Permit Number: AR0001759
AFIN: 24-00012

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.),

Arkansas Electric Cooperative Corporation
Thomas B. Fitzhugh Generating Station

is authorized to discharge once-through cooling water from Outfall 001, wastewaters from low volume waste sources (consisting of boiler blowdown, reverse osmosis system reject, combustion turbine purge water, and floor drains), and stormwater from around the cooling tower and fueling station from Outfall 002, and cooling tower blowdown, reverse osmosis reject and backwash, and floor drain wastewater from Outfall 003, from a facility located as follows: 6006 Lock and Dam Road, Ozark, AR 72949, in Franklin County.

Facility Coordinates: Latitude: 35° 27’ 46.64” N; Longitude: 93° 48’ 16.24” W

Discharge is to receiving waters named:

Lake Dardanelle (the Arkansas River) in Segment 3H of the Arkansas River Basin.

The outfalls are located at the following coordinates:

Outfall 001:	Latitude: 35° 27’ 43.46” N;	Longitude: 93° 48’ 20.49” W
Outfall 002:	Latitude: 35° 27’ 41.58” N;	Longitude: 93° 48’ 11.68” W
Outfall 003:	Latitude: 35° 27’ 43.99” N;	Longitude: 93° 48’ 21.89” 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:	August 1, 2022
Major Modification Effective Date:	December 1, 2025
Expiration Date:	July 31, 2027

Digitally signed by Stacie R. Wassell
DN: cn=Stacie R. Wassell, o=Division of Environmental Quality, ou=Office of Water Quality, email=stacie.wassell@adeq.state.ar.us, c=US
Date: 2025.11.18 06:52:19 -06'00'

Stacie R. Wassell
Deputy Director, Office of Water Quality
Arkansas Department of Energy and Environment
Division of Environmental Quality

November 18, 2025
Major Modification Issue Date

PART I
PERMIT REQUIREMENTS

SECTION A1. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS: OUTFALL 001 - 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 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.

Effluent Characteristics	**Discharge Limitations**				**Monitoring Requirements**	
	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[4]	record
Temperature	N/A	N/A	105°F	107°F (Inst. Max.)	once/day[4]	calculated[5]
Free Available Chlorine (FAC)[1]	8.3	20.9	0.2	0.5	N/A[2, 4]	N/A[2]
Total Residual Chlorine (TRC)[1]	N/A	8.3	N/A	0.2	N/A[2, 4]	N/A[2]
Total Recoverable Arsenic (As)[3]	Report	Report	Report	Report	once/quarter[3, 4]	grab
pH	N/A	N/A	Minimum 6.0 s.u.	Maximum 9.0 s.u.	once/week[4]	grab

[1] See Part II.16.
[2] Monitoring for FAC and TRC is waived during this permit term based on 40 C.F.R. § 122.44(a)(2). See Part II.17.
[3] For one year from the effective date of the permit. See Part II.18 (Arsenic Condition).
[4] When discharging.
[5] See Part II.7 (Temperature Condition – Outfall 001)

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 A2. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS: OUTFALL 002 - wastewaters from low volume waste sources (consisting of boiler blowdown, reverse osmosis system reject, combustion turbine purge water, and floor drains), and stormwater from around the cooling tower and fueling station

During the period beginning on the effective date and lasting until the date of expiration, the permittee is authorized to discharge from Outfall 002. 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.

Effluent Characteristics	**Discharge Limitations**				**Monitoring Requirements**	
	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[1]	totalizer
Chemical Oxygen Demand (COD)	N/A	N/A	50	75	two/month[1]	grab
Total Suspended Solids (TSS)	N/A	N/A	30.0	53.0	two/month[1]	grab
Oil and Grease (O & G)	N/A	N/A	10	15	two/month[1]	grab
Total Recoverable Arsenic (As)[3]	Report	Report	Report	Report	once/quarter[1,2]	grab
pH	N/A	N/A	Minimum 6.0 s.u.	Maximum 9.0 s.u.	two/month[1]	grab

[1] When discharging.
[2] For one year from the effective date of the permit. See Part II.18 (Arsenic Condition).

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. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS: OUTFALL 003 - cooling tower blowdown, reverse osmosis reject and backwash, and floor drain waste

During the period beginning on the effective date and lasting until the date of expiration, the permittee is authorized to discharge from Outfall 003. 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.

Effluent Characteristics	**Discharge Limitations**				**Monitoring Requirements**	
	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	five/week[1]	totalizing meter
Chemical Oxygen Demand (COD)	56.7	85.1	50	75	two/month[1]	grab
Total Suspended Solids (TSS)	39.7	59.5	35.0	53.0	two/month[1]	grab
Oil and Grease (O & G)	11.3	17.0	10	15	two/month[1]	grab
pH	N/A	N/A	Minimum 6.0 s.u.	Maximum 9.0 s.u.	two/month[1]	grab

[1] When discharging.

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

All of the sampling and analyses required by EPA Form 2C for Tables A, B, C, and D shall be performed, and the results submitted to the Enforcement Branch of the Office of Water Quality of DEQ, within 90 days of the first discharge from Outfall 003.

The report 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:

EE.Water.Enforcement.Report@arkansas.gov.

PART II
OTHER CONDITIONS

1. The operator of this wastewater treatment facility shall hold a Basic Industrial license from the State of Arkansas in accordance with PC&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 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 or a Total Maximum Daily Load (TMDL) is established or revised for the water body 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.

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 DEQ for use of the alternate method or instrument.
   - The method and/or instrument is in compliance with 40 C.F.R. Part 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 Assurance/Quality Control (QA/QC) 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. Best Management Practices (BMPs), as defined in Part IV.6, must be implemented for the facility to prevent or reduce the pollution of waters of the State from stormwater runoff, spills or leaks, and/or waste disposal. The permittee must amend the BMPs whenever there is a change in the facility or a change in the operation of the facility.

5. <u>Stormwater</u>

   Stormwater runoff commingling with other process wastewater discharged from Outfall 002 shall be managed in accordance with Best Management Practices (BMPs) to control the quality of stormwater discharges associated with industrial activity that are authorized by this permit. Use of BMPs in lieu of numeric effluent limitations in NPDES permits is authorized under 40 C.F.R. § 122.44(k) when the Permitting Authority finds numeric effluent limitations to be infeasible to carry out the purposes of the Clean Water Act.

6. There shall be no discharge of polychlorinated biphenyl compounds. [ref. 40 C.F.R. § 423.13(a)]

7. Temperature Limitations – Outfall 001

   Daily temperature shall be determined using the following mass balance equation:

   $T_{out} = [(T_1 \times (F_1 - F_2)] + (T_2 \times F_2)] / F_1$, where:

   T_{out} = Outfall 001 temperature
   T_1 = Temperature of flow exiting from condenser (°F)
   F_1 = Total flow exiting from condenser (MGD) = Outfall 001 flow
   T_2 = Temperature of flow exiting from cooling tower (°F)
   F_2 = Flow through cooling tower

8. The permittee is required to use the 3-cell cooling tower only when needed to comply with the temperature limitation set forth in this permit for Outfall 001. Not using the 3-cell cooling tower for treatment of the once-through cooling water which discharges through Outfall 001 does not constitute a bypass for the purpose of compliance with Part III.B.4 of this permit.

