STATEMENT OF BASIS

For the issuance of Draft Air Permit # 1842-AOP-R10 AFIN: 60-01380

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

Arkansas Electric Cooperative Corporation - Harry L. Oswald Generating Station
17400 Highway 365 South
Wrightsville, Arkansas 72183

3. PERMIT WRITER:

Thamoda Crossen

4. NAICS DESCRIPTION AND CODE:

NAICS Description: Fossil Fuel Electric Power Generation
NAICS Code: 221112

5. ALL SUBMITTALS:

The following is a list of ALL permit applications included in this permit revision.

Date of Application	Type of Application (New, Renewal, Modification, Deminimis/Minor Mod, or Administrative Amendment)	Short Description of Any Changes That Would Be Considered New or Modified Emissions
12/2/2025	Modification	-

6. REVIEWER'S NOTES:

AECC does not propose any physical changes with this modification application, however, to add the specific conditions to the Title V permit for SN-01 through SN-06 that will allow for the use of a spare LM6000 turbine core in place of one of the LM60000 turbines. The spare turbine will be used only as a replacement unit for 1 of the 6 LM6000 turbines at any given time.

There was no permitted emission changes associated with this permitting action.

7. COMPLIANCE STATUS:

The following summarizes the current compliance of the facility including active/pending enforcement actions and recent compliance activities and issues.

The last inspection was conducted July 31st, 2024. The Inspection Report noted that there were no areas of concern.

8. PSD/GHG APPLICABILITY:

a) Did the facility undergo PSD review in this permit (i.e., BACT, Modeling, etc.)? N
If yes, were GHG emission increases significant? N/A

b) Is the facility categorized as a major source for PSD? Y
- *Single pollutant ≥ 100 tpy and on the list of 28 or single pollutant ≥ 250 tpy and not on list*

If yes for 8(b), explain why this permit modification is not PSD.

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
SN-01 through SN-07	PM_{10}, VOC, CO, NOx	BACT/ PDS
	Nox	NSPS Db
	SO_2, NO_X	NSPS GG
	NO_X	BBBBB
SN-01 through SN-10	PM_{10}, VOC, CO, NOx	8 CAR § 41-101
	PM	8 CAR § 40-101
SN-08 and SN-10	HAPs	NESHAP ZZZZ
SN-08	PM_{10}, SO_2, VOC, CO, NOx	BACT/ PSD
SN-09	PM_{10}	BACT/ PSD

10. UNCONSTRUCTED SOURCES:

Unconstructed Source	Permit Approval Date	Extension Requested Date	Extension Approval Date	If Greater than 18 Months without Approval, List Reason for Continued Inclusion in Permit
N/A				

11. PERMIT SHIELD – TITLE V PERMITS ONLY:

Did the facility request a permit shield in this application? Y

(Note - permit shields are not allowed to be added, but existing ones can remain, for minor modification applications or any 8 CAR pt. 40 requirement.)

If yes, are applicable requirements included and specifically identified in the permit? Y
If not, explain why.

For any requested inapplicable regulation in the permit shield, explain the reason why it is not applicable in the table below.

Source	Inapplicable Regulation	Reason
SN-01 through SN-07	40 C.F.R. Part 64	None of the emission units use a control device as defined under Part 64.
SN-08 through SN-10	40 C.F.R. Part 64	None of the emission units have a potential pre-control device emissions in the amounts of tons per year required to classify the unit as a major source under Part 70.
Cooling Tower (SN-09)	40 C.F.R. Part 63 Subpart Q	The facility is not a major source of HAPs. The facility does not operate the cooling tower with chromium based water treatment chemicals.
Duct Burners (SN-01 through SN-07)	40 C.F.R. 60.49b(g) and (b)	Pursuant to 40 CFR 60.48b(h) a continuous monitoring system for NOx is not required for the duct burners. Therefore these two paragraphs do not apply because the provisions are applicable to affected facilities required to install a continuous monitoring system.

12. COMPLIANCE ASSURANCE MONITORING (CAM) – TITLE V PERMITS ONLY:

List sources potentially subject to CAM because they use a control device to achieve compliance and have pre-control emissions of at least 100 percent of the major source level. List the pollutant of concern and a brief summary of the CAM plan (temperature monitoring, CEMs, opacity monitoring, etc.) and frequency requirements of § 64.

