

Permit #: 1513-AOP-R2
AFIN: 61-00076
Page 1 of 9

STATEMENT OF BASIS

for the issuance of Draft Air Permit #: 1513-AOP-R2

1. PERMITTING AUTHORITY:

Arkansas Department of Environmental Quality
8001 National Drive
Post Office Box 8913
Little Rock, Arkansas 72219-8913

2. APPLICANT:

Mississippi River Transmission Corporation -
Biggers Compressor Station
278 Gas Plant Road
Biggers, AR 72413
Randolph County

3. PERMIT WRITER: James G. Siganos, P. E.

4. PROCESS DESCRIPTION AND NAICS CODE:

NAICS Description: Pipeline Transportation of Natural Gas - Compressor Station
NAICS Code: 486210

5. SUBMITTALS: December 20, 2004

6. REVIEWERS NOTES:

CenterPoint Energy Gas Transmission Company owns and operates the Biggers Compressor Station which is located in Biggers, Randolph County, Arkansas.

This permit is being issued as a renewal for the Title V Operating Permit 1513-AOP-R1, which has an expiration date of June 27, 2004. This is an existing operation; no new construction or major modification is being proposed. The facility is a major source of criteria pollutants and is therefore subject to Title V requirements. Significant emissions of nitrogen oxides (NO_x), carbon monoxide (CO) and volatile organic compounds (VOC) are a result of the combustion of natural gas in the compressor engines. Routine blowdowns and piping components are a source of fugitive emissions. Small amounts of particulate matter (less than 6.0 tpy) and sulfur dioxide may be emitted from this facility.

Updated emission factors for the compressor engines were sourced from AP-42, Section 3.2, table 3.2.3, Natural Gas-fired Reciprocating Engines, July 2000 edition and AP-42, Section 3.1, table 3.1-2a, Stationary Gas Turbines. The use of this updated uncontrolled engine/turbine emission data resulted in small plantwide permitted emission changes.

The permit includes estimations of hazardous air pollutant (HAP) emission rates based on the Gas Research Institute Topical Report GRI-96/0009.1 Measurement of Air Toxic Emissions from Natural Gas-Fired Internal Combustion Engines at Natural Gas Transmission and Storage Facilities. Volume 1, February, 1996. Emission factors for HAPs are based upon GRI-HAPCalc 3.01.

Permit #: 1513-AOP-R2
AFIN: 61-00076
Page 2 of 9

Based upon information submitted by the permittee, the facility is not a major source of HAPs, subject to 40 CFR Part 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE)

7. COMPLIANCE STATUS:

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

8. APPLICABLE REGULATIONS:

PSD Applicability

Did the facility undergo PSD review in this permit (i.e., BACT, Modeling, et cetera)?	Y/N	N	
Has this facility undergone PSD review in the past?	Y/N	Permit#	N
Is this facility categorized as a major source for PSD?	Y/N	Y	
. 100 tpy and on the list of 28 (100 tpy)?	Y/N	N	
. 250 tpy all other	Y/N	Y	

PSD Netting

Was netting performed to avoid PSD review in this permit? Y/N N

If so, indicate increases and decreases used in netting for PSD purposes only.

Source and Pollutant Specific Regulatory Applicability

Source	Pollutant	Regulation [NSPS, NESHAP (Part 61 & Part 63), or PSD <u>only</u>]
SN-11	SO ₂ and NO _x	NSPS Subpart GG

9. EMISSION CHANGES:

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

Plant Wide Permitted Emissions (ton/yr)			
Pollutant	Air Permit # 1513-AOP-R1	Air Permit # 1513-AOP-R2	Change
PM/PM ₁₀	---	5.6	+5.6
SO ₂	---	1.0	+1.0
VOC	35.2	10.9	-24.3
CO	1202.7	1230.4	+ 27.7
NO _x	1227.0	1204.7	-22.3
*Formaldehyde	8.34	5.52	-2.82
*Methanol	1.56	0.65	-0.91
*Acetaldehyde	---	1.11	+1.11
*Benzene	---	0.35	+0.35
*Toluene	---	0.14	+0.14
*Acrolein	---	0.53	+0.53

