ADEQ

A R K A N S A S
Department of Environmental Quality

APR 27 2016

CERTIFIED MAIL: RETURN RECEIPT REQUESTED (91 7199 9991 7030 4937 9174)

Jonathon Oliver, Vice-President
Arkansas Electric Cooperative Corporation - Carl E. Bailey Generating Station
P.O. Box 194208
Little Rock, AR 72119

RE: Discharge Permit Number AR0000400 – AFIN 74-00024

Dear Mr. Oliver:

Enclosed are the public notice, a copy of the draft permit, and Statement of Basis which the Arkansas Department of Environmental Quality (ADEQ) has prepared and mailed to you on the above date under the authority of the National Pollutant Discharge Elimination System (NPDES) and the Arkansas Water and Air Pollution Control Act. A copy of the final permit will be mailed to you when the Department has made a final permitting decision.

In accordance with Reg. 8.207, the enclosed public notice will be or has been published by ADEQ in a newspaper of general circulation of your facility for one (1) day only. An invoice for the cost of publishing the public notice and proof of publication will be sent to you by the advertising newspaper. The permittee must send proof of publication and proof of payment to the address at the bottom of this letter as soon as possible but no later than 30 days from the above date. Until this Department receives proof of publication of the public notice and payment of all permit fees, no further action will be taken on the issuance of your discharge permit.

For a list of changes, please see Section 5 of the enclosed Statement of Basis. Comments must be received at ADEQ prior to the close of the public comment period as described in the enclosed public notice. Once a final permit is issued by the Director and becomes effective, the permittee must comply with all terms and conditions of the permit, or be subject to enforcement actions for any instances of noncompliance during the duration of the permit, usually five (5) years. Consequently, it is imperative that you, as the applicant, thoroughly review the enclosed documentation for accuracy, applicability, and your ability to comply with all conditions therein.

Should you have any questions concerning any part of the draft permit, please contact Guy Lester at (501) 682-0023.

Sincerely,

Caleb J. Osborne
Associate Director, Office of Water Quality

CJO:gl

Enclosure

cc: John Hyde
585 Woodruff 816
Augusta, AR 72006

PUBLIC NOTICE OF DRAFT DISCHARGE PERMIT
PERMIT NUMBER AR0000400, AFIN 74-00024

This is to give notice that the Arkansas Department of Environmental Quality (ADEQ), Office of Water Quality, 5301 Northshore Drive, North Little Rock, Arkansas 72118-5317 at telephone number (501) 682-0623, proposes a draft renewal of the permit number AR0000400 for which an application was received on January 21, 2015, with additional information received on June 16, 2015, June 19, 2015, June 24, 2015, and August 3, 2015, for the following applicant under the National Pollutant Discharge Elimination System (NPDES) and the Arkansas Water and Air Pollution Control Act.

Applicant: Arkansas Electric Cooperative Corporation - Carl E. Bailey Generating Station, 585 Woodruff 816, Augusta, AR 72006. Location: approximately one mile south of Augusta on the west side of Arkansas State Highway 339; Latitude: 35° 15' 41.04" N; Longitude: 91° 21' 45.53" W in Woodruff County, Arkansas. The discharge of once-through cooling water, wastewaters from low volume waste sources (consisting of boiler blowdown, demineralization regeneration backwash, and floor drains), metal cleaning waste (consisting of air pre-heater wash), treated sanitary wastewater, and stormwater from the main plant building area and substation area is into man-made open channel, thence to the White River in Segment 4B of the White River Basin.

ADEQ's contact person for submitting written comments on the draft permit, requesting information regarding the draft permit, or obtaining a copy of the permit and the Statement of Basis is Guy Lester, at the above address and telephone number or by email at Water-Draft-Permit-Comment@adeq.state.ar.us. For those with Internet access, a copy of the proposed draft permit as well as the publication date may be found on the ADEQ's website at: http://www.adeq.state.ar.us/water/branch_permits/individual_permits/pn_permits/pnpermits.asp.

The comment period for the draft permit shall end at 4:30 P.M. (Central Time) on the 30th day after the publication date. If the last day of the comment period is a Saturday, Sunday, or legal holiday, the public comment period shall expire on the next day that is not a Saturday, Sunday, or legal holiday. For information regarding the actual publication date along with the actual date and time the comment period will end, please contact Guy Lester at the above address and telephone number or by email at Water-Draft-Permit-Comment@adeq.state.ar.us. Public notice, comments, and hearings will be conducted in accordance with Regulation 6.104(A)(5) [40 CFR Parts 124.10 through 124.12 by reference] and Regulation 8.207 through 8.210 (Administrative Procedures). All persons, including the permittee, who wish to comment on ADEQ's draft permitting decision must submit written comments to ADEQ, along with their name and mailing address. A Public Hearing will be held when ADEQ finds a significant degree of public interest. After the public comment period, ADEQ will issue a final permitting decision. ADEQ will notify the applicant and each person who has submitted written comments or request notice of the final permitting decision. Any interested person who has submitted comments may appeal a final decision by ADEQ in accordance with the APCEC Regulation No. 8.603.

DRAFT

Statement of Basis

This Statement of Basis is for information and justification of the permit limits only. Please note that it is not enforceable. This draft permitting decision is for renewal of the discharge Permit Number AR0000400 with Arkansas Department of Environmental Quality (ADEQ) Facility Identification Number (AFIN) 74-00024 to discharge to Waters of the State.

1. **PERMITTING AUTHORITY.**

   The issuing office is:

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

2. **APPLICANT.**

   The applicant's mailing address is:

   Arkansas Electric Cooperative Corporation - Carl E. Bailey Generating Station
   P.O. Box 194208
   Little Rock, AR 72119

   The facility address is:

   Arkansas Electric Cooperative Corporation - Carl E. Bailey Generating Station
   585 Woodruff 816
   Augusta, AR 72006

3. **PREPARED BY.**

   The permit was prepared by:

   Guy Lester
   Staff Engineer
   Permits Branch
   Office of Water Quality
   (501) 682-0023
   Email: lester@adeq.state.ar.us

   John Bailey P.E.
   Manager
   Permits Branch
   Office of Water Quality
   (501) 682-0629
   Email: bailey@adeq.state.ar.us

4. **PERMIT ACTIVITY.**

   Previous Permit Effective Date: August 1, 2010
   Previous Permit Expiration Date: July 31, 2015