Source	Pollutant Controlled	Cite Exemption or CAM Plan Monitoring and Frequency
N/A		

13. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

14. AMBIENT AIR EVALUATIONS:

The following are results for ambient air evaluations or modeling.

a) NAAQS

A NAAQS evaluation is not required under the Arkansas State Implementation Plan, National Ambient Air Quality Standards, Infrastructure SIPs and NAAQS SIP per Ark. Code Ann. § 8-4-318, dated March 2017 and the DEQ Air Permit Screening Modeling Instructions.

b) Non-Criteria Pollutants:

The non-criteria pollutants listed below were evaluated. Based on Department procedures for review of non-criteria pollutants, emissions of all other non-criteria pollutants are below thresholds of concern.

1st Tier Screening (PAER)

Estimated hourly emissions from the following sources were compared to the Presumptively Acceptable Emission Rate (PAER) for each compound. The Department has deemed the PAER to be the product, in lb/hr, of 0.11 and the Threshold Limit Value (mg/m^3), as listed by the American Conference of Governmental Industrial Hygienists (ACGIH).

Pollutant	TLV (mg/m^3)	PAER (lb/hr) = 0.11 × TLV	Proposed lb/hr	Pass?
Acrolein	0.23	0.0253	0.0110	Yes
Beryllium	0.00005	5.5E-06	0.000003	Yes
Benzene	0.063	0.00693	0.00046	Yes
Cadmium	0.01	0.0011	0.0006	Yes
Chromium	0.01	0.0011	0.00074	Yes
Cobalt	0.02	0.0022	0.00002	Yes
Lead	0.05	0.0055	0.00131	Yes
Formaldehyde	1.5	0.165	0.0167	Yes
Manganese	0.2	0.022	0.00008	Yes
Mercury	0.025	0.00275	0.00006	Yes
Nickel	0.1	0.011	0.00023	Yes

Pollutant	TLV (mg/m^3)	PAER (lb/hr) = 0.11 × TLV	Proposed lb/hr	Pass?
POM	0.2	0.022	0.0022	Yes
Selenium	0.2	0.022	0.00001	Yes

c) H_2S Modeling:

A.C.A. §8-3-103 requires hydrogen sulfide emissions to meet specific ambient standards. Many sources are exempt from this regulation, refer to the Arkansas Code for details.

Is the facility exempt from the H_2S Standards N
If exempt, explain:_____

15. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
01-06	Vendor Data	PM 0.0052 lb/MMBTU VOC 0.0005 lb/MMBtu CO 66 ppmvd@15% O_2 NO_x 25 ppmvd@15% O_2	None	N/A	Uses steam injection to limit NO_x emissions 576,000scf/ hr of Pipeline Natural Gas Rated Heat input = 576 MMBtu/hr Hours of operation: 8,760 hr/yr
07	Vendor Data	PM 0.0061 lb/MMBtu VOC 0.0006 lb/MMBtu CO 50 ppmvd@15% O_2 NO_x 9 ppmvd@15% O_2	None	N/A	Facility uses Dry Low NO_x 1,114,000 scf/ hr of Pipeline Natural Gas Rated Heat input = 1,144 MMBtu/hr Hours of operation: 8,760 hr/yr
08	AP-42 Table 3.4-1	<u>lb/hr</u> PM/PM_{10} = 0.87 SO_2 = 0.50 VOC = 0.79	CO Oxidation Catalyst	70%	1,254 hp 1,250 hrs/yr

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
		CO = 2.04 NOx = 29.66 Total HAPs = 0.042 <u>lb/MMBTU</u> Acetaldehyde = 2.52E-05 Acrolein = 7.88E-06 Formaldehyde = 7.89E-05 Benzene = 7.76E-04 Toluene = 2.81E-04 Xylen = 1.93E-04			70.44 gallons per hour of diesel fuel
09	EPA Report	31.3% dispersion factor 4000 lb PM/1E6 lb water <u>Lb/hr</u> PM = 1.8 PM<u>10</u> = 0.64	None		1,442 lb water/hr Hours of operation: 8,760 hr/yr
10	AP-42	<u>lb/MMBTU</u> PM/PM_{10} = 0.1 SO_2 = 0.08 VOC = 2.10 CO = 0.28 NOx = 1.63 Acetaldehyde = 7.67E-04 Acrolein = 9.25E-05 Formaldehyde = 1.18E-03 Benzene = 9.33E-04 Toluene = 4.09E-04 Xylen = 2.85E-04 Total HAPs = 0.0034 tpy	None	N/A	Rating: 275 hp Hours of operation: 500 hr/yr 15 gallons per hour of Diesel

16. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
01-07	VOC	25A	5 yrs	To confirm BACT limits

17. MONITORING OR CEMS:

The permittee must monitor the following parameters with CEMS or other monitoring equipment (temperature, pressure differential, etc.)

