - (b) A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.
- B. All **reports** required by the permit and **other information** requested by the Director shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
  1. The authorization is made in writing by a person described above.
  2. The authorization specified either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position).
  3. The written authorization is submitted to the Director.
- C. Certification. Any person signing a document under this section shall make the following certification:

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

## 12. **Availability of Reports**

Except for data determined to be confidential under 40 C.F.R. § 2 and APC&EC Rule 6, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Division of Environmental Quality. As required by the Regulations, the name and address of any permit applicant or permittee, permit applications, permits, and effluent data shall not be considered confidential.

## 13. **Penalties for Falsification of Reports**

The Arkansas Air and Water Pollution Control Act provides that any person who knowingly makes any false statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under this permit shall be subject

to civil penalties specified in Part III.A.2 and/or criminal penalties under the authority of the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. § 8-4-101 et seq.).

14. **Other Information**

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

## PART IV DEFINITIONS

All definitions contained in Section 502 of the Clean Water Act and 40 C.F.R. § 122.2 shall apply to this permit and are incorporated herein by reference. Additional definitions of words or phrases used in this permit are as follows:

1. **“7-Day Average”** also known as “average weekly,” means the highest allowable average of “daily discharges” over a calendar week, calculated as the sum of all “daily discharges” measured during a calendar week divided by the number of “daily discharges” measured during that week. The 7-Day Average for Fecal Coliform Bacteria (FCB) or *E. coli* is the geometric mean of the “daily discharges” of all effluent samples collected during a calendar week in colonies per 100 ml.
2. **“Act”** means the Clean Water Act, Public Law 95-217 (33.U.S.C. 1251 et seq.) as amended.
3. **“Administrator”** means the Administrator of the U.S. Environmental Protection Agency.
4. **“APC&EC”** means the Arkansas Pollution Control and Ecology Commission.
5. **“Applicable effluent standards and limitations”** means all State and Federal effluent standards and limitations to which a discharge is subject under the Act, including, but not limited to, effluent limitations, standards of performance, toxic effluent standards and prohibitions, and pretreatment standards.
6. **“Applicable water quality standards”** means all water quality standards to which a discharge is subject under the federal Clean Water Act and which has been (a) approved or permitted to remain in effect by the Administrator following submission to the Administrator pursuant to Section 303(a) of the Act, or (b) promulgated by the Director pursuant to Section 303(b) or 303(c) of the Act, and standards promulgated under (APC&EC) Rule 2, as amended.
7. **“Best Management Practices (BMPs)”** are activities, practices, maintenance procedures, and other management practices designed to prevent or reduce the pollution of waters of the State. BMPs also include treatment technologies, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw sewage. BMPs may include structural devices or nonstructural practices.
8. **“Bypass”** means the intentional diversion of waste streams from any portion of a treatment facility, as defined at 40 C.F.R. § 122.41(m)(1)(i).
9. **“Composite sample”** is a mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing a minimum of 4 effluent portions collected at equal time intervals (but not closer than one hour apart) during operational hours, within the 24-hour period, and combined proportional to flow or a sample collected at more frequent intervals proportional to flow over the 24-hour period.
10. **“Daily Discharge”** means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling.
  - A. **Mass Calculations:** For pollutants with limitations expressed in terms of mass, the “daily discharge” is calculated as the total mass of pollutant discharged over the sampling day.
  - B. **Concentration Calculations:** For pollutants with limitations expressed in other units of measurement, the “daily discharge” is calculated as the average measurement of the pollutant over the day.
11. **“Daily Maximum”** discharge limitation means the highest allowable “daily discharge” during the calendar month.

12. **“Director”** means the Director of the Division of Environmental Quality.
13. **“Dissolved oxygen limit”** shall be defined as follows:
  - A. When limited in the permit as a minimum monthly average, shall mean the lowest acceptable monthly average value, determined by averaging all samples taken during the calendar month.
  - B. When limited in the permit as an instantaneous minimum value, shall mean that no value measured during the reporting period may fall below the stated value.
14. **“Division”** means the Division of Environmental Quality (**DEQ**).
15. **“E. coli”** a sample consists of one effluent grab portion collected during a 24-hour period at peak loads. For *E. coli*, report the Daily Maximum as the highest “daily discharge” during the calendar month and the Monthly Average as the geometric mean of all “daily discharges” within a calendar month, in colonies per 100 ml.
16. **“Fecal Coliform Bacteria (FCB)”** a sample consists of one effluent grab portion collected during a 24-hour period at peak loads. For FCB, report the Daily Maximum as the highest “daily discharge” during the calendar month and the Monthly Average as the geometric mean of all “daily discharges” within a calendar month, in colonies per 100 ml.
17. **“Grab sample”** means an individual sample collected in less than 15 minutes in conjunction with an instantaneous flow measurement.
18. **“Industrial User”** means a nondomestic discharger, as identified in 40 C.F.R. § 403, introducing pollutants to a POTW.
19. **“Instantaneous flow measurement”** means the flow measured during the minimum time required for the flow-measuring device or method to produce a result in that instance. To the extent practical, instantaneous flow measurements coincide with the collection of any grab samples required for the same sampling period so that together the samples and flow are representative of the discharge during that sampling period.
20. **“Instantaneous Maximum”** when limited in the permit as an instantaneous maximum value, shall mean that no value measured during the reporting period may fall above the stated value.
21. **“Instantaneous Minimum”** an instantaneous minimum value, shall mean that no value measured during the reporting period may fall below the stated value.
22. **“Monitoring and Reporting”**

When a permit becomes effective, monitoring requirements are of the immediate period of the permit effective date. Where the monitoring requirement for an effluent characteristic is monthly or more frequently, the Discharge Monitoring Report (DMR) shall be submitted by the 25<sup>th</sup> of the month following the sampling. Where the monitoring requirement for an effluent characteristic is Quarterly, Semi-Annual, Annual, or Yearly, the DMR shall be submitted by the 25<sup>th</sup> of the month following the monitoring period end date.

  - A. **MONTHLY:**

is defined as a calendar month or any portion of a calendar month for monitoring requirement frequency of once/month or more frequently.
  - B. **BI-MONTHLY:**

is defined as two (2) calendar months or any portion of 2 calendar months for monitoring requirement frequency of once/2 months or more frequently.
  - C. **QUARTERLY:**
    1. is defined as a **fixed calendar quarter** or any part of the fixed calendar quarter for a non-seasonal effluent characteristic with a measurement frequency of once/quarter.

Fixed calendar quarters are: January through March, April through June, July through September, and October through December.

2. is defined as a **fixed three month period** (or any part of the fixed three month period) of or dependent upon the seasons specified in the permit for a seasonal effluent characteristic with a monitoring requirement frequency of once/quarter that does not coincide with the fixed calendar quarter. Seasonal calendar quarters are: May through July, August through October, November through January, and February through April.

**D. SEMI-ANNUAL:**

is defined as the fixed time periods January through June, and July through December (or any portion thereof) for an effluent characteristic with a measurement frequency of once/6 months or twice/year.

**E. ANNUAL or YEARLY:**

is defined as a fixed calendar year or any portion of the fixed calendar year for an effluent characteristic or parameter with a measurement frequency of once/year. A calendar year is January through December, or any portion thereof.

23. **“Monthly Average”** means the highest allowable average of “daily discharges” over a calendar month, calculated as the sum of all “daily discharges” measured during a calendar month divided by the number of “daily discharges” measured during that month. For Fecal Coliform Bacteria (FCB) or *E. coli*, report the Monthly Average as the geometric mean of all “daily discharges” within a calendar month.
24. **“National Pollutant Discharge Elimination System”** means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements under Sections 307, 402, 318, and 405 of the Clean Water Act.
25. **“POTW”** means Publicly Owned Treatment Works;
26. **“Reduction of CBOD<sub>5</sub>/BOD<sub>5</sub> and TSS in mg/l Formula”**  
[(Influent – Effluent) / Influent] × 100
27. **“Severe property damage”** means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in products.
28. **“Sewage sludge”** means the solids, residues, and precipitate separated from or created in sewage by the unit processes at a POTW. Sewage as used in this definition means any wastes, including wastes from humans, households, commercial establishments, industries, and stormwater runoff that are discharged to or otherwise enter a POTW.
29. **“Treatment works”** means any devices and systems used in storage, treatment, recycling, and reclamation of municipal sewage and industrial wastes, of a liquid nature to implement section 201 of the Act, or necessary to recycle reuse water at the most economic cost over the estimated life of the works, including intercepting sewers, sewage collection systems, pumping, power and other equipment, and alterations thereof; elements essential to provide a reliable recycled supply such as standby treatment units and clear well facilities, and any works, including site acquisition of the land that will be an integral part of the treatment process or is used for ultimate disposal of residues resulting from such treatment.
30. **Units of Measure:**  
“MGD” shall mean million gallons per day.

“**mg/l**” shall mean milligrams per liter or parts per million (ppm).

“**µg/l**” shall mean micrograms per liter or parts per billion (ppb).

“**cfs**” shall mean cubic feet per second.

“**ppm**” shall mean parts per million.

“**s.u.**” shall mean standard units.

31. “**Upset**” means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. Any upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, lack of preventive maintenance, or careless of improper operations.
32. “**Visible sheen**” means the presence of a film or sheen upon or a discoloration of the surface of the discharge. A sheen can also be from a thin glistening layer of oil on the surface of the discharge.
33. “**Weekday**” means Monday – Friday.

