

## STATEMENT OF BASIS

*for the issuance of Draft Air Permit # 1419-AOP-R2*

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 – Mississippi River Transmission Corp. – Tuckerman Compressor Station  
3.5 miles southwest of Tuckerman, on Gracelawn Street  
Tuckerman, Arkansas 72473

3. PERMIT WRITER:

Siew Low

4. PROCESS DESCRIPTION AND NAICS CODE:

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

5. SUBMITTALS: December 20, 2004

6. REVIEWER'S NOTES:

CenterPoint Energy - Mississippi River Transmission Corporation owns and operates a compressor station near Tuckerman, Arkansas. This Title V air permit renewal revises PM/PM<sub>10</sub>, SO<sub>2</sub>, VOC, and HAPs emission limits of the compressor and turbine engines by using the USEPA AP-42 and GRI-HAPCalc emission factors. NO<sub>x</sub> emissions from SN-10 are revised using USEPA – AP-42 emission factor. The stack testing schedule for the compressor engines and turbines is also being clarified. There are no physical changes or changes in the method of operation at the facility. The facility is subject to the Reciprocating Combustion Engine (RICE) MACT (40 CFR 63 Subpart ZZZZ), and the Stationary Combustion Turbines MACT (40 CFR 63 Subpart YYYY) because the facility is a major source of HAPs emissions. However, the stationary RICEs (SN-01 thru SN-04, SN-06, and SN-08) at this facility do not have to meet the requirements of this subpart, and no initial notification is necessary pursuant to 40 CFR 63.6590(b)(3); and the stationary combustion turbines (SN-11) at this facility do not have to meet the requirements of this subpart, and no initial notification is necessary pursuant to 40 CFR 63.6090(b)(4).

Permit #: 1419-AOP-R2

AFIN #: 34-00111

Page 2 of 7

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:**

NSPS (Y/N) None If yes, subpart  
NESHAP (Y/N) Yes If yes, subpart ZZZZ and subpart YYYY  
PSD applicability (Y/N) No  
Is facility on 28 list (100 tpy)? (Y/N) N  
Was netting performed to avoid PSD review (Y/N) Y

Subject to 112 (g) requirements (Y/N) No  
Subject to CAM requirements (Y/N) No  
Other applicable regulations

Source and Pollutant Specific Regulatory Applicability

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
SN-11	NO <sub>x</sub> and SO <sub>2</sub>	NSPS Subpart GG

8. **EMISSION CHANGES:**

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

Plantwide Permitted Emissions (ton/yr)			
Pollutant	Permit 1419-AOP-R1	Permit 1419-AOP-R2	Change
PM/PM <sub>10</sub>	0	4.5	+4.5
SO <sub>2</sub>	0	1.4	+1.4
VOC	160.9	37.6	-123.3
CO	144.9	151.4	+6.5
NO <sub>x</sub>	1160.1	1141.2	-18.9
Acrolein	0	1.92	+1.92
Acetaldehyde	0	2.38	+2.38

Permit #: 1419-AOP-R2

AFIN #: 34-00111

Page 3 of 7

Plantwide Permitted Emissions (ton/yr)			
Pollutant	Permit 1419-AOP-R1	Permit 1419-AOP-R2	Change
Benzene	0.36	0.43	+0.07
Formaldehyde	11.63	14.15	+2.52
Methanol	0	0.63	+0.63
Toluene	0	0.11	+0.11

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 <sub>x</sub>	284.8	100	Annual	44.3	44.3%
VOC	not applicable, emissions are < 500 tons per year				
CO	44.5	10,000	8-hour	268.5	2.7%
		40,000	1-hour	1030.3	2.6%

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 ( $\text{mg}/\text{m}^3$ ), as listed by the American Conference of Governmental Industrial Hygienists (ACGIH).

Pollutant	TLV ( $\text{mg}/\text{m}^3$ )	PAER (lb/hr) = 0.11*TLV	Proposed lb/hr	Pass?
Acetaldehyde	45.04	4.95	0.53	Yes
Acrolein	0.23	0.0253	0.32	No

Pollutant	TLV (mg/m <sup>3</sup> )	PAER (lb/hr) = 0.11*TLV	Proposed lb/hr	Pass?
Benzene	1.59	0.17	0.09	Yes
Formaldehyde	0.37	0.0407	1.92	No
Methanol	262	28.82	0.12	Yes
Toluene	188	20.68	0.08	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, µg/m <sup>3</sup> ) = 1/100 of Threshold Limit Value	Modeled Concentration (µg/m <sup>3</sup> )	Pass?
Acrolein	2.3	1.1	Yes
Formaldehyde	15*	6.5	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 04	NO <sub>x</sub> and CO	Testing	-	-	NO <sub>x</sub> and CO emission limits are carried over from previous permit.
	PM/PM <sub>10</sub> , SO <sub>2</sub> , and VOC	AP-42			
	HAPs	GRI-HAPCalc			
06	NO <sub>x</sub> and CO	AGA	-	-	NO <sub>x</sub> and CO emission limits are carried over from previous permit.
	PM/PM <sub>10</sub> , SO <sub>2</sub> , and VOC	AP-42			
	HAPs	GRI-HAPCalc			
08	NO <sub>x</sub> , CO, and VOC	AGA	-	-	Emission limits are carried over from previous permit.

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
10	PM/PM <sub>10</sub> , SO <sub>2</sub> NO <sub>x</sub> , CO, and VOC  HAPs	AP-42  GRI-HAPCalc	-	-	-
11	NO <sub>x</sub> and CO  PM/PM <sub>10</sub> , SO <sub>2</sub> , and VOC  HAPs	Testing  AP-42  GRI-HAPCalc	-	-	NO <sub>x</sub> and CO emission limits are carried over from previous permit.
12	PM/PM <sub>10</sub> , SO <sub>2</sub> NO <sub>x</sub> , CO, and VOC  HAPs	AP-42  GRI-HAPCalc	-	-	

11. TESTING REQUIREMENTS:

This permit requires stack testing of the following sources.

SN(s)	Pollutant	Test Method	Test Interval	Justification For Test Requirement
01, 02, 03, and 04	CO NO <sub>x</sub>	10 7E	One-half of each type of compressor engines every five years	See Plantwide Condition # 8 in permit.
06	CO NO <sub>x</sub>	10 7E	Every five years	See Plantwide Condition # 8 in permit.
08	CO NO <sub>x</sub>	10 7E	Every five years	See Plantwide Condition # 8 in permit.
11	CO NO <sub>x</sub>	10 20	Every five years	See Plantwide Condition # 8 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.

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)**
10	Operation time	4,086 hours per year	Monthly	N
11	Operation time	4,200 hours per year	Monthly	N
12	Operation time	500 hours per year	Monthly	N

14. OPACITY

SN	Opacity %	Justification (NSPS limit, Dept. Guidance, etc)	Compliance Mechanism (daily observation, weekly, control equipment operation, etc)
01 thru 04, 06, 08, 10, 11, and 12	5	natural gas fired	use of natural gas

15. DELETED CONDITIONS:

Former SC	Justification for removal
None	

16. VOIDED, SUPERSEDED OR SUBSUMED PERMITS

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

Permit #
1419-AOP-R1

17. CONCURRENCE BY:

The following supervisor concurs with the permitting decision:

\_\_\_\_\_  
*David Triplett, P.E.*