9. The permittee is authorized to discharge from Outfall 002 under the following circumstances:

   A. A 10-year, 24-hour precipitation event;
   B. The water level rising above the required two feet of freeboard reserved for stormwater events; or
   C. General maintenance purposes.

   The permittee shall maintain 2.0 linear feet of freeboard above the normal operating overflow from the pond.

10. The term "10-year, 24-hour precipitation event" means the maximum 24-hour precipitation event with a probable recurrence interval of once in ten years as defined by the National Weather Service and Technical Paper No. 40, "Rainfall Frequency Atlas of the U. S." May 1961, or equivalent regional or rainfall probability information developed therefrom.

11. The term "free available chlorine" means 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, or other methods approved by the permitting authority. [ref. 40 C.F.R. § 423.11(l)]

12. The term "total residual chlorine" (or total residual oxidants for intake water with bromides) means the value obtained using any of the "chlorine—total residual" methods in Table IB in 40 C.F.R. § 136.3(a), or other methods approved by the permitting authority. [ref. 40 C.F.R. § 423.11(a)]

13. The term "low volume waste sources" (low volume wastewater) 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)]

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. Prohibition on the Use of Chlorine

    Chlorine may not be added to the once-through cooling water.

16. Free Available Chlorine and Total Residual Chlorine

    Neither FAC, nor TRC, may be discharged from any unit that discharges through Outfall 001 for more than two hours in any one day and not more than one unit in any plant may discharge FAC or TRC at any one time. [ref. 40 C.F.R. §§ 423.12(b)(8) and 423.13(b)(2)]

17. The monitoring requirements for Free Available Chlorine and Total Residual Chlorine at Outfall 001, and the requirements in Part II.8, are waived during this permit term based on 40 C.F.R. § 122.44(a)(2). This waiver is only valid for the term of this permit. The permittee must request this monitoring waiver when applying for a reissued permit. The monitoring waiver request must be accompanied by a signed statement that certifies under penalty of law that the facility does not use chlorination in the cooling water. The signed certification shall include the statements specified in 40 C.F.R. § 122.22(d).

18. The requirement to sample, analyze, and report the Monthly Average and Daily Maximum values of Concentration and Mass of Total Recoverable Arsenic (As) in the effluent in accordance with the requirements in Part IA Sections A1 and A2 of the permit is applicable for one year from the effective date of the permit. After the results of four (4) samples have been reported in accordance with the above requirements, the permittee may cease the monitoring and reporting of Total Recoverable Arsenic.

    The permittee may use any EPA approved method based on 40 C.F.R. Part 136 provided the MQL for the chosen method is equal to or less than what has been specified in chart below:

Pollutant	MQL (µg/l)
Total Recoverable Arsenic	0.5

The permittee may develop a matrix specific method detection limit (MDL) in accordance with Appendix B of 40 C.F.R. Part 136. For any pollutant for which the permittee determines a site specific MDL, the permittee shall send to DEQ, NPDES Permits Branch, a report containing QA/QC documentation, analytical results, and calculations necessary to demonstrate that a site specific MDL was correctly calculated. A site specific minimum quantification level (MQL) shall be determined in accordance with the following calculation:

MQL = 3.3 x MDL

Upon written approval by Permits Branch, the site specific MQL may be utilized by the permittee for all future Discharge Monitoring Report (DMR) calculations and reporting requirements.

Clean Water Act Section 316(b) Conditions

19. The permittee must operate the cooling water intake structure (CWIS) based on the current design and location. No additional controls are required to minimize impingement mortality and entrainment of aquatic organisms. This will meet the *De Minimis Rate of Impingement* BTA Standard for Impingement Mortality in accordance with 40 C.F.R. § 125.94(c)(11), and the site-specific BTA Standard for Entrainment as established by the Director in accordance with 40 C.F.R. § 125.94(d).

20. Visual inspections of the CWIS

    Visual inspections of the on-shore portions of the CWIS shall be conducted when 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.

21. Reporting and Recordkeeping for the CWIS

    A. In accordance with 40 C.F.R. § 125.97(d), 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. In accordance with 40 C.F.R. § 125.97(f), all records supporting the Director's Determination of BTA for Entrainment under 40 C.F.R. § 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 40 C.F.R. § 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.

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

    In accordance with 40 C.F.R. § 125.97(c), an annual certification statement and report must be submitted to the Division (NPDES Permits Branch) 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.

23. In accordance with 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.

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 PC&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 PC&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 PC&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, state, or local requirement, 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 PC&EC Rule 9 (Rule 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 PC&EC Rule 6 and the provisions of PC&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 (10) 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 periods of equipment downtime or preventive maintenance; and
(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. Parts 257, 258, and 503.

B. Any changes to the permittee's disposal practices described in the Statement of Basis, 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 in the *Other Specified Monitoring Requirements* condition under Part II), 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. Part 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, use the following link to access electronic filing: 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 25th 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. Part 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.
G. The chain of custody that records the sequence of custody, control, transfer, analysis, and measurement of the 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 which are subject neither to effluent limitations in the permit, nor 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**

Please be aware that the notifications can be sent by email to EE.Water.Enforcement.Report@arkansas.gov or at 501-682-0624 for immediate reporting:

A. The permittee shall report any noncompliance which may endanger health or the environment within 24 hours from the time the permittee becomes aware of the circumstances to the Enforcement Branch of the Office of Water Quality of DEQ. 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 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.

C. The Director may waive the written report on a case-by-case basis if the notification has been received within 24 hours by the Enforcement Branch of the Office of Water Quality of 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 including Existing Manufacturing, Commercial, Mining, and Silvicultural 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 including those listed in 40 C.F.R. § 401.15 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 including those listed in 40 C.F.R. § 401.15 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 PC&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. Part 2 and PC&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 Rules, 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 Water and Air 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"** 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 (also known as "average weekly"). 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, or most probable number (MPN) 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. **"Applicable standards and limitations"** means all State, interstate, and federal standards and limitations to which a "discharge," a "sewage sludge use or disposal practice," or a related activity is subject under the Act, including "effluent limitations," water quality standards, standards of performance, toxic effluent standards or prohibitions, "best management practices," pretreatment standards, and "standards for sewage sludge use or disposal" under sections 301, 302, 303, 304, 306, 307, 308, 403, and 405 of the Act.
5. **"Applicable water quality standards"** means all water quality standards to which a discharge is subject under the 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 (PC&EC) Rule 2, as amended.
6. **"Best Management Practices (BMPs)"** means 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 material storage. BMPs may include structural devices or nonstructural practices.
7. **"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).
8. **"Composite sample"** means 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.
9. **"CV"** means coefficient of variation.
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"** means
    A. when limited in the permit as a minimum monthly average, the lowest acceptable monthly average value, determined by averaging all samples taken during the calendar month; **OR**
    B. when limited in the permit as an instantaneous minimum value, 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"** means a sample that 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, 7-Day Average as the geometric mean of all "daily discharges" within a calendar week, and the Monthly Average as the geometric mean of all "daily discharges" within a calendar month, in colonies or MPN per 100 ml.
16. **"Fecal Coliform Bacteria (FCB)"** means a sample that 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, 7-Day Average as the geometric mean of all "daily discharges" within a calendar week, and the Monthly Average as the geometric mean of all "daily discharges" within a calendar month, in colonies or MPN 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 source of Indirect Discharge. Indirect Discharge means the introduction of pollutants into a POTW from any non-domestic source regulated under section 307(b), (c), or (d) of the Act.
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) means that no value measured during the reporting period may fall above the stated value.
21. **"Instantaneous Minimum"** (when limited in the permit as an instantaneous minimum value) means that no value measured during the reporting period may fall below the stated value.
22. **"Interference"** means a discharge which, alone or in conjunction with a discharge or discharges from other sources, both:
    A. Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use, or disposal; and
    B. Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation), or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations, or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act (CWA), the Solid Waste Disposal Act (SWDA) (including Title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to subtitle D of the SWDA), the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