## **Final Fact Sheet**

*All changes to the statement of basis are italicized.*

*This is a modified permit, and only the modified portion of the permit can be reopened for comment.*

This Fact Sheet is for information and justification of the permit requirements only. Please note that it is not enforceable. This permitting decision is for the *modification* of discharge Permit Number AR0037842 with Arkansas Department of Energy and Environment – Division of Environmental Quality (DEQ) Arkansas Facility Identification Number (AFIN) 04-00107 to discharge to Waters of the State.

### **1. PERMITTING AUTHORITY**

The issuing office is:

Division of Environmental Quality  
5301 Northshore Drive  
North Little Rock, Arkansas 72118-5317

### **2. APPLICANT**

The applicant's mailing address, and the facility address, is:

Southwestern Electric Power Company - Flint Creek Power Plant  
21797 SWEPCO Road  
Gentry, AR 72734

### **3. PREPARED BY**

The permit was prepared by:

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### **4. PERMIT ACTIVITY**

Previous Permit Effective Date: *November 1, 2020*  
Previous Permit Minor Modification Effective Date: *April 30, 2021*  
Previous Permit Expiration Date: *October 31, 2025*

***THIS IS A MODIFIED PERMIT. IN ACCORDANCE WITH 40 C.F.R. § 122.62, ONLY THOSE PORTIONS OF THE PERMIT WHICH HAVE BEEN MODIFIED ARE OPEN FOR COMMENT AT THIS TIME.***

*The permittee submitted a permit modification application on January 13, 2021, and all additional information was received by May 18, 2021. The modification is to remove monitoring and reporting requirements for Mercury and Cyanide from the discharge from Outfall 001, remove monitoring and reporting requirements for Cyanide from the discharge from Outfall 101, and to revise the permit conditions concerning bottom ash transport water (BATW) to meet the revised Effluent Limitations Guidelines (ELGs) requirements in 40 C.F.R. § 423 that were promulgated on October 13, 2020, after the permit renewal was issued. The current discharge permit is modified for the remainder of the 5-year term, in accordance with regulations promulgated at 40 C.F.R. § 122.46(a).*

*DEQ issued a minor modification to the permit (effective April 30, 2021) to administratively correct a typographical error. The default units for permit reporting are milligrams/liter (mg/l). The permit renewal, effective November 1, 2020, did not include the qualifier notation in Part I, Section A1 to specify the reporting units as micrograms/liter (µg/l) for the monitoring and reporting of Mercury from Outfall 001. The numeric value for reporting the Mercury concentration in mg/l could not be reported on the monthly DMRs without causing an error in the NetDMR reporting forms. The values were too low to be reported in the decimal places available in the Net DMR reporting forms. Note, the issues in the permit appeal, APC&EC Docket Number 20-003-P, are not related to any reporting units or NetDMR.*

#### DOCUMENT ABBREVIATIONS

In the document that follows, various abbreviations are used. They are as follows:

APC&EC - Arkansas Pollution Control and Ecology Commission  
BAT - best available technology economically achievable  
BCT - best conventional pollutant control technology  
BMP - best management practice  
BOD<sub>5</sub> - five-day biochemical oxygen demand  
BPJ - best professional judgment  
BPT - best practicable control technology currently available  
CBOD<sub>5</sub> - carbonaceous biochemical oxygen demand  
CD - critical dilution  
CFR - Code of Federal Regulations  
cfs - cubic feet per second  
COD - chemical oxygen demand  
COE - United States Corp of Engineers  
CPP - continuing planning process  
CWA - Clean Water Act  
CWIS - Cooling Water Intake Structure  
DMR - discharge monitoring report  
DO - dissolved oxygen  
ELG - effluent limitation guidelines  
EPA - United States Environmental Protection Agency  
ESA - Endangered Species Act  
FCB - fecal coliform bacteria

gpm - gallons per minute  
MGD - million gallons per day  
MQL - minimum quantification level  
NAICS - North American Industry Classification System  
NH<sub>3</sub>-N - ammonia nitrogen  
NO<sub>3</sub> + NO<sub>2</sub>-N - nitrate + nitrite nitrogen  
NPDES - National Pollutant Discharge Elimination System  
O&G - oil and grease  
Rule 2 - APC&EC Rule 2  
Rule 6 - APC&EC Rule 6  
Rule 8 - APC&EC Rule 8  
Rule 9 - APC&EC Rule 9  
RP - reasonable potential  
SIC - standard industrial classification  
TDS - total dissolved solids  
TMDL - total maximum daily load  
TP - total phosphorus  
TRC - total residual chlorine  
TSS - total suspended solids  
UAA - use attainability analysis  
USF&WS - United States Fish and Wildlife Service  
USGS - United States Geological Survey  
WET - whole effluent toxicity  
WQMP - water quality management plan  
WQS - Water Quality standards  
WWTP - wastewater treatment plant

Compliance and Enforcement History:

The compliance and enforcement history for this facility can be reviewed by using the following web link:

[https://www.adeg.state.ar.us/downloads/WebDatabases/PermitsOnline/NPDES/PermitInformation/AR0037842\\_Combpliance%20Review\\_20190318.pdf](https://www.adeg.state.ar.us/downloads/WebDatabases/PermitsOnline/NPDES/PermitInformation/AR0037842_Combpliance%20Review_20190318.pdf)

**5. SIGNIFICANT CHANGES FROM THE PREVIOUSLY ISSUED PERMIT**

The permittee is responsible for carefully reading the permit in detail and becoming familiar with all of the changes therein:

- 1. Monitoring and reporting requirements for Mercury and Cyanide have been removed from Part I Section A1 of the permit because additional sampling indicates that the discharge does not have the reasonable potential to cause an exceedance of the WQS in the receiving stream for these pollutants. See Section 11.F below for the analysis.*
- 2. Monitoring and reporting requirements for Cyanide have been removed from Part I Sections A2 and A3 of the permit because additional sampling indicates that the discharge does not have the reasonable potential to cause an exceedance of the WQS in the receiving stream for this pollutant. See Section 11.F below for the analysis.*

3. *The end date for the applicability of the permit requirements in Section A2 has been changed from December 30, 2023, to November 29, 2022.*
4. *The beginning date for the applicability of the permit requirements in Section A3 has been changed from December 31, 2023, to November 30, 2022.*
5. *Part I Section A5 has been added, based on the revised ELGs in 40 C.F.R. § 423. See Section 11.E.9 below for details.*
6. *Part IB.2 has been included in the permit, based on the revised ELGs in 40 C.F.R. § 423. See Section 11.E.9 below for details.*
7. *Part II.12 has been revised, based on the revised definition in 40 C.F.R. § 423.11(p).*
8. *Part II.23 has been revised, and Part II.24 has been added, based on the revised ELGs in 40 C.F.R. § 423. See Section 11.E.9 below for details.*

## 6. RECEIVING STREAM SEGMENT AND DISCHARGE LOCATION

The outfalls are located at the following coordinates based on Google Earth using WGS84.

Outfall 001: Latitude: 36° 14' 0.366"; Longitude: 94° 33' 05.944"

Outfall 101: Latitude: 36° 14' 57.55" N; Longitude: 94° 31' 34.79" W

Outfall 401: Latitude: 36° 15' 26.97" N; Longitude: 94° 31' 33.10" W

The receiving waters named:

Outfall 001: Little Flint Creek, thence to Flint Creek in Segment 3J of the Arkansas River Basin.

Outfalls 101 and 401: SWEPCO Reservoir, thence to Little Flint Creek, thence to Flint Creek in Segment 3J of the Arkansas River Basin.

The receiving streams (SWEPCO Reservoir and Little Flint Creek) do not have assigned reach numbers. Flow discharged through Outfall 001 reaches Flint Creek within Reach #031 of USGS Hydrologic Unit Code (H.U.C.) 11110103. The receiving stream is a Water of the State classified for primary and secondary contact recreation, raw water source for domestic (public and private), industrial, and agricultural water supplies, propagation of desirable species of fish and other aquatic life, and other compatible uses.

## 7. 303(d) LIST, TOTAL MAXIMUM DAILY LOADS, ENDANGERED SPECIES, AND ANTI-DEGRADATION CONSIDERATIONS

### A. 303(d) List

The receiving stream is not on the 2018 303(d) list.

### B. Applicable Total Maximum Daily Load (TMDL) Reports

There are no applicable TMDLs for the receiving stream. Therefore, the effluent limitations and monitoring requirements in the proposed permit are based on current technology and water quality standards requirements and are protective of the stream designated uses.

### **C. Endangered Species**

Comments on the application were received from the USF&WS during the 60-day review period required by 40 C.F.R. § 125.98(h). The USF&WS identified the following species and critical habitats during their 60-day early review period in accordance with Subpart J – Requirements applicable to CWIS for Existing Facilities under Section 316(b) of the CWA. The listed species with potential to occur in Benton County include: Indiana Bat, Northern Long-eared Bat, Ozark Big-eared Bat, Gray Bat, Ozark Cavefish, Neosho Mucket, Rabbitsfoot, and Missouri Bladderpod. The comment also noted the project occurs in designated critical habitat for Neosho Mucket.

The USF&WS Environmental Conservation Online System (ECOS) identifies the critical habitat for the Neosho Mucket as the Illinois River, and not SWEPCO Reservoir. The USF&WS had no recommendations for any additional control measures that would minimize any incidental take of listed species, avoid likely jeopardy to a listed species, or destruction or adverse modification of critical habitat.

