

STATEMENT OF BASIS

For the issuance of Draft Air Permit # 1362-AOP-R6 AFIN: 24-00092

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

Black Hills Energy Arkansas, Inc. - Stockton Compressor Station
South of I-40, West of CR 64, North of Hwy 64
Ozark, Arkansas 72949

3. PERMIT WRITER:

Ann Sudmeyer

4. NAICS DESCRIPTION AND CODE:

NAICS Description: Support Activities for Oil and Gas Operations
NAICS Code: 213112

5. ALL SUBMITTALS:

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
4/21/2017	Administrative Amendment	N/A

6. REVIEWER'S NOTES:

Black Hills Energy Arkansas, Inc. - Stockton Compressor Station operates a natural gas transmission pipeline compressor station near Ozark, Arkansas. This permitting action is necessary to change the name from SEECO, Inc. (Stockton Compressor Station) to Black Hills Energy Arkansas, Inc. - Stockton Compressor Station. In addition, the contact information was updated. No other changes or items were reviewed.

7. COMPLIANCE STATUS:

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

This facility was last inspected on February 2, 2016 and was found to be in compliance.

8. PSD APPLICABILITY:

a) Did the facility undergo PSD review in this permit (i.e., BACT, Modeling, etc.)? N

b) Is the facility categorized as a major source for PSD? N

- *Single pollutant ≥ 100 tpy and on the list of 28 or single pollutant ≥ 250 tpy and not on list*

If yes, explain why this permit modification is not PSD.

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
01-04	CO, NO _x	NESHAP 40 C.F.R. § 63 Subpart ZZZZ
10, 11, 12	Benzene	NESHAP 40 C.F.R. § 63 Subpart HHH

10. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

11. AMBIENT AIR EVALUATIONS:

a) Reserved.

b) Non-Criteria Pollutants:

The non-criteria pollutants listed below were evaluated in a previous permit. 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/m³), 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	0.1327	No
1,3-Butadiene	4.424	0.48664	0.0105	Yes
Acetaldehyde	45.04	4.9544	0.2056	Yes
Formaldehyde	0.3684	0.040524	1.3189	No
POM	0.2	0.022	0.0046	Yes

The above information was obtained from the statement of basis for 1362-AOP-R5.

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 Department to be one one-hundredth of the Threshold Limit Value as listed by the ACGIH.

Pollutant	PAIL (µg/m ³) = 1/100 of Threshold Limit Value	Modeled Concentration (µg/m ³)	Pass?
Acrolein	2.3	1.5	Yes
Formaldehyde	15*	14.92	Yes

*ADEQ Allowable PAIL Limit

The above information was obtained from the statement of basis for 1362-AOP-R5.

c) H₂S 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 H₂S Standards N/A

If exempt, explain: _____

Pollutant	Threshold value	Modeled Concentration (ppb)	Pass?
H ₂ S	20 parts per million (5-minute average*)	N/A	N/A

Pollutant	Threshold value	Modeled Concentration (ppb)	Pass?
	80 parts per billion (8-hour average) residential area	N/A	N/A
	100 parts per billion (8-hour average) nonresidential area	N/A	N/A

*To determine the 5-minute average use the following equation

$$C_p = C_m (t_m/t_p)^{0.2} \text{ where}$$

C_p = 5-minute average concentration

C_m = 1-hour average concentration

t_m = 60 minutes

t_p = 5 minutes

12. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
01	Waukesha Product Bulletin Dated Aug. 8, 1989 AP-42 3.2-3	VOC= 2.0 g/hp-hr CO= 28.0 g/hp-hr NO _x = 7.0 g/hp-hr <u>lb/MMBtu</u> PM= 1.94E-2 PM ₁₀ = 1.94E-2 SO ₂ = 5.88E-4 1,3-Butadiene= 6.63E-4 Acetaldehyde= 2.79E-3 Acrolein= 2.63E-3 Formaldehyde= 2.05E-2 POM= 1.41E-4	None		SI-4SRB, 587 HP

