

NMED AIR QUALITY
TITLE V RENEWAL APPLICATION
EL PASO NATURAL GAS COMPANY, L.L.C.
PECOS RIVER COMPRESSOR STATION

Prepared By:

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February 2025

Project 253201.0039





9400 Holly Ave NE, Bldg 3, Ste B, Albuquerque, NM 87122 / P 505.266.6611 / trinityconsultants.com

February 28, 2025

Permit Programs Manager
NMED Air Quality Bureau
525 Camino de los Marques, Suite 1
Santa Fe, NM 87505

*RE: Application for Title V Renewal
El Paso Natural Gas Company, L.L.C. – Pecos River Compressor Station*

Dear Permit Programs Manager:

On behalf of El Paso Natural Gas Company, L.L.C., we are submitting this application for a Title V Renewal for the Pecos River Compressor Station. This submittal is pursuant to 20.2.70.300.B.2 NMAC, which requires a Title V application to be submitted at least twelve months prior to the expiration of the current permit. Title V Permit P129-R4 expires on March 4, 2026.

The format and content of this application are consistent with the Bureau's current policy regarding Title V applications; it is a complete application package using the most current application forms. Enclosed is one hard copy and one working copy of the application, including the original certification page. Please feel free to contact me at (505) 266-6611 or by email at aerenstein@trinityconsultants.com if you have any questions regarding this application. Alternatively, you may contact Richard Duarte with El Paso Natural Gas Company, L.L.C at (505) 831-7763 or by email at Ricardo_Duarte@kindermorgan.com.

Sincerely,

TRINITY CONSULTANTS

Adam Erenstein
Manager of Consulting Services

cc: Richard Duarte (El Paso Natural Gas Company, L.L.C)
Trinity Project File 253201.0039

HEADQUARTERS

12700 Park Central Dr, Ste 600, Dallas, TX 75251 / P 800.229.6655 / P 972.661.8100 / F 972.385.9203



Air Permit Application Compliance History Disclosure Form

Pursuant to Subsection 74-2-7(S) of the New Mexico Air Quality Control Act ("AQCA"), NMSA §§ 74-2-1 to -17, the New Mexico Environment Department ("Department") may deny any permit application or revoke any permit issued pursuant to the AQCA if, within ten years immediately preceding the date of submission of the permit application, the applicant met any one of the criteria outlined below. In order for the Department to deem an air permit application administratively complete, or issue an air permit for those permits without an administrative completeness determination process, the applicant must complete this Compliance History Disclosure Form as specified in Subsection 74-2-7(P). An existing permit holder (permit issued prior to June 18, 2021) shall provide this Compliance History Disclosure Form to the Department upon request.

Permittee/Applicant Company Name		Expected Application Submittal Date
El Paso Natural Gas Company, L.L.C.		February 28, 2025
Permittee/Company Contact	Phone	Email
Richard Duarte	(505) 831-7763	Ricardo_Duarte@kindermorgan.com
Within the 10 years preceding the expected date of submittal of the application, has the permittee or applicant:		
1	Knowingly misrepresented a material fact in an application for a permit?	☐ Yes ☒ No
2	Refused to disclose information required by the provisions of the New Mexico Air Quality Control Act?	☐ Yes ☒ No
3	Been convicted of a felony related to environmental crime in any court of any state or the United States?	☐ Yes ☒ No
4	Been convicted of a crime defined by state or federal statute as involving or being in restraint of trade, price fixing, bribery, or fraud in any court of any state or the United States?	☐ Yes ☒ No
5a	Constructed or operated any facility for which a permit was sought, including the current facility, without the required air quality permit(s) under 20.2.70 NMAC, 20.2.72 NMAC, 20.2.74 NMAC, 20.2.79 NMAC, or 20.2.84 NMAC?	☐ Yes ☒ No
5b	If "No" to question 5a, go to question 6. If "Yes" to question 5a, state whether each facility that was constructed or operated without the required air quality permit met at least one of the following exceptions: a. The unpermitted facility was discovered after acquisition during a timely environmental audit that was authorized by the Department; or b. The operator of the facility estimated that the facility's emissions would not require an air permit, and the operator applied for an air permit within 30 calendar days of discovering that an air permit was required for the facility.	☐ Yes ☐ No
6	Had any permit revoked or permanently suspended for cause under the environmental laws of any state or the United States?	☐ Yes ☒ No
7	For each "yes" answer, please provide an explanation and documentation.	

Mail Application To: New Mexico Environment Department Air Quality Bureau Permits Section 525 Camino de los Marquez, Suite 1 Santa Fe, New Mexico, 87505 Phone: (505) 476-4300 Fax: (505) 476-4375 www.env.nm.gov/aqb		For Department use only:
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Universal Air Quality Permit Application

Use this application for NOI, NSR, or Title V sources.

Use this application for: the initial application, modifications, technical revisions, and renewals. For technical revisions, complete Sections, 1-A, 1-B, 2-E, 3, 9 and any other sections that are relevant to the requested action; coordination with the Air Quality Bureau permit staff prior to submittal is encouraged to clarify submittal requirements and to determine if more or less than these sections of the application are needed. Use this application for streamline permits as well.

This application is submitted as (check all that apply): ☐ Request for a No Permit Required Determination (no fee)
☐ **Updating** an application currently under NMED review. Include this page and all pages that are being updated (no fee required).
 Construction Status: ☐ Not Constructed ☒ Existing Permitted (or NOI) Facility ☐ Existing Non-permitted (or NOI) Facility
 Minor Source: ☐ a NOI 20.2.73 NMAC ☐ 20.2.72 NMAC application or revision ☐ 20.2.72.300 NMAC Streamline application
 Title V Source: ☐ Title V (new) ☒ Title V renewal ☐ TV minor mod. ☐ TV significant mod. TV Acid Rain: ☐ New ☐ Renewal
 PSD Major Source: ☐ PSD major source (new) ☐ minor modification to a PSD source ☐ a PSD major modification

Acknowledgements:

- ☒ I acknowledge that a pre-application meeting is available to me upon request. ☒ Title V Operating, Title IV Acid Rain, and NPR applications have no fees.
- ☐ \$500 NSR application Filing Fee enclosed **OR** ☐ The full permit fee associated with 10 fee points (required w/ streamline applications).
- ☐ Check No.: N/A in the amount of N/A
- ☒ I acknowledge the required submittal format for the hard copy application is printed double sided 'head-to-toe', 2-hole punched (except the Sect. 2 landscape tables is printed 'head-to-head'), numbered tab separators. Incl. a copy of the check on a separate page.
- ☒ I acknowledge there is an annual fee for permits in addition to the permit review fee: www.env.nm.gov/air-quality/permit-fees-2/.
- ☐ This facility qualifies for the small business fee reduction per 20.2.75.11.C. NMAC. The full \$500.00 filing fee is included with this application and I understand the fee reduction will be calculated in the balance due invoice. The Small Business Certification Form has been previously submitted or is included with this application. (Small Business Environmental Assistance Program Information: www.env.nm.gov/air-quality/small-biz-eap-2/.)

Citation: Please provide the **low level citation** under which this application is being submitted: **20.2.70.300.B(2) NMAC** (e.g. application for a new minor source would be 20.2.72.200.A NMAC, one example for a Technical Permit Revision is 20.2.72.219.B.1.b NMAC, a Title V acid rain application would be: 20.2.70.200.C NMAC)

Section 1 – Facility Information

Section 1-A: Company Information

		AI # if known (see 1 st 3 to 5 #s of permit IDEA ID No.): 194	Updating Permit/NOI #: Title V: P-129R4
1	Facility Name: Pecos River Compressor Station	Plant primary SIC Code (4 digits): 4922	
		Plant NAIC code (6 digits): 486210	
a	Facility Street Address (If no facility street address, provide directions from a prominent landmark): From Malaga, NM travel south on Hwy 285, approximately 12.5 miles, and turn east at mile marker 4 (Whitehorse Road). Drive approximately 3 miles east; the facility will be on the left.		
2	Plant Operator Company Name: El Paso Natural Gas Company, L.L.C.	Phone/Fax: (505) 831-7763 / (505) 831-7734	
a	Plant Operator Address: 2 N. Nevada Ave., Colorado Springs, CO 80903		

b	Plant Operator's New Mexico Corporate ID or Tax ID: 152793	
3	Plant Owner(s) name(s): El Paso Natural Gas Company	Phone/Fax: (505) 831-7763 / (505) 831-7734
a	Plant Owner(s) Mailing Address(s): 2 N. Nevada Ave., Colorado Springs, CO 80903	
4	Bill To (Company): El Paso Natural Gas Company	Phone/Fax: (505) 831-7763 / (505) 831-7734
a	Mailing Address: 2 N. Nevada Ave., Colorado Springs, CO 80903	E-mail: Ricardo_Duarte@kindermorgan.com
5	☐ Preparer: ☒ Consultant: Adam Erenstein, Trinity Consultants	Phone/Fax: (505) 266-6611
a	Mailing Address: 9400 Holly Ave NE, Bldg 3, Ste B, Albuquerque, NM 87122	E-mail: aerenstein@trinityconsultants.com
6	Plant Operator Contact: Richard Najera	Phone/Fax: (575) 234-5407 / N/A
a	Address: 4305 National Park Highway, Carlsbad, NM 88220	E-mail: Richard_Najera@kindermorgan.com
7	Air Permit Contact: Richard Duarte	Title: Sr. EHS engineer
a	E-mail: Ricardo_Duarte@kindermorgan.com	Phone/Fax: (505) 831-7763 / (505) 831-7734
b	Mailing Address: 100 Sun Ave, Suite 650, Albuquerque, NM 87109	
c	The designated Air permit Contact will receive all official correspondence (i.e. letters, permits) from the Air Quality Bureau.	