The limits in the permit are designed to protect all beneficial uses of the receiving waters, including propagation of desirable species of fish and other aquatic life, as well as other species which are directly, or indirectly, affected by the receiving waters, which includes the above species of concern. Therefore, DEQ has determined that the final permit limits will serve to help protect the species of concern identified above.

The draft permit and Fact Sheet were sent to the USF&WS for review during the public comment period.

### **D. Anti-Degradation**

The limitations and requirements set forth in this permit for discharge into waters of the State are consistent with the Anti-degradation Policy and all other applicable water quality standards found in APC&EC Rule 2.

## **8. OUTFALL, TREATMENT PROCESS DESCRIPTION, AND FACILITY CONSTRUCTION**

The following is a description of the facility described in the application:

### **A. Average Flow (based on DMR data from October 2016 through September 2018):**

Outfall 001: 9.37 MGD  
Outfall 101: 8.41 MGD  
Outfall 401: 406.08 MGD

### **B. Type of Treatment:**

Outfall 001: None. SWEPCO Reservoir, which is an impoundment of Little Flint Creek, is a water of the state. Any treatment of any process wastewater generated at this facility takes place before any discharges from Outfalls 101 and 401 reach the Reservoir.

Outfall 101: settling and neutralization of all wastestreams except ash landfill leachate; ash landfill leachate treatment (Advanced Biological Metals removal system - ABMet®)

Outfall 401: chlorination (optional)

C. Discharge Description:

Outfall 001: discharge from SWEPCO Reservoir

This outfall is a stream monitoring station established to assure a daily average release of at least 2 cfs (1.29 MGD) flow through the spillway, overflow, seepage, or pumping into Little Flint Creek.

Outfall 101: low volume wastewater consisting of demineralizer process wastewater, lab drains, boiler blowdown, filter backwash, truck washwater, various plant washwaters, plant floor drains, stack seal water overflow, hydrovactor wastewater, and reclaim basin water; coal pile runoff; treated combustion residual leachate (ash landfill leachate); treated municipal wastewater from the City of Gentry; stormwater from various plant areas; and bottom ash transport water

It should be noted that the discharge of bottom ash transport water through Outfall 101 is only allowed prior to *November 30, 2022, unless the facility certifies that coal combustion will permanently cease by December 31, 2028.* See Section 11.E.9 below for details.

The City of Gentry operates under NPDES permit No. AR0020184.

Outfall 401: once through cooling water

D. Facility Status: This facility was evaluated using the NPDES Permit Rating Worksheet (MRAT) to determine the correct permitting status. Since the facility's MRAT score of 600 is greater than 80, this facility is classified as a major industrial.

E. Facility Construction: This permit does not authorize or approve the construction or modification of any part of the treatment system or facilities. Approval for such construction must be by permit issued under Rule 6.202.

## 9. ACTIVITY

Under the Standard Industrial Classification (SIC) code of 4911 or North American Industry Classification System (NAICS) code of 221112, the applicant's activities are the operation of a steam electric power generating plant.

## 10. SOLIDS PRACTICES

Solids are retained in the *wastewater and clearwater* ponds. The solids in the *wastewater* pond are periodically removed into a dewatering cell which is located within the footprint of the *wastewater* pond. Typically, three to six months are required for the dredging operation.

As ash is dredged into the dewatering cell, the sluice water is drained via gravity back into the primary pond through two standpipes. The dredged ash is hauled to the Flint Creek Power Plant Class 3N Landfill for disposal, or as a substitute for sand in landfill construction activities. Alternatively it is sold as a product.

It should be noted that discharge of sluice water (bottom ash transport water) generated on or after *November 30, 2022* is prohibited, *unless the facility certifies that coal combustion will permanently cease by December 31, 2028*. See Section 11.E.9 below.

## 11. DEVELOPMENT AND BASIS FOR PERMIT CONDITIONS

The Arkansas Division of Environmental Quality has determined to issue a permit for the discharge described in the application. Permit requirements are based on federal regulations (40 C.F.R. §§ 122, 124, and Subchapter N), and regulations promulgated pursuant to the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. 8-4-101 et seq.). All of the information contained in the application, including all of the submitted effluent testing data, was reviewed to determine the need for effluent limits and other permit requirements.

The following is an explanation of the derivation of the conditions of the permit and the reasons for them or, in the case of notices of intent to deny or terminate, reasons suggesting the decisions as required under 40 C.F.R. § 124.7.

### **Technology-Based Versus Water Quality-Based Effluent Limitations and Conditions**

Following regulations promulgated at 40 C.F.R. § 122.44, the permit limits are based on either technology-based effluent limits pursuant to 40 C.F.R. § 122.44(a) or on State water quality standards and requirements pursuant to 40 C.F.R. § 122.44(d), whichever are more stringent as follows:

Parameter	Water Quality-Based		Technology-Based		Previous Permit		Final Permit	
	Monthly Avg. mg/l	Daily Max. mg/l	Monthly Avg. mg/l	Daily Max. mg/l	Monthly Avg. mg/l	Daily Max. mg/l	Monthly Avg. mg/l	Daily Max. mg/l
<b>Outfall 001</b>								
pH	6.0-9.0 s.u.		N/A		6.0-9.0 s.u.		6.0-9.0 s.u.	
<b>Outfall 101</b>								
TSS	N/A	N/A	31.8	92.2	25	43	31.8	92.2
O&G	10	15	13.4	18.0	6	8	10	15
pH	6.0-9.0 s.u.		6.0-9.0 s.u.		6.0-9.0 s.u.		6.0-9.0 s.u.	

Parameter	Water Quality-Based		Technology-Based		Previous Permit		Final Permit	
	Monthly Avg. mg/l	Daily Max. mg/l	Monthly Avg. mg/l	Daily Max. mg/l	Monthly Avg. mg/l	Daily Max. mg/l	Monthly Avg. mg/l	Daily Max. mg/l
<b>Outfall 401</b>								
Flow	N/A	N/A	450 MGD	450 MGD	450 MGD	450 MGD	450 MGD	450 MGD
FAC*	N/A	N/A	0.2	0.5	N/A	N/A	0.2	0.5
TRC*	N/A	N/A	N/A	0.2	N/A	0.2	N/A	0.2
Temperature	N/A	129.2°F	N/A	N/A	N/A	129.2°F	N/A	129.2°F
pH	6.0-9.0 s.u.		6.0-9.0 s.u.		6.0-9.0 s.u.		6.0-9.0 s.u.	

\* See Section 11.G. for discussion regarding Water Quality evaluation of the ELG limitations

**A. Justification for Limitations and Conditions of the Final Permit**

Parameter	Water Quality or Technology	Justification
<b>Outfall 001</b>		
pH	Water Quality	Rule 2.504, CWA § 402(o), and previous permit
<b>Outfall 101</b>		
TSS	Technology	40 C.F.R. § 423.12(b)(3), (4), (9), (11), and (13)
O&G	Water Quality	Rule 2.510
pH	Water Quality	Rule 2.504, CWA § 402(o), and previous permit
<b>Outfall 401</b>		
Flow	Technology	40 C.F.R. § 122.44(l), and previous permit
FAC	Technology	40 C.F.R. § 423.12(b)(6)
TRC	Technology	40 C.F.R. § 423.13(b)(1)
Temperature	Water Quality	Rule 2, Appendix A, Ozark Highlands Ecoregion - Site Specific Standards Variations Supported by Use Attainability Analysis, CWA § 402(o), and previous permit
pH	Water Quality	Rule 2.504, CWA § 402(o), and previous permit

*No new information was received, except for Mercury, Cyanide, and the revised ELG concerning the discharge of bottom ash transport water, to warrant adding, removing, or revising any requirements in the permit. Therefore, the requirements in the permit, except for Mercury, Cyanide, and the compliance dates for the elimination of the discharge of bottom ash transport water, are consistent with the requirements in the previous permit.*

**B. Anti-backsliding**

The permit is consistent with the requirements to meet Anti-backsliding provisions of the Clean Water Act (CWA), Section 402(o) [40 C.F.R. § 122.44(l)]. The final effluent

limitations for reissuance permits must be as stringent as those in the previous permit, unless the less stringent limitations can be justified using exceptions listed in CWA 402(o)(2), CWA 303(d)(4), or 40 C.F.R. § 122.44(l)(2)(i).

The permit meets or exceeds the requirements of the previous permit, except for TSS and O&G for Outfall 101.

The TSS and O&G limits for Outfall 101 have been revised. These limits were originally established in 1989 and included in the NPDES permit which was effective on November 1, 1989. They have been continued in all permits renewed since that time. Since that time, there have changes in the flows and the wastestreams at facility, which necessitate re-calculating the limits based on the ELGs and using the combined wastestream formula. See Section 11.E.8 below for details.

The TSS and O&G limits are less stringent than the previous permit. This is not backsliding because the limits are based on new information not available at the time of permit issuance, in accordance with the exception listed in 40 C.F.R. § 122.44(l)(2)(i)(B)(1).

### C. Limits Calculations

#### 1. Mass Limits:

No mass limitations are included in the permit, except for FAC and TRC for Outfall 401. 40 C.F.R. § 122.45(f)(ii) allows for mass limits to not be included when applicable standards and limitations are expressed in terms of other units of measurement.

The calculation of the loadings (lbs per day) for TRC and FAC from Outfall 401 uses the following equation:

$$\text{lbs/day} = \text{Concentration (mg/l)} \times \text{Flow (MGD)} \times 8.34 \times 2 \text{ units} \times 2/24$$

The factor 2/24 is based on the requirement that TRC and FAC are only allowed to be discharged from the generating units for a maximum of 2 hours per day (1 day = 24 hours).

