

STATEMENT OF BASIS

For the issuance of Draft Air Permit # 1433-AOP-R9 AFIN: 02-00065

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

Enable Mississippi River Transmission, LLC - Fountain Hill Compressor Station
409 Ashley 8 Road
Hamburg, Arkansas 71646

3. PERMIT WRITER:

Kyle Crane

4. NAICS DESCRIPTION AND CODE:

NAICS Description: Pipeline Transportation of Natural Gas
NAICS Code: 486210

5. ALL SUBMITTALS:

The following is a list of ALL permit applications included in this permit revision.

Date of Application	Type of Application (New, Renewal, Modification, Deminimis/Minor Mod, or Administrative Amendment)	Short Description of Any Changes That Would Be Considered New or Modified Emissions
3/7/2019	Modification	Recalculation of HAPs based on AP-42, change in total sulfur limit based on gas tariff

6. REVIEWER'S NOTES:

Enable Mississippi River Transmission, LLC (EMRT), formerly CenterPoint Energy – Mississippi River Transmission, LLC, owns and operates the Fountain Hill Natural Gas Compressor Station located in Ashley County, Arkansas. This modification was submitted to;

- Update the CAM plan and conditions for compressor engines SN-06 and SN-07,
- Revise the facility's HAP calculations based on EPA's AP-42 emission factors,

- Update the total sulfur limit of the pipeline gas and associated emissions based on the current FERC gas quality tariff, and
- Add NSPS Subpart OOOOa conditions to compressor SN-05.

The permit's general provisions have also been updated. Annual permitted emissions increase by 3.2 tons per year (tpy) of SO₂ and 0.68 tpy of total HAPs with this modification. Annual permitted emissions decrease by 0.5 tpy of CO with this modification.

Dispersion modelling was performed for acrolein and formaldehyde concentrations using Lakes Environmental AERMOD View 9.5.0 and AERMOD v18081.

7. COMPLIANCE STATUS:

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

The facility was last inspected on July 26, 2018 and was found to be out of compliance related to exhaust gas temperature recordkeeping on compressor engines SN-06 and SN-07, resulting in a pending CAO. ECHO shows 1 quarter of noncompliance in the past 12.

8. PSD/GHG APPLICABILITY:

a) Did the facility undergo PSD review in this permit (i.e., BACT, Modeling, etc.)? N
If yes, were GHG emission increases significant? N

b) Is the facility categorized as a major source for PSD? Y

- *Single pollutant ≥ 100 tpy and on the list of 28 or single pollutant ≥ 250 tpy and not on list*

If yes for 8(b), explain why this permit modification is not PSD.

This permit does not include a major modification as defined by 40 CFR §52.21(b)(2).

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
SN-01 through SN-10	-	NESHAP ZZZZ
SN-05	VOC CO NO _x	NSPS JJJJ
SN-05	-	NSPS OOOOa

10. PERMIT SHIELD – TITLE V PERMITS ONLY:

Did the facility request a permit shield in this application? Y

(Note - permit shields are not allowed to be added, but existing ones can remain, for minor modification applications or any Regulation 18 requirement.)

If yes, are applicable requirements included and specifically identified in the permit? Y
 If not, explain why.

For any requested inapplicable regulation in the permit shield, explain the reason why it is not applicable in the table below.

Source	Inapplicable Regulation	Reason
N/A		

11. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

12. AMBIENT AIR EVALUATIONS:

The following are results for ambient air evaluations or modeling.

a) NAAQS

A NAAQS evaluation is not required under the Arkansas State Implementation Plan, National Ambient Air Quality Standards, Infrastructure SIPs and NAAQS SIP per Ark. Code Ann. § 8-4-318, dated March 2017 and the ADEQ Air Permit Screening Modeling Instructions.

b) Non-Criteria Pollutants:

The non-criteria pollutants listed below were evaluated. Based on Department procedures for review of non-criteria pollutants, emissions of all other non-criteria pollutants are below thresholds of concern.

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?
Acetaldehyde	45	4.95	0.16	Yes
Acrolein	0.229	0.025	0.16	No

Pollutant	TLV (mg/m ³)	PAER (lb/hr) = 0.11 × TLV	Proposed lb/hr	Pass?
Benzene	1.59	0.175	0.08	Yes
Formaldehyde	1.5 ^a	0.165	1.12	No
Methanol	262	28.8	0.16	Yes
Toluene	75	8.28	0.032	Yes

a. Based on the ADEQ approved alternate PAIL

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	2.29	0.71186	Yes
Formaldehyde	15.0 ^a	4.98304	Yes

a. ADEQ approved alternate PAIL.

c) H₂S Modeling:

A.C.A. §8-3-103 requires hydrogen sulfide emissions to meet specific ambient standards. Many sources are exempt from this regulation, refer to the Arkansas Code for details.

Is the facility exempt from the H₂S Standards Y

If exempt, explain: The facility does not emit H₂S

13. 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 and 07 to 08	NO _x & CO: Stack test data. VOC, PM ₁₀ , SO ₂ (AP-42, 7/00,	g/hp-hr NO _x -15.9 CO -18.64 lb/MMBtu	None	These sources shall be tested for CO & NO _x emissions. Uncontrolled	