Section 1-B: Current Facility Status

1.a	Has this facility already been constructed? ☒ Yes ☐ No	1.b If yes to question 1.a, is it currently operating in New Mexico? ☒ Yes ☐ No
2	If yes to question 1.a, was the existing facility subject to a Notice of Intent (NOI) (20.2.73 NMAC) before submittal of this application? ☐ Yes ☒ No	If yes to question 1.a, was the existing facility subject to a construction permit (20.2.72 NMAC) before submittal of this application? ☒ Yes ☐ No
3	Is the facility currently shut down? ☐ Yes ☒ No	If yes, give month and year of shut down (MM/YY): N/A
4	Was this facility constructed before 8/31/1972 and continuously operated since 1972? ☒ Yes ☐ No	
5	If Yes to question 3, has this facility been modified (see 20.2.72.7.P NMAC) or the capacity increased since 8/31/1972? ☐ Yes ☒ No ☐ N/A	
6	Does this facility have a Title V operating permit (20.2.70 NMAC)? ☒ Yes ☐ No	If yes, the permit No. is: P129-R4
7	Has this facility been issued a No Permit Required (NPR)? ☐ Yes ☒ No	If yes, the NPR No. is: N/A
8	Has this facility been issued a Notice of Intent (NOI)? ☐ Yes ☒ No	If yes, the NOI No. is: N/A
9	Does this facility have a construction permit (20.2.72/20.2.74 NMAC)? ☒ Yes ☐ No	If yes, the permit No. is: 3260-M1
10	Is this facility registered under a General permit (GCP-1, GCP-2, etc.)? ☐ Yes ☒ No	If yes, the register No. is: N/A

Section 1-C: Facility Input Capacity & Production Rate

1	What is the facility's maximum input capacity, specify units (reference here and list capacities in Section 20, if more room is required)			
a	Current	Hourly: 60,417 Mscf	Daily: 1,450 MMscf	Annually: 529,250 MMscf
b	Proposed	Hourly: 60,417 Mscf	Daily: 1,450 MMscf	Annually: 529,250 MMscf
2	What is the facility's maximum production rate, specify units (reference here and list capacities in Section 20, if more room is required)			
a	Current	Hourly: 60,417 Mscf	Daily: 1,450 MMscf	Annually: 529,250 MMscf
b	Proposed	Hourly: 60,417 Mscf	Daily: 1,450 MMscf	Annually: 529,250 MMscf

Section 1-D: Facility Location Information

1	Section: 7	Range: 29E	Township: 26S	County: Eddy	Elevation (ft): 2,900
2	UTM Zone: ☐ 12 or ☒ 13			Datum: ☐ NAD 27 ☐ NAD 83 ☒ WGS 84	
a	UTM E (in meters, to nearest 10 meters): 592,660 m E			UTM N (in meters, to nearest 10 meters): 3,547,910 m N	
b	AND Latitude (deg., min., sec.): 32° 3' 49"			Longitude (deg., min., sec.): -104° 1' 6"	
3	Name and zip code of nearest New Mexico town: Malaga, 88263				
4	Detailed Driving Instructions from nearest NM town (attach a road map if necessary): From Malaga, NM: travel south on Hwy 285, go approximately 12.5 miles, and turn east at mile marker 4 (Whitehorse Road). Drive approximately 3 miles east; the facility will be on the left.				
5	The facility is ~11.5 miles SSE of Malaga, NM.				
6	Status of land at facility (check one): ☒ Private ☐ Indian/Pueblo ☐ Federal BLM ☐ Federal Forest Service ☐ Other (specify)				
7	List all municipalities, Indian tribes, and counties within a ten (10) mile radius (20.2.72.203.B.2 NMAC) of the property on which the facility is proposed to be constructed or operated: Municipalities: None. Indian Tribes: None. Counties: Eddy County, NM; Loving County, TX; Reeves County, TX; Culberson County, TX.				
8	20.2.72 NMAC applications only: Will the property on which the facility is proposed to be constructed or operated be closer than 50 km (31 miles) to other states, Bernalillo County, or a Class I area (see www.env.nm.gov/air-quality/modeling-publications/)? ☐ Yes ☐ No (20.2.72.206.A.7 NMAC) If yes, list all with corresponding distances in kilometers: N/A - This application is being submitted under 20.2.70 NMAC				
9	Name nearest Class I area: Carlsbad Caverns National Park				
10	Shortest distance (in km) from facility boundary to the boundary of the nearest Class I area (to the nearest 10 meters): 35.6 km				
11	Distance (meters) from the perimeter of the Area of Operations (AO is defined as the plant site inclusive of all disturbed lands, including mining overburden removal areas) to nearest residence, school or occupied structure: ~ 1,800 meters				
12	Method(s) used to delineate the Restricted Area: Continuous Fencing “ Restricted Area ” is an area to which public entry is effectively precluded. Effective barriers include continuous fencing, continuous walls, or other continuous barriers approved by the Department, such as rugged physical terrain with steep grade that would require special equipment to traverse. If a large property is completely enclosed by fencing, a restricted area within the property may be identified with signage only. Public roads cannot be part of a Restricted Area.				
13	Does the owner/operator intend to operate this source as a portable stationary source as defined in 20.2.72.7.X NMAC? ☐ Yes ☒ No A portable stationary source is not a mobile source, such as an automobile, but a source that can be installed permanently at one location or that can be re-installed at various locations, such as a hot mix asphalt plant that is moved to different job sites.				
14	Will this facility operate in conjunction with other air regulated parties on the same property? ☒ No ☐ Yes If yes, what is the name and permit number (if known) of the other facility?				

Section 1-E: Proposed Operating Schedule (The 1-E.1 & 1-E.2 operating schedules may become conditions in the permit.)

1	Facility maximum operating ($\frac{\text{hours}}{\text{day}}$): 24	($\frac{\text{days}}{\text{week}}$): 7	($\frac{\text{weeks}}{\text{year}}$): 52	($\frac{\text{hours}}{\text{year}}$): 8760
2	Facility's maximum daily operating schedule (if less than 24 $\frac{\text{hours}}{\text{day}}$)? Start: N/A		☐ AM ☐ PM	End: N/A ☐ AM ☐ PM
3	Month and year of anticipated start of construction: N/A			
4	Month and year of anticipated construction completion: N/A			
5	Month and year of anticipated startup of new or modified facility: N/A			
6	Will this facility operate at this site for more than one year? ☒ Yes ☐ No			

Section 1-F: Other Facility Information

1	Are there any current Notice of Violations (NOV), compliance orders, or any other compliance or enforcement issues related to this facility? ☐ Yes ☒ No If yes, specify: N/A		
a	If yes, NOV date or description of issue: N/A	NOV Tracking No: N/A	
b	Is this application in response to any issue listed in 1-F, 1 or 1a above? ☐ Yes ☒ No If Yes, provide the 1c & 1d info below:		
c	Document Title: N/A	Date: N/A	Requirement # (or page # and paragraph #): N/A
d	Provide the required text to be inserted in this permit: N/A		
2	Is air quality dispersion modeling or modeling waiver being submitted with this application? ☐ Yes ☒ No		
3	Does this facility require an "Air Toxics" permit under 20.2.72.400 NMAC & 20.2.72.502, Tables A and/or B? ☐ Yes ☒ No		
4	Will this facility be a source of federal Hazardous Air Pollutants (HAP)? ☒ Yes ☐ No		
a	If Yes, what type of source? ☐ Major (☐ ≥10 tpy of any single HAP OR ☐ ≥25 tpy of any combination of HAPS) OR ☒ Minor (☒ <10 tpy of any single HAP AND ☒ <25 tpy of any combination of HAPS)		
5	Is any unit exempt under 20.2.72.202.B.3 NMAC? ☐ Yes ☒ No		
a	If yes, include the name of company providing commercial electric power to the facility: <u>N/A</u> Commercial power is purchased from a commercial utility company, which specifically does not include power generated on site for the sole purpose of the user.		

Section 1-G: Streamline Application (This section applies to 20.2.72.300 NMAC Streamline applications only)

1	☐ I have filled out Section 18, "Addendum for Streamline Applications." ☒ N/A (This is not a Streamline application.)
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Section 1-H: Current Title V Information - Required for all applications from TV Sources

(Title V-source required information for all applications submitted pursuant to 20.2.72 NMAC (Minor Construction Permits), or 20.2.74/20.2.79 NMAC (Major PSD/NNSR applications), and/or 20.2.70 NMAC (Title V))

1	Responsible Official (R.O.) (20.2.70.300.D.2 NMAC): Eddie Carreon		Phone: (806) 354-3108
a	R.O. Title: Director of Operations	R.O. e-mail: heriberto_carreon@kindermorgan.com	
b	R. O. Address: 4711 S Western, Amarillo, TX 79109		
2	Alternate Responsible Official (20.2.70.300.D.2 NMAC): Steve Romano		Phone: (713) 420-6244
a	A. R.O. Title: Vice President of Operations	A. R.O. e-mail: steven_romano@kindermorgan.com	
b	A. R. O. Address: 1001 Louisiana, Houston, TX 77002		
3	Company's Corporate or Partnership Relationship to any other Air Quality Permittee (List the names of any companies that have operating (20.2.70 NMAC) permits and with whom the applicant for this permit has a corporate or partnership relationship): El Paso Natural Gas Company, L.L.C. was formerly named "El Paso Natural Gas Company" (until 8/6/2012); both names may appear on operating permits, and refer to the same company		
4	Name of Parent Company ("Parent Company" means the primary name of the organization that owns the company to be permitted wholly or in part.): Kinder Morgan, Inc.		
a	Address of Parent Company: 1001 Louisiana Street; Suite 1000, Houston, TX 77002		
5	Names of Subsidiary Companies ("Subsidiary Companies" means organizations, branches, divisions or subsidiaries, which are owned, wholly or in part, by the company to be permitted.): N/A – El Paso Natural Gas Company, L.L.C. has no subsidiaries.		
6	Telephone numbers & names of the owners' agents and site contacts familiar with plant operations: Richard Najera (575) 234-5407 and Richard Duarte (505) 831-7763		