Flow = 450 MGD (flow limit)

FAC Concentration = 0.2 mg/l (monthly avg. concentration limit)

FAC Concentration = 0.5 mg/l (daily max. concentration limit)

FAC Mass limit (monthly avg.) = 62.6 lbs/day

FAC Mass limit (daily max.) = 156.4 lbs/day

TRC Concentration = 0.2 mg/l (inst. max. concentration limit)

TRC Mass limit (daily max.) = 62.6 lbs/day

2. Daily Maximum Limits:

a. Outfall 101:

The daily maximum limit for TSS is based on the results of the combined wastestream formula. See Section 11.E.8 below for details.

The daily maximum limit for O&G is based on Rule 2.

b. Outfall 401:

The daily maximum limit for Temperature is an end-of-pipe water quality-based limit equal to the site-specific standard established for SWEPCO Reservoir in Rule No. 2 - Appendix A – Ozark Highlands Ecoregion.

The daily maximum limit for FAC is based on 40 C.F.R. § 423.12(b)(6).

D. **208 Plan (Water Quality Management Plan)**

This facility is not in the 208 Plan, nor required to be. Therefore, there are no changes to the 208 Plan occurring with this permit renewal.

E. **Applicable Effluent Limitations Guidelines**

Discharges from facilities of this type are covered by Federal effluent limitations guidelines promulgated under 40 C.F.R. § 423 – Steam Electric Power Generating Point Source Category.

1. 40 C.F.R. § 423.12(b)(2) applies to all discharges from the facility. There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.
2. 40 C.F.R. § 423.12(b)(3) is applicable to Outfall 101 because the discharge from this outfall contains low volume wastewater.
3. 40 C.F.R. § 423.12(b)(4) is applicable to Outfall 101 because the discharge from this outfall contains bottom ash transport water.
4. 40 C.F.R. § 423.12(b)(6) and (8) are applicable to Outfall 401 because the discharge from this outfall consists of once through cooling water.
5. 40 C.F.R. § 423.12(b)(9) is applicable to Outfall 101 because the discharge from this outfall contains coal pile runoff.
6. 40 C.F.R. § 423.13(b)(1) and (2) are applicable to Outfall 401 because the discharge from this outfall consists of once through cooling water.
7. 40 C.F.R. § 423.13(l) is applicable to Outfall 101 because the discharge from this outfall contains combustion residual leachate (ash landfill leachate).

8. Combined Wastestreams for Outfall 101:

The TSS and O&G limits were originally established and included in the NPDES permit effective November 1, 1989. Since that time, there have been changes in the operation of the facility, including changes in the handling and treatment of leachate from the ash landfill.

The following various wastestreams are combined in the ponds that discharge through Outfall 101:

- a. Low Volume Waste consisting of demineralizer process wastewater, lab drains, boiler blowdown, filter backwash, truck washwater, various plant washwaters, plant floor drains, stack seal water overflow, hydrovactor wastewater, and reclaim basin water [Ref. 40 C.F.R. § 423.12(b)(3)]
- b. Bottom Ash Transport Water [Ref. 40 C.F.R. § 423.12(b)(4)]
- c. Coal Pile Runoff consisting of coal yard stormwater runoff and water from coal yard reclaim hopper and dumper house sumps. [Ref. 40 C.F.R. § 423.12(b)(9)]
- d. Treated ash landfill leachate. [Ref. 40 C.F.R. §§ 423.13(l) and 423.12(b)(11)]
- e. Treated municipal wastewater from the City of Gentry. [Ref. AR0020184]

As noted, some of these wastestreams are categorical wastestreams regulated under the Steam Electric Power Generating Point Source Category, and one is discharge from a POTW. The various wastestreams have different technology-based TSS and O&G limitations. Therefore, the technology-based TSS and O&G limits have been recalculated, taking into account the flows of the various wastestreams as reported in the renewal application, the respective ELG limitations for the various wastestreams, and the permit limits for the treated municipal wastewater from the City of Gentry. This meets the requirements of 40 C.F.R. § 423.12(b)(13).

*The discharge of bottom ash transport water generated on or after either November 30, 2022 or December 31, 2028 will be prohibited by either November 29, 2022, or by December 30, 2028 (if the permittee submits a Notice of Planned Participation (NPP) certifying the permanent cessation of coal combustion by no later than December 31, 2028). Therefore, two sets of calculations were performed: one that included bottom ash transport water in the discharge, and one that did not. The TSS limitations based on the inclusion of bottom ash transport water have been included in Part IA Section A2. See Section 11.E.9 below for a discussion of the permit conditions and limitations after the discharge of bottom ash transport water is prohibited.*

The calculated technology-based O&G limits were less stringent than the WQS for O&G. Therefore, the WQ-based limits for O&G have been included in Part IA Sections A2, A3, and A5 of the permit.

*If the permittee submits, by October 13, 2021, a Notice of Planned Participation to certify permanent cessation of coal combustion by no later than December 31, 2028, the discharge of bottom ash transport water will be prohibited after December 31, 2028. See Section 11.E.9 below.*

The detailed calculation may be viewed on the Division's website at the following address:

[http://www.adeq.state.ar.us/downloads/WebDatabases/PermitsOnline/NPDES/PermitInformation/AR0037842\\_Combined%20Wastestreams\\_20200430.pdf](http://www.adeq.state.ar.us/downloads/WebDatabases/PermitsOnline/NPDES/PermitInformation/AR0037842_Combined%20Wastestreams_20200430.pdf)

9. Prohibition of the discharge of Bottom Ash Transport Water

On November 3, 2015, the EPA issued a final rule amending 40 C.F.R. § 423, the effluent limitations guidelines and standards for the steam electric power generating point source category. The amendments addressed and contained limitations and standards on fly ash transport water, bottom ash transport water, flue gas desulfurization (FGD) wastewater, flue gas mercury control wastewater, and gasification wastewater. Of these wastestreams, only bottom ash transport water is generated at the facility.

The 2015 updates included revisions and additions to special definitions in 40 C.F.R. §§ 423.11 (f), (p), and (t). They also included the addition of 40 C.F.R. § 423.13 (k) to the ELGs representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT) to the discharge of bottom ash transport water.

On June 6, 2017, Federal Register Vol. 82, No. 107 (FR) published a proposed revision to the 40 C.F.R. § 423, on page 26019, which postponed the compliance dates noted above (see the link in Section 17.V below) and in this notice EPA solicited comments on whether this postponement should be for a specified period of time.

The FR notes that the EPA received seven petitions for review of the rule, and the United States Judicial Panel on Multi-District Litigation issued an order on December 8, 2015, consolidating all of the petitions in the U.S. Court of Appeals for the Fifth Circuit. On April 12, 2017, the EPA Administrator sent a letter to those who submitted the reconsideration petitions, announcing his decision to reconsider the Rule. On April 14, 2017, the EPA requested that the Fifth Circuit hold the case in abeyance while the Agency undertakes reconsideration. On April 24, 2017, the Fifth Circuit granted the motion and placed the case in abeyance.

On August 11, 2017, EPA sent a second letter to those who had submitted the reconsideration petitions for the 2015 Rule, announcing the Administrator's decision to conduct a new rulemaking to potentially revise the new, more stringent BAT limitations in the 2015 Rule that apply to two wastestreams: FGD wastewater and bottom ash transport water. On August 14, 2017, EPA filed a motion to govern further proceedings in the U.S. Court of Appeals for the Fifth Circuit, which explained that EPA intended to conduct further rulemaking to potentially revise the new, more stringent requirements in the 2015 Rule applicable only to FGD wastewater and bottom ash transport water (as noted above, FGD wastewater is not a wastestream at the facility), and requested, in part, that the Court sever and hold in abeyance all judicial proceedings concerning portions of the 2015 Rule related to those particular requirements. On August 22, 2017, the Court granted EPA's motion.

On September 18, 2017, Federal Register Vol. 82, No. 179 (FR) published a revision to the 40 C.F.R. § 423, on page 43500, which postponed the “as soon as possible” compliance date for bottom ash transport water and FGD wastewater from November 1, 2018 to November 1, 2020. The “no later than” December 31, 2023 compliance date for bottom ash transport water and FGD wastewater was unchanged.