23. **"Monitoring and Reporting"**
    NPDES permits specify monitoring and reporting requirements for specific periods defined as follows:
    A. **"MONTHLY"** means a calendar month, or any portion of a calendar month, for monitoring requirement frequency of once/month or more frequently.
    B. **"BI-MONTHLY"** means two (2) calendar months or any portion of 2 calendar months for monitoring requirement frequency of once/2 months or more frequently.
    C. **"QUARTERLY"** means:
        1. 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; **OR**
        2. 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"** means 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.
    E. **"ANNUAL" or "YEARLY"** means 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.
24. **"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.
25. **"National Pollutant Discharge Elimination System (NPDES)"** 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 Act.
26. "**NOEC**" means No Observed Effect Concentration.
27. **"Pass Through"** means a discharge which exits the POTW in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation).
28. **"PC&EC"** means the Pollution Control and Ecology Commission.
29. **"Percent Removal"** means a percentage expression of the removal efficiency across a treatment plant for a given pollutant parameter, as determined from the 30-day average values of the effluent pollutant concentrations for a given time period.
30. **"PMSD"** means Percent Minimum Significant Difference.
31. **"POTW"** means Publicly Owned Treatment Works, as defined in 40 C.F.R. § 403.3(q).
32. **"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.

33. **"Sewage sludge"** means any solid, semi-solid, or liquid residue removed during the treatment of municipal waste water or domestic sewage. Sewage sludge includes, but is not limited to, solids removed during primary, secondary, or advanced waste water treatment, scum, septage, portable toilet pumpings, type III marine sanitation device pumpings (33 C.F.R. Part 159), and sewage sludge products. Sewage sludge does not include grit or screenings, or ash generated during the incineration of sewage sludge.
34. **"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.
35. **Units of Measure:**
    A. **"cfs"** means cubic feet per second.
    B. **"MGD"** means million gallons per day.
    C. **"µg/l"** means micrograms per liter, or parts per billion (ppb).
    D. **"mg/l"** means milligrams per liter, or parts per million (ppm).
    E. **"ppb"** means parts per billion.
    F. **"ppm"** means parts per million.
    G. **"s.u."** means standard units.
    H. **"lb/d"** means pounds per day.
    I. **"col/100 ml"** means colonies per 100 milliliters, or most probable number (MPN) per 100 milliliters.
36. **"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 or improper operations.
37. **"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.
38. **"Week"** means a calendar week, consisting of the 7-day period of Sunday through Saturday.
39. **"Weekday"** means Monday – Friday.

Final Statement of Basis

All changes to the final fact sheet are italicized.

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

This Statement of Basis is for information and justification of the permit requirements only. Please note that it is not enforceable. This permitting decision is for *modification* of discharge Permit Number AR0001759 with Arkansas Department of Energy and Environment – Division of Environmental Quality (DEQ) Arkansas Facility Identification Number (AFIN) 24-00012 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 is:

Arkansas Electric Cooperative Corporation
Thomas B. Fitzhugh Generating Station
P.O. Box 78
Ozark, AR 72949

The facility address is:

Arkansas Electric Cooperative Corporation
Thomas B. Fitzhugh Generating Station
6006 Lock and Dam Road
Ozark, AR 72949

3. **PREPARED BY**

The permit was prepared by:

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4. **PERMIT ACTIVITY**

Previous Permit Effective Date: August 1, 2016
Previous Permit Expiration Date: July 31, 2021

The permittee submitted an application for modification of the individual discharge permit and issuance of a state construction permit March 28, 2025, and all additional information was received by August 1, 2025. The facility intends to install 2 gas-fired electrical generating turbines, and associated cooling water pre-treatment and cooling towers. The new facility will be separate from the rest of the existing facility. No process waters or wastewaters will commingle with existing process waters or wastewaters. The new facility will not use water

from the CWIS, but from the local municipal water supply. Treated wastewaters from the new facility will discharge through new Outfall 003. The current discharge permit is modified for the rest of the 5-year term in accordance with regulations promulgated at 40 C.F.R. § 122.46(a).

DOCUMENT ABBREVIATIONS

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

BAT - best available technology economically achievable
BCT - best conventional pollutant control technology
BMP - best management practice
BOD_5 - five-day biochemical oxygen demand
BPJ - best professional judgment
BPT - best practicable control technology currently available
$CBOD_5$ - carbonaceous biochemical oxygen demand
CD - critical dilution
C.F.R. - 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
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_3-N - ammonia nitrogen
$NO_3 + NO_2$-N - nitrate + nitrite nitrogen
NPDES - National Pollutant Discharge Elimination System
O&G - oil and grease
PC&EC - Pollution Control and Ecology Commission
Rule 2 - PC&EC Rule 2
Rule 6 - PC&EC Rule 6
Rule 8 - PC&EC Rule 8
Rule 9 - PC&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.adeq.state.ar.us/downloads/WebDatabases/PermitsOnline/NPDES/PermitInformation/AR0001759_Enforcement_Review_20250410.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 made as a part of the modification.

1. *The driving directions have been removed from the cover page.*
2. *The wastestream descriptions on the cover page have been revised.*
3. *Outfall 003 has been included on the cover page.*
4. *Part I.A Section A3 (requirements for Outfall 003) has been included in the permit.*
5. *References to Outfall 001 have been included in Parts II.7 and II.8.*
6. *Reference to Outfall 001 has been included in Part II.16 because the restriction on the use of chlorine does not apply to the cooling tower blowdown that discharges through Outfall 003.*
7. *Parts III and IV have been updated to the current standard conditions and definitions.*

The following are changes that were made at the previous permit renewal and are included for completeness:

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

1. The applicant's mailing address has been removed from the cover page of the permit.
2. Lake Dardanelle has been added to the receiving stream description.
3. "Demineralizer regeneration backwash" has been removed from the wastestream description for Outfall 002, and replaced with "reverse osmosis system reject" due to a change in the treatment system for boiler make-up water.
4. Due to a change in rounding procedures, the concentration limits for COD have been rounded to whole numbers.
5. Most of the conditions in Part II have been renumbered because multiple conditions have been added.