10. MODELING:- PREVIOUS PERMIT

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. No change from previous permit

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	305.5	100	Annual	43.41	43%
CO	295.8	10,000	8-hour	1735	17%
		40,000	1-hour	2478	6%

Other Modeling N/A

11. Non-Criteria Pollutants

This permit contains a TLV table for non-criteria pollutants. Modeling was used to determine the permitted emission rates for ranges of non-criteria pollutants (grouped by TLVs) that pass the PAER or PAIL. Therefore, modeling of specific non-criteria pollutants was not performed. (If the permit does not contain a TLV table, Please remove this paragraph.)

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 deemed 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*TLV	Proposed lb/hr	Pass?
Formaldehyde	1.5	0.1650	1.9	N
Methanol	262	28.82	0.13	Y
Acetaldehyde	45	4.95	0.10	Y
Acrolein	2.3	0.26	0.09	Y
Toluene	188	20.73	<0.01	Y
Benzene	1.6	0.18	0.06	Y

2nd Tier Screening (PAIL)

SCREEN3 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?
Formaldehyde	15	2.58	Y

12. CALCULATIONS:

SN	Emission Factor Source (AP-42, Testing, etc)	Emission Factor and units (lbs/ton, lbs/hr, etc)	Control Equipment Type (if any)	Control Equipment Efficiency	Comments (Emission factor controlled/uncontrolled, etc)
01, 02, 04, 05, 06, & 07	NO _x & CO Same as previous permit. VOC, PM10 & SO ₂ per AP-42 (7/00, 3.2-3)	Lb/hr Lb/MMBtu	N/A	N/A	HAP emissions are from GRI-HAPCalc 3.01 factors.
09	NO _x , CO, VOC, PM10 & SO ₂ per AP-42 (7/00, 3.2-3)	Lb/MMBtu	N/A	N/A	HAP emissions are from GRI-HAPCalc 3.01 factors.
11	NO _x & CO Same as previous permit. VOC, PM10 & SO ₂ per AP-42 (7/00, 3.1-2a)	Lb/hr Lb/MMBtu	N/A	N/A	HAP emissions are from GRI-HAPCalc 3.01 factors.
12	NO _x , CO, VOC, PM10 & SO ₂ per AP-42 (7/00, 3.2-3)	Lb/MMBtu	N/A	N/A	HAP emissions are from GRI-HAPCalc 3.01 factors.

13. TESTING REQUIREMENTS:

This permit requires stack testing of the following sources.

SN(s)	Pollutant	Test Method	Test Interval	Remarks- Justification For Test Requirement
01, 02, & 04	NOx & CO	7E & 10	One half of every engine every five years	<ul style="list-style-type: none"> • 01 & 02 last tested February 2003. • Test 04 by February 2008 • 19.702
05, 06, & 07	NOx & CO	7E & 10	One half of every engine every five years	<ul style="list-style-type: none"> • 06 & 07 last tested February 2003. • Test 05 by February 2008 • 19.702
09	NOx & CO	7E & 10	---	Test one time to determine compliance.
11	NOx & CO	10 & 20	---	<ul style="list-style-type: none"> • Last tested February 2003. • Test by February 2008 • 19.702

14. MONITORING OR CEMS N/A

15. 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)**
09, 11 & 12	Operating Hours	4032, 4600, and 500 hrs respectively	Rolling 12 month total	Y

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

** Indicates whether the item needs to be included in reports

16. OPACITY

SN	Opacity %	Justification (NSPS limit, Dept. Guidance, etc)	Compliance Mechanism (daily observation, weekly, control equipment operation, etc)
All	5	18.501	Burn natural gas

17. DELETED CONDITIONS: N/A

18. VOIDED, SUPERSEDED OR SUBSUMED PERMITS

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

Permit #
1513-AOP-R1

19. CONCURRENCE BY:

The following supervisor concurs with the permitting decision:

Thomas Rheaume, P.E.