*On October 13, 2020, Federal Register Vol. 85, No. 198 (FR) published a revision to the 40 C.F.R. § 423 on pages 64716-64723. The revisions, which have been incorporated into 40 C.F.R. § 423, included the following:*

- *Revision of the definition of “transport water” in 40 C.F.R. § 423.11(p);*
- *Revision of the definition of the “as soon as possible” compliance date in 40 C.F.R. § 423.11(t) for the elimination of the discharge of BATW from November 1, 2020 to October 13, 2021, and the “no later than” compliance date to December 31, 2025;*
- *Addition, as 40 C.F.R. § 423.11(w), of the definition of the term “permanent cessation of coal combustion” meaning the certification that an electric generating unit will cease combustion of coal no later than December 31, 2028;*
- *Addition, as 40 C.F.R. § 423.13(k)(2)(i)(B)(ii), of the allowance for facilities to continue generating and discharging BATW until December 31, 2028, if facilities have certified that they will permanently cease coal combustion by December 31, 2028;*
- *Addition, as 40 C.F.R. § 423.19(f), of the certification requirements for facilities that will permanently cease coal combustion by December 31, 2028.*
- *Addition, as 40 C.F.R. § 423.18, of required permit conditions that allow an electric generating unit to qualify as permanently ceasing the combustion of coal by December 31, 2028, if such qualification would have been demonstrated absent the certain qualifying events.*

*See the link in Section 17.SS below.*

*The permit modification application submitted by the permittee states that the facility will replace the bottom ash sluicing system with a dry bottom ash handling system (DBAH), and that the generation of bottom ash transport water (BATW) will cease by November 30, 2022.*

*The permit modification application included a timeline to install the DBAH system and make related changes to the power plant. Pursuant to 40 C.F.R. § 423.11(t), the Division evaluated that timeline in light of the time required to expeditiously install the equipment for the DBAH system and to make changes to the plant to comply with the requirements of 40 C.F.R. § 423. The installation of the DBAH system will require a significant amount of supporting work at the power plant, which includes installing a new storage bunker, conveyor, electrical upgrades, and controls. Based on the work that needs to be completed in the power plant, the generating unit needs to be taken out of service to complete installation under and around the boiler. The earliest that*

*the installation of the DBAH system is achievable will be after completion of the rest of the supporting work in the Fall of 2022. Based on this information, and the schedule presented in Attachment 2 of the application, Flint Creek will meet the ELG BATW requirements by November 30, 2022.*

*In consideration of the information submitted with the permit modification application, and the above-referenced revised ELGs in 40 C.F.R. § 423, the following permit conditions concerning the discharge of BATW have been modified, or added:*

- a. The “on or before” date for BATW generated and discharged has been changed from December 30, 2023 to November 29, 2022 throughout the permit.*
- b. The “on or after” compliance date for the cessation of generation and discharge of BATW has been changed from December 30, 2023 to November 30, 2022 throughout the permit.*
- c. Conditions allowing for the extension of the generation and discharge of BATW past November 30, 2022, by certification that coal combustion will permanently cease by December 31, 2028, has been added as Part II.23.B and C.*
- d. Requirements for the certification by the permittee of the permanent cessation of coal combustion have been added as Part II.23.D.*
- e. Part I Section A5 has been added as the discharge requirements for Outfall 101 in the event that the permittee certifies the permanent cessation of coal combustion in accordance with the conditions in Part II.23.D.*
- f. The Schedule of Compliance in Part IB has been revised to allow for the change in compliance date due to the certification of permanent cessation of coal combustion by the permittee.*
- g. The definition of “BATW in Part II.12 has been replaced with the definition of “transport water” from 40 C.F.R. § 423.11(p).*
- h. Conditions required by 40 C.F.R. § 423.18 have been added as Part II.24.*

*The discharge of BATW generated on or after November 30, 2022 is prohibited, unless the permittee submits (in accordance with the requirements of Part II.23.D), by October 13, 2021, a Notice of Planned Participation (NPP) certifying the permanent cessation of coal combustion by no later than December 31, 2028. If an NPP is submitted by permittee (in accordance with the requirements of Part II.23.D), the discharge of bottom ash transport water generated on or after December 31, 2028 will be prohibited.*

#### 10. Cooling Water Intake Structures (CWISs) - CWA § 316(b)

EPA promulgated the Existing Facilities Rule pursuant to Clean Water Act Section 316(b) on August 15, 2014. The rule became effective on October 14, 2014. This Existing Facilities Rule is found in Subpart J of 40 C.F.R. § 125 (125.90 through 125.99). Subpart J establishes the 316(b) requirements that apply to CWIS at existing facilities for the purpose of minimizing adverse environmental impact associated with the use of CWIS. The requirements are established and implemented in NPDES permits.

Subpart J is applicable to existing facilities that commenced construction on or before January 17, 2002. Since this facility began operations in 1978, this facility is defined as an existing facility as defined in 40 C.F.R. § 125.92(k). Existing facilities are subject to Subpart J if all of the following items are true:

- The facility is a point source;
- The facility uses or proposes to use one or more CWIS with a cumulative design intake flow of greater than 2 million gallons per day (MGD) to withdraw water from waters of the United States; and
- Twenty-five percent (25%) or more of the water the facility withdraws on an actual intake flow basis is used exclusively for cooling purposes.

This facility is a point source, the design intake flow of the CWIS associated with this facility is 432 MGD, and the facility uses at least 25% of the water withdrawn exclusively for cooling purposes. Therefore, this facility is subject to Subpart J for existing facilities.

Subpart J requires the facility to choose one of seven options that represent Best Technology Available (BTA) for impingement (IM), and also requires the permitting authority to determine BTA for entrainment (E) on a site-specific basis based on the information submitted in the permit application.

The Division received a letter, dated October 7, 2015 from David Hall, Ph.D of American Electric Power requesting that the Flint Creek Reservoir be designated as part of a closed-cycle recirculating cooling system, as defined in 40 C.F.R. § 125.92(c). Documents supporting the request were submitted with the letter. The documents consisted of:

- a copy of the application for construction of the dam on Flint Creek that was submitted to the Arkansas Soil and Water Conservation Commission (ASWCC) on October 15, 1974;
- a copy of the letter from the Arkansas Department of Commerce, Division of Soil and Water Resources, stating that the ASWCC had unanimously passed a motion to issue a permit to construct the dam on Flint Creek;
- a copy of the minutes from the meeting where the motion was passed;
- a copy of the permit for construction of the dam on Flint Creek issued by the ASWCC on May 19, 1975; and
- a copy of the letter from USEPA Region VI stating that the Flint Creek Reservoir was classified as a “cooling pond”.

The Division reviewed the request, and the supporting documents, and determined that Flint Creek Reservoir meets the definition of a closed-cycle recirculating system (CCRS) as defined in 40 C.F.R. § 125.92(c)(2). A letter, dated April 19, 2016, was

sent informing the facility of the determination. Pursuant to Subpart J, the operation of CCRS, and monitoring the actual intake flows on a daily basis, is a pre-approved BTA for minimizing impingement mortality, with no biological (IM or E) monitoring required. It is also determined that, in accordance with 40 C.F.R. § 122.21(r)(1)(B), and 40 C.F.R. § 125.94(d), operating a CCRS meets the site-specific BTA Standards for Entrainment.

Subpart J requires submittal of the information noted in 40 C.F.R. § 122.21(r). The Division granted a waiver for submittal of the information noted in 40 C.F.R. §§ 122.21(r)(9)-(13) in the above referenced letter, dated April 19, 2016, based on the determination that the facility operates a CCRS, as defined in 40 C.F.R. § 125.92(c)(2). In a separate letter, dated September 6, 2016, the Division specified that the information in 40 C.F.R. §§ 122.21(r)(2)-(5), and (8) must be submitted. The document, “Flint Creek Power Plant – Impingement Monitoring Data Report – Benton County, Arkansas”, PBS&J, March 2007, originally submitted by the facility March 13, 2012, the information submitted in and attached to a letter from the facility, dated March 2, 2012, and the document “316(b) Proposal for Information Collection, Flint Creek Power Plant, AR0037842”, Arkansas Electric Power, September 2005 (submitted March 19, 2019), fulfills the requirements of 40 C.F.R. §§ 122.21(r)(2)-(5). The letter submitted by the facility, dated April 20, 2018, described the current operational status of the CWIS, and meets the requirements of 40 C.F.R. § 122.21(r)(8).

In accordance with Part II.16.A of the permit, the facility is required to operate and maintain the closed-cycle recirculating cooling system in accordance with Best Management Practices (BMPs) that will minimize any Adverse Environmental Impacts (AEIs) from the CWIS.

Part II.16.B of the permit also requires the facility to monitor the actual intake flow at least daily. This monitoring must be representative of normal operating conditions. Actual intake flows may be calculated using the pump run time and pump capacity. The actual intake flows determined by this method will satisfy the monitoring requirements under Part II.16.B. Part II.16.B satisfies the reporting requirements of 40 C.F.R. § 125.94 (c)(1) and 40 C.F.R. § 125.97 (a) and (b).

In accordance with 40 C.F.R. § 125.98(b)(1), the following language is also included in Part II.16.C of the permit: “Nothing in this permit authorizes take for the purposes of a facility’s compliance with the Endangered Species Act.”

Part II.17 satisfies the requirements for an annual certification statement and report in 40 C.F.R. § 125.97(c).

Part II.18 satisfies the requirements for weekly visual inspections in 40 C.F.R. § 125.96(e).

Parts II.19.A and B satisfy the requirements for recordkeeping in 40 C.F.R. §§ 125.95(e) and 125.97(f), respectively.

Part II.19.C satisfies the requirements for reporting in 40 C.F.R. § 125.97(a).

**F. Priority Pollutant Scan (PPS)**

DEQ has reviewed and evaluated the effluent in accordance with the potential toxicity of each analyzed pollutant using the procedures outlined in the Continuing Planning Process (CPP).

The concentration of each pollutant after mixing with the receiving stream was compared to the applicable water quality standards as established in the Regulation Establishing Water Quality Standards for Surface Waters of the State of Arkansas, Rule 2 (Rule 2.508) and criteria obtained from the “Quality Criteria for Water, 1986 (Gold Book).”

Under Federal Regulation 40 C.F.R. § 122.44(d), as adopted by Rule 6, if a discharge poses the reasonable potential to cause or contribute to an exceedance above a water quality standard, the permit must contain an effluent limitation for that pollutant. Effluent limitations for the toxicants listed below have been derived in a manner consistent with the Technical Support Document (TSD) for Water Quality-based Toxics Control (EPA, March 1991), the CPP, and 40 C.F.R. § 122.45(c).