The permittee submitted a permit renewal application on January 21, 2015, and additional information was received on June 16, 2015, June 19, 2015, June 24, 2015, and August 3, 2015. It is proposed that the current discharge permit be reissued for a 5-year term in accordance with regulations promulgated at 40 CFR Part 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
CFR - Code of Federal Regulations
cfs - cubic feet per second
COD - chemical oxygen demand
COE - United States Corp of Engineers
CPP - continuing planning process
CWA - Clean Water Act
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
NH3-N - ammonia nitrogen
$NO_3 + NO_2$-N - nitrate + nitrite nitrogen
NPDES - National Pollutant Discharge Elimination System
O&G - oil and grease
Reg. 2 - APCEC Regulation No. 2
Reg. 6 - APCEC Regulation No. 6
Reg. 8 - APCEC Regulation No. 8
Reg. 9 - APCEC Regulation No. 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:

Compliance and Enforcement History for this facility can be reviewed by using the following web link:

http://www.adeq.state.ar.us/downloads/WebDatabases/PermitsOnline/NPDES/PermitInformation/AR0000400_Compliance%20Review_20150609.pdf

5. SIGNIFICANT CHANGES FROM THE PREVIOUSLY ISSUED PERMIT.

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

1. The facility location and outfall location coordinates have been updated to be more precise.
2. For Outfall 002, “demineralization regeneration backwash” has been added to the discharge description, and the other wastestream descriptions have been revised to match the corresponding wastestream descriptions listed in 40 CFR 423.
3. All of the effluent limits have been corrected to reference the nearest tenth to ensure the required accuracy in reporting.
4. TRC limits have been deleted from Part IA. Section A1. See Section 11.D.1.a.ii below for details.
5. The Monthly Average TSS limit has been reduced to 30 mg/l. See Section 11.D.2.b.ii below for details.
6. Total Copper and Total Iron limits have been added to Outfall 002. See Section 11.D.2.b.iii below for details.
7. Part II.1 has been added to the permit to clarify that any discharge from the facility other than through the permitted outfall is not authorized by the permit and must be reported within 24 hours.
8. Part II.10 has been added to ensure compliance with the conditions for waiving monitoring and reporting requirements (and limitations and other requirements) for FAC and TRC. See Section 11.D.1 below for details.
9. Part II.11 has been added to define the wastestream description “low volume waste sources” based on 40 CFR 423.11(b).

10. Part II.12 has been added because the permittee requested, and met the conditions for, a waiver of monitoring and reporting requirments for FAC and TRC in accordance with 40 CFR 122.44(a)(2). Limitations and other requirments for FAC and TRC have not been included in the permit. See Section 11.D.1 below for details.
11. Part II.13 has been added to require the permittee gather data and information for submittal with the next permit renewal application based on the requirements of 40 CFR 122.21(r)(1)-(6), and (8) and 40 CFR 125.94(c).
12. Part II.14 has been added to the permit, in accordance with 40 CFR 122.98(b)(1).
13. A requirement to perform a Priority Pollutant Scan on the first discharge from Outfall 002 has been added as Part II.16.

6. RECEIVING STREAM SEGMENT AND DISCHARGE LOCATION.

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

Outfall 001: Latitude: 35° 15’ 27.96” N; Longitude: 91° 21’ 51.51” W
Outfall 002: Latitude: 35° 15’ 36.75” N; Longitude: 91° 21’ 55.91” W

The receiving waters named:

a man-made open channel, thence to the White River in Segment 4B of the White River Basin. The receiving stream with USGS Hydrologic Unit Code (H.U.C) of 11010013 and Reach #002 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, ENDANGERED SPECIES, AND ANTI-DEGRADATION CONSIDERATIONS.

A. 303(d) List:

The receiving stream is not listed on the 2008 303(d) list. Therefore no permit action is needed.

B. Endangered Species:

No comments on the application were received from the USF&WS during the 60-day review period required by 40 CFR 125.98(h). The draft permit and Statement of Basis will be sent to the USF&WS for review during the public comment period.

C. Anti-Degradation:

The limitations and requirements set forth in this permit for discharge into waters of the State are consistent with the Antidegradation Policy and all other applicable water quality standards found in APC&EC Regulation No. 2.

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

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

A. Discharge Flow: Outfall 001: 120 MGD (Daily Max. permit limit)
Outfall 002: 0.5 MGD (when discharge occurs - from application)

B. Type of Treatment: Outfall 001 – (optional) side-stream spray cooling pond
Outfall 002 – sedimentation pond

C. Discharge Description:

Outfall 001 – once-through cooling water
Outfall 002 – wastewaters from low volume waste sources (consisting of boiler blowdown, demineralization regeneration backwash, and floor drains), metal cleaning waste (consisting of air pre-heater wash), treated sanitary wastewater, and stormwater from the main plant building area and substation area

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 Reg. 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 steam electric power generating station.

10. **SOLIDS PRACTICES.**

Any settled solids remain in the sedimentation pond.

11. **DEVELOPMENT AND BASIS FOR PERMIT CONDITIONS**.

The Arkansas Department of Environmental Quality has determined to issue a draft permit for the discharge described in the application. Permit requirements are based on federal regulations (40 CFR Parts 122, 124, and Subchapter N), the National Pretreatment Regulation in 40 CFR Part 403 and regulations promulgated pursuant to the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. 8-4-101 et. seq.). All of the information contained in the application, including all of the submitted effluent testing data, was reviewed to determine the need for effluent limits and other permit requirements.

The following is an explanation of the derivation of the conditions of the draft 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 CFR Part 124.7.

Technology-Based Versus Water Quality-Based Effluent Limitations And Conditions

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

Parameter	Water Quality-Based		Technology-Based		Previous Permit		Draft 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								
Flow	N/A	N/A	Report, MGD	120 MGD	Report, MGD	120 MGD	Report, MGD	120 MGD
Temperature	>118°F (Inst. Max.)		N/A		118°F (Inst. Max.)		118°F (Inst. Max.)	
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.	
Outfall 002								
COD	N/A	N/A	50.0	75.0	50	75	50.0	75.0
TSS	N/A	N/A	30.0	99.5	35	53	30.0	53.0
FCB (col/100ml)								
(Apr-Sept)	200	400	N/A	N/A	200	400	200	400
(Oct-Mar)	1000	2000	N/A	N/A	1000	2000	1000	2000
O&G	10.0	15.0	15.0	20.0	10	15	10.0	15.0
Total Recoverable Copper	17.9	35.9	0.3	0.3	N/A	N/A	0.3	0.3
Total Iron	N/A	N/A	0.3	0.3	N/A	N/A	0.3	0.3
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.	

