

STATEMENT OF BASIS

For the issuance of Draft Air Permit # 1191-AR-3 AFIN: 24-00077

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

CenterPoint Energy Gas Transmission Co. - North Cecil Compressor Station
1.1 Miles Southwest of Webb City
Ozark, Arkansas 72949

3. PERMIT WRITER:

Andrea Sandage

4. PROCESS DESCRIPTION AND NAICS CODE:

NAICS Description: Pipeline Transportation of Natural Gas
NAICS Code: 48621

5. SUBMITTALS:

11/25/2009

6. REVIEWER'S NOTES:

CenterPoint Energy Gas Transmission Co. - North Cecil Compressor Station (24-00077) operates a facility located at 1.1 Miles Southwest of Webb City, Ozark, AR 72949. This facility has submitted an application to decrease the horsepower of two (2) natural gas compressor engines (SN-01 and SN-02) from 860-hp to 810-hp. The total decrease in emissions include: 0.8 tpy VOC, 2.4 tpy CO, 1.8 tpy NO_x, and 0.18 tpy formaldehyde.

The facility is not subject to 40 CFR Part 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE) since SN-01 and SN-02 are existing spark ignition 4 stroke lean burn stationary RICE [63.6590(b)(3)]. The equipment was modified to update the HP and therefore is subject to 40 CFR Part 60 Subpart JJJJ of the Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (NSPS).

7. COMPLIANCE STATUS:

The following summarizes the current compliance of the facility including active/pending enforcement actions and recent compliance activities and issues; there are no current enforcement actions against the facility.

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 not PSD?

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
N/A		

10. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

11. MODELING:

Criteria Pollutants: N/A

Non-Criteria Pollutants:

Pollutant	RT	PTE (TPY)	HAPS? PTE > RT
Acetaldehyde	0.9	0.44	No
Acrolein	0.004	0.28	Yes
Benzene	0.2	0.02	No
Formaldehyde	0.2	2.78	Yes
Methanol	1.0	0.13	No

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	0.06	No
Formaldehyde	1.5	0.165	0.64	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 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	0.654	Y
Formaldehyde	15.0	6.713	Y

12. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
01 & 02	Manufacturer's Specification	1.80 g NO _x /hp-hr 2.52 g CO/hp-hr	N/A	N/A	20% safety factor added
	40 CFR 60.4233 (f)(4)	1.0 g VOC/hp-hr	N/A	N/A	N/A
	AP-42 Table 3.2-2	0.00991 lb PM/PM ₁₀ /MMBtu 0.000588 lb SO ₂ /MMBtu 0.0084 lb CH ₃ CHO/MMBtu 0.0051 lb Acrolein/MMBtu 0.0004 lb Benzene/MMBtu 0.0528 lb CH ₂ O/MMBtu 0.0025 lb Methanol/MMBtu	N/A	N/A	N/A

13. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
01 & 02	CO	10	Test one time initially and one of each every five years	Dept. Standard
	NO _x	7E		

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)
N/A				

16. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
01 & 02	5	Dept. Guidance	Pipeline natural gas fuel only

17. DELETED CONDITIONS:

Former SC	Justification for removal
1	The facility requested that the specific condition (SC-1) limiting the natural gas usage be removed and replaced and with the requirement to conduct stack testing on one half of each type of engine every five years. This is the preferred method of emission monitoring.

18. GROUP A INSIGNIFICANT ACTIVITIES

Source Name	Group A Category	Emissions (tpy)						
		PM/PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs	
							Single	Total
New Antifreeze Tank- 500 gal	A-3			0.01				
New Oil Tank – 500 gal	A-3			0.01				
Used oil Tank - waste oil tank (SN-06), TVP<0.5 psia – 150 bbl	A-3			0.01				
Waste Water Tank – 210 bbl	A-3			0.01				
Compressor and Station Blowdowns (SN-03, SN-04 & SN-05)	A-13							
Fugitive Emissions	A-13			0.13				
Loading Emissions	A-13							

19. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

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

Permit #
1191-AR-2

20. CONCURRENCE BY:

The following supervisor concurs with the permitting decision.



 Paula Parker, P.E.

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Facility Name: CenterPoint Energy
 Gas Transmission Co. - North Cecil
 Compressor Station
 Permit Number: 1191-AR-3
 AFIN: 24-00077

			Old Permit	New Permit
\$/ton factor	22.07	Permit Predominant Air Contaminant	30	28.2
Minimum Fee \$	400	Net Chargeable Emission Increase	-1.8	
Minimum Initial Fee \$	500	Permit Modification Fee \$	400	
		Initial Permit Fee \$	0	
Check if Administrative Amendment	<input type="checkbox"/>	Annual Chargeable Emissions (tpy)	28.2	

Pollutant (tpy)	Old Permit	New Permit	Change
PM	0.6	0.6	0
PM ₁₀	0.6	0.6	0
SO ₂	0.2	0.2	0
VOC	16.6	15.8	-0.8
CO	42	39.6	-2.4
NO _x	30	28.2	-1.8
Acrolein*	0.28	0.28	0
Formaldehyde*	2.96	2.78	-0.18