The following items were used in calculations:

Parameter	Value	Source
Discharge Flow = Q	Outfall 001: 9.37 MGD = 14.50 cfs Outfall 101: 8.41 MGD = 13.01 cfs Outfall 401: 406.08 MGD = 623.30 cfs	DMRs – highest monthly avg. flow
7Q10 Background Flow	0 cfs	Lake discharge
LTA Background Flow	0 cfs	Lake discharge
TSS	2.5 mg/l	CPP – Ozark Highlands Ecoregion
Hardness as CaCO <sub>3</sub>	148 mg/l	CPP – Ozark Highlands Ecoregion
pH	7.50 s.u.	ARK0004

The following pollutants were reported above detection levels:

Pollutant	Concentration Reported, µg/l	MQL, µg/l
<b>OUTFALL 001</b>		
Arsenic	0.564 <sup>1</sup>	0.5
Copper	1.62 <sup>1</sup>	0.5
Mercury	0.00092 <sup>6</sup>	0.005
Nickel	1.3 <sup>1</sup>	0.5
Zinc	2 <sup>1</sup>	20
Total Phenols	4.2 <sup>1</sup>	5
Cyanide	4.78 <sup>7</sup>	10

Pollutant	Concentration Reported, µg/l	MQL, µg/l
<b>OUTFALL 101</b>		
Arsenic	0.63 <sup>2</sup>	0.5
Copper	6.07 <sup>2</sup>	0.5
Lead	0.07 <sup>2</sup>	0.5
Mercury	0.002 <sup>3</sup>	0.005
Nickel	2.74 <sup>2</sup>	0.5
Selenium	0.59 <sup>4</sup>	5
Zinc	2.86 <sup>2</sup>	20
Total Phenols	5.85 <sup>2</sup>	5
Cyanide	4.78 <sup>8</sup>	10
<b>OUTFALL 401</b>		
Arsenic	0.61 <sup>5</sup>	0.5
Copper	17.1 <sup>5</sup>	0.5
Mercury	0.00368 <sup>5</sup>	0.005
Nickel	4.2 <sup>5</sup>	0.5
Total Phenols	7.6 <sup>5</sup>	5

- <sup>1</sup> Single data point reported on EPA Form 2C for Outfall 001 in the permit renewal application.
- <sup>2</sup> Geometric Mean of 2 data points from EPA Form 2C for Outfall 101 submitted with the permit renewal application, and the PPS received April 26, 2018.
- <sup>3</sup> Geometric Mean of 15 data points from EPA Form 2C for Outfall 101 submitted with the permit renewal application, and sampling report submitted February 18, 2020. One data point, from the PPS received April 26, 2018, was omitted because the analysis did not meet the required MQL of 0.005 µg/l.
- <sup>4</sup> Geometric Mean of 6 data points from EPA Form 2C for Outfall 101 submitted with the permit renewal application, the PPS received April 26, 2018, and laboratory reports submitted March 13, 2019.
- <sup>5</sup> Single data point reported on EPA Form 2C for Outfall 401 in the permit renewal application.
- <sup>6</sup> Geometric Mean of 13 data points (1 reported for Outfall 001 in the permit renewal application received June 29, 2017, and 12 from sampling performed February 23, 2021 – March 31, 2021).
- <sup>7</sup> Maximum of 23 data points (1 reported for Outfall 001 in the permit renewal application received June 29, 2017, and 22 from sampling performed February 23, 2021 – May 5, 2021).
- <sup>8</sup> Maximum of 24 data points (2 reported for Outfall 101 in the permit renewal application received June 29, 2017, and 22 from sampling performed February 23, 2021 – May 5, 2021).

Instream Waste Concentrations (IWCs) were calculated in the manner described in Appendix D of the CPP and compared to the applicable criteria. The following tables summarize the results of the analysis. The complete evaluation, *including the additional data for Mercury and Cyanide*, can be viewed on the Division’s website at the following address:

1. **Aquatic Toxicity Evaluation**

a. Acute Criteria Evaluation

Pollutant	Concentration Reported (C <sub>e</sub> ) µg/l	C <sub>e</sub> × 2.13 <sup>1</sup>	Instream Waste Concentration (IWC)	Criteria <sup>2</sup>	Reasonable Potential (Yes/No)
			Acute, µg/l	Acute, µg/l	
<b>OUTFALL 001</b>					
Copper	1.62	3.45	3.45	57.11	No
Mercury	0.00092	0.00196	0.00196	7.24	No
Nickel	1.3	2.77	2.77	3405.03	No
Zinc	2	4.26	4.26	422.06	No
Cyanide	4.78	-	4.78	22.36	No
<b>OUTFALL 101</b>					
Copper	6.07	12.93	12.93	57.11	No
Lead	0.07	0.38	0.38	430.62	No
Mercury	0.002	0.0043	0.0043	7.24	No
Nickel	2.74	5.84	5.84	3405.03	No
Selenium	0.59	1.26	1.26	20.00	No
Zinc	2.86	6.09	6.09	422.06	No
Cyanide	4.78	-	4.78	22.36	No
<b>OUTFALL 401</b>					
Copper	17.1	36.42	36.42	57.11	No
Mercury	0.00368	0.003784	0.003784	7.24	No
Nickel	4.2	8.95	8.95	3405.03	No

<sup>1</sup> Statistical ratio used to estimate the 95<sup>th</sup> percentile using a single effluent concentration or the geometric mean of a dataset.

<sup>2</sup> Criteria are from Rule 2.508.

b. Chronic Criteria Evaluation

Pollutant	Concentration Reported (C <sub>e</sub> ) µg/l	C <sub>e</sub> × 2.13 <sup>1</sup>	Instream Waste Concentration (IWC)	Criteria <sup>2</sup>	Reasonable Potential (Yes/No)
			Chronic, µg/l	Chronic, µg/l	
<b>OUTFALL 001</b>					
Copper	1.62	3.45	3.45	36.81	No
Mercury	0.00092	0.00196	0.00196	0.012	No
Nickel	1.3	2.77	2.77	378.16	No
Zinc	2	4.26	4.26	385.40	No
Cyanide	4.78	-	4.78	5.2	No
<b>OUTFALL 101</b>					
Copper	6.07	12.93	12.93	36.81	No
Lead	0.07	0.38	0.38	16.78	No
Mercury	0.002	0.0043	0.0043	0.012	No
Nickel	2.74	5.84	5.84	378.16	No
Selenium	0.59	1.26	1.26	5.00	No
Zinc	2.86	6.09	6.09	385.40	No
Cyanide	4.78	7.37	4.78	5.2	No
<b>OUTFALL 401</b>					
Copper	17.1	36.42	36.42	36.81	No
Mercury	0.00368	0.003784	0.003784	0.012	No
Nickel	4.2	8.95	8.95	378.16	No

<sup>1</sup> Statistical ratio used to estimate the 95<sup>th</sup> percentile using a single effluent concentration or the geometric mean of a dataset.

<sup>2</sup> Criteria are from Rule 2.508.

## 2. Human Health (Bioaccumulation) Evaluation

Pollutant	Concentration Reported ( $C_e$ ) $\mu\text{g/l}$	$C_e \times 2.13^1$	Instream Waste Concentration (IWC)	Criteria <sup>2</sup>	Reasonable Potential (Yes/No)
<b>OUTFALL 001</b>					
Arsenic	0.564	1.20	1.20	1.4	No
Copper	1.62	3.45	3.45	13,000	No
Mercury	0.00092	0.00196	0.00196	2 <sup>3</sup>	No
Nickel	1.3	2.77	2.77	46,000	No
Zinc	2	4.26	4.26	260,000	No
Cyanide	4.78	-	4.78	4,000	No
<b>OUTFALL 101</b>					
Arsenic	0.63	1.34	1.34	1.4	No
Copper	6.07	12.93	12.93	13,000	No
Lead	0.07	0.38	0.38	50	No
Mercury	0.002	0.0043	0.0043	2 <sup>3</sup>	No
Nickel	2.74	5.84	5.84	46,000	No
Selenium	0.59	1.26	1.26	42,000	No
Zinc	2.86	6.09	6.09	260,000	No
Cyanide	4.78	-	4.78	4,000	No
<b>OUTFALL 401</b>					
Arsenic	0.61	1.30	1.30	1.4	No
Copper	17.1	36.42	36.42	13,000	No
Mercury	0.00368	0.003784	0.003784	2 <sup>3</sup>	No
Nickel	4.2	8.95	8.95	46,000	No

<sup>1</sup> Statistical ratio used to estimate the 95<sup>th</sup> percentile using a single effluent concentration or the geometric mean of a dataset.

<sup>2</sup> Unless otherwise specified, adapted from "National Recommended Water Quality Criteria: 2002 – Human Health Criteria Calculation Matrix," EPA. The respective WQC from the noted reference are Consumption of Organism Only values. The values from the reference are for a lifetime risk factor of 10-6. These values have been multiplied by 10 to correspond to human health criteria lifetime risk factor of 10-5 as stated in Rule 2.508.

<sup>3</sup> Primary Drinking Water Standard.