A. **Justification for Limitations and Conditions of the draft permit:**

Parameter	Water Quality or Technology	Justification
Outfall 001		
Flow	Technology	40 CFR 122.44(l) and previous permit
Temperature	Water Quality	Reg. 2.502, CWA Section 402(o), and previous permit
pH	Water Quality	Reg. 2.504, CWA Section 402(o), and previous permit
Outfall 002		
COD	Technology	40 CFR 122.44(l) and previous permit
TSS[1]	Technology	40 CFR 423.12(b)(3), 40 CFR 122.44(l), and previous permit
FCB	Water Quality	Reg. 2.507, CWA Section 402(o), and previous permit
O&G	Water Quality	Reg. 2.510, CWA Section 402(o), and previous permit
Total Recoverable Copper[2]	Technology	40 CFR 423.12(b)(5)
Total Iron[1]	Technology	40 CFR 423.12(b)(5)
pH	Water Quality	Reg. 2.504, CWA Section 402(o), and previous permit

[1] See Section 11.D.2.b.ii below for details.
[2] See Section 11.D.2.b.iii below for details.

B. **Anti-backsliding**

The draft permit is consistent with the requirements to meet Anti-backsliding provisions of the Clean Water Act (CWA), Section 402(o) [40 CFR 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 CFR 122.44 (l)(2)(i).

The draft permit meets or exceeds the requirements of the previous permit.

C. **Limits Calculations**

1. Mass limits:

In accordance with 40 CFR 122.45(f)(1), all pollutants limited in permits shall have limitations expressed in terms of mass if feasible. 40 CFR 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.

No mass limits are included in this permit for Outfall 002 due to variable nature of discharge flows, in accordance with 40 CFR 122.45(f)(iii).

2. Daily Maximum Limits:

   The daily maximum limit for Flow from Outfall 001 is based on the maximum design flow of the cooling system as noted in the application.

   The daily maximum limit for COD is based on Section 5.4.2 of the Technical Support Document for Water Quality-Based Toxics Control.

   Daily Maximum limit = Monthly average limit x 1.5

   The daily maximum limits for FCB and O&G are based on Regs. 2.507 and 2.510, respectively.

   See Section 11.D below for daily maximum limit for TSS.

3. Temperature

   The 118°F Inst. Max. temperature limitation is continued from previous permit.

   The following were used to confirm that the discharge will not cause the receiving stream (the White River) to exceed the temperature standards in Reg. 2.502:

   $T_d = [(Q_e \times T_e) + (Q_b \times T_b)] / [Q_e + Q_b]$

   where:

   T_d = downstream temperature of receiving stream in °F (after mixing with effluent)
   Q_e = maximum flow for Outfall 001 (permit limit) = 120 MGD = 185.7 cfs
   T_e = maximum allowable temperature of the effluent (permit limit) = 118°F
   Q_b = critical background flow = 7Q10 = 4,190 cfs and 7Q10 (Nov-Apr) = 4,290 cfs*
   T_b = background temperature of receiving stream = 85.1°F and 39.2°F†

   * 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 Station 07074500 (January 1964 – September 2005).

   † Ref.: Maximum and minimum, respectively, of 244 data points from Arkansas Monitoring Station WHI0138 from June 1993 – May 2015.

Maximum Downstream Temperature

Use T_b = 85.1°F and Q_b = 4,190 cfs

T_d = [(185.7 x 118°F) + (4,190 x 85.1°F)] / (185.7 + 4,190)

T_d = 86.5°F

86.5°F < 89.6°F [WQS for temperature for the White River (Dam #1 to mouth) from Reg. 2.502]

Receiving Stream Temperature Change

Use T_b = 39.2°F and Q_b = 4,290 cfs

T_d = [(185.7 x 118°F) + (4,290 x 39.2°F)] / (185.7 + 4,290)

$\Delta T = T_d - T_b$ = 42.5°F – 39.2°F = 3.3°F

3.3°F ≤ 5.0°F (maximum allowable temperature change from Reg. 2.502)

4. COD, TSS, and FCB

   The sanitary wastestream flow averages 300 gallons per day (gpd), while all other flows to the sedimentation pond (which discharges through Outfall 002) average 7,000 gpd. This makes the sanitary wastestream approximately 4% of the total flow to the sedimentation pond. The current retention time in the pond is greater than 10 years. The permit has Chemical Oxygen Demand (COD) limitations (which account for all oxygen demanding pollutants), TSS limitations, and Fecal Coliform Bacteria (FCB) limitations. Because of these existing limitations, the low flow volume of sanitary wastewater, and the long pond retention time, no additional permit action is necessary concerning the sanitary wastestream.

D. **Applicable Effluent Limitations Guidelines**

Discharges from facilities of this type are covered by Federal effluent limitations guidelines (ELGs) promulgated under 40 CFR Part 423 – Steam Electric Power Generating Point Source Category.

1. Outfall 001 – once-through cooling water

   a. 40 CFR 423.13 specifies the following ELGs that represent Best Available Technology economically feasible (BAT):

i. 40 CFR 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.5 of the permit.

ii. Although 40 CFR 423.13(b)(1) and (2) apply because the facility has a generating capacity of 165 megawatts (MW) which is greater than 25 MW, the facility does not use chlorination. Therefore, the ELGs for TRC have not been included as conditions in the permit. See also, Section 11D.1.c below.

b. Although 40 CFR 423.12(6) applies because the facility discharges once through cooling water, the facility does not use chlorination. Therefore, the ELGs for FAC have not been included as conditions in the permit. See also, Section 11D.1.c below.

c. The Department received a signed statement, dated Jun 19, 2015, certifying that the facility does not use chlorination in the cooling water. Part II.12 of the permit waives the monitoring and reporting requirements for TRC and FAC based on this request for a waiver by the permittee, in accordance with 40 CFR 122.44(a)(2). Part II.10 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. In accordance with 40 CFR 122.44(a)(2)(ii), the waiver is only valid for the term of this permit. In accordance with 40 CFR 122.44(a)(2)(iii), the permittee must request this monitoring waiver again when applying for the next permit renewal.

Other requirements concerning TRC and FAC have not been included in the permit, as noted in Section 11.D.1.a.ii and b, above, based on the above referenced certification statement.

The above conditions have been included as Parts II.10 and II.12 of the permit.

A major modification of the permit will be required to include the monitoring and reporting requirements, and TRC and FAC ELG conditions from 40 CFR 423.12(6), 13(b)(1), and 13(b)(2) in the permit before the facility may use chlorination in the cooling water.