6. The frequency and sample type for flow from Outfall 002 have been revised. See Section 13 below for details.
7. The sampling frequencies for COD, TSS, O&G, and pH have been revised. See Section 13 below for details.
8. Definitions for "free available chlorine", "total residual chlorine", and "once-through cooling water" have been added as Parts II.11, II.12, and II.14.
9. The definition of "low volume waste sources" in Part II.13 has been revised to match the updated definition in 40 C.F.R. § 423.11(b).
10. The CWIS requirements in Part II.19 (Part II.14 of the previous permit) have been revised. See Section 11.F below for details.
11. Weekly visual inspection requirements of the CWIS have been included as Part II.20.
12. Reporting and recordkeeping requirements for the CWIS have been included as Part II.21.
13. The requirement to submit a CWIS Annual Certification Statement and Report has been added as Part II.22. See Section 11.F below for details.
14. Part III.C.5 of the permit now requires that DMRs be submitted electronically via NetDMR.

6. RECEIVING STREAM SEGMENT AND DISCHARGE LOCATION

The outfall is located at the following coordinates based on the previous permit and the renewal application, and confirmed with Google Earth using WGS84:

Outfall 001: Latitude: 35° 27' 43.46" N; Longitude: 93° 48' 20.49" W
Outfall 002: Latitude: 35° 27' 41.58" N; Longitude: 93° 48' 11.68" W
Outfall 003: Latitude: 35°27' 43.99" N; Longitude: 93°48' 21.89" W

The receiving waters named:

Lake Dardanelle (the Arkansas River) in Segment 3H of the Arkansas River Basin. The receiving stream with Assessment Unit AR_11110202_4060 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 listed on the 2022 303(d) list. Therefore no permit action is required.

B. Applicable Total Maximum Daily Load (TMDL) Reports

There are no applicable TMDLs for the receiving stream.

C. Endangered Species

No comments on the application were received from the USF&WS. The draft permit and Statement of Basis were sent to the USF&WS for their review.

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 PC&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:

Outfall 001: 60.061 MGD
Outfall 002: 0.199 MGD
Outfall 003: 0.136 MGD (estimated)

B. Type of Treatment:

Outfall 001: no treatment (optional cooling tower, as required)
Outfall 002: settling, evaporation, neutralization, and chemical oxidation
Outfall 003: oil/water separator and retention pond

C. Discharge Description:

Outfall 001: once-through cooling water
Outfall 002: wastewaters from low volume waste sources (consisting of boiler blowdown, reverse osmosis system reject, combustion turbine purge water, and floor drains), and stormwater from around the cooling tower and fueling station
Outfall 003: cooling tower blowdown, reverse osmosis reject and backwash, and floor drain wastewater

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 50 is less than 80, this facility is classified as a minor 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 station.

10. SOLIDS PRACTICES

There are no significant solids generated at the facility.

11. DEVELOPMENT AND BASIS FOR PERMIT CONDITIONS

The 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. Parts 122, 124, and Subchapter N) and rules 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
OUTFALL 001								
Temperature	105°F	107°F (Inst. Max.)	N/A	N/A	105°F	107°F (Inst. Max.)	105°F	107°F (Inst. Max.)
FAC	N/A	N/A	0.2	0.5	0.2	0.5	0.2	0.5
TRC	N/A	N/A	N/A	0.2	N/A	0.2	N/A	0.2
Total Recoverable Arsenic	N/A	N/A	Report	Report	Report	Report	Report	Report
pH	6.0-9.0 s.u.		N/A		6.0-9.0 s.u.		6.0-9.0 s.u.	
OUTFALL 002								
COD	N/A	N/A	50	75	50.0	75.0	50	75
TSS	N/A	N/A	30.0	100	30.0	53.0	30.0	53.0
O&G	10	15	15.0	20.0	10.0	15.0	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
OUTFALL 003								
COD	*N/A*	*N/A*	*50*	*75*	*N/A*	*N/A*	*50*	*75*
TSS	*N/A*	*N/A*	*30.0*	*53.0*	*N/A*	*N/A*	*30.0*	*53.0*
O&G	*10*	*15*	*N/A*	*N/A*	*N/A*	*N/A*	*10*	*15*
pH	*6.0-9.0 s.u.*		*N/A*		*N/A*		*6.0-9.0 s.u.*	

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

Parameter	Water Quality or Technology	Justification
OUTFALL 001		
Temperature	Water Quality	Rule 2.502, CWA 402(o), and previous permit
FAC	Technology	40 C.F.R. § 423.12(b)(2), 40 C.F.R. § 122.44(l), and previous permit
TRC	Technology	40 C.F.R. § 423.12(b)(1), 40 C.F.R. § 122.44(l), and previous permit
Total Recoverable Arsenic	Technology	A.C.A § 8-4-216 and the CPP
pH	Water Quality	Rule 2.504, CWA § 402(o), and previous permit
OUTFALL 002		
COD	Technology	40 C.F.R. § 122.44(l), and previous permit
TSS	Technology	40 C.F.R. § 423.12(b)(3), 40 C.F.R. § 122.44(l), and previous permit
O&G	Water Quality	Rule 2.510, CWA § 402(o), and previous permit
pH	Water Quality	Rule 2.504, CWA § 402(o), and previous permit
OUTFALL 003		
COD[1]	*Technology*	*Best engineering judgment of the permit writer*
TSS[2]	*Technology*	*Best engineering judgment of the permit writer*
O&G[3]	*Water Quality*	*Rule 2.510*
pH[4]	*Water Quality*	*Rule 2.504*

[1] *COD limits have been included in the permit because COD is the most representative measure of oxygen demand for discharges from facilities of this type. This test can readily indicate the presence of spilled oils. Due to the lack of technology-based limits or water quality limitations, the limits have been determined based on generally accepted scientific knowledge and engineering practices using the typical values associated with this type of facility.*

[2] *TSS limits have been included in the permit because wastewater from the facility has the potential to carry suspended solids. Due to the lack of technology-based limits or water quality limitations, the limits have been set equal to the TSS limitations for Outfall 002 because the discharges are similar.*

[3] *O&G limits have been included in the permit since the facility uses an oil/water separator to treat wastewater. The limits are based on the values in Rule 2.510.*

[4] *pH limits have been included because the reverse osmosis process has an effect on the pH of the treated water and reject. The limits are equal to the WQS in Rule 2.504.*

NOTE: Neither Temperature limitations, Minerals limitations, nor TRC limitations have been included for the discharge from Outfall 003 because the low volume of the discharge does not have the reasonable potential to cause an exceedance of the WQS for Temperature, Minerals, or TRC in the receiving stream.

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.

C. **Limits Calculations**

1. Mass Limits:

In accordance with 40 C.F.R. § 122.45(f)(1), all pollutants limited in permits shall have limitations expressed in terms of mass if feasible. 40 C.F.R. § 122.45(f)(2) allows for pollutants which are limited in terms of mass to also be limited in terms of other units of measurement.

The calculation of the loadings (lbs per day) for TRC and FAC from Outfall 001 uses an average flow of 60.061 MGD and the following equation:

lbs/day = Concentration (mg/l) × Flow (MGD) × 8.34 x 2/24

No mass limits are included in this permit for Outfall 002 because of the variable nature of the discharge flows due to the presence of commingled stormwater, in accordance with 40 C.F.R. § 122.45(f)(iii).