7	Affected Programs to include Other States, local air pollution control programs (i.e. Bernalillo) and Indian tribes: Will the property on which the facility is proposed to be constructed or operated be closer than 80 km (50 miles) from other states, local pollution control programs, and Indian tribes and pueblos (20.2.70.402.A.2 and 20.2.70.7.B)? If yes, state which ones and provide the distances in kilometers: Texas ~7 km
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Section 1-I – Submittal Requirements

Each 20.2.73 NMAC (NOI), a 20.2.70 NMAC (Title V), a 20.2.72 NMAC (NSR minor source), or 20.2.74 NMAC (PSD) application package shall consist of the following:

Hard Copy Submittal Requirements:

- 1) One hard copy **original signed and notarized application package printed double sided 'head-to-toe' 2-hole punched** as we bind the document on top, not on the side; except Section 2 (landscape tables), which should be **head-to-head**. Please use **numbered tab separators** in the hard copy submittal(s) as this facilitates the review process. For NOI submittals only, hard copies of UA1, Tables 2A, 2D & 2F, Section 3 and the signed Certification Page are required. **Please include a copy of the check on a separate page.**
- 2) If the application is for a minor NSR, PSD, NNSR, or Title V application, include one working hard **copy** for Department use. This **copy** should be printed in book form, 3-hole punched, and **must be double sided**. Note that this is in addition to the head-to-toe 2-hole punched copy required in 1) above. Minor NSR Technical Permit revisions (20.2.72.219.B NMAC) only need to fill out Sections 1-A, 1-B, 3, and should fill out those portions of other Section(s) relevant to the technical permit revision. TV Minor Modifications need only fill out Sections 1-A, 1-B, 1-H, 3, and those portions of other Section(s) relevant to the minor modification. NMED may require additional portions of the application to be submitted, as needed.
- 3) The entire NOI or Permit application package, including the full modeling study, should be submitted electronically. Electronic files for applications for NOIs, any type of General Construction Permit (GCP), or technical revisions to NSRs must be submitted with compact disk (CD) or digital versatile disc (DVD). For these permit application submittals, **two CD** copies are required (in sleeves, not crystal cases, please), with additional CD copies as specified below. NOI applications require only a **single CD** submittal. Electronic files for other New Source Review (construction) permits/permit modifications or Title V permits/permit modifications can be submitted on CD/DVD or sent through AQB's secure file transfer service.

Electronic files sent by (check one):

☐ CD/DVD attached to paper application

☒ secure electronic transfer. Air Permit Contact Name Adam Erenstein, Email aerenstein@trinityconsultants.com

Phone number (505) 266-6611.

a. If the file transfer service is chosen by the applicant, after receipt of the application, the Bureau will email the applicant with instructions for submitting the electronic files through a secure file transfer service. Submission of the electronic files through the file transfer service needs to be completed within 3 business days after the invitation is received, so the applicant should ensure that the files are ready when sending the hard copy of the application. The applicant will not need a password to complete the transfer. **Do not use the file transfer service for NOIs, any type of GCP, or technical revisions to NSR permits.**

- 4) Optionally, the applicant may submit the files with the application on compact disk (CD) or digital versatile disc (DVD) following the instructions above and the instructions in 5 for applications subject to PSD review.
- 5) If **air dispersion modeling** is required by the application type, include the **NMED Modeling Waiver** and/or electronic air dispersion modeling report, input, and output files. The dispersion modeling **summary report only** should be submitted as hard copy(ies) unless otherwise indicated by the Bureau.
- 6) If the applicant submits the electronic files on CD and the application is subject to PSD review under 20.2.74 NMAC (PSD) or NNSR under 20.2.79 NMC include,
 - a. one additional CD copy for US EPA,
 - b. one additional CD copy for each federal land manager affected (NPS, USFS, FWS, USDI) and,
 - c. one additional CD copy for each affected regulatory agency other than the Air Quality Bureau.

If the application is submitted electronically through the secure file transfer service, these extra CDs do not need to be submitted.

Electronic Submittal Requirements [in addition to the required hard copy(ies)]:

- 1) All required electronic documents shall be submitted as 2 separate CDs or submitted through the AQB secure file transfer service. Submit a single PDF document of the entire application as submitted and the individual documents comprising the application.

- 2) The documents should also be submitted in Microsoft Office compatible file format (Word, Excel, etc.) allowing us to access the text and formulas in the documents (copy & paste). Any documents that cannot be submitted in a Microsoft Office compatible format shall be saved as a PDF file from within the electronic document that created the file. If you are unable to provide Microsoft office compatible electronic files or internally generated PDF files of files (items that were not created electronically: i.e. brochures, maps, graphics, etc.), submit these items in hard copy format. We must be able to review the formulas and inputs that calculated the emissions.
- 3) It is preferred that this application form be submitted as 4 electronic files (**3 MSWord docs**: Universal Application section 1 [UA1], Universal Application section 3-19 [UA3], and Universal Application 4, the modeling report [UA4]) and **1 Excel file** of the tables (Universal Application section 2 [UA2]). Please include as many of the 3-19 Sections as practical in a single MS Word electronic document. Create separate electronic file(s) if a single file becomes too large or if portions must be saved in a file format other than MS Word.
- 4) The **electronic file names** shall be a maximum of 25 characters long (including spaces, if any). The format of the electronic Universal Application shall be in the format: "A-3423-FacilityName". The "A" distinguishes the file as an application submittal, as opposed to other documents the Department itself puts into the database. Thus, all electronic application submittals should begin with "A-". Modifications to existing facilities should use the **core permit number** (i.e. '3423') the Department assigned to the facility as the next 4 digits. Use 'XXXX' for new facility applications. The format of any separate electronic submittals (additional submittals such as non-Word attachments, re-submittals, application updates) and Section document shall be in the format: "A-3423-9-description", where "9" stands for the **section #** (in this case Section 9-Public Notice). Please refrain, as much as possible, from submitting any scanned documents as this file format is extremely large, which uses up too much storage capacity in our database. Please take the time to fill out the **header information** throughout all submittals as this will identify any loose pages, including the Application Date (date submitted) & Revision number (0 for original, 1, 2, etc.; which will help keep track of subsequent partial update(s) to the original submittal. Do not use special symbols (#, @, etc.) in file names. The footer information should not be modified by the applicant.

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Table 2-A: Regulated Emission Sources

Unit and stack numbering must correspond throughout the application package. If applying for a NOI under 20.2.73 NMAC, equipment exemptions under 2.72.202 NMAC do not apply.

Unit Number ¹	Source Description	Make	Model #	Serial #	Manufacturer's Rated Capacity ³ (Specify Units)	Requested Permitted Capacity ³ (Specify Units)	Date of Manufacture ²	Controlled by Unit #	Source Classification Code (SCC)	For Each Piece of Equipment, Check One	RICE Ignition Type (CI, SI, 4SLB, 4SRB, 2SLB) ⁴	Replacing Unit No.
							Date of Construction/Reconstruction ²	Emissions vented to Stack #				
A-01	Regenerative Cycle Turbine	General Electric	M3712R	95025	7150	7150	1953 Pre-2006	N/A A-01	20200209	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified ☐ To Be Removed ☐ Replacement Unit ☐ To be Replaced	N/A	N/A
A-02	Regenerative Cycle Turbine	General Electric	M3712R	95053	7150	7150	1953 Pre-2006	N/A A-02	20200209	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified ☐ To Be Removed ☐ Replacement Unit ☐ To be Replaced	N/A	N/A
A-03	Regenerative Cycle Turbine	General Electric	M3712R	95055	7150	7150	1953 Pre-2006	N/A A-03	20200209	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified ☐ To Be Removed ☐ Replacement Unit ☐ To be Replaced	N/A	N/A
F-001	Facility-Wide Fugitives	N/A	N/A	N/A	N/A	N/A	- -	- -	31088811	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified ☐ To Be Removed ☐ Replacement Unit ☐ To be Replaced	N/A	N/A
SSM	SSM Emissions	N/A	N/A	N/A	N/A	N/A	- -	- -	31088811	☐ Existing (unchanged) ☐ New/Additional ☒ To Be Modified ☐ To Be Removed ☐ Replacement Unit ☐ To be Replaced	N/A	N/A
										☐ Existing (unchanged) ☐ New/Additional ☐ To Be Modified ☐ To Be Removed ☐ Replacement Unit ☐ To be Replaced		
										☐ Existing (unchanged) ☐ New/Additional ☐ To Be Modified ☐ To Be Removed ☐ Replacement Unit ☐ To be Replaced		
										☐ Existing (unchanged) ☐ New/Additional ☐ To Be Modified ☐ To Be Removed ☐ Replacement Unit ☐ To be Replaced		
										☐ Existing (unchanged) ☐ New/Additional ☐ To Be Modified ☐ To Be Removed ☐ Replacement Unit ☐ To be Replaced		
										☐ Existing (unchanged) ☐ New/Additional ☐ To Be Modified ☐ To Be Removed ☐ Replacement Unit ☐ To be Replaced		
										☐ Existing (unchanged) ☐ New/Additional ☐ To Be Modified ☐ To Be Removed ☐ Replacement Unit ☐ To be Replaced		
										☐ Existing (unchanged) ☐ New/Additional ☐ To Be Modified ☐ To Be Removed ☐ Replacement Unit ☐ To be Replaced		
										☐ Existing (unchanged) ☐ New/Additional ☐ To Be Modified ☐ To Be Removed ☐ Replacement Unit ☐ To be Replaced		
										☐ Existing (unchanged) ☐ New/Additional ☐ To Be Modified ☐ To Be Removed ☐ Replacement Unit ☐ To be Replaced		

¹ Unit numbers must correspond to unit numbers in the previous permit unless a complete cross reference table of all units in both permits is provided.

