STATEMENT OF BASIS

For the issuance of Draft Air Permit # 1165-AOP-R13 AFIN: 24-00012

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

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

3. PERMIT WRITER:

Jesse Smith

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
4/8/2025	Minor Mod	New fire pump engine SN-19

6. REVIEWER'S NOTES:

Arkansas Electric Cooperative Corporation (AECC) operates a Westinghouse 501D5A combustion turbine at the existing Thomas B. Fitzhugh Generating Station located at 6006 Lock and Dam Road in Ozark, Arkansas 72949. The facility has submitted a modification to add a second stand-by fire pump engine as SN-19 to the permit. Permitted emissions increased as follows: 0.1 tpy PM/PM_{10}, 0.1 tpy SO_2, 0.4 tpy VOC, 0.4 tpy CO, 0.4 tpy NO_X, and 0.01 tpy total HAPs.

7. COMPLIANCE STATUS:

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

The facility was last inspected on February 10, 2025. There were no areas of concern noted at this time and no significant violations noted on EPA's ECHO database.

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

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.
Emission increases for this modification are below significance levels.

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
SN-06	PM/PM_{10} SO_2 CO NOx	PSD NSPS Subpart Db NSPS Subpart GG
SN-08	NOx, CO, HAPs	NSPS Subpart IIII NESHAP Subpart ZZZZ
SN-10	HAPs	NESHAP CCCCCC
SN-11 & SN-19	NOx, CO, HAPs	NSPS Subpart IIII NESHAP Subpart ZZZZ
SN-12	NOx	NSPS Subpart GG
SN-13	NOx	NSPS Subpart GG
SN-16	NOx, CO, HAPs	NSPS Subpart IIII NESHAP Subpart ZZZZ

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? N
(Note - permit shields are not allowed to be added, but existing ones can remain, for minor modification applications or any Rule 18 requirement.)

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
06	NOx	Acid Rain Program requirement that applies to this source and pollutant – 40 C.F.R. § 64.2(b)(1)(iii)

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 Division of Environmental Quality 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 Division of Environmental Quality 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	0.2	0.022	0.01591	Yes
PAH	0.2	0.022	0.06297	No

2nd Tier Screening (PAIL)

AERMOD air dispersion modeling was performed on the estimated hourly emissions from the following sources, in order to predict ambient concentrations beyond the property boundary. The Presumptively Acceptable Impact Level (PAIL) for each compound has been deemed by the Division of Environmental Quality to be one one-hundredth of the Threshold Limit Value as listed by the ACGIH.

Pollutant	PAIL ($\mu g/m^3$) = 1/100 of Threshold Limit Value	Modeled Concentration ($\mu g/m^3$)	Pass?
Sum of all PAH Pollutants (0.591 lb/hr)	2.0	0.06583	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 Y
If exempt, explain: No H_2S emissions

15. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
04 & 05	TANKS 4.0.9d	727.46 lb VOC/yr 782.0 lb VOC/yr			
06	Manufacturer's data (criteria) & AP-42 (HAPs)	lb/hr PM/PM_{10}: 54.4 VOC:11.20 CO: 305.8 NOx: 273.60 SO_2: 514.00			
07, 17, & 18	Mass balance	1,070,100 gal/hr 1,000 ppm 0.005% drift			PM_{10} = Capacity x Total Dissolved Solids x Drift Loss x Density of Water
08	Manufacturer's data (PM/PM_{10}, VOC, CO and NOx) and mass balance (SO_2)	g/kW-hr PM/PM_{10}: 0.055 VOC: 0.15 CO: 0.67 NOx: 5.43 lb/hr SO_2: 0.0046 21.6 gal/hr 7.08 lb/gal 15 ppm			SO_2 = Fuel Oil (FO) flow x FO density x FO sulfur% x (2 lb SO_2/1 lb S)
10	TANKS 4.0.9d	202.86 lb VOC/yr			
11	Manufacturer's data (PM/PM_{10}, VOC, CO and NOx) and mass balance (SO_2)	g/hp-hr PM/PM_{10}: 0.12 VOC: 0.10 CO: 0.80 NOx: 2.75 lb/hr SO_2: 0.002 9.3 gal/hr			SO_2 = Fuel Oil (FO) flow x FO density x FO sulfur% x (2 lb SO_2/1 lb S)

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
		7.08 lb/gal 15 ppm			
12 & 13	<u>Natural Gas</u> 40 CFR 75 Appendix D Manufacturer's data AP-42 Table 3.1-2a	<u>Lb/MMBtu</u> SO_2: 0.0006 H_2SO_4: 0.00006 NO_X: 0.0158 CO: 0.04 VOC: 0.0137 Ammonia: 0.0136 PM: 0.0066 PM_{10}: 0.0066 $PM_{2.5}$: 0.0066			90 Startup/shutdown events a year.
	<u>Fuel Oil</u> AP-42 Table 3.1-2a Manufacturer's data	<u>Lb/MMBtu</u> SO_2: 0.00152 H_2SO_4: 0.000152 PM: 0.0115 PM_{10}: 0.0115 $PM_{2.5}$: 0.0115 NO_X: 0.0323 CO: 0.0302 VOC: 0.0208 Ammonia: 0.0143			10 Startup/shutdown events a year.