The calculation of the loadings (lbs per day) for COD, TSS, and O&G from Outfall 003 uses an estimated average flow of 0.136 MGD and the following equation:

lbs/day = Concentration (mg/l) × Flow (MGD) × 8.34

2. Daily Maximum Limits:

   The daily maximum limits for COD and TSS are based on Section 5.4.2 of the Technical Support Document for Water Quality-based Toxics Control:

   daily maximum limits = monthly average limits × 1.5

   The daily maximum limit for Temperature is based on Rule 2.502.

   The daily maximum limit for O&G is based on Rule 2.510.

   See Section 11.D below for daily maximum limits for FAC and TRC.

3. Temperature

   Outfall 001

   The temperature limitations are continued from previous permit.

   The following were used to confirm that the discharge will not cause an exceedance of the Rule 2.502 WQS for temperature in the receiving stream.

   For maximum downstream temperature of the receiving stream:

   $$T_d = [(Q_e \times T_e) + (Q_{bmax} \times T_{bmax})] / (Q_e + Q_{bmax})$$

   For maximum temperature change of the receiving stream:

   $$\Delta T_d = \{[(Q_e \times T_e) + (Q_{bmin} \times T_{bmin})] / (Q_e + Q_{bmin})\} - T_{bmin}$$

   where:

   T_d = downstream temperature of receiving stream in °F
   ΔT_d = change in temperature of receiving stream in °F
   Q_e = average flow = 60.061 MGD = 92.93 cfs
   T_e = maximum allowable temperature of the effluent (permit limit) = 107 °F
   Q_{bmax} = critical background flow for max. temp. = 7Q10 whole year = 878* cfs
   T_{bmax} = avg. background temperature of receiving stream (May-Oct)= 79.5 °F†
   T_{bmin} = avg. background temperature of receiving stream (Nov-Apr) = 52.8 °F†
   Q_{bmin} = critical flow for max. temp. change (7Q10 Nov-Apr) = 1,180* cfs

   * Ref.: "Low-Flow Characteristics and Regionalization of Low-Flow Characteristics for Selected Streams in Arkansas", U.S. Dept. of the Interior, U.S. Geological Survey, Scientific Investigations Report 2008-5065 – USGS stream station 07250550.

   † Ref.: Stream Data (May 3, 2011 – March 9, 2021) from Arkansas monitoring station ARK0033.

T_d = [(92.93 x 107 °F) + (878 x 79.5 °F)] / (92.93 + 878)

T_d = 82.1 °F

82.1 °F < 89.6 °F (Temperature WQS for the Arkansas River from Rule 2.502)

and

ΔT_d = {[(92.93 x 107 °F) + (1,180 x 52.8 °F)] / (92.93 + 878)} – 52.8 °F

ΔT_d = 4.0 °F

4.0 °F ≤ 5 °F) (maximum allowable temperature change from Rule 2.502)

Therefore, with a maximum temperature limit of 107 °F, the discharge from the facility should not cause an exceedance of the WQS for temperature in the receiving stream.

Outfall 003

The discharge from Outfall 003 does not show reasonable potential to cause an exceedance of the WQS for Temperature in the receiving stream.

The complete temperature *evaluations* can be viewed on DEQ's website at the following *addresses*:

Outfall 001

https://www.adeq.state.ar.us/downloads/WebDatabases/PermitsOnline/NPDES/PermitInformation/AR0001759_Temperature%20Evaluation_20210616.pdf

Outfall 003

https://www.adeq.state.ar.us/downloads/WebDatabases/PermitsOnline/NPDES/PermitInformation/AR0001759_Engineering%20Calculations_20250627.pdf

D. **Applicable Effluent Limitations Guidelines**

Discharges from *Outfall 001* are covered by Federal effluent limitations guidelines (ELGs) promulgated under 40 C.F.R. Part 423 – Steam Electric Power Generating Point Source Category.

Discharges from Outfall 003 are not covered by Federal effluent limitations guidelines (ELGs) promulgated under 40 C.F.R. Part 423 – Steam Electric Power Generating Point Source Category, based on 40 C.F.R. § 423.10(a): "Applicability. The provisions of this part apply to discharges resulting from the operation of a generating unit by an establishment whose generation of electricity is the predominant source of revenue or principal reason for operation, and whose generation of electricity results primarily from a process utilizing fossil-type fuel (coal, oil, or gas), fuel derived from fossil fuel (e.g., petroleum coke, synthesis gas), or nuclear fuel ***in conjunction with a thermal cycle***

employing the steam water system as the thermodynamic medium. *This part applies to discharges associated with both the combustion turbine and steam turbine portions of a combined cycle generating unit." (emphasis added). Because the electrical generating units associated with Outfall 003 are gas-fired turbines that generate electricity directly with neither steam-generation nor a steam-driven turbine that generates electricity, the discharge associated with Outfall 003 is not subject to 40 C.F.R. Part 423.*

1. Outfall 001 – once-through cooling water

   a. 40 C.F.R. § 423.13 specifies the following ELGs that represent Best Available Technology economically feasible (BAT):

      i. 40 C.F.R. § 423.13(a) specifies that there shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid. This prohibition has been included as Part II.6 of the permit.

      ii. 40 C.F.R. § 423.13(b)(1) applies because the facility has a generating capacity of 170.6 megawatts (MW), which is greater than 25 MW. This ELG specifies the following concentration limits for TRC:

Parameter	Monthly Avg. (mg/l)	Daily Max. (mg/l)
TRC	N/A	0.2

      40 C.F.R. § 423.13(b)(2) specifies that TRC may not be discharged from any single generating unit for more than two hours per day. This requirement has been included as Part II.16 of the permit. These ELGs also specify a mass limit based on the above concentration, the facility average flow, and the maximum 2-hour discharge limit. The mass limit was calculated as noted in Section 11.C.1 above. These ELGs have been included as limits in Part IA, Section A1 of the permit. See also Section 11.D.1.c below.

   b. 40 C.F.R. § 423.12 specifies the following ELGs that represent Best Practicable Control Technology currently available (BPT):

      40 C.F.R. § 423.12 (b)(6) specifies the following concentration limits for FAC:

Parameter	Monthly Avg. (mg/l)	Daily Max. (mg/l)
FAC	0.2	0.5

      40 C.F.R. § 423.12(b)(8) specifies that FAC may not be discharged from any single generating unit for more than two hours per day. This requirement has been included as Part II.16 of the permit. These ELGs also specify mass limits based on the above concentrations, the facility average flow, and the maximum 2-hour discharge limit. The mass limits were calculated as noted in Section 11.C.1 above. These ELGs have been included as limits in Part IA, Section A1 of the permit. See also Section 11.D.1.c below.

c. The facility does not use chlorination. Part II.17 of the permit waives the monitoring and reporting requirements for TRC and FAC based on the request for a waiver by the permittee, in accordance with 40 C.F.R. § 122.44(a)(2). Part II.15 of the permit prohibits the use of chlorine in the cooling water to ensure compliance with the conditions cited by the permittee as justification for waiving monitoring and reporting requirements.