2. Outfall 002 – wastewaters from low volume waste sources (consisting of boiler blowdown, demineralization regeneration backwash, and floor drains), metal cleaning waste (consisting of air pre-heater wash), and treated sanitary wastewater

a. 40 CFR 423.13 specifies the following ELGs that represent Best Available Technology economically feasible (BAT):

i. 40 CFR 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 CFR 423.12 specifies the following ELGs that represent Best Practicable Control Technology currently available (BPT):

i. 40 CFR 423.12(b)(1) specifies that all discharges, except once through cooling water, shall have a pH within the range of 6.0–9.0. This ELG has been met by the pH limits in Part IA, Section A2 of the permit.

ii. The discharge is a combined wastestream of wastewaters from low volume waste sources (consisting of boiler blowdown, demineralization regeneration backwash, and floor drains), metal cleaning waste (consisting of air pre-heater wash), and treated sanitary wastewater. 40 CFR 423.12(b)(3) specifies limitations for low volume waste sources, and 40 CFR 423.12(b)(5) specifies limitations for metal cleaning wastes. The pollutants and their corresponding ELGs are as follows:

ELGs for Low Volume Waste Sources 40 CFR 423.12(b)(3)		
Parameter	Monthly Avg. (mg/l)	Daily Max. (mg/l)
TSS	30.0	100.0
O&G	15.0	20.0

ELGs for Metal Cleaning Wastes 40 CFR 423.12(b)(5)		
Parameter	Monthly Avg. (mg/l)	Daily Max. (mg/l)
TSS	30.0	100.0
O&G	15.0	20.0
Total Copper	1.0	1.0
Total Iron	1.0	1.0

In accordance with 40 CFR 423.12(b)(12), each portion of a combined wastestream must meet its corresponding ELG limitation. Since the combined wastestream includes sanitary wastewater, and 40 CFR 423 does not specify any ELG for this type of waste, the following technology-based limits were used, based on the best engineering judgment of the permit writer using the secondary treatment limits from 40 CFR 133.102:

Technology-based Limits for Sanitary Wastewater [ref. 40 CFR 133.102]		
Parameter	Monthly Avg. (mg/l)	Daily Max. (mg/l)
TSS	30.0	45.0

Because the water quality-based O&G limits in Reg. 2.510 are more stringent than the O&G limits in the ELG, they have been retained in the permit. For each of the other pollutants listed above, limitations were calculated using the combined wastestream formula:

$$C_{cw} = [(C_{lv} \times Q_{lv}) + (C_{mc} \times Q_{mc}) + (C_{sw} \times Q_{sw})] / Q_{cw}$$

where:

C_{cw} = pollutant limit for combined wastestream (mg/l)
C_{lv} = ELG pollutant limit for low volume waste sources (mg/l)
Q_{lv} = low volume waste source flow (gpd)
C_{mc} = ELG pollutant limit for metal cleaning waste (mg/l)
Q_{mc} = metal cleaning waste flow (gpd)
C_{fb} = pollutant concentration for sanitary waste (mg/l)
Q_{fb} = sanitary waste flow (gpd)
Q_{cw} = combined wastestream flow (gpm) = $(Q_{lv} + Q_{mc} + Q_{sw})$

The combined wastestream calculations can be viewed on the Department's website at the following address:

http://www.adeq.state.ar.us/downloads/WebDatabases/PermitsOnline/NPDES/PermitInformation/AR0000400_Combined%20Wastestream%20Calculations_20150911.pdf

The Daily Max. TSS limit from the previous permit is more stringent than the combined wastestream TSS limit. Therefore, the TSS limit from the previous permit has been retained in the permit.

There are no water quality standards for Iron in Reg. 2.508, so the combined wastestream limits for Total Iron have been included as the limitations in Part IA, Section A2 of the permit. Water-quality based limitations for Total Copper were calculated using the information in the first table of Section 11.E below, an average flow from Outfall 002 of 0.5 MGD (0.77 cfs), data from monitoring station WHI0138, and the procedure from Part IV.B of the ADEQ Discharge Permit, Toxic Control Implementation Procedure in Appendix D of the CPP. The calculated water-quality based limitations for Total Copper were less stringent the combined wastestream limits. Therefore, the combined wastestream limits for Total Copper have been included as the limitations in Part IA, Section A2 of the permit.

The water quality-based limitation calculations for Copper can be viewed on the Department's website at the following address:

http://www.adeq.state.ar.us/ftproot/Pub/WebDatabases/PermitsOnline/NPDES/PermitInformation/AR0000400_WQ-based%20limit%20calculations%20for%20Copper_20150803.pdf

The limitations included in Part IA, Section A2 of the permit are as follows:

Draft Permit Limits		
Parameter	Monthly Avg. (mg/l)	Daily Max. (mg/l)
TSS	30.0	53.0
O&G	10.0	15.0
Total Copper	0.3	0.3
Total Iron	0.3	0.3

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

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), Regulation No. 2 (Reg. 2.508) and criteria obtained from the EPA National Recommended Water Quality Criteria, found at the following link:

http://water.epa.gov/scitech/swguidance/standards/criteria/current/index.cfm#cmc

Under Federal Regulation 40 CFR Part 122.44(d), as adopted by Regulation No. 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 CFR Part 122.45(c).

The following items were used in the calculations:

Parameter	Value	Source
Discharge Flow = Q	120 MGD = 185.7 cfs (Outfall 001)	Permit flow limit
Background Flow = 7Q10 (Aquatic Toxicity)	4,190 cfs	USGS Document SIR 2008-5065
Background Flow = Harmonic Mean (Human Health)	13,859 cfs	Data from USGS 07074500
TSS	18.5 mg/l	Attachment V, "Total Suspended Solids from Ambient Water Quality Monitoring Network" - White River
Hardness as CaCo3	116 mg/l	Attachment VI, "Mean Hardness by Receiving Stream and Ecoregion" - White River
pH	7.71 s.u.	WHI0138 Data

The pollutants in the following tables were reported in the PPS. Instream Waste Concentrations (IWCs) were calculated in the manner described in Appendix D of the CPP, and compared to the applicable Water Quality Standards for the Aquatic Toxicity Evaluation, and to the applicable EPA Water Quality Criteria for the Human Health (Bioaccumulation) Evaluation. The following tables summarize the results of the analysis. The complete evaluation can be viewed on the Department's website at the following address:

http://www.adeq.state.ar.us/downloads/WebDatabases/PermitsOnline/NPDES/PermitInformation/AR0000400_Reasonable%20Potential%20Calculations_20150616.pdf