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
	table 3.2-3)	PM/PM ₁₀ – 9.5E-3 SO ₂ – 2.96E-2 VOC – 2.96E-2			
05	NSPS JJJ AP-42 Table 3.2-3	g/hp-hr: 1.0 VOC 4.0 CO 3.0 NO _x lb/MMBtu: 0.01941 PM/PM ₁₀ 5.88E-04 SO ₂	NSCR	50% for VOC 90% for CO and NO _x	
06	NO _x & CO: Stack test data. VOC, PM ₁₀ , SO ₂ (AP-42, 7/00, table 3.2-3)	g/hp-hr NO _x -1.795 CO -1.864 lb/MMBtu PM/PM ₁₀ – 9.5E-3 SO ₂ – 2.96E-2 VOC – 2.96E-2	NSCR/AFRC	95% - NO _x 90% - CO	
01 thru 08	HAPs: AP-42 Table 3.2-3	<u>lb/MMBtu</u> Total HAP: 0.0298	None	Uncontrolled	
10	NO _x , CO, VOC, PM ₁₀ & SO ₂ : (AP-42, 7/00, table 3.2-3)	lb/MMBtu PM/PM ₁₀ - 9.5E-3 NO _x – 2.27 CO – 3.72 SO ₂ - 2.96E-2 VOC – 2.96E-2	None	Test SN-09 one time to determine compliance for CO & NO _x .	
10	HAPs: AP-42 Table 3.2-3	<u>lb/MMBtu</u> Total HAP: 0.0298	None	Uncontrolled	

14. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
01 thru 04 and 06 thru 08	NO _x and CO	7E and 10	Every 60 months	Compressor stations are required to test one half of each

SN	Pollutants	Test Method	Test Interval	Justification
				type of engine every five years.
05	VOC CO NO _x	25A 10 7E	Initial test and every 8,760 hours or 3 years, whichever comes first	NSPS JJJJ 40 C.F.R. §60.4243(b)(2)(ii)
Plantwide	Total Sulfur (SO ₂)	Sorbent tubes supplied by National Draeger, Incorporated or equivalent, or other test method upon the Department's approval	Every 60 months	Department Guidance

15. 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)
06-07	Catalyst inlet temperature	in-line thermocouple	Continuously	Y
10	Hours of operation	non-resettable hour meter	When in operation	N

16. 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)
06-07	Catalyst inlet temperature	750°F - 1250°F	Daily	Y
06-07	CO and NO _x concentration at the end of the exhaust stack	3.7 lb/hr CO 3.1 lb/hr NO _x	Quarterly, but at least annually if not running full time (see Specific Condition #6)	Y

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
05	Maintenance conducted	--	As needed	N
05	Hours of operation or months since last rod packing replacement	Every 26,000 hours of operation or every 36 months	As needed	Y
10	Hours of operation	500 hours (emergency and non-emergency) per calendar year each. Emergency operation in excess of these hours may be allowable but shall be reported	Monthly	N
01 thru 04, 06, 07, & 08	Records required to maintain remote status	40 CFR §63.6675	Every 12 months	N
01 thru 04, 06, 07, 08, & 10	Maintenance Conducted	-	See Plantwide Conditions #22 and #23	N

17. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
01 thru 08 & 10	5%	Department Guidance	Natural Gas Fuel Only

18. DELETED CONDITIONS:

Former SC	Justification for removal
#6 & #7	CAM parameters for SN-06 and SN-07 that have been replaced by measurements from a portable emissions analyzer

19. GROUP A INSIGNIFICANT ACTIVITIES:

The following is a list of Insignificant Activities including revisions by this permit.

Source Name	Group A Category	Emissions (tpy)						
		PM/PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs	
							Single	Total
Three (3) Produced Water Storage Tanks – 8,820 gal each	A-3	-	-	5.76	-	-	-	-
Produced Water Storage Tank – 4,200 gal	A-3	-	-	0.92	-	-	-	-
Antifreeze Mix Tank – 8,820 gal	A-3	-	-	0.0001	-	-	-	-
Diesel Storage Tank – 105 gal	A-3	-	-	0.0001	-	-	-	-
Engine Oil Storage Tank – 11,298 gal	A-3	-	-	0.005	-	-	-	-
Glycol Storage Tank – 4,200 gal	A-3	-	-	0.0001	-	-	-	-
Kerosene Storage Tank – 105 gal	A-3	-	-	0.0001	-	-	-	-
Used Oil Storage Tank – 4,200 gal	A-3	-	-	0.002	-	-	-	-
Used Oil Storage Tank – 1,008 gal	A-3	-	-	0.0005	-	-	-	-
Used Solvent Storage Tank – 1,008 gal	A-3	-	-	0.0003	-	-	-	-
Total A-3		-	-	6.6882	-	-	-	-
Compressor & Facility Blowdowns	A-13	-	-	1.52	-	-	-	-
Process Piping Fugitives	A-13	-	-	0.62	-	-	-	-
Truck Loading	A-13	-	-	0.01	-	-	-	-
Total A-13		-	-	2.15	-	-	-	-

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20. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

The following is a list of all active permits voided/superseded/subsumed by the issuance of this permit.

Permit #
1433-AOP-R8

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Major Source

Revised 03-11-16

Facility Name: Enable Mississippi River Transmission,
 LLC - Fountain Hill Compressor Station
 Permit Number: 1433-AOP-R9
 AFIN: 02-00065

\$/ton factor	23.93	Annual Chargeable Emissions (tpy)	754.7
Permit Type	Modification	Permit Fee \$	1000

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)	3.2
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 condensable 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		4.9	4.9	0		
PM ₁₀		4.9	4.9	0	0	4.9
PM _{2.5}		0	0	0		
SO ₂		0.9	4.1	3.2	3.2	4.1
VOC		15.6	15.6	0	0	15.6
CO		860.6	860.1	-0.5		
NO _x		730.1	730.1	0	0	730.1

Pollutant (tpy)	Check if Chargeable Emission	Old Permit	New Permit	Change in Emissions	Permit Fee Chargeable Emissions	Annual Chargeable Emissions
Total HAPs	<input type="checkbox"/>	7.06	7.74	0.68		