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
02	Waukesha Product Bulletin Dated Aug. 8, 1989 AP-42 3.2-3	VOC= 2.0 g/hp-hr CO= 28.0 g/hp-hr NO _x = 7.0 g/hp-hr <u>lb/MMBtu</u> PM= 1.94E-2 PM ₁₀ = 1.94E-2 SO ₂ = 5.88E-4 1,3-Butadiene= 6.63E-4 Acetaldehyde= 2.79E-3 Acrolein= 2.63E-3 Formaldehyde= 2.05E-2 POM= 1.41E-4	None		SI-4SRB, 330 HP
03, 04	Waukesha Product Bulletin Dated Aug. 8, 1989 AP-42 3.2-2	VOC= 1.0 g/hp-hr CO= 2.65 g/hp-hr NO _x = 1.5 g/hp-hr <u>lb/MMBtu</u> PM= 9.99E-3 PM ₁₀ = 9.99E-3 SO ₂ = 5.88E-4 1,3-Butadiene= 2.67E-4 Acetaldehyde= 8.36E-3 Acrolein= 5.14E-3 Formaldehyde= 5.28E-2 POM= 1.62E-4	None		SI-4SLB, 1478 HP
10	VOC GRI-GLYCalc Combustion AP-42 1.4	VOC=0.23 lb/hr= 1.02 tpy <u>lb/MMscf</u> PM= 7.6 PM ₁₀ = 7.6 SO ₂ = 0.6 VOC= 5.5 CO= 84 NO _x = 100 Formaldehyde= 7.5E-2 POM= 6.96E-4	None		1.0 MMBtu/hr

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
11	VOC GRI-GLYCalc Combustion AP-42 1.4	VOC=0.23 lb/hr= 1.02 tpy lb/MMscf PM= 7.6 PM ₁₀ = 7.6 SO ₂ = 0.6 VOC= 5.5 CO= 84 NO _x = 100 Formaldehyde= 7.5E-2 POM= 6.96E-4	None		2.5 MMBtu/hr
12	VOC GRI-GLYCalc Combustion AP-42 1.4	VOC=0.37 lb/hr= 1.62 tpy lb/MMscf PM= 7.6 PM ₁₀ = 7.6 SO ₂ = 0.6 VOC= 5.5 CO= 84 NO _x = 100 Formaldehyde= 7.5E-2 POM= 6.96E-4	None		0.45 MMBtu/hr

13. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
01-04	CO NO _x	10 7E	Every other engine every five years.	Standard for compressor stations. See Plantwide Condition #8 for details.

14. 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)
N/A				

15. 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, 02	Hours of operation	8,760 hours per 12 consecutive months	Daily	Yes
10, 11, 12	Facility-wide actual annual average natural gas throughput	less than 28.3 thousand standard cubic meters per day	Annual	No

16. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
01 - 04, 10, 11, 12	5%	Natural Gas Usage	Only Fire Natural Gas

17. DELETED CONDITIONS:

Former SC	Justification for removal
	N/A

18. GROUP A INSIGNIFICANT ACTIVITIES:

Source Name	Group A Category	Emissions (tpy)						
		PM/PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs	
							Single	Total
(8) 55 Gallon Engine Oil Drums	A-2			0.09				
Compressors Blowdowns	A-13			0.08				
Fugitive Emissions	A-13			0.06				
Total	A-13			0.14				

Permit #: 1362-AOP-R6

AFIN: 24-00092

Page 8 of 8

19. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

List all active permits voided/superseded/subsumed by the issuance of this permit.

Permit #
1362-AOP-R5

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Major Source

Revised 03-11-16

Black Hills Energy Arkansas, Inc. - Stockton Compressor Station
 Permit #: 1362-AOP-R6
 AFIN: 24-00092

\$/ton factor		23.93	Annual Chargeable Emissions (tpy)	119.7
Permit Type	AA		Permit Fee \$	0

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	<input type="checkbox"/>
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 condensable 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		1.6	1.6	0		
PM ₁₀		1.6	1.6	0	0	1.6
PM _{2.5}		0	0	0		
SO ₂		0.6	0.6	0	0	0.6
VOC		41.7	41.7	0	0	41.7
CO		201.4	201.4	0		
NO _x		75.8	75.8	0	0	75.8
Total HAPs	<input type="checkbox"/>	6.9472	6.9472	0		