1. **Aquatic Toxicity Evaluation**

a. Acute Criteria Evaluation

Pollutant	Concentration Reported (C_e) µg/l	C_e x 2.13[1]	Instream Waste Concentration (IWC)	Water Quality Standards (WQS)[2]	Reasonable Potential (Yes/No)
			Acute, µg/l	Acute, µg/l	
Copper	6.99	14.89	6.94	63.03	No
Lead	0.781	1.664	0.798	456.70	No
Mercury	0.00406	0.00865	0.00367	5.97	No
Nickel	1.92	4.09	1.97	4362.12	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 Reg. 2.508 unless otherwise specified.

b. Chronic Criteria Evaluation

Pollutant	Concentration Reported (C_e) µg/l	C_e x 2.13[1]	Instream Waste Concentration (IWC)	Water Quality Standards (WQS)[2]	Reasonable Potential (Yes/No)
			Chronic, µg/l	Chronic, µg/l	
Copper	6.99	14.89	3.15	41.50	No
Lead	0.781	1.664	0.386	17.80	No
Mercury	0.00406	0.00865	0.00130	0.012	No
Nickel	1.92	4.09	0.96	484.45	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 Reg. 2.508 unless otherwise specified.

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

Pollutant	Concentration Reported (C_e) µg/l	C_e x 2.13[1]	Instream Waste Concentration (IWC)	EPA Water Quality Criteria (WQC)[2]	Reasonable Potential (Yes/No)
Arsenic	0.82	1.75	0.55	1.4[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 Reg. 2.508.

ADEQ has determined from the submitted information that the discharge does not pose the reasonable potential to cause or contribute to an exceedance above a listed criteria.

F. **Cooling Water Intake Structures (CWISs) - CWA § 316(b)**

EPA promulgated the rule for cooling water intake structures (CWIS) at existing facilities pursuant to Clean Water Act Section 316(b) on August 15, 2014. The rule became effective on October 14, 2014. The rule includes provisions specifically designed to ensure that the rule, as it is implemented, is not likely to jeopardize the continued existence of federally-listed species, or result in the destruction or adverse modification of designated critical habitat pursuant to the Endangered Species Act of 1973 (ESA). The rule also establishes Best Technology Available (BTA) standards for minimizing adverse environmental impact to reduce impingement mortality and entrainment of aquatic organisms at existing power generation and manufacturing facilities.

40 CFR 122.21(r)(1)(ii) applies to all existing facilities. It requires existing facilities to submit the information specified under 40 CFR Parts 122.21(r)(2) and (3), and the applicable provisions of 40 CFR Parts 122.21(r)(4)-(8). This information includes the following:

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

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

For facilities with an effective permit that expires prior to 7/14/2018, 40 CFR 125.95(a)(2) allows 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 Department has determined that there was not sufficient time to collect and develop the information required by 40 CFR Parts 122.21(r)(1)-(6), and (8) for submission with the permit renewal application. Therefore, Part II.13 has been included in the permit, which requires that the permittee collect and develop all the information required by the above noted regulations for submission with the application for the next permit renewal. The data and information shall be sufficient to show compliance with the requirements for BTA Standards for Impingement Mortality in accordance with 40 CFR 125.94(c), and BTA Standards for Entrainment in accordance with 40 CFR 125.94(d).

The receiving stream is not classified as an Ecologically Sensitive Waterbody, so no federally-listed species or critical habitats are affected by the CWIS. As noted in Section 7.B above, no comments were received from the USF&WS during the 60-day review period required by 40 CFR 125.98(h). The draft permit and Statement of Basis will be sent to the USF&WS for review during the public comment period.

In accordance with 40 CFR 122.98(b)(1), Part II.14 which states: “Nothing in this permit authorizes take for the purposes of a facility’s compliance with the Endangered Species Act” has been included in the permit.

In accordance with 40 CFR 125.98(b)(5), the Director has established (based on the best engineering judgement of the staff) that the site-specific Interim BTA Standards for Impingement Mortality and Entrainment are equivalent to the design and location of the current control measures to reduce the impingement mortality and entrainment by the cooling water intake structure.

12. **STORMWATER REQUIREMENTS**

The federal regulations at 40 CFR 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 ARR00A437.

13. **SAMPLE TYPE AND FREQUENCY.**

Regulations require permits to establish monitoring requirements to yield data representative of the monitored activity [40 CFR Part 122.48(b)] and to ensure compliance with permit limitations [40 CFR Part 122.44(i)(l)].

Requirements for sample type and sampling frequency have been based on the current discharge permit, except for Total Copper and Total Iron from Outfall 002. The sample type and frequency for Total Copper and Total Iron have been based on generally accepted scientific knowledge and engineering practice as adequate to ensure compliance.

Parameter	Previous Permit		Draft Permit	
	Frequency of Sample	Sample Type	Frequency of Sample	Sample Type
Outfall 001				
Flow	continuous	recorder	continuous	recorder
Temperature	continuous	recorder	continuous	recorder
pH	once/day	grab	once/month	grab
Outfall 002				
Flow	once/week	estimate	once/week[1]	estimate
COD	once/week	grab	once/week[1]	grab
TSS	once/week	grab	once/week[1]	grab
FCB	once/week	grab	once/week[1]	grab
O&G	once/week	grab	once/week[1]	grab
Total Copper	N/A	N/A	once/month[1]	grab
Total Iron	N/A	N/A	once/month[1]	grab
pH	once/week	grab	once/week[1]	grab

[1] When discharging.

14. **PERMIT COMPLIANCE.**

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. AR0000400 received January 21, 2015, and additional information received on June 16, 2015, June 19, 2015, June 24, 2015, and August 3, 2015.
B. APCEC Regulation No. 2.
C. APCEC Regulation No. 3.
D. APCEC Regulation No. 6 which incorporates by reference certain federal regulations included in Title 40 of the Code of Federal Regulations at Reg. 6.104.
E. 40 CFR Parts 122 and 125.
F. 40 CFR Part 423.
G. Discharge permit file AR0000400.
H. Discharge Monitoring Reports (DMRs).
I. "2008 Integrated Water Quality Monitoring and Assessment Report", ADEQ.
J. "2008 List of Impaired Waterbodies (303(d) List)", ADEQ, February 2008
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. Continuing Planning Process (CPP).
M. Technical Support Document For Water Quality-based Toxic Control.
N. Reasonable Potential Calculations.
O. Combined Wastestream Calculations.
P. Water quality-based Copper limit calculations.
Q. EPA National Recommended Water Quality Criteria at: http://water.epa.gov/scitech/swguidance/standards/criteria/current/index.cfm#cmc
R. Inspection Report #034733 dated July 17, 2007.
S. Compliance Review Memo dated June 6, 2015 from Jacqueline Trotta to Guy Lester..
T. Telephone conversations on June 24, 2015 and August 3, 2015 to discuss changes to the permit.
U. Meeting between representatives of the permittee and ADEQ on May 5, 2015.
V. EPA Memo, "Guidance for NPDES Permits Issued to Steam Electric Power Plants", dated August 22, 1985.
W. Letter from EPA, dated March 3, 2016, declining full review of preliminary draft permit.

