STATEMENT OF BASIS

For the issuance of Draft Air Permit # 2123-AOP-R10 AFIN: 29-00506

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

American Electric Power Services Corporation
3711 Highway 355 South
Fulton, Arkansas 71838

3. PERMIT WRITER:

Shawn Hutchings

4. NAICS DESCRIPTION AND CODE:

NAICS Description: Other Heavy and Civil Engineering Construction
NAICS Code: 237990

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
12/13/2024	Renewal	None, only insignificant activity and compliance adjustments.

6. REVIEWER'S NOTES:

Southwestern Electric Power Company (SWEPCO), a unit of American Electric Power (AEP), is operating a coal-fired electric power generating facility near Fulton, Arkansas, in Hempstead County. This facility is named the John W. Turk, Jr. Power Plant. The main steam generating unit consists of one ultra-supercritical pulverized coal boiler powering a single steam turbine designed for base load operation with a nominal net power output of 600 megawatts. This boiler burns sub-bituminous coal and natural gas. This permit is the Title V permit for the facility. In this permit compliance for NO_x was changed from a 12-month rolling averaging time to a 365 day averaging time. Testing interval in Specific Conditions 7, 8, and 9 were increased from 12

to 13 months. TDS testing for SN-CT-01 was increased from weekly to monthly. Conditions 10, 69, 70, 230, and 239 were removed. These conditions were initial tests or initial compliance from the original Title V permit and no longer needed. NSPS Subpart Da options to allow compliance demonstration with a PM CEM was added since the facility is opting to use a PM CEM for compliance with the MACT Subpart UUUUU limits. Insignificant activities were updated. Standard annual opacity observations were added to SN-05. There were no changes in permitted emission rates.

7. COMPLIANCE STATUS:

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

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. This permit renewal does not include any changes in method of operation or modification of sources.

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
01	all	PSD
	HAPs	40 C.F.R. Part 63, Subpart UUUUU
	PM, SO_2, NO_x	40 C.F.R. Part 60, Subpart Da
02	all	PSD
	HAPs	40 C.F.R. Part 63, Subpart DDDDD
	NO_x	40 C.F.R. 60, Subpart Db
03	all	PSD
	PM, fuel specifications	40 C.F.R. 60, Subpart IIII
	N/A	40 C.F.R. 63, Subpart ZZZZ
04 & 05	PM, NO_x, fuel specifications	40 C.F.R. 60, Subpart IIII
EP-01 through EP-10, EP-12, TP-16 and TP-20	opacity	40 C.F.R. 60, Subpart Y

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
None				

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 8 CAR pt. 40 requirement.)

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

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
01	PM	Post 1990 Rule (Da), and CEMs
	SO_2	Post 1990 Rule (Da), and CEMs
	NO_x	Post 1990 Rule (Da), and CEMs
	HAPs	Post 1990 Rule (UUUUU)

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:

There were no increases in permitted emission rates. No evaluation was performed.

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: The facility is not permitted to emit H_2S

15. CALCULATIONS:

SN	Emission Factor Source	Pollutant	Emission Factor	Control Equipment	Control Equipment Efficiency	Comments
01	BACT	PM/PM_{10} (filterable)	0.012 lb/MMBtu	Baghouse	99.9	
		PM/PM_{10} (total)	0.025 lb/MMBtu	Baghouse	99.9	
		SO_2	0.065 lb/MMBTU	Dry Flue Gas Desulfurization	80-90+	
		VOC	0.0036 lb/MMBtu	Proper Design/Operation		
		CO	0.15 lb/MMBtu	Proper Design/Operation		
		NO_x	0.067 lb/MMBTU/0.05 lb/MMBTU annual	SCR	70-90	
01	BACT	Pb	2.6E-05 lb/MMBtu	Baghouse	99.9	
		H_2SO_4 Mist	0.0042 lb/MMBtu	DFGD with Baghouse		
02	BACT	PM (total)	0.0076 lb/MMBTU	Natural Gas Combustion		
		SO_2	0.0006 lb/MMBtu	Natural Gas Combustion		
		VOC	0.0055 lb/MMBtu	Proper Design/Operation		
		CO	0.30 lb/MMBTU	Proper Design/Operation		
		NO_x	0.11 lb/MMBtu	Low NO_x Burner and Flue Gas Recirculation		

