

STATEMENT OF BASIS

for the issuance of Draft Air Permit # 1244-AOP-R1

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

CenterPoint Energy – MRTC, Carlisle Compressor Station
Hillman Road, Route 1
Carlisle, Arkansas 72024

3. PERMIT WRITER:

Siew Low

4. PROCESS DESCRIPTION AND NAICS CODE:

NAICS Description: Natural Gas Pipeline Compressor Station
NAICS Code: 486210

5. SUBMITTALS: February 13, 2004, April 12, 2004, May 26, 2004, July 20, 2004,
August 3, 2004, October 20, 2004, and November 1, 2004.

6. REVIEWER'S NOTES:

CenterPoint Energy – MRTC- Carlisle Compressor Station currently operates a natural gas compressor station at Carlisle, Arkansas in Lonoke County. This Title V renewal authorizes the update of PM/PM₁₀, SO₂, and VOC emission limits of the eight compressor engines and the PM/PM₁₀, SO₂, CO, and VOC emission limits of a generator engine by using the most-up-to-date USEPA AP-42 emission factors. The 275 hp Ingersoll Rand PVC auxiliary generator (SN-09) is disconnected from service. The facility will not be subject to the Reciprocating Combustion Engine (RICE) MACT (40 CFR 63. Subpart ZZZZ) because the facility is not a major source of HAP emissions.

7. COMPLIANCE STATUS: The following summarizes the current compliance status of the facility including active/pending enforcement actions and recent compliance activities and issues:

The facility has no outstanding/pending enforcement action.

8. APPLICABLE REGULATIONS:

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NSPS (Y/N) None If yes, subpart

NESHAP (Y/N) None If yes, subpart

PSD applicability (Y/N) No

Is facility on 28 list (100 tpy)? (Y/N)

Was netting performed to avoid PSD review (Y/N)

Subject to 112 (g) requirements (Y/N) No

Subject to CAM requirements (Y/N) No

Other applicable regulations

8. EMISSION CHANGES:

The following table summarizes plantwide emission changes associated with this permitting action.

Plantwide Permitted Emissions (ton/yr)			
Pollutant	Permit 1244-AOP-R0	Permit 1244-AOP-R1	Change
PM/PM ₁₀	0	5.0	+5.0
SO ₂	0	0.9	+0.9
VOC	42.0	15.6	-26.4
CO	1872.0	1908.0	+36.0
NO _x	1585.4	1507.8	-77.6
Acrolein	0	0.73	+0.73
Acetaldehyde	0	0.81	+0.81
Benzene	0	0.50	+0.50
Formaldehyde	9.42	5.96	-3.46
Methanol	1.94	0.91	-1.03
Toluene	0	0.17	+0.17

9. MODELING:

A. Criteria Pollutants

Pollutant	Emission Rate (lb/hr)	NAAQS Standard ($\mu\text{g}/\text{m}^3$)	Averaging Time	Highest Concentration ($\mu\text{g}/\text{m}^3$)	% of NAAQS
NO _x	344.1	100	Annual	91.456*	91.5 %
VOC	not applicable, emissions are < 500 tons per year				
CO	435.5	10,000	8-hour	2564	25.6 %
		40,000	1-hour	4344	10.9 %

* Modeling was conducted using 5-year (1997 ~ 2001) consecutive data. NOCALM option was used in the modeling. Ambient Ratio Method was applied to the maximum annual NO_x concentration (88.01166 $\mu\text{g}/\text{m}^3$ from 2001 Metdata), which brings the concentration to 66.008 $\mu\text{g}/\text{m}^3$ (since the concentration is over 50% of NAAQS, background concentration is included), with the latest 2002 NO_x background concentration of 28.2 $\mu\text{g}/\text{m}^3$, the total highest concentration of NO_x comes out to be 91.456 $\mu\text{g}/\text{m}^3$.

B. Non-Criteria Pollutants

1st Tier Screening (PAER)

Estimated hourly emissions from the following sources were compared to the Presumptively Acceptable Emission Rate (PAER) for each compound. The PAER was deemed by the Department 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?
Acetaldehyde	45.04	4.95	0.17	Yes
Acolein	0.23	0.0253	0.17	No
Benzene	1.59	0.17	0.09	Yes
Formaldehyde	0.37	0.0407	1.32	No
Methanol	262	28.82	0.17	Yes
Toluene	188	20.68	0.09	Yes

2nd Tier Screening (PAIL)

ISCST3 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 was deemed by the Department to be one one-hundredth of the Threshold Limit Value, as listed by the ACGIH.

Pollutant	(PAIL, $\mu\text{g}/\text{m}^3$) = 1/100 of Threshold Limit Value	Modeled Concentration ($\mu\text{g}/\text{m}^3$)	Pass?
Acrolein	2.3	0.5	Yes
Formaldehyde	15*	3.85	Yes

* Surrogate screening value adopted by ADEQ (see Steve Patrick memo of October 19, 1998).

10. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
01 thru 08	PM/PM ₁₀ , SO ₂ , CO, and NO _x , and VOC HAPs	AP-42 GRI-HAPCalc (V3.01)	-	-	CO and NO _x emission limits is carried over from previous permit.
10	PM/PM ₁₀ , VOC, SO ₂ , NO _x , and CO. HAPs	AP-42 GRI-HAPCalc (V3.01)	-	-	

11. TESTING REQUIREMENTS:

This permit requires stack testing of the following sources.

SN(s)	Pollutant	Test Method	Test Interval	Justification For Test Requirement
01 thru 8	CO NO _x	10 7E	One-half of eight compressor engines every five years	See Plantwide Condition # 7 in permit.

12. MONITORING OR CEMS

The following are parameters that must be monitored with CEMs or other monitoring equipment (temperature, pressure differential, etc), frequency of recording and whether records are needed to be included in any annual, semiannual or other reports.

SN	Parameter or Pollutant to be Monitored	Method of Monitoring (CEM, Pressure Gauge, etc)	Frequency*	Report (Y/N)**
None				

* Indicate frequency of recording required for the parameter (Continuously, hourly, daily, etc.)

** Indicates whether the parameter needs to be included in reports.

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13. RECORD KEEPING REQUIREMENTS

The following are items (such as throughput, fuel usage, VOC content of coating, etc) that must be tracked and recorded, frequency of recording and whether records are needed to be included in any annual, semiannual or other reports.

SN	Recorded Item	Limit (as established in permit)	Frequency*	Report (Y/N)**
None				

14. OPACITY

SN	Opacity %	Justification (NSPS limit, Dept. Guidance, etc)	Compliance Mechanism (daily observation, weekly, control equipment operation, etc)
01 thru 08	5	natural gas fired	use of natural gas
10	5	natural gas fired	use of natural gas

15. DELETED CONDITIONS:

Former SC	Justification for removal
4, 5, and 6	SN-09 is disconnected from service.

16. VOIDED, SUPERSEDED OR SUBSUMED PERMITS

List all active permits for this facility which are voided/superseded/subsumed by issuance of this permit.

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17. CONCURRENCE BY:

The following supervisor concurs with the permitting decision:

Lyndon Poole, P.E.