2. Outfall 002 – wastewaters from low volume waste sources (consisting of boiler blowdown, reverse osmosis system reject, combustion turbine purge water, and floor drains)

   a. 40 C.F.R. § 423.13 specifies the following ELGs that represent Best Available Technology economically feasible (BAT):

      i. 40 C.F.R. § 423.13(a) specifies that there shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid. This prohibition has been included as Part II.6 of the permit.

   b. 40 C.F.R. § 423.12 specifies the following ELGs that represent Best Practicable Control Technology currently available (BPT):

      i. 40 C.F.R. § 423.12(b)(3) specifies limitations on the discharge of TSS and O&G in low volume wastewaters. In accordance with 40 C.F.R. § 423.12(b)(11), the limitations are expressed as the following concentration limits:

ELGS from 40 C.F.R. § 423.12(b)(3)		
Parameter	Monthly Avg. (mg/l)	Daily Max. (mg/l)
TSS	30.0	100.0
O&G	15.0	20.0

3. The most-stringent limitations are included in permits whenever there are multiple technology-based or water quality-based limitations for pollutants [ref. 40 C.F.R. § 125.3(a)]. The ELGs for TSS have been met by the inclusion of TSS limits in Part IA, Section A2 of the permit. The Daily Max. TSS limit of 53.0 mg/l in the previous permit is more stringent than the Daily Max. limit from the ELG, so it is unchanged in the permit. The water quality-based O&G limits in Rule 2.510 are more stringent than the O&G limits in the ELG, so they are retained in the permit.

E. **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 Arkansas Water Quality Standards (AWQS), 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: 60.061 MGD = 92.93 cfs Outfall 002: 0.199 MGD = 0.31 cfs	DMRs May 2019-April 2021
7Q10 Background Flow	878 cfs whole year 1,180 cfs Nov-Apr	USGS Scientific Investigations Report 2008-5065 – Station 07250550
LTA Background Flow	34,500 cfs	USGS StreamStats Station 07250550
TSS	12.0 mg/l	CPP – Arkansas River
Hardness as $CaCO_3$	125 mg/l	CPP – Arkansas River

The following pollutants were reported above detection levels:

Pollutant	Concentration Reported, µg/l[1]	MQL, µg/l
Outfall 001		
Arsenic	1.80	0.5
Chromium	0.29	10
Copper	11.00	0.5
Lead	0.284	0.5
Nickel	7.40	0.5

[1] One data point for each pollutant from PPS and EPA Form 2C from application.

Pollutant	Concentration Reported, µg/l[1]	MQL, µg/l
Outfall 002		
Arsenic	1.07	0.5
Copper	10.5	0.5
Lead	0.437	0.5
Nickel	1.45	0.5
Di-n-Butyl Phthalate	10.5	10

[1] One data point for each pollutant from PPS and EPA Form 2C from application.

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 can be viewed on the Division's website at the following address:

https://www.adeq.state.ar.us/downloads/WebDatabases/PermitsOnline/NPDES/PermitInformation/AR0001759_Toxicity%20Evaluation_20210610.pdf

1. **Aquatic Toxicity Evaluation**

a. Acute Criteria Evaluation – Outfall 001

Pollutant	Concentration Reported (C_e) µg/l	$C_e \times 2.13$[1]	Instream Waste Concentration (IWC)	Criteria[2]	Reasonable Potential (Yes/No)
			Acute, µg/l	Acute, µg/l	
Chromium	0.29	0.62	0.39	15.71	No
Copper	11.00	23.43	15.49	62.66	No
Lead	0.284	0.60	0.39	460.92	No
Nickel	7.40	15.21	10.52	4147.93	No

[1] Statistical ratio used to estimate the 95th percentile using a single effluent concentration or the geometric mean of a dataset.
[2] Criteria are from Rule 2.508 unless otherwise specified.

b. Acute Criteria Evaluation – Outfall 002

Pollutant	Concentration Reported (C_e) µg/l	$C_e \times 2.13$[1]	Instream Waste Concentration (IWC)	Criteria[2]	Reasonable Potential (Yes/No)
			Acute, µg/l	Acute, µg/l	
Copper	10.5	22.37	1.60	62.66	No
Lead	0.437	0.93	0.01	460.92	No
Nickel	1.45	3.09	1.29	4147.93	No

[1] Statistical ratio used to estimate the 95th percentile using a single effluent concentration or the geometric mean of a dataset.
[2] Criteria are from Rule 2.508 unless otherwise specified.

c. Chronic Criteria Evaluation – Outfall 001

Pollutant	Concentration Reported (C_e) µg/l	$C_e \times 2.13$[1]	Instream Waste Concentration (IWC)	Criteria[2]	Reasonable Potential (Yes/No)
			Chronic, µg/l	Chronic, µg/l	
Chromium	0.29	0.62	0.18	10.58	No
Copper	11.00	23.43	8.01	40.99	No
Lead	0.284	0.60	0.18	17.96	No
Nickel	7.40	15.21	1.32	460.66	No

[1] Statistical ratio used to estimate the 95th percentile using a single effluent concentration or the geometric mean of a dataset.
[2] Criteria are from Rule 2.508 unless otherwise specified.

d. Chronic Criteria Evaluation – Outfall 002

Pollutant	Concentration Reported (C_e) µg/l	$C_e \times 2.13$[1]	Instream Waste Concentration (IWC)	Criteria[2]	Reasonable Potential (Yes/No)
			Chronic, µg/l	Chronic, µg/l	
Copper	10.5	22.37	1.51	40.99	No
Lead	0.437	0.93	0.001	17.96	No
Nickel	1.45	3.09	1.28	460.66	No

[1] Statistical ratio used to estimate the 95th percentile using a single effluent concentration or the geometric mean of a dataset.
[2] Criteria are from Rule 2.508 unless otherwise specified.

2. **Human Health (Bioaccumulation) Evaluation**

a. Outfall 001

Pollutant	Concentration Reported (C_e) µg/l	$C_e \times 2.13$[1]	Instream Waste Concentration (IWC)	Criteria	Reasonable Potential (Yes/No)
Arsenic	1.80	3.83	1.53	1.4[2]	Yes
Chromium	0.29	0.62	0.002	100[3]	No
Copper	11.00	23.43	1.54	13,000[2]	No
Lead	0.284	0.60	0.002	50[2]	No
Nickel	7.40	15.21	1.32	46,000[2]	No

[1] Statistical ratio used to estimate the 95th percentile using a single effluent concentration or the geometric mean of a dataset.
[2] 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.
[3] Primary Drinking Water Maximum Contaminant Level.

b. Outfall 002

Pollutant	Concentration Reported (C_e) µg/l	$C_e \times 2.13$[1]	Instream Waste Concentration (IWC)	Criteria[2]	Reasonable Potential (Yes/No)
Arsenic	1.07	2.28	1.52	1.4	Yes
Copper	10.5	22.37	1.48	13,000	No
Lead	0.437	0.93	0.00001	50	No
Nickel	1.45	3.09	1.28	46,000	No
Di-n-Butyl Phthalate	10.5	22.4	0.0002	20,000	No

[1] Statistical ratio used to estimate the 95th percentile using a single effluent concentration or the geometric mean of a dataset.