17. **PUBLIC NOTICE.**

The public notice describes the procedures for the formulation of final determinations and shall provide for a public comment period of 30 days. During this period, any interested persons may submit written comments on the permit and may request a public hearing to clarify issues involved in the permitting decision. A request for a public hearing shall be in writing and shall state the nature of the issue(s) proposed to be raised in the hearing.

A copy of the permit and public notice will be sent via email to the Corps of Engineers, the Regional Director of the U.S. Fish and Wildlife Service, the Department of Arkansas Heritage, the EPA, and the Arkansas Department of Health.

18. **POINT OF CONTACT.**

For additional information, contact:

Guy Lester
Permits Branch, Office of Water Quality
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, Arkansas 72118-5317
Telephone: (501) 682-0023

DRAFT

Permit Number: AR0000400
AFIN: 74-00024

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
Carl E. Bailey Generating Station

is authorized to discharge once-through cooling water, wastewaters from low volume waste sources (consisting of boiler blowdown, demineralization regeneration backwash, and floor drains), metal cleaning waste (consisting of air pre-heater wash), treated sanitary wastewater, and stormwater from the main plant building area and substation area from a facility located as follows: 585 Woodruff 816, Augusta, AR 72006, approximately one mile south of Augusta on the west side of Arkansas State Highway 339 in Woodruff County, Arkansas. The applicant's mailing address is: P.O. Box 194208, Little Rock, AR 72119.

Latitude: 35° 15' 41.04" N; Longitude: 91° 21' 45.53" W

to receiving waters named:

a man-made open channel, thence to the White River in Segment 4B of the White River Basin.

The outfalls are located at the following coordinates:

Outfall 001: Latitude: 35° 15' 27.96" N; Longitude: 91° 21' 51.51" W
Outfall 002: Latitude: 35° 15' 36.75" N; Longitude: 91° 21' 55.91" 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:
Expiration Date:

_____ _____

Caleb J. Osborne
Associate Director, Office of Water Quality
Arkansas Department of Environmental Quality

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 and calculations.

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	120 MGD	continuous	recorder
Temperature	N/A	N/A	118°F (Inst. Max.)		continuous	recorder
pH	N/A	N/A	Minimum 6.0 s.u.	Maximum 9.0 s.u.	once/month	grab

There shall be no discharge of distinctly visible solids, scum, or foam of a persistent nature, nor shall there be any formation of slime, bottom deposits, or sludge banks. 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 at the outfall.

PERMIT REQUIREMENTS

SECTION A2. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS: OUTFALL 002 – wastewaters from low volume waste sources (consisting of boiler blowdown, demineralization regeneration backwash, and floor drains), metal cleaning waste (consisting of air pre-heater wash), treated sanitary wastewater, and stormwater from the main plant building area and substation area.

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 and calculations.

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	once/week[1]	estimate
Chemical Oxygen Demand (COD)	N/A	N/A	50.0	75.0	once/week[1]	grab
Total Suspended Solids (TSS)	N/A	N/A	30.0	53.0	once/week[1]	grab
Oil & Grease (O&G)	N/A	N/A	10.0	15.0	once/week[1]	grab
Fecal Coliform Bacteria (FCB)			(colonies/100ml)			
(April – September)	N/A	N/A	200	400	once/week[1]	grab
(October – March)	N/A	N/A	1000	2000	once/week[1]	grab
Total Recoverable Copper[2]	N/A	N/A	0.3	0.3	once/month[1]	grab
Total Iron	N/A	N/A	0.3	0.3	once/month[1]	grab
pH	N/A	N/A	Minimum 6.0 s.u.	Maximum 9.0 s.u.	once/week[1]	grab

[1] When discharging.
[2] See Part II.15 (Metals Condition).

There shall be no discharge of distinctly visible solids, scum, or foam of a persistent nature, nor shall there be any formation of slime, bottom deposits, or sludge banks. There shall be no visible sheen as defined in Part IV of this permit.

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge during the entire monitoring period. Samples for all parameters are to be taken at the discharge from the retention pond at Outfall 002.

SECTION B. PERMIT COMPLIANCE SCHEDULE

None.

PART II
OTHER CONDITIONS

1. Any discharge other than from the permitted Outfall is not authorized under this permit and shall be reported to ADEQ as a noncompliance event within 24 hours of occurrence.

2. The operator of this wastewater treatment facility shall be a Basic Industrial licensed by the State of Arkansas in accordance with APCEC Regulation No. 3.

3. In accordance with 40 CFR Parts 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.

4. Other Specified Monitoring Requirements

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

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

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

5. 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.

6. There shall be no discharge of polychlorinated biphenyl compounds.

7. The permittee shall maintain adequate storage capacity in the retention pond that discharge through Outfall 002 for a storm event up to a 10-year, 24-hour storm event. This capacity must exclude the 2 feet of freeboard which must exist above the total volume required for normal operation plus the required storm surge capacity.

8. The term "10-year, 24-hour storm event" means the maximum 24-hour precipitation event with a probable recurrence interval of once in ten years as defined 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.

9. The permittee is only required to use the spray cooling pond when needed to comply with the temperature limitation set forth in this permit for Outfall 001. Part III.B.4 of this permit (reporting requirement for bypasses of treatment system) shall not apply to discharges which do not flow through the spray cooling pond.

10. Prohibition on the Use of Chlorine

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

    Use of chlorination in the once-through cooling water will require a major permit modification.

11. The term low volume waste sources means, taken collectively as if from one source, wastewater from all sources except those for which specific limitations are otherwise established in 40 CFR Part 423. Low volume wastes sources include, but are not limited to: wastewaters from wet scrubber air pollution control systems, ion exchange water treatment systems, water treatment evaporator blowdown, laboratory and sampling streams, boiler blowdown, floor drains, cooling tower basin cleaning wastes, and recirculating house service water systems. Sanitary and air conditioning wastes are not included.