*DEQ has determined from the submitted information that the discharge does not pose the reasonable potential to cause or contribute to an exceedance above a listed Criteria. Therefore, the monitoring and reporting requirements for Outfall 001 for Mercury and Cyanide, and for Outfall 101 for Cyanide, have been removed from the permit as part of this modification.*

### G. Water Quality Standards for ELG-limited pollutants – Outfall 401

The ELGs promulgated under 40 C.F.R. §§ 423.12 and 423.13 include limitations for TRC and FAC. The TRC and FAC ELGs apply to Outfall 401. 40 C.F.R. §§ 122.44(d) and (d)(1) require NPDES discharge permits to include:

“any requirements in addition to or more stringent than promulgated effluent limitations guidelines or standards under sections 301, 304, 306, 307, 318 and 405 of CWA necessary to:

(1) Achieve water quality standards established under section 303 of the CWA, including State narrative criteria for water quality.”

There are no numerical water quality standards for TRC or FAC in Rule 2.508. However, the narrative water quality standard in Rule 2.409 forbids the discharge of toxic pollutants in amounts which are toxic. Outfall 401 has Whole Effluent Toxicity (WET) testing requirements. Part V – Chlorination/Dechlorination of the DEQ Discharge Permit, Toxic Control Implementation Procedure of the CPP, specifies the use of WET testing (biomonitoring) in the case of facilities that use chlorination without dechlorination. The CPP states:

“If the chlorinated effluent is non-toxic and significant dilution is provided in the receiving stream (e.g., the Arkansas or Mississippi River) the permit will rely on biomonitoring to evaluate potential impacts from chlorine. If the toxicity test results show toxicity problems, a schedule of compliance to install dechlorination is required.”

WET testing results for Outfall 401 from December 2014 through June 2019 show no failures, and a minimum No Observable Effect Concentration for all tests of 54% (the Critical Dilution). This indicates that the effluent is non-toxic.

Based on the results of WET testing, and the requirements in the CPP, the discharge meets the narrative water quality standard in Rule 2.409. Since WET testing monitors the combined effects of all pollutants in the effluent, it is an acceptable replacement for a concentration limit in this circumstance (it should be noted that FAC is a component of TRC). Therefore, no additional water quality-based TRC or FAC requirements are necessary for the discharge through Outfall 401. The ELG limits for TRC and FAC have been included for this outfall.

## 12. WHOLE EFFLUENT TOXICITY

Section 101(a)(3) of the Clean Water Act states that “...it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited.” In addition, DEQ is required under 40 C.F.R. § 122.44(d)(1), adopted by reference in Rule 6, to include conditions as necessary to achieve water quality standards as established under Section 303 of the Clean Water Act. Arkansas has established a narrative criteria which states “toxic materials shall not be present in receiving waters in such quantities as to be toxic to human, animal, plant or aquatic life or to interfere with the normal propagation, growth and survival of aquatic biota.”

Whole effluent toxicity (WET) testing is the most direct measure of potential toxicity which incorporates the effects of synergism of effluent components and receiving stream water quality characteristics. It is the national policy of EPA to use bioassays as a measure of toxicity to allow evaluation of the effects of a discharge upon a receiving water (49 Federal Register 9016-9019, March 9, 1984). EPA Region 6 and the State of Arkansas are now

implementing the Post Third Round Policy and Strategy established on September 9, 1992, and EPA Region 6 Post-Third Round Whole Effluent Toxicity Testing Frequencies, revised March 13, 2000. Whole effluent toxicity testing of the effluent is thereby required as a condition of this permit to assess potential toxicity. The whole effluent toxicity testing procedures stipulated as a condition of this permit are as follows:

<b>TOXICITY TESTS</b>	<b>FREQUENCY</b>
Chronic WET	once/quarter

Requirements for measurement frequency are based on the CPP.

Since 7Q10 is less than 100 cfs (ft<sup>3</sup>/sec), chronic WET testing requirements will be included in the permit.

The Critical Dilutions (CD) of 17% for Outfall 101, and 40% for Outfall 401, are continued from the previous permit based on the submitted mixing zone studies conducted by FTN Associates, Ltd.

Toxicity tests shall be performed in accordance with protocols described in “Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms,” EPA/600/4-91/002, July 1994. A minimum of five effluent dilutions in addition to an appropriate control (0%) are to be used in the toxicity tests. These additional effluent concentrations are **7%, 10%, 13%, 17%, and 23%** for Outfall 101, and **17%, 23%, 30%, 40%, and 53%** for Outfall 401 (See CPP). The low-flow effluent concentration (critical dilution) is defined as **17%** effluent for Outfall 101 and **40%** effluent for Outfall 401. The requirement for chronic WET tests is based on the magnitude of the facility’s discharge with respect to receiving stream flow. The stipulated test species, *Ceriodaphnia dubia* and the Fathead minnow (*Pimephales promelas*) are representative of organisms indigenous to the geographic area of the facility; the use of these is consistent with the requirements of the State water quality standards. The WET testing frequency has been established to provide data representative of the toxic potential of the facility’s discharge, in accordance with the regulations promulgated at 40 C.F.R. § 122.48.

Results of all dilutions as well as the associated chemical monitoring of pH, temperature, hardness, dissolved oxygen conductivity, and alkalinity shall be reported according to EPA-821-R-02-013, October 2002 and shall be submitted as an attachment to the Discharge Monitoring Report (DMR).

This permit may be reopened to require further WET testing studies, Toxicity Reduction Evaluation (TRE) and/or effluent limits if WET testing data submitted to the Division shows toxicity in the permittee’s discharge. Modification or revocation of this permit is subject to the provisions of 40 CFR 122.62, as adopted by reference in APC&EC Rule 6. Increased or intensified toxicity testing may also be required in accordance with Section 308 of the Clean Water Act and Section 8-4-201 of the Arkansas Water and Air Pollution Control Act (Act 472 of 1949, as amended).

Administrative Records

Permit Number:	AR0037842	AFIN:	04-00107	Outfall Number:	101
Date of Review:	12/5/2018	Reviewer:	A. Bates/M. Barnett		
Facility Name:	Southwestern Electric Power Company - Flint Creek Power Plant				
Previous Dilution series:	7, 10, 13, 17, 23%	Proposed Dilution Series:	7, 10, 13, 17, 23%		
Previous Critical Dilution:	17%	Proposed Critical Dilution:	17%		
Previous TRE activities:	none				

**Frequency recommendation by species**

<i>Pimephales promelas</i> (Fathead minnow):	once per quarter
<i>Ceriodaphnia dubia</i> (water flea):	once per quarter

**TEST DATA SUMMARY**

TEST DATE	Vertebrate ( <i>Pimephales promelas</i> )		Invertebrate ( <i>Ceriodaphnia dubia</i> )	
	Lethal	Sub-Lethal	Lethal	Sub-Lethal
	NOEC	NOEC	NOEC	NOEC
12/31/2013	23	23	23	23
3/31/2014	23	23	23	23
12/31/2014	23	23	23	23 *
6/30/2015	23	23	23	23
12/31/2015	23	23	23	23
6/30/2016	23	23	23	23 *
12/16/2016	23	23	23	23
6/30/2017	23	23	23	23
12/31/2017	23	23	23	23
3/31/2018	23	23	23	23
6/30/2018	23	23	23	23
9/30/2018	23	23	23	23
12/31/2018	23	23	23	23

\* denotes tests for which one or more effluent samples was received above 6.0°C

**Failures noted in BOLD**

**REASONABLE POTENTIAL CALCULATIONS**

	Vertebrate Lethal	Vertebrate Sub-lethal	Invertebrate Lethal	Invertebrate Sub-Lethal
<b>Min NOEC Observed</b>	23	23	23	23
<b>TU at Min Observed</b>	4.35	4.35	4.35	4.35
<b>Count</b>	13	13	13	13
<b>Failure Count</b>	0	0	0	0
<b>Mean</b>	4.348	4.348	4.348	4.348
<b>Std. Dev.</b>	0.000	0.000	0.000	0.000
<b>CV</b>	0	0	0	0
<b>RPMF</b>	0	0	0	0
<b>Reasonable Potential</b>	0.000	0.000	0.000	0.000
<b>100/Critical dilution</b>	5.882	5.882	5.882	5.882
<b>Does Reasonable Potential Exist</b>	No	No	No	No

**PERMIT ACTION**

<i>P. promelas</i> Chronic - monitoring
<i>C. dubia</i> Chronic - monitoring

Review of the past five years of WET test data indicates that reasonable potential does not exist. There is insufficient evidence for the inclusion of limits at this time.