SN	Parameter or Pollutant to be Monitored	Method (CEM, Pressure Gauge, etc.)	Frequency	Report (Y/N)
01-07	SO_2	continuous monitoring systems	N/A	N/A
	CO	continuous monitoring systems	Continuously	N/A
	NOx	continuous monitoring systems	Continuously	N/A
	Sulfur content of fuel	N/A*	N/A	N/A
	fuel nitrogen content	N/A*	N/A	N/A

* EPA allowed the permittee to use Part 75 CEMS and data gathering methods in place of the requirements of these Part 60 requirements.

18. RECORDKEEPING REQUIREMENTS:

The following are items (such as throughput, fuel usage, VOC content, etc.) that must be tracked and recorded.

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
01-07	Firing Natural Gas only	No limit, will be at capacity	Monthly	N
	Duct Burner Hours or Operation	7,500	Monthly	Y
01- 06	LM6000 turbines core: make, model number, maximum heat input rate (MMBTU/hr), and power output of both cores	Identical core	30 Days of startup	Y
	NO_X and CO	100% of the permitted capacity	Upon core replacement	Y

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
08	Hours of Operation	1,250	Monthly	Y
	Diesel Sulfur Content	0.05% weight	Monthly	Y
	Subpart ZZZZ recordkeeping	Reduce CO emissions by 70 percent or more	Continuous	Y
09	Total Dissolved Solids	4000 ppm	Monthly	N
10	Hours of Operation	500	Monthly	Y

19. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
01-07	5%	Natural gas use	natural gas only
08	20%	Department standards	method 9 readings
09	20%	Department standards	dissolved solids limit along with annual inspections
10	20%	Department standards	method 9 readings

20. DELETED CONDITIONS:

Former SC	Justification for removal
N/A	

21. GROUP A INSIGNIFICANT ACTIVITIES:

The following is a list of Insignificant Activities including revisions by this permit.

Source Name	Group A Category	Emissions (tpy)						
		PM/PM_{10}	SO_2	VOC	CO	NO_x	HAPs	
							Single	Total
9.9 MMBtu/hr Natural Gas Fired Fuel Heater	A-1	0.33	0.03	0.48	3.64	4.34	-	0.08
EDG Fuel Storage Tank (500 gallons)	A-3	-	-	0.01	-	-	0.01	0.01

Source Name	Group A Category	Emissions (tpy)						
		PM/PM_{10}	SO_2	VOC	CO	NO_x	HAPs	
							Single	Total
Emergency Fire Pump Fuel Tank (360 gallons)	A-3	-	-	0.01	-	-	0.01	0.01

22. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

The following is a list of all active permits voided/superseded/subsumed by the issuance of this permit.

Permit #
1842-AOP-R9

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Major Source

Revised 03-11-16

Arkansas Electric Cooperative Corporation - Harry L.
Oswald Generating Station
Permit Number: 1842-AOP-R10
AFIN: 60-01380

$/ton factor	28.14	Annual Chargeable Emissions (tpy)	900.9
Permit Type	Modification	Permit Fee $	1000

Minor Modification Fee $	500
Minimum Modification Fee $	1000
Renewal with Minor Modification $	500
Check if Facility Holds an Active Minor Source or Minor Source General Permit	☐
If Hold Active Permit, Amt of Last Annual Air Permit Invoice $	0
Total Permit Fee Chargeable Emissions (tpy)	0
Initial Title V Permit Fee Chargeable Emissions (tpy)	

HAPs not included in VOC or PM: *Chlorine, Hydrazine, HCl, HF, Methyl Chloroform, Methylene Chloride, Phosphine, Tetrachloroethylene, Titanium Tetrachloride*

Air Contaminants: *All air contaminants are chargeable unless they are included in other totals (e.g., H2SO4 in condensible PM, H2S in TRS, etc.)*

Pollutant (tpy)	Check if Chargeable Emission	Old Permit	New Permit	Change in Emissions	Permit Fee Chargeable Emissions	Annual Chargeable Emissions
PM		185.6	185.6	0	0	185.6
PM_{10}		180.6	180.6	0		
$PM_{2.5}$				0		
SO_2		13.6	13.6	0	0	13.6
VOC		75.2	75.2	0	0	75.2
CO		817.3	817.3	0		
NO_X		626.5	626.5	0	0	626.5

Pollutant (tpy)	Check if Chargeable Emission	Old Permit	New Permit	Change in Emissions	Permit Fee Chargeable Emissions	Annual Chargeable Emissions
Single HAP	☐	9.95	9.95	0		
Total HAPs	☐	21.08	21.08	0		
	☐	0	0	0		
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