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
14 & 15	Natural Gas AP-42 Table 1.4-1 and Table 1.4-2	Lb/MMscf SO_2: 0.6 NO_X: 100.0 CO: 84.0 PM: 7.6 PM_{10}: 7.6 $PM_{2.5}$: 7.6 VOC: 5.5			
	Fuel Oil AP-42 Tables 1.3-1, 1.3-2, 1.3-3, 1.3-6, 1.3-8, and 1.3-12	Lb/1,000 gal SO_2: 7.1 NO_X: 20.0 CO: 5.0 PM: 3.3 PM_{10}: 3.3 $PM_{2.5}$: 3.3 VOC: 0.2			
16	NSPS Subpart IIII Tier 2 standards and AP-42 Table 3.4-1	g/kW-hr PM: 0.2 PM_{10}: 0.2 $PM_{2.5}$: 0.2 VOC: 1.37 CO: 3.5 NO_X: 6.4 Lb/hp-hr SO_2: 4.04E-04			
19	NSPS Subpart IIII Table 4 and AP-42 Table 3.3-1	g/HP-hr PM: 0.15 PM_{10}: 0.15 VOC: 3 CO: 2.6 NO_X: 3 Lb/MMBtu SO_2: 0.29			

16. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
06	NOx	Method 20	Initial	40 C.F.R. §60.46b(f)
	NOx	Method 20	Initial	40 C.F.R. §60.335 40 C.F.R. §60.8
	SO_2	ASTM D 1072-80, D 3031-81, D 4084-82, or D 3246-81	180 days after start-up	40 C.F.R. §60.335 40 C.F.R. §60.8
			Every 5 years	Department Guidance

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)
06, 12, 13	CO, NO_x, SO_2	CEM/fuel content	Continuous	Y
08	High Pressure Limit	Backpressure Monitor	Continuous	N

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)
04 & 05	Fuel oil	35.1 Million gal per year	Monthly	Y
06	fuel oil and natural gas burned	9.626 billion cubic feet of natural gas and 35.14 million gallons of fuel oil per year	Monthly	Y

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
06	duration and CO emissions for startup/shutdown events	Startup 4 hr; 6,000 lb CO Shutdown 1 hr; 305.8 lb CO	Monthly	Y
07	TDS	1,000 ppm	Monthly	Y
17, 18	TDS	1,200 ppm	Monthly	Y
08	Hours of operation	2,500 hours/year	Monthly	Y
16	Hours of operation	1,000 hours/year	Monthly	Y
10	Gasoline Throughput	10,000 gal/month	Monthly	Y
11, 19	Hours of operation	500 hours/year (emergency and non-emergency)	Monthly	Y
12 & 13	fuel oil and natural gas burned	2.5517 billion cubic feet of natural gas and 2.761 million gallons of fuel oil per year	Monthly	Y
14 & 15	Hour of operation	2,000 hours/year each	Monthly	Y

19. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
06, 12, 13, 14, 15	20% when burning fuel oil	Dept. Guidance	Daily Observation
08, 16	20%	Reg.19.503 and 40 C.F.R. § 52 Subpart E	Annual
11, 19	20%	Reg.19.503 and 40 C.F.R. § 52 Subpart E	Annual

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
Main Building Heater (5.25 MMBtu/hr, NG)	A-1	0.21	0.01	0.11	0.17	2.64	0.11	0.11
Shop Heater	A-1	0.0006	0.000	0.0008	0.0030	0.0071	0.0008	0.0008
Warehouse Heater #1	A-1	0.0003	0.000	0.0004	0.0016	0.0038	0.0004	0.0004
Warehouse Heater #2	A-1	0.0003	0.000	0.0004	0.0015	0.0035	0.0004	0.0004
Intake Heater	A-1	0.0006	0.000	0.0008	0.0030	0.0071	0.0008	0.0008
Firehouse Heater	A-1	0.0003	0.000	0.0004	0.0016	0.0038	0.0004	0.0004
Totals for A-1 Group		*0.2121*	*0.01*	*0.1128*	*0.1807*	*2.6653*	*0.1128*	*0.1128*
Diesel fuel tank for EDG (250 gallon) – Back up tank	A-3			0.0002			0.0002	0.0002
Diesel fuel tank for EFPE (300 gallon)	A-3			0.0002			0.0002	0.0002
Diesel fuel tank for EDG (525 gallon)	A-3			0.0008			0.0008	0.0008
Diesel fuel tank (2,000 gallon) – Back up tank	A-3			0.0002			0.0002	0.0002
Diesel fuel tank for standby gen (1,000 gallon) – Back up tank	A-3			0.0005			0.0005	0.0005
Totals for A-3 Group				*0.0019*			*0.0019*	*0.0019*
Diesel Tank for LM60000 No. 1 (1,270,000 gal)	A-13			0.078			0.078	0.078
Diesel Tank for LM60000 No. 2 (1,270,000 gal)	A-13			0.078			0.078	0.078
Totals for A-13 Group				*0.155*			*0.155*	*0.155*

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 #
1165-AOP-R12

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Major Source

Revised 03-11-16

Arkansas Electric Cooperative Corporation - Thomas B. Fitzhugh Generating Station
Permit #: 1165-AOP-R13
AFIN: 24-00012

$/ton factor	28.14	Annual Chargeable Emissions (tpy)	1505.9
Permit Type	Minor Mod	Permit Fee $	500

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)	1
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		102.6	102.7	0.1	0.1	102.7
PM_{10}		102.4	102.5	0.1		
$PM_{2.5}$		0	0	0		
SO_2		841.4	841.5	0.1	0.1	841.5
VOC		50	50.4	0.4	0.4	50.4
CO		574.9	575.3	0.4		
NO_X		492.3	492.7	0.4	0.4	492.7

Pollutant (tpy)	Check if Chargeable Emission	Old Permit	New Permit	Change in Emissions	Permit Fee Chargeable Emissions	Annual Chargeable Emissions
Single HAP	☐	3.85	3.86	0.01		
Total HAPs	☐	6.86	6.87	0.01		
Ammonia	☑	18.6	18.6	0	0	18.6