² Specify dates required to determine regulatory applicability.

³ To properly account for power conversion efficiencies, generator set rated capacity shall be reported as the rated capacity of the engine in horsepower, not the kilowatt capacity of the generator set.

⁴ "4SLB" means four stroke lean burn engine, "4SRB" means four stroke rich burn engine, "2SLB" means two stroke lean burn engine, "CI" means compression ignition, and "SI" means spark ignition

Table 2-B: Insignificant Activities¹ (20.2.70 NMAC) OR Exempted Equipment (20.2.72 NMAC)

All 20.2.70 NMAC (Title V) applications must list all Insignificant Activities in this table. All 20.2.72 NMAC applications must list Exempted Equipment in this table. If equipment listed on this table is exempt under 20.2.72.202.B.5, include emissions calculations and emissions totals for 202.B.5 "similar functions" units, operations, and activities in Section 6, Calculations. Equipment and activities exempted under 20.2.72.202 NMAC may not necessarily be Insignificant under 20.2.70 NMAC (and vice versa). Unit & stack numbering must be consistent throughout the application package. Per Exemptions Policy 02-012.00 (see http://www.env.nm.gov/aqb/permit/aqb_pol.html), 20.2.72.202.B NMAC Exemptions do not apply, but 20.2.72.202.A NMAC exemptions do apply to NOI facilities under 20.2.73 NMAC. List 20.2.72.301.D.4 NMAC Auxiliary Equipment for Streamline applications in Table 2-A. The List of Insignificant Activities (for TV) can be found online at <http://www.env.nm.gov/aqb/forms/InsignificantListTitleV.pdf>. TV sources may elect to enter both TV Insignificant Activities and Part 72 Exemptions on this form.

Unit Number	Source Description	Manufacturer	Model No.	Max Capacity	List Specific 20.2.72.202 NMAC Exemption (e.g. 20.2.72.202.B.5)	Date of Manufacture /Reconstruction ²	For Each Piece of Equipment, Check One
			Serial No.	Capacity Units	Insignificant Activity citation (e.g. IA List Item #1.a)	Date of Installation /Construction ²	
T-001	Lube Oil Storage Tank	-	-	6,300		Unknown	☒ Existing (unchanged) ☐ To be Removed
			-	gal	IA List Item #5	Jan-53	☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
T-002	Used Oil Tank	-	-	500		Unknown	☒ Existing (unchanged) ☐ To be Removed
			-	gal	IA List Item #5	Jan-82	☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
T-003	Used Oil Tank	-	-	500		Unknown	☒ Existing (unchanged) ☐ To be Removed
			-	gal	IA List Item #5	Jan-94	☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
T-004	Process vessel	-	-	250		Unknown	☒ Existing (unchanged) ☐ To be Removed
			-	gal	IA List Item #5	Jan-82	☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
T-005	Used Oil Tank	-	-	2,000		Unknown	☒ Existing (unchanged) ☐ To be Removed
			-	gal	IA List Item #5	Jan-03	☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
T-006	Used Oil Tank	-	-	110		Unknown	☒ Existing (unchanged) ☐ To be Removed
			-	gal	IA List Item #5	Jan-53	☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
T-007	Used Oil Tank	-	-	110		Unknown	☒ Existing (unchanged) ☐ To be Removed
			-	gal	IA List Item #5	Jan-53	☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
T-008	Used Oil Tank	-	-	110		Unknown	☒ Existing (unchanged) ☐ To be Removed
			-	gal	IA List Item #5	Jan-53	☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
T-009	Used Oil Tank	-	-	1000		-	☐ Existing (unchanged) ☒ To be Removed
			-	gal	IA List Item #5	-	☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
							☐ Existing (unchanged) ☐ To be Removed
							☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
							☐ Existing (unchanged) ☐ To be Removed
							☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
							☐ Existing (unchanged) ☐ To be Removed
							☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
							☐ Existing (unchanged) ☐ To be Removed
							☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced

¹ Insignificant activities exempted due to size or production rate are defined in 20.2.70.300.D.6, 20.2.70.7.Q NMAC, and the NMED/AQB List of Insignificant Activities, dated September 15, 2008. Emissions from these insignificant activities do not need to be reported, unless specifically requested.

² Specify date(s) required to determine regulatory applicability.

Table 2-C: Emissions Control Equipment

Unit and stack numbering must correspond throughout the application package. Only list control equipment for TAPs if the TAP's maximum uncontrolled emissions rate is over its respective threshold as listed in 20.2.72 NMAC, Subpart V, Tables A and B. In accordance with 20.2.72.203.A(3) and (8) NMAC, 20.2.70.300.D(5)(b) and (e) NMAC, and 20.2.73.200.B(7) NMAC, the permittee shall report all control devices and list each pollutant controlled by the control device regardless if the applicant takes credit for the reduction in emissions.

[illegible]

☒ This Table was intentionally left blank because it would be identical to Table 2-E.

[illegible]

¹**Condensable Particulate Matter:** Include condensable particulate matter emissions for PM10 and PM2.5 if the source is a combustion source. Do not include condensable particulate matter for PM unless PM is set equal to PM10 and PM2.5. Particulate matter (PM) is not subject to an ambient air quality standard, but PM is a regulated air pollutant under PSD (20.2.74 NMAC) and Title V (20.2.70 NMAC).

All applications for facilities that have emissions during routine or predictable startup, shutdown or scheduled maintenance (SSM)¹, including NOI applications, must include in this table the Maximum Emissions during routine or predictable startup, shutdown and scheduled maintenance (20.2.7 NMAC, 20.2.72.203.A.3 NMAC, 20.2.73.200.D.2 NMAC). In Section 6 and 6a, provide emissions calculations for all SSM emissions reported in this table. Refer to "Guidance for Submittal of Startup, Shutdown, Maintenance Emissions in Permit Applications" (https://www.env.nm.gov/aqb/permit/aqb_pol.html) for more detailed instructions. Numbers shall be expressed to at least 2 decimal points (e.g. 0.41, 1.41, or 1.41E-4).

² **Condensable Particulate Matter:** Include condensable particulate matter emissions for PM10 and PM2.5 if the source is a combustion source. Do not include condensable particulate matter for PM unless PM is set equal to PM10 and PM2.5. Particulate matter (PM) is not subject to an ambient air quality standard, but it is a regulated air pollutant under PSD (20.2.74 NMAC) and Title V (20.2.70 NMAC).

Use this table to list stack emissions (requested allowable) from split and combined stacks. List Toxic Air Pollutants (TAPs) and Hazardous Air Pollutants (HAPs) in Table 2-I. List all fugitives that are associated with the normal, routine, and non-emergency operation of the facility. Unit and stack numbering must correspond throughout the application package. Refer to Table 2-E for instructions on use of the “-” symbol and on significant figures.

[illegible]

Unit and stack numbering must correspond throughout the application package. Include the stack exit conditions for each unit that emits from a stack, including blowdown venting parameters and tank emissions. If the facility has multiple operating scenarios, complete a separate Table 2-H for each scenario and, for each, type scenario name here:

[illegible]

Table 2-I: Stack Exit and Fugitive Emission Rates for HAPs and TAPs

In the table below, report the Potential to Emit for each HAP from each regulated emission unit listed in Table 2-A, only if the entire facility emits the HAP at a rate greater than or equal to one (1) ton per year. For each such emission unit, HAPs shall be reported to the nearest 0.1 tpy. Each facility-wide Individual HAP total and the facility-wide Total HAPs shall be the sum of all HAP sources calculated to the nearest 0.1 ton per year. Per 20.2.72.403.A.1 NMAC, facilities not exempt [see 20.2.72.402.C NMAC] from TAP permitting shall report each TAP that has an uncontrolled emission rate in excess of its pounds per hour screening level specified in 20.2.72.502 NMAC. TAPs shall be reported using one more significant figure than the number of significant figures shown in the pound per hour threshold corresponding to the substance. Use the HAP nomenclature as it appears in Section 112 (b) of the 1990 CAAA and the TAP nomenclature as it listed in 20.2.72.502 NMAC. Include tank-flashing emissions estimates of HAPs in this table. For each HAP or TAP listed, fill all cells in this table with the emission numbers or a "-" symbol. A "-" symbol indicates that emissions of this pollutant are not expected or the pollutant is emitted in a quantity less than the threshold amounts described above.