[2] 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.

As can be seen in the tables above, the calculated IWC for Arsenic is higher than the EPA Water Quality Criterion. A.C.A. § 8-4-216 authorizes the Division to require the submission of any information relevant to meeting the requirements of the Arkansas Water and Air Pollution Control Act. A requirement to monitor and report for Arsenic once per quarter for one year has been added to the permit so that, in the event that a WQS for Arsenic is added to Rule 2.508, data will be available to perform a reasonable potential analysis. This is in accordance with the procedure in Appendix D of the CPP (Appendix D, Part IV – Chemical Specific Standards and Criteria, Section E – Protection of Human Health Criteria of the Discharge Permit, Toxic Control Implementation Procedure).

The CPP requires that for all pollutants for which there are no applicable state water standards, IWCs are to be compared with the EPA Human Health Criteria (fish consumption only). If dilution calculations show that the in-stream concentration exceeds these criteria, the permit will require the permittee to monitor and report for the pollutant of concern once per quarter for one year only. A reopener clause has been included in the permit (see Part II.2) to provide permit limits if state water quality standards are developed for the applicable pollutants, and the data shows that there is a reasonable potential for the discharge to violate those water quality standards.

F. 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. Part 125 (125.90 through 125.99). Subpart J establishes the 316(b) requirements and Best Technology Available (BTA) standards 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 1963, 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:

(1) The facility is a point source;
(2) 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
(3) 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 (DIF) of the CWIS associated with this facility is 61.08 MGD, and the facility uses 99% 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 mortality (IM) (unless the facility has a "De Minimis Rate of Impingement" or is a "Low capacity utilization power generating unit"), 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. 40 C.F.R. § 122.21(r)(1)(ii) applies to all existing facilities. It requires existing facilities to submit the information specified under 40 C.F.R. §§ 122.21(r)(2) and (3), and the applicable provisions of 40 C.F.R. §§ 122.21(r)(4)-(8). This information includes the following:

Information	40 C.F.R. §
Source Water Physical Data	122.21(r)(2)
Cooling Water Intake Structure Data	122.21(r)(3)
Source Water Baseline Biological Characterization Data	122.21(r)(4)
Cooling Water System Data	122.21(r)(5)
Chosen Method(s) of Compliance with Impingement Mortality Standard	122.21(r)(6)
Entrainment Performance Studies	122.21(r)(7)
Operational Status	122.21(r)(8)

Because the CWIS is an existing unit that withdraws less than 125 MGD, submission of the information described in 40 C.F.R. §§ 122.21(r)(9)-(13) is not required.

For facilities with an effective permit that expired prior to July 14, 2018, 40 C.F.R. § 125.95(a)(2) allowed for the establishment of an alternate schedule for submission of the above noted information when applying for a permit renewal (instead of submitting the information with the permit renewal application) when it is demonstrated that there was not sufficient time to collect or develop the required information.

Because the CWIS rule became effective on October 14, 2014, the Division determined that there was not sufficient time to collect and develop the complete information required by 40 C.F.R. §§ 122.21(r)(2)-(8) for submission with the permit renewal application for the previous permit. Therefore, Part II.14 was included in the previous permit, which required that the permittee submit all the information required by the above noted regulations by December 31, 2016. The permittee submitted the information in the document "Thomas B. Fitzhugh Generating Station - 316(b) 122.21(r) Information - Final Report, May, 2016" (the Report) on August 8, 2016 (see Source 17.Y below). Portions of the Report were also submitted with the complete permit renewal application received December 28, 2020. The Report was reviewed by OWQ personnel, and was determined to meet the above requirements (see Source 17.Z below).

It should be noted that the permittee did not submit any entrainment performance studies, nor are they required to do so. 40 C.F.R. § 122.21(r)(7) states: "The owner or operator of an existing facility must submit any previously conducted studies, or studies obtained from other facilities, addressing technology efficacy, through-facility entrainment survival, and other entrainment studies…Any studies conducted at other locations must include an explanation as to why the data from other locations are relevant and representative of conditions at your facility." The Report states that no entrainment studies were conducted at the facility, and there are no other applicable studies which would meet the requirements stated above. 40 C.F.R. § 122.21(r)(7) does not require an entrainment performance study to be performed if there are no previously conducted studies. In addition, the facility has a DIF<125 MGD, so it is exempt from the requirement to perform an entrainment characterization study in 40 C.F.R. § 122.21(r)(9).

The facility has chosen "De Minimis Rate of Impingement" as the method for compliance with the requirements for CWIS in 40 C.F.R. § 125.94. The justification for this method of compliance was the impingement study conducted January 6, 2006 through December 29, 2006, the results of which were summarized in the Report referenced above. Although the data is more than 10 years old, there have been no changes to the facility or CWIS, and no changes to the receiving stream that would that would affect the impingement rate. Therefore, the data is representative of current conditions and is appropriate for use in determination of compliance with the requirements of 40 C.F.R. § 125.94. A summary of the finding is as follows:

(1) 749 live fish, weighing a total of 4,939 grams, were impinged during the twenty seven (27) 24-hour sampling events conducted every other week from January 5, 2006 through December 29, 2006.

(2) Since the generating station is a "peaking facility" (it only operates when there is a high demand for electric power), the facility was operating during only 10 of the 27 sampling events. All of the impinged live fish were collected during sampling events when the facility was not operating. So, no live fish were impinged when the facility would normally be in operation.

(3) 2 dead on arrival (DOA) fish were impinged, and it could not be determined if the CWIS contributed to their mortality. Assuming the CWIS did contribute, and taking into account the annual operating schedule, it is estimated that only 11 DOA fish per year would be impinged.

(4) A total of 1,323 shellfish were impinged. However, all but one (1) impinged shellfish were Zebra Mussels and Asian Clams, both invasive species. 40 C.F.R. § 125.92(b) specifically excludes Zebra Mussels from the definition of "all life stages of fish and shellfish", and allows the permitting authority to exclude other specified nuisance species.

(5) No federally threatened or endangered finfish, nor their designated critical habitat, were identified for the Arkansas River.

(6) None of the fish or shellfish impinged were identified as federally threatened or endangered species.

The USF&WS submitted comments (see Source 17.AA below) on the renewal application concerning the CWIS during the 60-day review period required by 40 C.F.R. § 125.98(h). The USF&WS stated that the following listed species have the potential to occur near the generating station:

- endangered Gray Bat (Myotis grisescens)
- endangered Indiana Bat (Myotis sodalis)
- threatened Northern Long-eared Bat (Myotis septentrionalis)
- endangered Ozark Big-eared Bat (Corynorhinus (=Plecotus) townsendii)
- threatened Eastern Black Rail (Laterallus jamaicensis spp. jamaicensis)
- threatened Red Knot (Calidris canutus rufa)
- threatened Piping Plover (Charadrius melodus)
- threatened American Burying Beetle (Nicrophorus americanus)

The USF&WS stated: "Currently, we have no recommended control measures to minimize incidental take or avoid jeopardy to listed species. There is no designated critical habitat within the identified project area."

It is noted that none of the listed species are classified as aquatic life.