SN	Emission Factor Source	Pollutant	Emission Factor	Control Equipment	Control Equipment Efficiency	Comments
		Pb	N/A	Natural Gas combustion		
03 and 04	BACT	NO_x + NMHC	6.4 g/kWh	Proper Design/Operation Low Sulfur Diesel 100 hrs/yr		
		SO_2	0.007 g/kWh			
		PM	0.2 g/kWh			
		CO	3.5 g/kWh			
EP-01 – EP-10, TP-16, TP-20	AP-42	PM/PM_{10}	various	Water and Surfactant Spray		
EP-12	Design	PM/PM_{10}	0.01 gr/dscf	filter		
TP-22 TP-23	design	PM/PM_{10}	9.4E-05 lb/ton	None		
EP-15 - EP-18 EP-21 - EP-25	Design	PM/PM_{10}	0.01 gr/dscf	filter		
F-01 – F-03, F-05, F-06	EPA Guidance	PM/PM_{10}	3.9 lb/day/acre	None	N/A	
F-04	AP-42	PM/PM_{10}	lb/day/acre 1.0 PM 0.5 PM_{10}	Water Spray	75%	Maximum of 26 acres
CT-01	BACT	Drift rate	0.0005%	Drift Eliminators	N/A	
RD-01	AP-42	PM/PM_{10}	1.07 lb/VMT	Watering and chemical suppression	90	
TK-01	TANKS	VOC	Varies	N/A	N/A	Based on 25,000 gallons of gasoline per year.
05	Manufacturer's specs	NO_x	4.0 g/kW-hr	Oxidation Catalyst	Not specified	Annual emissions are based on 100 hours per year
		CO	3.5 g/kW-hr			
		VOC	0.19 g/kW-hr			
		PM/PM_{10}	0.2 g/kW-hr			

SN	Emission Factor Source	Pollutant	Emission Factor	Control Equipment	Control Equipment Efficiency	Comments
	ULSD	SO_2	0.007 g/kW-hr			
	AP-42 Chapter 3.3, Table 3.3-2	HAPs	Varies			

16. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
01	VOC PM/PM_{10} HF HCl H_2SO_4 Ammonia Lead (Pb)	various	annual	BACT/NSPS/MACT Verify Emission Rates
01	Other Non-Criteria	TBD	Once	Verify Emission Rates/MACT
02	PM CO	various	Once	NSPS/MACT
	NO_x	7E	Initial and once every five years.	Verify emission rates
EP-01 through EP-10, and EP-12	Opacity	Method 9	Initial	NSPS

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	PM Opacity CO NO_x SO_2 CO_2	CEMS COMS CEMS	Continuous	Y

SN	Parameter or Pollutant to be Monitored	Method (CEM, Pressure Gauge, etc.)	Frequency	Report (Y/N)
	Mercury			
01	Bag Leaks	Bag Leak Detector	Continuous	Y

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	Mercury Emissions	1.7 lb/TBtu per 12-month period	Monthly	Y
01	Bag Leak Detector Readings	None specified	Monthly	Y
01	BTU input	6000 MMBtu/hr 24-hour average	Continuous	Y
01	SO_2 emissions	0.065 lb/MMBtu (30-day rolling average)	Monthly	Y
		480.0 lb/hr (24-hr rolling average)	Monthly	Y
01	NO_x emissions	0.067 lb/MMBtu (24-hr rolling average normal operations)	Monthly	Y
		420.0 lb/hr (24-hr rolling average)	Monthly	Y
01	NO_x emissions	0.05 lb/MMBtu (12-month rolling average)	Monthly	Y
01	CO	0.15 lb/MMBtu (30-day rolling average)	Monthly	Y
02	Fuel Used	272.1 MMscf/12 month	Monthly	Y
03	Hours of operation	500 per year	Monthly	Y
04	Hours of operation	100 per year	Monthly	Y

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
F-04	Maximum area of the inactive coal piles	26 acres	Semi-annually	Y
F-06	Maximum area of the solid waste disposal area	50 acres	Semi-annually	Y
CT-01	Total Dissolved Solids (TDS)	7,500 ppm	Monthly	Y
TK-01	Gasoline throughput	25,000 gallons per 12-month	Monthly	Y
05	Hours of operation	100 hours per calendar year	Monthly	Y
Welsh Unit 2	SO_2 emissions	2,165 lb/hr (24-hr rolling average)	Semi-annually	Y

19. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
01	10	Good Operations	COM
02	10	Good Operations	COM
03	20% in acceleration mode 15% in Lugging mode 50% during peaks (as measured according to 40 C.F.R. 86, Subpart I)	Good Operations	Method 9
04 & 05	20	Dept. Guidance	Annual visible observation
SN-EP-01 through EP-10, EP-12, TP-16, and TP-20	20	NSPS	Method 9
SN-TP-22	20	Dept. Guidance	Daily Observations
EP-15 through EP-25	10	Dept. Guidance	Weekly observations
SN-F-01 through F-06	10	Dept. Guidance	Weekly observations

20. DELETED CONDITIONS:

Former SC	Justification for removal
10, 69, 70, 230, 239	Initial tests or initial compliance reports from the initial Title V permit. Conditions no longer necessary.
MATS conditions	MATS conditions were completely overhauled. Some were original initial compliance conditions and no longer apply. Others were removed from the rule and no longer apply.

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
Diesel or Propane Space Heaters (20 total)	Group A, #1	0.002	1.1E-05	0.0036	0.025	0.09	0.0036	0.0036
10,000 gal Diesel Storage Tanks (3 total)	Group A, #3			0.006				
700 gal. Diesel Storage Tank	Group A, #3			0.001				
572 gal Diesel Storage Tank	Group A, #3			0.001				
Boiler Feed Pump Lube Oil Reservoir – 2,906 gal	Group A, #3			0.001				
550 gallon CPRP Diesel Fuel Storage Tank	Group A, #3			0.001				
10,000 gallon Construction fuel storage tank (diesel)	Group A, #3			0.002				
Diesel Fuel Tank, 3000 gal	Group A, #3			0.001				
Diesel Fuel Tank, 1,000 gal	Group A, #3			0.001				
Tractor Oil Tanks (3), 500 gal	Group A, #3			0.001				
Used Oil Tank, 1,200 gal	Group A, #3			0.001				
Total	A-3			0.017				

10,000 gallon Sodium Hypochlorite Tank	Group A, #4							
5,000 gallon Sodium Hypochlorite Tank	Group A, #4							
30,000 gallon Anhydrous Ammonia Tank	Group A, #4							
Emissions from Laboratory Equipment/Vents	Group A, #5							
Water washing activities of empty 55 gallon drums	Group A, #6							
5 gallon Gasoline Containers (15 total)	Group A, #8							
Turbine Lube Oil Storage Tank – 16,800 gal	Group A, #13			0.001				
Turbine Lube oil Reservoir and Storage Tank – 11,624 gal	Group A, #13			0.001				
Total	A-13			0.002				
CPRP Diesel Tank, 250 gal	Group A, #2			0.001				
Diesel Fuel Tank, 250 gal	Group A, #2			0.001				
Portable Diesel Tank, 150 gal	Group A, #2			0.001				
Tractor Oil Tanks, (2) 220 gal each	Group A, #2			0.001				
Total	A-2			0.004				

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 #
2123-AOP-R9

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Major Source

Revised 03-11-16

American Electric Power Services Corporation
Permit #: 2123-AOP-R10
AFIN: 29-00506

$/ton factor	28.14	Annual Chargeable Emissions (tpy)	4613.7816
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)	2.649935
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		468.5	471.1	2.6		
PM_{10}		744	746.6	2.6	2.6	746.6
$PM_{2.5}$		0	0	0		
SO_2		2,102.80	2102.8	0	0	2102.8
VOC		96.71	96.71	0	0	96.71
CO		3,986.70	3986.7	0		
NO_X		1,334.50	1334.5	0	0	1334.5
Lead	☐	0.6801	0.680068	-3.2E-05		

Pollutant (tpy)	Check if Chargeable Emission	Old Permit	New Permit	Change in Emissions	Permit Fee Chargeable Emissions	Annual Chargeable Emissions
Sulfuric Acid	☑	110.38	110.38	0	0	110.38
Hydrogen Chloride	☑	52.56	52.56	0	0	52.56
Mercury	☑	3.17E-02	0.031635	-6.5E-05	-6.5E-05	0.031635
Methylene Chloride	☑	0.49	0.49	0	0	0.49
Hydrogen Fluoride	☑	5.26	5.26	0	0	5.26
Trichloroethylene	☑	0	0.05	0.05	0.05	0.05
Total HAPs	☐	95.07	95.07	0		
Ammonia	☑	164.4	164.4	0	0	164.4
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