

STATEMENT OF BASIS

For the issuance of Draft Air Permit # 1513-AOP-R4 AFIN: 61-00076

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

CenterPoint Energy - Mississippi River Transmission LLC. - Biggers Compressor Station
278 Gas Plant Road
Biggers, Arkansas 72413

3. PERMIT WRITER:

Joseph Hurt

4. PROCESS DESCRIPTION AND NAICS CODE:

NAICS Description: Pipeline Transportation of Natural Gas
NAICS Code: 4862100

5. SUBMITTALS:

1/18/2011

6. REVIEWER'S NOTES:

CenterPoint Energy - Mississippi River Transmission Corporation owns and operates the Biggers Natural Gas Compressor Station which is located in Biggers, Randolph County, Arkansas. The facility has requested to incorporate the applicable requirements of 40 CFR Part 63, Subpart ZZZZ for SN-01, SN-02, SN-04 through SN-07, SN-09, and SN-12. Additionally, the facility will install non-selective catalytic reduction (NSCR) to reduce formaldehyde emissions from SN-01, SN-02, and SN-04 through SN-07. After installation of NSCR, the total permitted annual formaldehyde emission rate limit will decrease by 3.15 tpy.

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 or pending enforcement actions.

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)
SN-11	SO ₂ and NO _x	NSPS Subpart GG
SN-01, SN-02, SN-04 through SN-07, SN-09, and SN-12	Formaldehyde	NESHAP Subpart ZZZZ

10. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

11. MODELING:

Criteria Pollutants

Examination of the source type, location, plot plan, land use, emission parameters, and other available information indicate that modeling is not warranted at this time.

Pollutant	Emission Rate (lb/hr)	NAAQS Standard (µg/m ³)	Averaging Time	Highest Concentration (µg/m ³)	% of NAAQS
PM ₁₀	1.9	50	Annual	0.38998	0.8 %
		150	24-Hour	4.06825	2.8 %
SO ₂	1.1	80	Annual	0.30114	0.4 %
		1300	3-Hour	6.86558	0.6 %

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
		365	24-Hour	3.08009	0.9 %
VOC	2.9	0.12	1-Hour (ppm)	N/A	N/A
CO	296.0	10,000	8-Hour	1412.31127	14.2 %
		40,000	1-Hour	2028.04226	5.1 %
NO _x	297.7	100	Annual	47.64494	47.7 %
Pb	N/A	0.15	Rolling 3-month Period over 3 years	N/A	N/A

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 Department has deemed the PAER 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) = $0.11 \times \text{TLV}$	Proposed lb/hr	Pass?
Acetaldehyde	45	4.95	0.43	Yes
Acrolein	0.229	0.025	0.18	NO
Benzene	1.59	0.175	0.15	Yes
Formaldehyde	1.5	0.165	0.52*	NO
Methanol	262	28.8	0.20	Yes
Toluene	75	8.28	0.09	Yes
1,3 Butadiene	4.42	0.48	0.09	Yes

* After installation of NSCR.

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 ($\mu\text{g}/\text{m}^3$) = 1/100 of Threshold Limit Value	Modeled Concentration ($\mu\text{g}/\text{m}^3$)	Pass?
Acrolein	2.29	0.47626	YES
Formaldehyde	15.0	2.62697*	YES

* From 1513-AOP-R3. Modeling after installation of NSCR is $1.41 \mu\text{g}/\text{m}^3$.

12. CALCULATIONS:

SN	Emission Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
01, 02, 04, 05, 06, & 07	NO _x & CO per testing. VOC, PM10 & SO ₂ per AP-42 (7/00, 3.2-3) HAPs	lb/hr: 44.90 CO 42.20 NO _x lb/MMBtu: 2.96E-02 VOC 9.50E-03 PM ₁₀ 5.88E-04 SO ₂ GRI-HAPCalc (V3.01)	NSCR	76% for Formaldehyde	
09	NO _x , CO, VOC, PM10 & SO ₂ per AP-42 (7/00, 3.2-3) HAPs	lb/MMBtu: 2.27 NO _x 3.72 CO 2.96E-02 VOC 9.50E-03 PM ₁₀ 5.88E-04 SO ₂ GRI-HAPCalc (V3.01)	N/A	N/A	Tpy emissions are calculated based on 4,032 hours of operation annually.

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
11	NOx & CO per testing. VOC, PM10 & SO2 per AP-42 (7/00, 3.1-2a) HAPs	lb/hr: 32.50 NO _x 7.00 CO lb/MMBtu: 2.10E-03 VOC 6.60E-03 PM ₁₀ 3.40E-03 SO ₂ GRI-HAPCalc (V3.01)	N/A	N/A	Tpy emissions are calculated based on 4,600 hours of operation annually.
12	NO _x , CO, VOC, PM10 & SO2 per AP-42 (7/00, 3.2-3) HAPs	lb/MMBtu: 2.27 NO _x 3.72 CO 2.10E-02 VOC 9.50E-03 PM ₁₀ 5.88E-04 SO ₂ GRI-HAPCalc (V3.01)	N/A	N/A	Tpy emissions are calculated based on 500 hours of operation annually.

13. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
Plantwide	Total Sulfur (SO ₂)	Methods outlined in section 2.3.5 or 2.3.3.1.2 of 40 CFR Part 75, Appendix D	Every five years	Department Guidance
01, 02, & 04	NO _x & CO	7E & 10	One half of every engine every five years	Department Guidance
05, 06, & 07	NO _x & CO	7E & 10	One half of every engine every five years	Department Guidance
11	NO _x & CO	20 & 10	Every five years	Department Guidance

SN	Pollutants	Test Method	Test Interval	Justification
01, 02, and 04 through 07	Formaldehyde	320 or other approved by Department	Initial	Verify lb/hr emission rate limit after installation of NSCR
		Method 320 or 323 or others as specified by regulation	Initial and every 8,760 hours or 3 years, whichever comes first	NESHAP

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)
11	Fuel sulfur content	As specified in NSPS Subpart GG	Continuously	N
	Fuel nitrogen content	As specified in NSPS Subpart GG	Continuously	N
01, 02, and 04 through 07	Catalyst Inlet Temperature	CPMS	Continuously, 4-hour rolling average	Y

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)
09	Hours of Operation	4,032 hrs per any consecutive 12-month period	Monthly	Y
11	NO _x emissions	230 ppm	Continuously	N
	Fuel sulfur content	0.8% by wt.	Continuously	N
	Hours of Operation	4,600 hrs per any consecutive 12-month period	Monthly	Y

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
12	Hours of Operation	500 hrs per any consecutive 12-month period	Monthly	Y
01, 02, and 04 through 07	Catalyst Inlet Temperature	750°F - 1250°F	Continuously	Y
	Pressure Drop across Catalyst	No more than ±2 inches of water at 100% load; 10% from the pressure drop across the catalyst measured during the initial performance test	Once per month	Y
	Records required by 63.6655	N/A	N/A	Y
	Maintenance Conducted	N/A	N/A	Y
09 & 12	Hours of operation and documentation for emergency hours	100 hr/yr for maintenance and readiness testing; 50 hr/yr for non-emergency but counted as part of the 100 hr/yr above	As Needed	Y

16. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
Plantwide	5 %	Department Guidance	Combustion of natural gas only

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
0.1 MMBtu/hr Boiler	A-1	0.003	0.001	0.002	0.004	0.04		
Total	A-1	0.003	0.001	0.002	0.004	0.04		
Methanol Tank (168 gal)	A-2			0.01			0.01	0.01
Kerosene Tank (168 gal)	A-2			0.001				
Total	A-2			0.011			0.01	0.01
Used Oil Tank (1,176 gal)	A-3			0.001				
Entrained Liquids Tank (7,518 gal)	A-3			0.04				
Antifreeze Tank (4,200 gal)	A-3			0.001				
Antifreeze Mix Tank (7,000 gal)	A-3			0.001				
Diesel Tank (1,134 gal)	A-3			0.001				
Waste Water Tank (4,700)	A-3			0.07				
Total	A-3			0.114				
Piping Component Fugitives	A-13			0.19				
Engine blowdowns	A-13			0.10				
Oil Storage Tank (11,298 gal)	A-13			0.01				
Gasoline Tank (548 gal)	A-13			0.19				
Smart Ash Incinerator	A-13	0.27		0.008	0.36			
Total	A-13	0.27		0.498	0.36			

Permit #: 1513-AOP-R4

AFIN: 61-00076

Page 9 of 9

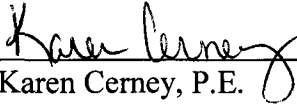
19. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

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

Permit #
1513-AOP-R3

20. CONCURRENCE BY:

The following supervisor concurs with the permitting decision.



Karen Cerney, P.E.

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Major Source

Revised 12-15-10

Facility Name: CenterPoint Energy - Biggers Compressor Station
 Permit Number: 1513-AOP-R4
 AFIN: 61-00076

\$/ton factor	22.07	Annual Chargeable Emissions (tpy)	1222.6
Permit Type	Minor Mod	Permit Fee \$	500

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 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	<input checked="" type="checkbox"/>	4.9	4.9	0	0	4.9
PM ₁₀	<input type="checkbox"/>	4.9	4.9	0		
SO ₂	<input checked="" type="checkbox"/>	1.4	1.4	0	0	1.4
VOC	<input checked="" type="checkbox"/>	11	11	0	0	11
CO	<input type="checkbox"/>	1230.7	1230.7	0		
NO _x	<input checked="" type="checkbox"/>	1205.3	1205.3	0	0	1205.3
Acetaldehyde*	<input type="checkbox"/>	1.12	1.12	0		
Acrolein*	<input type="checkbox"/>	0.61	0.61	0		
Benzene*	<input type="checkbox"/>	0.4	0.4	0		
Formaldehyde*	<input type="checkbox"/>	4.76	4.76	0		
Methanol*	<input type="checkbox"/>	0.66	0.66	0		
Toluene*	<input type="checkbox"/>	0.16	0.16	0		
1,3-Butadiene*	<input type="checkbox"/>	0.21	0.21	0		