As noted above, the Report was reviewed by OWQ personnel. The review stated that the impingement rates are low, and the operation will likely not have an impact to the aquatic fauna of the receiving stream (see Source 17.Z below).

After review of the Report and the renewal application, it is the determination of OWQ that "De Minimis Rate of Impingement" applies to the facility, and no additional controls are warranted to minimize impingement mortality of aquatic organisms. The Interim BTA Standard for Impingement Mortality in Part II.14 of the previous permit, i.e., operation of the cooling water intake structure based on the current design and location, is retained in the permit as the Final BTA Standard for Impingement Mortality for this facility. This determination has been included in Part II.19 of the permit.

Based on the low impingement rate of aquatic organisms, the OWQ has determined that no additional controls are warranted to minimize entrainment of aquatic organisms, and the Interim BTA Standard for Entrainment in Part II.14 of the previous permit, i.e. operation of the cooling water intake structure based on the current design and location, is retained in the permit as the Final BTA Standard for Entrainment for this facility. This determination has been included in Part II.19 of the permit.

In accordance with 40 C.F.R. § 122.98(b)(1), "Nothing in this permit authorizes take for the purposes of a facility's compliance with the Endangered Species Act" has been included in Part II.23 of the permit.

It should be noted that the addition of the gas-fired turbines, and all associated equipment, does not change anything associated with the existing CWIS. The cooling water that is used by this equipment does not come from the CWIS, but from the local municipal water supply. No additional permit action based on the requirements of CWA § 316(b) is required.

12. 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 ARR00A436.

13. 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)(l)].

Requirements for sample type and sampling frequency for Outfall 001, and Total Recoverable Arsenic for Outfall 002, have been based on the previous discharge permit.

Requirements for sample type and sampling frequency for flow from Outfall 002 are based on the type of flowmeter installed in accordance with State Construction Permit AR0001759C. The sampling frequencies for COD, TSS, and O&G for Outfall 002 are based on a review of data as reported on DMRs from January 2019 – April 2021, "OWQ Monitoring Frequency Reduction Guidelines" (OWQ Interoffice Memorandum, June 12, 2020), as requested by the permittee in the renewal application. The sampling frequency for pH has been set the same as the reduced frequencies for COD, TSS, and O&G, based on the best engineering judgment of the permit writer.

The data review for monitoring frequency reduction may be viewed at the following web address:

https://www.adeq.state.ar.us/downloads/WebDatabases/PermitsOnline/NPDES/PermitInformation/AR0001759_Monitoring%20Frequency%20Reduction%20Calculations_20210617.pdf

Requirements for sample type and sampling frequency for Outfall 003 were based on recommended frequencies for self-monitoring of discharges within the flow of >0.10 to 0.50 MGD from Part 5.4 of the CPP.

Parameter	Previous Permit		Final Permit	
	Frequency of Sample	Sample Type	Frequency of Sample	Sample Type
Outfall 001				
Flow	continuous	record	continuous[3]	record
Temperature	once/day	calculated	once/day[3]	calculated
FAC	once/day	grab	N/A[1]	N/A[1]
TRC	once/day	grab	N/A[1]	N/A[1]
Total Recoverable Arsenic	once/quarter	grab	once/quarter[2, 3]	grab
pH	once/week	grab	once/week[3]	grab
Outfall 002				
Flow	once/week	estimate	continuous[3]	totalizer
COD	once/week	grab	twice/month[3]	grab
TSS	once/week	grab	twice/month[3]	grab
O&G	once/week	grab	twice/month[3]	grab
Total Recoverable Arsenic	N/A	N/A	once/quarter[2,3]	grab
pH	once/week	grab	twice/month[3]	grab
Outfall 003				
COD	*N/A*	*N/A*	*twice/month[3]*	*grab*
TSS	*N/A*	*N/A*	*twice/month[3]*	*grab*
O&G	*N/A*	*N/A*	*twice/month[3]*	*grab*
pH	*N/A*	*N/A*	*twice/month[3]*	*grab*

[1] Monitoring for FAC and TRC is waived during this permit term based on 40 C.F.R. § 122.44(a)(2). See Part II.17.
[2] For one year from the effective date of the permit. See Part II.18 (Arsenic Condition).
[3] When discharging.

14. PERMIT COMPLIANCE SCHEDULE

A Schedule of Compliance has not been included in this permit.

15. 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.

16. SOURCES

The following sources were used to draft the permit:

A. *Application No. AR0001759 received March 28, 2025, and all additional information received by June 17, 2025.*
B. PC&EC Rule 2, codified in 8 CAR Part 21.
C. PC&EC Rule 3, codified in 8 CAR Part 22.
D. PC&EC Rule 6, codified in 8 CAR Part 25, which incorporates by reference certain federal regulations included in Title 40 of the Code of Federal Regulations at Rule 6.104, codified at 8 CAR § 25-104.
E. 40 C.F.R. Parts 122 and 125.
F. 40 C.F.R. Part 423.
G. Discharge permit file AR0001759.
H. Discharge Monitoring Reports (DMRs).
I. "2022 Integrated Water Quality Monitoring and Assessment Report," DEQ.
J. "2022 List of Impaired Waterbodies (303(d) List)," DEQ.
K. "Low-Flow Characteristics and Regionalization of Low-Flow Characteristics for Selected Streams in Arkansas," U.S. Dept. of the Interior, U.S. Geological Survey, Scientific Investigations Report 2008-5065.
L. USGS StreamStats online program.
M. Continuing Planning Process (CPP).
N. Technical Support Document for Water Quality-based Toxic Control.
O. Inspection Report dated July 1, 2019.
P. Compliance Review Memo dated April 22, 2021.
Q. Planning Review Memo dated June 17, 2021.
R. NPDES Permit Rating.
S. Monitoring frequency reduction evaluation.
T. USGS Station 07250550 annual average flow data.
U. Metals data from Arkansas Monitoring Station ARK0033.
V. Toxicity evaluation.
W. Temperature data from Arkansas Monitoring Station ARK0033.
X. Temperature evaluation.
Y. "Thomas B. Fitzhugh Generating Station - 316(b) and 40 C.F.R. § 122.21(r) Information - Final Report, May, 2016."
Z. OWQ review of 40 C.F.R. § 122.21(r) information submittal.
AA. U.S. Fish & Wildlife Service comment letter, dated June 22, 2021.
BB. EPA review letter, dated December 16, 2021.
CC. AECC Comment letter, dated March 7, 2022.
DD. *Engineering calculations including Temperature evaluation for Outfall 003.*
EE. *Minerals Evaluation.*

17. PUBLIC NOTICE

The public notice of the draft permit was published for public comment on September 28, 2025. The last day of the comment period was thirty (30) days after the publication date. No public comments were received on the draft permit.

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 Arkansas Department of Parks, Heritage and Tourism, the EPA, and the Arkansas Department of Health.

18. PERMIT FEE

In accordance with Rule 9.403(E), the annual fee for the permit is calculated from the Average Flow (Q, in MGD) as follows:

Fee = \$200 + (700 × Q) = \$200 + (700 × 60.061); = \$10,000 (maximum fee)

19. POINT OF CONTACT

For additional information, contact:

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