Stack No.	Unit No.(s)	Total HAPs		Acetaldehyde ☒ HAP or ☐ TAP		Formaldehyde ☒ HAP or ☐ TAP		Provide Pollutant Name Here ☐ HAP or ☐ TAP		Provide Pollutant Name Here ☐ HAP or ☐ TAP		Provide Pollutant Name Here ☐ HAP or ☐ TAP		Provide Pollutant Name Here ☐ HAP or ☐ TAP		Provide Pollutant Name Here ☐ HAP or ☐ TAP		Provide Pollutant Name Here ☐ HAP or ☐ TAP	
		lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
A-01	A-01	0.65	2.85	0.27	1.20	0.27	1.17												
A-02	A-02	0.65	2.85	0.27	1.20	0.27	1.17												
A-03	A-03	0.65	2.85	0.27	1.20	0.27	1.17												
N/A	F-001	0.0054	0.024	-	-	-	-												
N/A	SSM/M	*	0.069	-	-	-	-												
Totals:		1.96	8.64	0.82	3.59	0.80	3.50												

Specify fuel characteristics and usage. Unit and stack numbering must correspond throughout the application package.

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For each tank, list the liquid(s) to be stored in each tank. If it is expected that a tank may store a variety of hydrocarbon liquids, enter "mixed hydrocarbons" in the Composition column for that tank and enter the corresponding data of the most volatile liquid to be stored in the tank. If tank is to be used for storage of different materials, list all the materials in the "All Calculations" attachment, run the newest version of TANKS on each, and use the material with the highest emission rate to determine maximum uncontrolled and requested allowable emissions rate. The permit will specify the most volatile category of liquids that may be stored in each tank. Include appropriate tank-flashing modeling input data. Use additional sheets if necessary. Unit and stack numbering must correspond throughout the application package.

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Include appropriate tank-flashing modeling input data. Use an addendum to this table for unlisted data categories. Unit and stack numbering must correspond throughout the application package. Use additional sheets if necessary. See reference Table 2-L2. Note: 1.00 bbl = 10.159 M3 = 42.0 gal

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Table 2-L2: Liquid Storage Tank Data Codes Reference Table

Roof Type	Seal Type, Welded Tank Seal Type		Seal Type, Riveted Tank Seal Type		Roof, Shell Color	Paint Condition
FX: Fixed Roof	Mechanical Shoe Seal	Liquid-mounted resilient seal	Vapor-mounted resilient seal	Seal Type	WH: White	Good
IF: Internal Floating Roof	A: Primary only	A: Primary only	A: Primary only	A: Mechanical shoe, primary only	AS: Aluminum (specular)	Poor
EF: External Floating Roof	B: Shoe-mounted secondary	B: Weather shield	B: Weather shield	B: Shoe-mounted secondary	AD: Aluminum (diffuse)	
P: Pressure	C: Rim-mounted secondary	C: Rim-mounted secondary	C: Rim-mounted secondary	C: Rim-mounted secondary	LG: Light Gray	
Note: 1.00 bbl = 0.159 M ³ = 42.0 gal					MG: Medium Gray	
					BL: Black	
					OT: Other (specify)	

Note: $1.00 \text{ bbl} = 0.159 \text{ M}^3 = 42.0 \text{ gal}$

Table 2-M: Materials Processed and Produced (Use additional sheets as necessary.)

[illegible]

Enter Continuous Emissions Measurement (CEM) Data in this table. If CEM data will be used as part of a federally enforceable permit condition, or used to satisfy the requirements of a state or federal regulation, include a copy of the CEM's manufacturer specification sheet in the Information Used to Determine Emissions attachment. Unit and stack numbering must correspond throughout the application package. Use additional sheets if necessary.

[illegible]

Table 2-O: Parametric Emissions Measurement Equipment

Unit and stack numbering must correspond throughout the application package. Use additional sheets if necessary.

[illegible]

Table 2-P: Greenhouse Gas Emissions

Applications submitted under 20.2.70, 20.2.72, & 20.2.74 NMAC are required to complete this Table. Power plants, Title V major sources, and PSD major sources must report and calculate all GHG emissions for each unit. Applicants must report potential emission rates in short tons per year (see Section 6.a for assistance). Include GHG emissions during Startup, Shutdown, and Scheduled Maintenance in this table. For minor source facilities that are not power plants, are not Title V, or are not PSD, there are three options for reporting GHGs 1) report GHGs for each individual piece of equipment; 2) report all GHGs from a group of unit types, for example report all combustion source GHGs as a single unit and all venting GHG as a second separate unit; OR 3) check the following box ☐ By checking this box, the applicant acknowledges the total CO₂e emissions are less than 75,000 tons per year.

		CO ₂ ton/yr	N ₂ O ton/yr	CH ₄ ton/yr	SF ₆ ton/yr	PFC/HFC ton/yr ²									Total GHG Mass Basis ton/yr ⁴	Total CO ₂ e ton/yr ⁵
Unit No.	GWP _s ¹	1	265	28	22,800	footnote 3										
A-01	mass GHG	31643.47	0.060	0.60	-	-									31644.12	
	CO ₂ e	31643.47	15.78	16.67	-	-										31675.91
A-02	mass GHG	31643.47	0.060	0.60	-	-									31644.12	
	CO ₂ e	31643.47	15.78	16.67	-	-										31675.91
A-03	mass GHG	31643.47	0.060	0.60	-	-									31644.12	
	CO ₂ e	31643.47	15.78	16.67	-	-										31675.91
F-001	mass GHG	1.11	-	50.81											51.92	
	CO ₂ e	1.11	-	1422.71												1423.82
SSM/M	mass GHG	10.00	-	456.85											466.85	
	CO ₂ e	10.00	-	11421.32												11431.32
	mass GHG															
	CO ₂ e															
	mass GHG															
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	CO ₂ e															
	mass GHG															
	CO ₂ e															
	mass GHG															
	CO ₂ e															
Total	mass GHG														95451.15	
	CO ₂ e															107882.88

¹ GWP (Global Warming Potential): Applicants must use the most current GWPs codified in Table A-1 of 40 CFR part 98. GWPs are subject to change, therefore, applicants need to check 40 CFR 98 to confirm GWP values.

² For HFCs or PFCs describe the specific HFC or PFC compound and use a separate column for each individual compound.

³ For each new compound, enter the appropriate GWP for each HFC or PFC compound from Table A-1 in 40 CFR 98.

⁴ Green house gas emissions on a **mass basis** is the ton per year green house gas emission before adjustment with its GWP.

⁵ CO₂e means Carbon Dioxide Equivalent and is calculated by multiplying the TPY mass emissions of the green house gas by its GWP. GWP have been updated within this application to reflect current GWP.

Section 3

Application Summary

The **Application Summary** shall include a brief description of the facility and its process, the type of permit application, the applicable regulation (i.e. 20.2.72.200.A.X, or 20.2.73 NMAC) under which the application is being submitted, and any air quality permit numbers associated with this site. If this facility is to be collocated with another facility, provide details of the other facility including permit number(s). In case of a revision or modification to a facility, provide the lowest level regulatory citation (i.e. 20.2.72.219.B.1.d NMAC) under which the revision or modification is being requested. Also describe the proposed changes from the original permit, how the proposed modification will affect the facility's operations and emissions, de-bottlenecking impacts, and changes to the facility's major/minor status (both PSD & Title V).

The **Process Summary** shall include a brief description of the facility and its processes.

Startup, Shutdown, and Maintenance (SSM) routine or predictable emissions: Provide an overview of how SSM emissions are accounted for in this application. Refer to "Guidance for Submittal of Startup, Shutdown, Maintenance Emissions in Permit Applications (http://www.env.nm.gov/aqb/permit/app_form.html) for more detailed instructions on SSM emissions.

This application is being submitted for the renewal of Operating Permit P129-R4 for Pecos River Compressor Station. The facility is owned and operated by El Paso Natural Gas Company, LLC (EPNG), a Kinder Morgan company. This submittal is pursuant to 20.2.70.300.B.2 NMAC, which requires a Title V application to be submitted at least twelve months prior to the expiration of the current permit. Title V Permit P129-R4 expires on March 4, 2026.

Pecos River Compressor Station is a compressor station, which compresses natural gas for transportation purposes. Equipment at this facility includes three General Electric M3712R regenerative cycle turbines (A-01, A-02 and A-03). Other regulated emission sources include facility-wide fugitives (F-001) and startup, shutdown and routine maintenance (SSM) emissions. Insignificant activities include eight storage tanks (T-001, T-002, T-003, T-004, T-005, T-006, T-007 and T-008). The insignificant tank, T-009, will be removed with this application.

Emissions have been updated throughout the application to incorporate new global warming potentials for CH₄ and N₂O. Based on guidance from NMED, Malfunction emissions have been removed with this application. Finally, contact and administrative information has been updated where applicable.

Additionally, Pecos River Compressor Station recently became subject to the Ozone Precursor rule under 20.2.50 NMAC to reduce ozone precursor emissions. EPNG elected to comply with the emission standards through an Alternative Compliance Plan (ACP) and an Alternate Emission Standard (AES), both of which have been approved by the Department. The ACP and AES address CO and NO_x emissions from all subject units in the Kinder Morgan fleet. At Pecos River Compressor Station specifically, the three GE turbines will address the lowering NO_x and CO emissions. Per the submittal schedule provided by NMED, EPNG will be submitting its NSR revision application for Pecos River Compressor Station by April 2026. Once the NSR is issued, the changes will be incorporated into the Title V permit within 12-months of the change. Copies of the ACP and AES are included for reference under Section 20.