12. The monitoring requirements for Free Available Chlorine (FAC) and Total Residual Chlorine (TRC) at Outfall 001 [ref. 40 CFR 423.12(6) and 40 CFR 423.13(b)(1)] are waived during this permit term based on the 40 CFR 122.44(a)(2). The permittee submitted a signed statement certifying under penalty of law that the facility does not use chlorination in the cooling water, in accordance with 40 CFR 122.44(a)(2)(iii).

    Limitations other requirements concerning FAC and TRC [ref. 40 CFR 423.12(6), 40 CFR 423.13(b)(1), and 40 CFR 423.13(b)(2)] have not been included in the permit, based on the above referenced signed certification statement.

    This waiver is only valid for the term of this permit, in accordance with 40 CFR 122.44(a)(2)(ii). The permittee must request this monitoring waiver again when applying for the next permit renewal, in accordance with 40 CFR 122.44(a)(2)(iii).

13. The permittee must operate the cooling water intake structure based on the current design and location to minimize impingement mortality and entrainment of aquatic organisms. This will meet the site-specific Interim BTA Standards for Impingement Mortality and Entrainment as established by the Director in accordance with 40 CFR 125.98(b)(5).

    The permittee shall submit all data and information required by 40 CFR 122.21(r)(2)-(6), and (8) by December 31, 2016. The data and information shall be sufficient to show compliance with the requirements for Best Technology Available (BTA) Standards for Impingement Mortality in accordance with 40 CFR 125.94(c), and BTA Standards for Entrainment in accordance with 40 CFR 125.94(d).

    Upon review of the submitted data and information, the Department may re-open the permit for modification, in accordance with Part II.3.

14. Nothing in this permit authorizes take for the purposes of a facility's compliance with the Endangered Species Act.

15. The permittee may use any EPA approved method based on 40 CFR 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 Copper	0.5

    The permittee may develop a matrix specific method detection limit (MDL) in accordance with Appendix B of 40 CFR Part 136. For any pollutant for which the permittee determines a site specific MDL, the permittee shall send to ADEQ, 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:

    $$MQL = 3.3 \times MDL$$

    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.

16. The permittee must conduct a Priority Pollutant Scan (PPS) and complete Part V of EPA form 2C (i.e., analysis of effluent characteristics and potential toxic pollutants) and the ADEQ PPS Form at Outfall 002 at the next discharge. The PPS must be submitted to ADEQ within 90 days of the resulting discharge.

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 APCEC Regulation No. 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 APCEC Regulation No. 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 APCEC Regulation No. 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 statues 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 such as endangered species, state or local statute, ordinance or regulation.

11. Permit Fees

The permittee shall comply with all applicable permit fee requirements (i.e., including annual permit fees following the initial permit fee that will be invoiced every year the permit is active) for wastewater discharge permits as described in APCEC Regulation No. 9 (Regulation for the Fee System for Environmental Permits). Failure to promptly remit all required fees shall be grounds for the Director to initiate action to terminate this permit under the provisions of 40 CFR Parts 122.64 and 124.5(d), as adopted in APCEC Regulation No. 6 and the provisions of APCEC Regulation No. 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 insure 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 CFR 122.41(m)(1)(i).

A. Bypass not exceeding limitation

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

B. Notice

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

C. Prohibition of bypass

1. Bypass is prohibited and the Director may take enforcement action against a permittee for bypass, unless:

(a) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage.

(b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if the permittee could have installed adequate backup equipment to prevent a bypass which occurred during normal or preventive maintenance.
(c) The permittee submitted notices as required by Part III.B.4.B.

2. The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in Part III.B.4.C(1).

5. Upset Conditions

A. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Part III.B.5.B of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

B. Conditions necessary for demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

1. An upset occurred and that the permittee can identify the specific cause(s) of the upset.
2. The permitted facility was at the time being properly operated.
3. The permittee submitted notice of the upset as required by Part III.D.6.
4. The permittee complied with any remedial measures required by Part III.B.3.

C. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

6. Removed Substances

A. Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering waters of the State. The Permittee must comply with all applicable state and Federal regulations governing the disposal of sludge, including but not limited to 40 CFR Part 503, 40 CFR Part 257, and 40 CFR Part 258.

B. Any changes to the permittee's disposal practices described in Part II of the permit 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 insure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated, and maintained to insure 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 Department approved method (i.e., as allowed under Part II.4), 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 Department.

3. Monitoring Procedures

Monitoring must be conducted according to test procedures approved under 40 CFR 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 insure accuracy of measurements and shall insure 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 insure 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

Monitoring results must be reported on a Discharge Monitoring Report (DMR) form provided by the Department or other form/method approved in writing by the Department (e.g., electronic submittal of DMR once approved). Monitoring results obtained during the previous monitoring period shall be summarized and reported on a DMR form postmarked no later than the 25th day of the month or submitted electronically by 6:00 p.m. of the 25th, following the completed reporting period beginning on the effective date of the permit. When mailing the DMRs, duplicate copies of the forms signed and certified as required by Part III.D.11 and all other reports required by Part III.D, shall be submitted to the Director at the following address:

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

If permittee uses outside laboratory facilities for sampling and/or analysis, the name and address of the contract laboratory shall be included on the DMR.

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 CFR 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.

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 CFR 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 CFR 122.29(b).
B. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants subject to effluent limitations in the permit, or to the notification requirements under 40 CFR 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 <u>even</u> when <u>no</u> discharge occurs during the reporting period.**

5. Compliance Schedule

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

6. Twenty-four Hour Report

A. The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain the following information:

1. A description of the noncompliance and its cause.
2. The period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue.
3. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

B. The following shall be included as information which must be reported within 24 hours:

1. Any unanticipated bypass which exceeds any effluent limitation in the permit.
2. Any upset which exceeds any effluent limitation in the permit.
3. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in Part I of the permit to be reported within 24 hours to the Enforcement Branch of the Office of Water Quality of the ADEQ.

C. The Director may waive the written report on a case-by-case basis if the oral report has been received within 24 hours to the Enforcement Branch of the Office of Water Quality of the ADEQ.

7. Other Noncompliance

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

8. Changes in Discharge of Toxic Substances for Industrial Dischargers

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

A. That any activity has occurred or will occur which would result in the discharge on a routine or frequent basis of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the “notification levels” described in 40 CFR Part 122.42(a)(1).

B. That any activity has occurred or will occur which would result in any discharge on a non-routine or infrequent basis of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the "notification levels" described in 40 CFR Part 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 governed by regulations promulgated in APCEC Regulation No. 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 CFR Part 2 and APCEC Regulation No. 6, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Department of Environmental Quality. As required by the Regulations, the name and address of any permit applicant or permittee, permit applications, permits, and effluent data shall not be considered confidential.