Permit Number:	AR0037842	AFIN:	04-00107	Outfall Number:	401
Date of Review:	12/5/2018	Reviewer:	A. Bates/M. Barnett		
Facility Name:	Southwestern Electric Power Company - Flint Creek Power Plant				
Previous Dilution series:	17, 23, 30, 40, 54%	Proposed Dilution Series:	17, 23, 30, 40, 53%		
Previous Critical Dilution:	40%	Proposed Critical Dilution:	40%		
Previous TRE activities:	none				
<b>Frequency recommendation by species</b>					
<i>Pimephales promelas</i> (Fathead minnow):	once per quarter				
<i>Ceriodaphnia dubia</i> (water flea):	once per quarter				
<b>TEST DATA SUMMARY</b>					
TEST DATE	Vertebrate ( <i>Pimephales promelas</i> )		Invertebrate ( <i>Ceriodaphnia dubia</i> )		
	Lethal NOEC	Sub-Lethal NOEC	Lethal NOEC	Sub-Lethal NOEC	
12/31/2014	54	54	54	54	54 *
6/30/2015	54	54	54	54	54 *
12/31/2015	54	54	54	54	54 *
6/30/2016	54	54	54	54	54 *
12/31/2016	54	54	54	54	54
6/30/2017	54	54	54	54	54
12/31/2017	54	54	54	54	54
3/31/2018	54	54	54	54	54
6/30/2018	54	54	54	54	54
9/30/2018	54	54	54	54	54
12/31/2018	54	54	54	54	54
* denotes tests for which one or more effluent samples was received above 6.0°C					
<b>Failures noted in BOLD</b>					
<b>REASONABLE POTENTIAL CALCULATIONS</b>					
	<b>Vertebrate Lethal</b>	<b>Vertebrate Sub-lethal</b>	<b>Invertebrate Lethal</b>	<b>Invertebrate Sub-Lethal</b>	
<b>Min NOEC Observed</b>	54	54	54	54	
<b>TU at Min Observed</b>	1.85	1.85	1.85	1.85	
<b>Count</b>	11	11	11	11	
<b>Failure Count</b>	0	0	0	0	
<b>Mean</b>	1.852	1.852	1.852	1.852	
<b>Std. Dev.</b>	0.000	0.000	0.000	0.000	
<b>CV</b>	0	0	0	0	
<b>RPMF</b>	0	0	0	0	
<b>Reasonable Potential</b>	0.000	0.000	0.000	0.000	
<b>100/Critical dilution</b>	2.500	2.500	2.500	2.500	
<b>Does Reasonable Potential Exist</b>	No	No	No	No	
<b>PERMIT ACTION</b>					
<i>P. promelas</i> Chronic - monitoring					
<i>C. dubia</i> Chronic - monitoring					

Review of the past five years of WET test data indicates that reasonable potential does not exist. There is insufficient evidence for the inclusion of limits at this time.

### 13. STORMWATER REQUIREMENTS

The federal regulations at 40 C.F.R. § 122.26(b)(14) require certain industrial sectors to have NPDES permit coverage for stormwater discharges from the facility. These requirements include the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) to control the quality of stormwater discharges from the facility. This facility was issued stormwater permit coverage under NPDES Tracking number ARR00B277.

**14. SAMPLE TYPE AND FREQUENCY**

Regulations require permits to establish monitoring requirements to yield data representative of the monitored activity [40 C.F.R. § 122.48(b)] and to ensure compliance with permit limitations [40 C.F.R. § 122.44(i)(1)].

Requirements for sample type and sampling frequency have been based on the current discharge permit, except for Mercury and Cyanide for Outfall 001 and Outfall 101, and FAC for Outfall 401. The sample type for Mercury and Cyanide has been set as “grab” in accordance with 40 C.F.R. § 122.21(g)(7)(i), because SWEPCO Lake and the Ash Pond system have retention times greater than 24 hours. The sampling frequency has been set at “once/quarter” because this frequency will provide sufficient data for an RP analysis. The sample type and frequency for FAC have been set the same as for TRC because they are related pollutants.

Parameter	Previous Permit		Final Permit	
	Frequency of Sample	Sample Type	Frequency of Sample	Sample Type
<b>Outfall 001</b>				
Flow	continuous	record	continuous	record
pH	once/week	grab	once/week	grab
<b>Outfall 101</b>				
Flow	continuous	record	continuous	record
TSS	once/week	grab	once/week	grab
O&G	once/2 months	grab	once/2 months	grab
pH	once/week	grab	once/week	grab
Chronic WET	once/quarter	composite	once/quarter	composite
<b>Outfall 401</b>				
Flow	continuous	record	continuous	record
FAC	N/A	N/A	twice/month	grab
TRC	twice/month	grab	twice/month	grab
Temperature	continuous	record	continuous	record
pH	twice/month	grab	twice/month	grab
Chronic WET	once/quarter	composite	once/quarter	composite

**15. PERMIT COMPLIANCE SCHEDULE**

A compliance schedule was added to Part IB.2 of the permit which requires periodic progress reports on meeting the no discharge requirement for bottom ash transport water, and a final certification that this requirement was met prior to *November 30, 2022, unless the permittee certifies to the Division that it will permanently cease combustion of coal by December 31, 2028, pursuant to the conditions in Part II.23.D. If the permittee submits the above referenced certification, then the permittee shall submit progress reports in accordance with the requirements in Parts II.23.D.iv and v, rather than in accordance with the requirements in IB.1.*

## 16. MONITORING AND REPORTING

The applicant is at all times required to monitor the discharge on a regular basis and report the results monthly. The monitoring results will be available to the public.

## 17. SOURCES

The following sources were used to draft the permit:

- A. *Application No. AR0037842 received January 13, 2021, and all additional information received by February 1, 2021.*
- B. APC&EC Rule 2.
- C. APC&EC Rule 3.
- D. APC&EC Rule 6 which incorporates by reference certain federal regulations included in Title 40 of the Code of Federal Regulations at Rule 6.104.
- E. 40 C.F.R. §§ 122 and 125.
- F. 40 C.F.R. § 423.
- G. Discharge permit file AR0037842.
- H. Discharge Monitoring Reports (DMRs).
- I. “2018 Integrated Water Quality Monitoring and Assessment Report,” DEQ.
- J. “2018 List of Impaired Waterbodies (303(d) List),” DEQ, May 2020.
- K. Continuing Planning Process (CPP).
- L. Technical Support Document For Water Quality-based Toxic Control.
- M. [Inspection Report #105719, dated December 7, 2018.](#)
- N. [Compliance Review Memo from Christina Brown to Guy Lester, P.E., dated March 18, 2019.](#)
- O. [Letter, dated October 7, 2015, from David P. Hall, PhD, of American Electric Power, to John Bailey, P.E., of ADEQ.](#)
- P. [Letter, dated April 19, 2016, from John Bailey, P.E., of ADEQ, to Carl Handley, Plant Manager, of American Electric Power.](#)
- Q. [“Flint Creek Power Plant - Impingement Monitoring Data Report - Benton County, Arkansas,” PBS&J, March 2007.](#)
- R. [“Mixing Zone Study at SWEPCO Lake,” dated November 16, 1990, FTN Associates Ltd.](#)
- S. [“316\(b\) Proposal for Information Collection, Flint Creek Power Plant, AR0037842,” Arkansas Electric Power, September 2005.](#)
- T. [Federal Register Vol. 82, No. 107 pp 26017-26019.](#)
- U. [Federal Register Vol. 82, No. 179 pp 43494-43500.](#)
- V. [Email series, dated October 26, 2017 concerning certification of analytical laboratory.](#)
- W. [Letter, dated December 27, 2017, submittal of Mercury and Selenium analytical data.](#)
- X. [Priority Pollutant Scan for Outfall 101, submitted April 26, 2018.](#)
- Y. [Email comments by the U.S. Fish & Wildlife Service, dated September 18, 2018.](#)
- Z. [U.S. Fish & Wildlife Service ECOS Critical Habitat Map, March 19, 2019.](#)
- AA. [Site visit report, November 14, 2018.](#)
- BB. [Submittal of 2018 Mercury and Selenium analytical data for Outfall 101.](#)
- CC. [Submittal of revised Mercury and Selenium analytical data for Outfall 101.](#)
- DD. [ELG combined wastestream calculations.](#)

- EE. [ArcGIS stream map.](#)
- FF. [Google Earth Image.](#)
- GG. [Google Earth Image - Outfalls.](#)
- HH. [Revised EPA Form 2C, page 2.](#)
- II. [Email, dated December 10, 2019, Advanced Industrial operators license requirement.](#)
- JJ. [Letter, dated February 18, 2020, concerning contamination of Mercury samples, and submission of valid Mercury analytical data.](#)
- KK. [Mercury Data for Outfall 101.](#)
- LL. [Toxicity Calculations.](#)
- MM. [Pre-draft review comments by Permittee, dated March 15, 2020.](#)
- NN. [EPA No Objection letter, dated June 24, 2020.](#)
- OO. [Arkansas Department of Health No Comment Letter, dated July 21, 2020.](#)
- PP. [American Electric Power Comment Letter, received July 31, 2020.](#)
- QQ. [USF&WS No Comment Letter. dated August 6, 2020.](#)
- RR. [Sierra Club Comment Letter, dated August 3, 2020.](#)
- SS. [Federal Register Vol. 85 No. 198 64716-64723.](#)
- TT. [Email, dated February 1, 2022 about revised facility flows.](#)
- UU. [Updated Flow Diagram.](#)
- VV. [Review letter from EPA, dated March 22, 2021.](#)
- WW. [Email letter, dated April 22, 2021, requesting to remove monitoring and reporting of Mercury and Cyanide as part of permit modification.](#)
- XX. [Email letter, dated May 18, 2021, with additional Cyanide sampling data.](#)
- YY. [Mercury and Cyanide data evaluation.](#)
- ZZ. [Toxicity calculations with additional Mercury and Cyanide data.](#)
- AAA. [Email letter from SWPECO, dated September 16, 2021 - No Comment on Draft Permit Modification.](#)

## 18. PUBLIC NOTICE

*The public notice of the draft permit was published for public comment on August 29, 2021. The last day of the comment period was September 28, 2021. No public comments were received on the draft permit during the 30-day public comment period. One comment letter was received after the close of the 30-day public comment period.*

*Copies of the draft permit and public notice were sent via email to the Corps of Engineers, the Regional Director of the U.S. Fish and Wildlife Service, the Department of Parks, Heritage, and Tourism, the EPA, and the Arkansas Department of Health.*

## 19. PERMIT FEE

In accordance with Rule No. 9.403(A)(1), the annual fee for the permit is \$15,000.

*In accordance with Rule No. 9.403(A)(1)(c)(i), the major modification fee for the permit is \$5,000.*

## 20. POINT OF CONTACT

For additional information, contact:

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