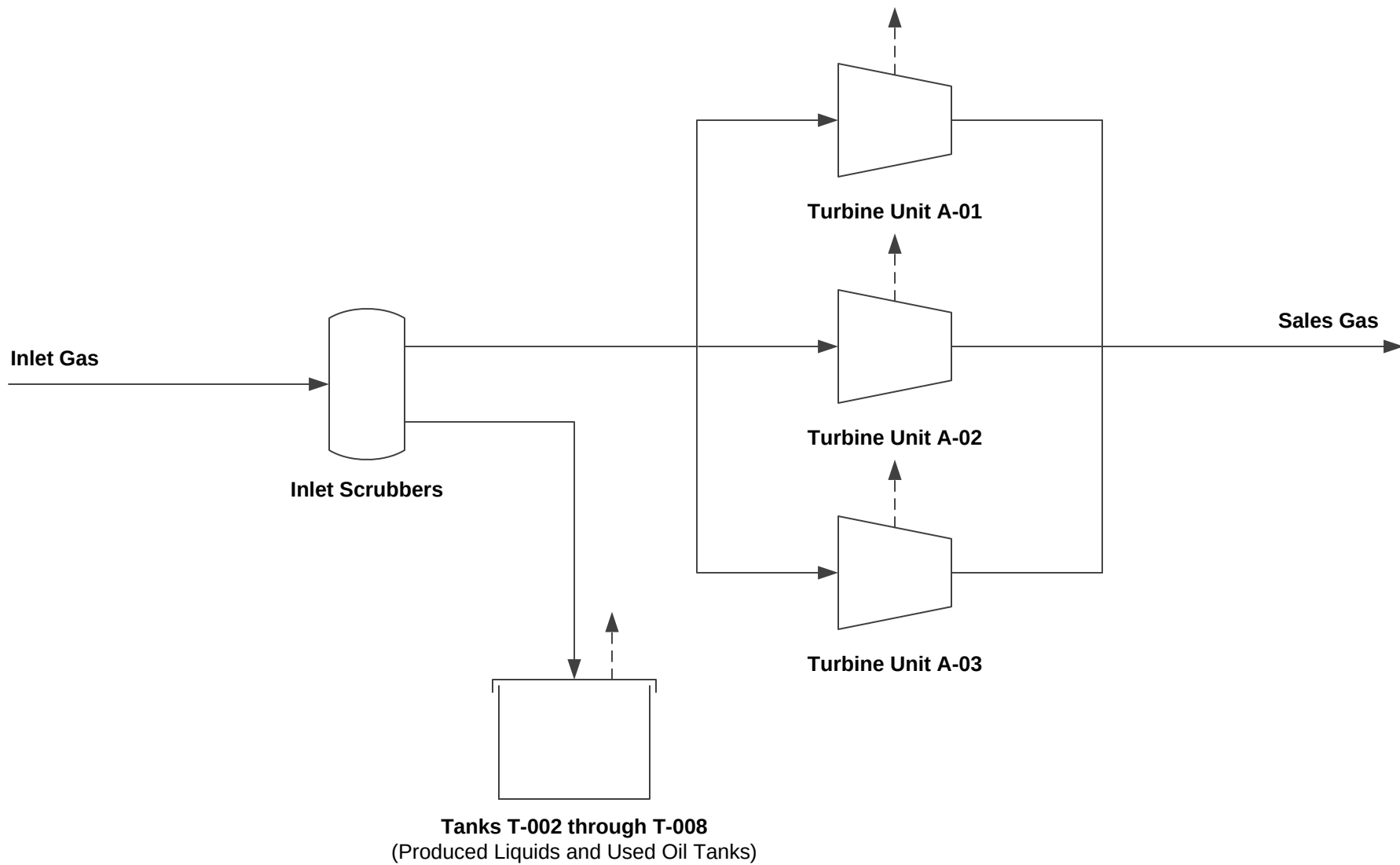
Pecos River Compressor Station is a Title V major facility. The facility is also a major source under the Prevention of Significant Deterioration (PSD) rules. However, the facility has not completed a major modification and, therefore, does not require a PSD permit. There will be no change to the status of the facility under these rules with this renewal. The facility will also remain a minor source of hazardous air pollutants (HAPs).

Section 4

Process Flow Sheet

A **process flow sheet** and/or block diagram indicating the individual equipment, all emission points and types of control applied to those points. The unit numbering system should be consistent throughout this application.

A process flow sheet is attached.



Legend

Emission Source 

**Process Flow Diagram
Pecos River Compressor Station**

Section 5

Plot Plan Drawn To Scale

A **plot plan drawn to scale** showing emissions points, roads, structures, tanks, and fences of property owned, leased, or under direct control of the applicant. This plot plan must clearly designate the restricted area as defined in UA1, Section 1-D.12. The unit numbering system should be consistent throughout this application.

A plot plan is attached.

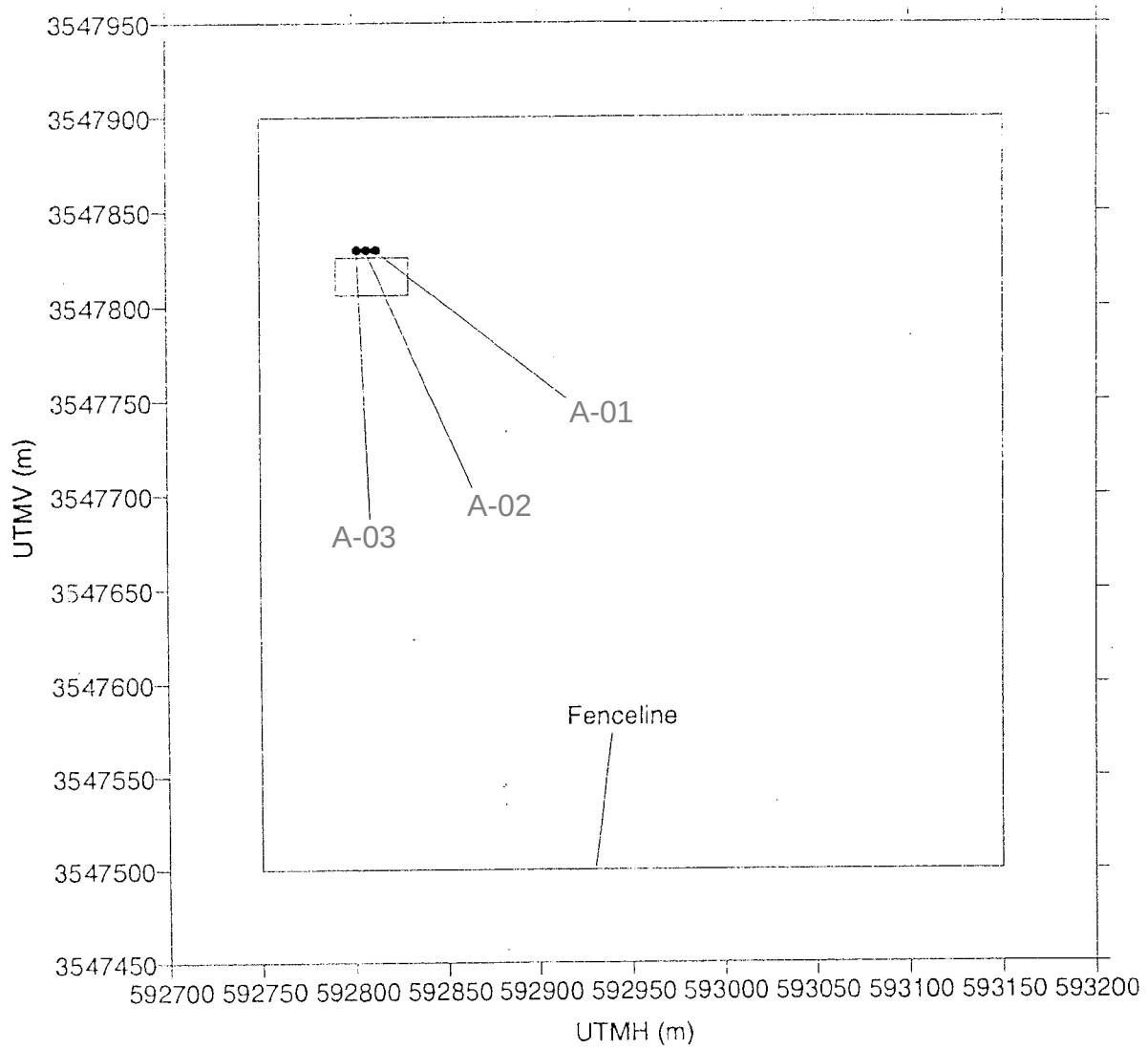


Figure B-1
Pecos River Compressor Station
Site Layout

Section 6

All Calculations

Show all calculations used to determine both the hourly and annual controlled and uncontrolled emission rates. All calculations shall be performed keeping a minimum of three significant figures. Document the source of each emission factor used (if an emission rate is carried forward and not revised, then a statement to that effect is required). If identical units are being permitted and will be subject to the same operating conditions, submit calculations for only one unit and a note specifying what other units to which the calculations apply. All formulas and calculations used to calculate emissions must be submitted. The "Calculations" tab in the UA2 has been provided to allow calculations to be linked to the emissions tables. Add additional "Calc" tabs as needed. If the UA2 or other spread sheets are used, all calculation spread sheet(s) shall be submitted electronically in Microsoft Excel compatible format so that formulas and input values can be checked. Format all spread sheets and calculations such that the reviewer can follow the logic and verify the input values. Define all variables. If calculation spread sheets are not used, provide the original formulas with defined variables. Additionally, provide subsequent formulas showing the input values for each variable in the formula. All calculations, including those calculations are imbedded in the Calc tab of the UA2 portion of the application, the printed Calc tab(s), should be submitted under this section.