13. Penalties for Falsification of Reports

The Arkansas Air and Water Pollution Control Act provides that any person who knowingly makes any false statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under this permit shall be subject to civil penalties specified in Part III.A.2 and/or criminal penalties under the authority of the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. § 8-4-101 et seq.).

14. Other Information

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

PART IV
DEFINITIONS

All definitions contained in Section 502 of the Clean Water Act and 40 CFR 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. **"Act"** means the Clean Water Act, Public Law 95-217 (33.U.S.C. 1251 et seq.) as amended.
2. **"Administrator"** means the Administrator of the U.S. Environmental Protection Agency.
3. **"APCEC"** means the Arkansas Pollution Control and Ecology Commission.
4. **"Applicable effluent standards and limitations"** means all State and Federal effluent standards and limitations to which a discharge is subject under the Act, including, but not limited to, effluent limitations, standards of performance, toxic effluent standards and prohibitions, and pretreatment standards.
5. **"Applicable water quality standards"** means all water quality standards to which a discharge is subject under the federal Clean Water Act and which has been (a) approved or permitted to remain in effect by the Administrator following submission to the Administrator pursuant to Section 303(a) of the Act, or (b) promulgated by the Director pursuant to Section 303(b) or 303(c) of the Act, and standards promulgated under (APCEC) Regulation No. 2, as amended.
6. **"Best Management Practices (BMPs)"** are activities, practices, maintenance procedures, and other management practices designed to prevent or reduce the pollution of waters of the State. BMPs also include treatment technologies, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw sewage. BMPs may include structural devices or nonstructural practices.
7. **"Bypass"** As defined at 40 CFR 122.41(m).
8. **"Composite sample"** is a mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing a minimum of 4 effluent portions collected at equal time intervals (but not closer than one hour apart) during operational hours, within the 24-hour period, and combined proportional to flow or a sample collected at more frequent intervals proportional to flow over the 24-hour period.
9. **"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.
10. **"Daily Maximum"** discharge limitation means the highest allowable "daily discharge" during the calendar month. The 7-day average for Fecal Coliform Bacteria (FCB) or E-Coli is the geometric mean of the values of all effluent samples collected during the calendar week in colonies per 100 ml.

11. **"Department"** means the Arkansas Department of Environmental Quality (**ADEQ**).
12. **"Director"** means the Director of the Arkansas Department of Environmental Quality.
13. **"Dissolved oxygen limit"** shall be defined as follows:
    A. When limited in the permit as a minimum monthly average, shall mean the lowest acceptable monthly average value, determined by averaging all samples taken during the calendar month.
    B. When limited in the permit as an instantaneous minimum value, shall mean that no value measured during the reporting period may fall below the stated value.
14. **"E-Coli"** a sample consists of one effluent grab portion collected during a 24-hour period at peak loads. For E-Coli, report the monthly average as a 30-day geometric mean in colonies per 100 ml.
15. **"Fecal Coliform Bacteria (FCB)"**a sample consists of one effluent grab portion collected during a 24-hour period at peak loads. For Fecal Coliform Bacteria (FCB) report the monthly average as a 30-day geometric mean in colonies per 100 ml.
16. **"Grab sample"** means an individual sample collected in less than 15 minutes in conjunction with an instantaneous flow measurement.
17. **"Industrial User**" means a nondomestic discharger, as identified in 40 CFR Part 403, introducing pollutants to a POTW.
18. **"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.
19. **"Instantaneous Maximum"** when limited in the permit as an instantaneous maximum value, shall mean that no value measured during the reporting period may fall above the stated value.
20. **"Instantaneous Minimum"** an instantaneous minimum value, shall mean that no value measured during the reporting period may fall below the stated value.
21. **"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.
22. **"Monitoring and Reporting"**
    When a permit becomes effective, monitoring requirements are of the immediate period of the permit effective date. Where the monitoring requirement for an effluent characteristic is monthly or more frequently, the Discharge Monitoring Report (DMR) shall be submitted by the 25th of the month following the sampling. Where the monitoring requirement for an effluent characteristic is Quarterly, Semi-Annual, Annual, or Yearly, the DMR shall be submitted by the 25th of the month following the monitoring period end date.
    A. **MONTHLY:**
       is defined as a calendar month or any portion of a calendar month for monitoring requirement frequency of once/month or more frequently.

B. **BI-MONTHLY:**
is defined as two (2) calendar months or any portion of 2 calendar months for monitoring requirement frequency of once/2 months or more frequently.

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

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

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

23. **"National Pollutant Discharge Elimination System"** means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements under Sections 307, 402, 318, and 405 of the Clean Water Act.
24. **"POTW"** means a Publicly Owned Treatment Works.
25. **"Reduction of CBOD5/BOD5 and TSS in mg/l Formula**"
((Influent – Effluent) / Influent) x 100
26. **"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.
27. **"Sewage sludge"** means the solids, residues, and precipitate separated from or created in sewage by the unit processes at a POTW. Sewage as used in this definition means any wastes, including wastes from humans, households, commercial establishments, industries, and stormwater runoff that are discharged to or otherwise enter a POTW.
28. **"7-day average"** Also known as "average weekly" means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week.

29. **"Treatment works"** means any devices and systems used in storage, treatment, recycling, and reclamation of municipal sewage and industrial wastes, of a liquid nature to implement section 201 of the Act, or necessary to recycle reuse water at the most economic cost over the estimated life of the works, including intercepting sewers, sewage collection systems, pumping, power and other equipment, and alterations thereof; elements essential to provide a reliable recycled supply such as standby treatment units and clear well facilities, and any works, including site acquisition of the land that will be an integral part of the treatment process or is used for ultimate disposal of residues resulting from such treatment.
30. **Units of Measure:**
    "MGD" shall mean million gallons per day.
    "mg/l" shall mean milligrams per liter or parts per million (ppm).
    "µg/l" shall mean micrograms per liter or parts per billion (ppb).
    "cfs" shall mean cubic feet per second.
    "ppm" shall mean parts per million.
    "s.u." shall mean standard units.
31. **"Upset"** means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. Any upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, lack of preventive maintenance, or careless of improper operations.
32. **"Visible sheen"** means the presence of a film or sheen upon or a discoloration of the surface of the discharge. A sheen can also be from a thin glistening layer of oil on the surface of the discharge.
33. **"Weekday"** means Monday – Friday.