

STATEMENT OF BASIS

for issuance of Draft Air Permit No. 1450-AOP-R0.

1. PERMITTING AUTHORITY:

Arkansas Department of Pollution Control and Ecology
8001 National Drive
Post Office Box 8913
Little Rock, Arkansas 72219-8913.

2. APPLICANT:

Arkansas Western Gas Company
P.O. Box 1288
Fayetteville, AR 72702-1288.

3. PERMIT WRITER:

Glenn Proffitt.

4. PROCESS DESCRIPTION AND SIC CODE:

Natural gas compressor and dehydration station.
SIC Code: 4922.

5. REVIEWER'S NOTES:

This permitting action establishes the facility as a major source with respect to Title V of the Clean Air Act Amendments of 1990. This permit action covers permitting all equipment, future emissions, and hazardous air pollutants. The increase in potential emissions due to permitting the above mentioned equipment does not trigger a PSD review, because no physical modifications have been made to the sources since the issuance of Air Permit 1450-AR-3. Methane and ethane emissions are not quantified in this permit as a result of the Department's new policy for these air contaminants.

6. EMISSION CHANGES:

Plantwide Permitted Emissions (ton/yr)			
Pollutant	Air Permit 1450-AR-3	Title V Permit 1450-AOP-R0	Change
PM/PM ₁₀	1.8	0.2	-1.6
VOC	23.8	67.6	+43.8
CO	232.2	193.7	-38.5
NO _x	155.0	180.0	+25.0
Formaldehyde	Not quantified	2.2	+2.2
Acrolein	Not quantified	0.22	+0.22

7. CALCULATIONS:

The reviewing engineer calculated the formaldehyde and acrolein emissions from the Gas Research Institute (GRI) field test factors for four-stroke clean burn engine.

At source locations for which no comments appear below, the emission calculations received the reviewer's concurrence as submitted by the facility in the permit application.

KEY: Abbreviations used in the following tables: SN = Source Number, SC = Specific Condition. For all sources deemed insignificant, the permit writer has reviewed submitted calculations, and concurs with the emission estimates.

SN	Pollutant	Basis for emission calculations of final permit limits		Comment
		lb/hr	ton/yr	
01	PM/PM ₁₀ VOC CO NO _x HAPs Formaldehyde Acrolein	Maximum Capacity	Maximum Capacity	
10	VOC	Maximum Capacity	Maximum Capacity	
11	PM/PM ₁₀ VOC CO NO _x	Maximum Capacity	Maximum Capacity	
12	PM/PM ₁₀ VOC CO NO _x	Maximum Capacity	Maximum Capacity	
13	PM/PM ₁₀ VOC CO NO _x	Maximum Capacity	Maximum Capacity	
15	VOC	Maximum Capacity	Maximum Capacity	
16	VOC			

8. MODELING:

1. Criteria Pollutants

SN	Pollutant	Emissions (lb/hr)	Emissions (tpy)	Averaging Period	NAAQS (Fg/m ³)	Modeled Concentration (Fg/m ³)	Percent of NAAQS	Pass ¹
Facility	PM/PM ₁₀	<100 tpy, therefore no modeling performed						
Facility	VOC	<100 tpy, therefore no modeling performed						
Facility	CO	44.3	193.7	8-hour 1-hour	10,000 40,000	316.83 452.6	3.2% 1.1%	Yes Yes
Facility	NO _x	41.1	180.0	Annual	100	41.99	42.0%	Yes

¹To “pass” the modeled concentration of the pollutant must be less than 50% of the NAAQS.
²The Scheffe method. To “pass” for ozone, the concentration must be 25% of the NAAQS.

2. Non-Criteria Pollutants

1st Tier Screening (PEAR)

SN	Pollutant	TLV (mg/m ³)	PEAR (lb/hr) = 0.11*TLV	Proposed lb/hr	Pass
01	Formaldehyde	0.37	0.0407	0.5	No
01	Acrolein	0.23	0.0253	0.22	No

2nd Tier Screening (PAIL)

The Non-Criteria Method. Screen3 modeling was used and compared to a 24-hour modeled value.

SN	Pollutant	(PAIL, Fg/m ³) = 1/100 of Threshold Limit Value	Highest Off-Property Modeled Concentration (Fg/m ³)	Pass
01	Formaldehyde	3.7	2.042	Yes
01	Acrolein	2.3	0.2042	Yes

9. SPECIFIC CONDITIONS:

SC#	SN Section	Explanation	Old SC#
1	SN-01	Criteria Pollutant Emission Limits	1

SC#	SN Section	Explanation	Old SC#
2		Non-Criteria Pollutant Emission Limits	1
3		Opacity Limit	7
4	SN-10	Criteria Pollutant Emission Limit	5
5	SN-11	Criteria Pollutant Emission Limit	5
6		Opacity Limit	1
7	SN-13	Criteria Pollutant Emission Limit	4
8		Opacity Limit	2
9	SN-15	Criteria Pollutant Emission Limit	
10	SN-16	Criteria Pollutant Emission Limit	

10. **TESTING AND OPERATIONAL PARAMETERS:**

No testing or operational parameters was required in this permit.

11. **RECORDKEEPING AND REPORTING:**

No recordkeeping or reporting was required in this permit.

12. **OPACITY:**

The permittee will show compliance by burning only natural gas.

13. **REFERENCES:**

- a. Air Permit Application, received July 11, 1996
- b. Regulation No. 18, as amended July 1, 1997..
- c. Regulation No. 19, as amended July 1, 1997.
- d. Regulation No. 26 as amended January 27, 1995.

14. **CONCURRENCE BY**

The following supervisor concurs with the permitting decision:

Thomas Rheume, P.E.