Tank Flashing Calculations: The information provided to the AQB shall include a discussion of the method used to estimate tank-flashing emissions, relative thresholds (i.e., NOI, permit, or major source (NSPS, PSD or Title V)), accuracy of the model, the input and output from simulation models and software, all calculations, documentation of any assumptions used, descriptions of sampling methods and conditions, copies of any lab sample analysis. If Hysis is used, all relevant input parameters shall be reported, including separator pressure, gas throughput, and all other relevant parameters necessary for flashing calculation.

SSM Calculations: It is the applicant's responsibility to provide an estimate of SSM emissions or to provide justification for not doing so. In this Section, provide emissions calculations for Startup, Shutdown, and Routine Maintenance (SSM) emissions listed in the Section 2 SSM and/or Section 22 GHG Tables and the rational for why the others are reported as zero (or left blank in the SSM/GHG Tables). Refer to "Guidance for Submittal of Startup, Shutdown, Maintenance Emissions in Permit Applications (http://www.env.nm.gov/aqb/permit/app_form.html) for more detailed instructions on calculating SSM emissions. If SSM emissions are greater than those reported in the Section 2, Requested Allowables Table, modeling may be required to ensure compliance with the standards whether the application is NSR or Title V. Refer to the Modeling Section of this application for more guidance on modeling requirements.

Glycol Dehydrator Calculations: The information provided to the AQB shall include the manufacturer's maximum design recirculation rate for the glycol pump. If GRI-Glycalc is used, the full input summary report shall be included as well as a copy of the gas analysis that was used.

Road Calculations: Calculate fugitive particulate emissions and enter haul road fugitives in Tables 2-A, 2-D and 2-E for:

1. If you transport raw material, process material and/or product into or out of or within the facility and have PER emissions greater than 0.5 tpy.
2. If you transport raw material, process material and/or product into or out of the facility more frequently than one round trip per day.

Significant Figures:

- A. All emissions standards are deemed to have at least two significant figures, but not more than three significant figures.
- B. At least 5 significant figures shall be retained in all intermediate calculations.
- C. In calculating emissions to determine compliance with an emission standard, the following rounding off procedures shall be used:
 - (1) If the first digit to be discarded is less than the number 5, the last digit retained shall not be changed;
 - (2) If the first digit discarded is greater than the number 5, or if it is the number 5 followed by at least one digit other than the number zero, the last figure retained shall be increased by one unit; **and**
 - (3) If the first digit discarded is exactly the number 5, followed only by zeros, the last digit retained shall be rounded upward if it is an odd number, but no adjustment shall be made if it is an even number.
 - (4) The final result of the calculation shall be expressed in the units of the standard.

Control Devices: In accordance with 20.2.72.203.A(3) and (8) NMAC, 20.2.70.300.D(5)(b) and (e) NMAC, and 20.2.73.200.B(7) NMAC, the permittee shall report all control devices and list each pollutant controlled by the control device

regardless if the applicant takes credit for the reduction in emissions. The applicant can indicate in this section of the application if they chose to not take credit for the reduction in emission rates. For notices of intent submitted under 20.2.73 NMAC, only uncontrolled emission rates can be considered to determine applicability unless the state or federal Acts require the control. This information is necessary to determine if federally enforceable conditions are necessary for the control device, and/or if the control device produces its own regulated pollutants or increases emission rates of other pollutants.

Emission sources at Pecos River Compressor Station include the following:

- Three GE M3712R regenerative cycle turbines
- Facility-wide fugitive emissions
- Startup, shutdown, routine maintenance emissions

Emission calculations are reproduced from previous applications for all sources. These emissions have been previously reviewed and approved.

General Electric M3712R Turbines (A-01, A-02 and A-03)

The emission rates for NO_x, CO and VOCs were calculated using testing data. Test data was taken from various GE M3712R turbines and used to create an emission factor. The SO₂ emission rate was calculated using a maximum sulfur content in the fuel of 5grains/100scf. HAP emissions were calculated using GRI-HAPCalc 3.01. As a conservative measure, the ISO horsepower was used for these calculations instead of the site-rated horsepower. A safety factor was added to the VOC emission rate as a conservative measure. PM emissions were calculated using the Total PM emission factor in AP-42 Table 3.1-2.

Greenhouse gas emission rates were updated using the current emission factors (in kg/MMBtu) from Tables C-1 and C-2 in 40 CFR 98 Subpart C and the fuel consumption rate of the turbines (in MMBtu/hr).

Fugitives (F-001)

The fugitive emissions for the facility were calculated using emission factors from Table 2-3 of the 1993 *Protocol for Equipment Leak Emission Estimates* (EPA-453/R-93-026). These emission factors provide a total organic carbon (TOC) emission rate. A representative gas analysis was used to estimate the VOC, methane, and CO₂ emission rates based on the TOC emission rate. Since the available gas analysis for the facility does not include a breakdown of HAP constituents, GRI-HAPCalc was used to determine the fugitive HAP emission rate.

Startup, Shutdown and Maintenance (SSM)

Facility and turbine blowdown emissions (unit SSM) were calculated using the predicted number of scheduled and unscheduled SSM events, the volume of gas blown down per event (based on historical data), and nominal weight percentages. HAP emissions were calculations assuming the same HAP-to-VOC ratio as the fugitive emission calculations. A description of the various SSM events may include, but are not limited to:

Unit Blowdowns

Compressor units are shut down periodically for scheduled maintenance or because market demand or pipeline conditions indicate that the horsepower is not required. When a compressor unit is shut down, the unit piping is vented to the unit blowdown and expansion gas stack.

Turbine Starting Gas

Prior to start-up, the compressor is purged with natural gas to evacuate any air present. The turbine is then started with a small turbine that uses natural gas (expansion gas). The purge and expansion gas is vented through the unit blowdown and expansion gas stack.

The starting gas volume is measured. The amount of starting gas varies widely based on the duration of the start-up sequence. The calculations were completed with a conservative estimate.

Station Blowdown

During a station Emergency Shutdown (ESD), the station is isolated and all natural gas in the piping must be purged for safety reasons. The natural gas in the station piping is vented through the station ESD stack.

Section 6.a

Green House Gas Emissions

(Submitting under 20.2.70, 20.2.72 20.2.74 NMAC)

Title V (20.2.70 NMAC), Minor NSR (20.2.72 NMAC), and PSD (20.2.74 NMAC) applicants must estimate and report greenhouse gas (GHG) emissions to verify the emission rates reported in the public notice, determine applicability to 40 CFR 60 Subparts, and to evaluate Prevention of Significant Deterioration (PSD) applicability. GHG emissions that are subject to air permit regulations consist of the sum of an aggregate group of these six greenhouse gases: carbon dioxide (CO₂), nitrous oxide (N₂O), methane (CH₄), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆).

Calculating GHG Emissions:

1. Calculate the ton per year (tpy) GHG mass emissions and GHG CO₂e emissions from your facility.
2. GHG mass emissions are the sum of the total annual tons of greenhouse gases without adjusting with the global warming potentials (GWPs). GHG CO₂e emissions are the sum of the mass emissions of each individual GHG multiplied by its GWP found in Table A-1 in 40 CFR 98 Mandatory Greenhouse Gas Reporting.
3. Emissions from routine or predictable start up, shut down, and maintenance must be included.
4. Report GHG mass and GHG CO₂e emissions in Table 2-P of this application. Emissions are reported in **short** tons per year and represent each emission unit's Potential to Emit (PTE).
5. All Title V major sources, PSD major sources, and all power plants, whether major or not, must calculate and report GHG mass and CO₂e emissions for each unit in Table 2-P.
6. For minor source facilities that are not power plants, are not Title V, and are not PSD there are three options for reporting GHGs in Table 2-P: 1) report GHGs for each individual piece of equipment; 2) report all GHGs from a group of unit types, for example report all combustion source GHGs as a single unit and all venting GHGs as a second separate unit; 3) or check the following ☐ By checking this box, the applicant acknowledges the total CO₂e emissions are less than 75,000 tons per year.

Sources for Calculating GHG Emissions:

- Manufacturer's Data
- AP-42 Compilation of Air Pollutant Emission Factors at <http://www.epa.gov/ttn/chief/ap42/index.html>
- EPA's Internet emission factor database WebFIRE at <http://cfpub.epa.gov/webfire/>
- 40 CFR 98 Mandatory Green House Gas Reporting except that tons should be reported in short tons rather than in metric tons for the purpose of PSD applicability.
- API Compendium of Greenhouse Gas Emissions Methodologies for the Oil and Natural Gas Industry. August 2009 or most recent version.
- Sources listed on EPA's NSR Resources for Estimating GHG Emissions at <http://www.epa.gov/nsr/clean-air-act-permitting-greenhouse-gases>:

Global Warming Potentials (GWP):

Applicants must use the Global Warming Potentials codified in Table A-1 of the most recent version of 40 CFR 98 Mandatory Greenhouse Gas Reporting. The GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to that of one unit mass of CO₂ over a specified time period.

"Greenhouse gas" for the purpose of air permit regulations is defined as the aggregate group of the following six gases: carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. **(20.2.70.7 NMAC, 20.2.74.7 NMAC)**. You may also find GHGs defined in 40 CFR 86.1818-12(a).

Metric to Short Ton Conversion:

Short tons for GHGs and other regulated pollutants are the standard unit of measure for PSD and title V permitting programs. 40 CFR 98 Mandatory Greenhouse Reporting requires metric tons.

1 metric ton = 1.10231 short tons (per Table A-2 to Subpart A of Part 98 – Units of Measure Conversions)

El Paso Natural Gas Company, LLC

Pecos River Compressor Station

Emission Summary

Unit	NO _x		CO		VOC		SO ₂		PM		Acetaldehyde		Formaldehyde		Total HAPs		CO ₂ e tpy
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	
A-01	53.10	232.58	8.00	35.04	0.78	3.42	0.43	1.87	0.41	1.79	0.27	1.20	0.27	1.17	0.65	2.85	31675.91
A-02	53.10	232.58	8.00	35.04	0.78	3.42	0.43	1.87	0.41	1.79	0.27	1.20	0.27	1.17	0.65	2.85	31675.91
A-03	53.10	232.58	8.00	35.04	0.78	3.42	0.43	1.87	0.41	1.79	0.27	1.20	0.27	1.17	0.65	2.85	31675.91
SSM	-	-	-	-	*	10.00	-	-	-	-	-	-	-	-	*	0.069	12801.88
F-001	-	-	-	-	0.25	1.11	-	-	-	-	-	-	-	-	0.0054	0.024	1423.82
Totals	159.30	697.73	24.00	105.12	2.59	21.36	1.28	5.62	1.22	5.36	0.82	3.59	0.80	3.50	1.96	8.64	109253.44

Notes

"*" Denotes an hourly value is not appropriate for this emission type.

"-" Denotes emissions of this pollutant are not expected.

El Paso Natural Gas Company, LLC - Pecos River Compressor Station

Turbines

Units:	A-01, A-02, A-03		
Description:	GE Regenerative Cycle Turbines (model M3712R)		
ISO Rating:	7150	hp	
Fuel Heating Value:	1031	Btu/scf	
Fuel Consumption:	524.9	MMscf/yr	
Heat Input:	61.8	MMBtu/hr	Fuel consumption * Fuel Heating Value * 1 yr/8760 hours
Heat Input Rate:	8640.2	Btu/hp-hr	Heat input / horsepower * 10 ⁶ Btu/MMBtu

Emission Calculations

NO _x ¹	CO ¹	VOC ¹	SO ₂ ²	PM ³	Acetaldehyde ⁴	Formaldehyde	Total HAPs ⁴		
53.1	8.0	0.13		0.0066				lb/hr	Permit limits
			5					lb/MMBtu	Emission Factor
		600 %						grains S/100 scf	
53.10	8.00	0.78	0.43	0.41	0.27	0.27	0.65	lb/hr	Safety Factor
232.58	35.04	3.42	1.87	1.79	1.20	1.17	2.85	tons/yr	

¹ Emission rates based on statistical analysis of test data. Emission rates have been previously reviewed and approved.

² SO₂ emission rate based on sulfur content of 5gr S/100scf

³ PM emissions are calculated using AP-42 Table 3.1-2a. (Emission Rate [lb/hr] = EF [lb/MMBtu] * Heat Input [MMBtu/hr])

⁴ HAP emissions estimated using GRI-HAPCalc 3.01

HAP emissions exceed VOC emissions as a result of conservative HAP emission factors

GHG Emission Calculations

CO ₂	CH ₄	N ₂ O		
53.06	1.00E-03	1.00E-04	kg / MMBtu	40 CFR 98, Subpart C, Tables C-1 and C-2
28714581	541	54	kg / yr	
31643.47	0.60	0.060	tons / yr	
31643.47	16.67	15.78	tons / yr CO ₂ e	

El Paso Natural Gas Company, LLC - Pecos River Compressor Station

Facility-Wide Fugitive Emissions

Unit: F-001

Description: Facility-wide fugitives

VOC	Benzene	Toluene	Ethylbenzene	Xylenes	Total HAPs		
0.56	0.0037	0.0062	3.00E-04	0.0016	0.012	tpy	GRI-HAPCalc
100%	100%	100%	100%	100%	100%	%	Safety Factor
0.25	0.0017	0.0028	1.37E-04	7.31E-04	0.0054	lb/hr	
1.11	0.0074	0.012	6.00E-04	0.0032	0.024	tpy	

Greenhouse Gas Emissions

Component	Weight % (nominal)		
VOC	2%		
CO2	2%		
CH4	90%		
CO2	CH4	CO2e	
1.11	50.81		ton/yr ⁵
1	28		GWP, 40 CFR 98 Table A-1
1.11	1422.71	1423.82	ton/yr CO2e

SSM/M Emissions

Unit: SSM
Description: Facility-wide startup, shutdown, maintenance emissions

Gas Analysis (Typical)

VOC weight %:	1.97%	Nominal
CO2 weight %:	1.97%	Nominal
CH4 weight %:	90.00%	Nominal
Gas molecular weigh	17.00 lb/lb-mol	Nominal
Gas molar volume:	378.61 scf/lb-mol	Constant
Gas density:	0.0449 lb/scf	Gas MW / Molar volume

Turbine Blowdown Venting (BD-Unit)

SSM Emission Rates, Per Event

Event Description:	Planned Maintenance and Normal Shutdown	
Volume per event:	27 Mscf/event	Estimated (varies)
VOC Emissions:	23.9 lb/event	lb/scf * scf/event * VOC wt %

SSM Emission Rates, Annual

Annual volume:	2727 Mscf/yr	2006 volume + 100% safety factor
VOC Emissions:	1.2 tons/yr	lb/scf * scf/event * VOC wt % * ton/2000 lb

Turbine Starting Gas (BD-Unit)

SSM Emission Rates, Per Event

Event Description:	Normal Startup	
Volume per event:	150 Mscf/event	Estimated (varies)
VOC Emissions:	133 lb/event	lb/scf * scf/event * VOC wt %

SSM Emission Rates, Annual

Annual volume:	15000 Mscf/yr	2006 volume + 100% safety factor
VOC Emissions:	6.6 tons/yr	lb/scf * scf/event * VOC wt %

Facility Blowdown Venting (BD-ESD)

SSM Emission Rates, Per Event

Event Description:	Station ESD	
Volume per event:	481 Mscf/event	Estimated (varies)
VOC Emissions:	425 lb/event	lb/scf * scf/event * VOC wt %

SSM Emission Rates, Annual

Annual volume:	962 Mscf/yr	Assumes 1 event per year
VOC Emissions:	0.425 tons/yr	lb/event * event/year * ton/2000lb

Facility VOC Total: 8.27 tons/yr

Facility Blowdown Total

VOC Emissions:	10.0 tons/yr	
HAP emissions:	0.069 tons/yr	Assumes same HAP/VOC ratio as fugitives
CO2 Emissions:	10.0 tons/yr	VOC Emissions / %VOC * %CO2
CH4 Emissions:	456.9 tons/yr	VOC Emissions / %VOC * %CH4
CO2e Emissions:	12801.9 tons/yr	

Facility-Wide SSM / M Total

VOC	HAP	CO2	CH4	CO2e
10.0	0.069	10.0	456.9	12801.9 tons/yr

Section 7

Information Used To Determine Emissions

Information Used to Determine Emissions shall include the following:

- ☐ If manufacturer data are used, include specifications for emissions units and control equipment, including control efficiencies specifications and sufficient engineering data for verification of control equipment operation, including design drawings, test reports, and design parameters that affect normal operation.
 - ☒ If test data are used, include a copy of the complete test report. If the test data are for an emissions unit other than the one being permitted, the emission units must be identical. Test data may not be used if any difference in operating conditions of the unit being permitted and the unit represented in the test report significantly effect emission rates.
 - ☐ If the most current copy of AP-42 is used, reference the section and date located at the bottom of the page. Include a copy of the page containing the emissions factors, and clearly mark the factors used in the calculations.
 - ☐ If an older version of AP-42 is used, include a complete copy of the section.
 - ☒ If an EPA document or other material is referenced, include a complete copy.
 - ☐ Fuel specifications sheet.
 - ☒ If computer models are used to estimate emissions, include an input summary (if available) and a detailed report, and a disk containing the input file(s) used to run the model. For tank-flashing emissions, include a discussion of the method used to estimate tank-flashing emissions, relative thresholds (i.e., permit or major source (NSPS, PSD or Title V)), accuracy of the model, the input and output from simulation models and software, all calculations, documentation of any assumptions used, descriptions of sampling methods and conditions, copies of any lab sample analysis.
-

The following items were used to calculate the emissions for this facility:

- Turbines:
 - o GRI-HAPCalc Output
 - o 40 CFR 98 Subpart C, Tables C-1 and C-2
 - o Turbine Testing Data from Afton and Belen Compressor Stations

GRI-HAPCalc® 3.0
Turbine Report

Facility ID:	PECOS RIVER	Notes:
Operation Type:	COMPRESSOR STATION	
Facility Name:	PECOS RIVER COMPRESSOR STATION	
User Name:		
Units of Measure:	U.S. STANDARD	

*Note: Emissions less than 5.00E-09 tons (or tonnes) per year are considered insignificant and are treated as zero.
These emissions are indicated on the report with a "0".
Emissions between 5.00E-09 and 5.00E-05 tons (or tonnes) per year are represented on the report with "0.0000".*

Turbine Unit

Unit Name: S001-003

Hours of Operation: 8,760 Yearly
Rate Power: 7150 hp
Fuel Type: NATURAL GAS
Emission Factor Set: GRI FIELD TEST DATA
Additional EF Set: -NONE-

Calculated Emissions (ton/yr)

<u>Chemical Name</u>	<u>Emissions</u>	<u>Emission Factor</u>	<u>Emission Factor Set</u>
HAPs			
Formaldehyde	1.1683	0.01693680 g/bhp-hr	GRI Field
Acetaldehyde	1.1958	0.01733570 g/bhp-hr	GRI Field
1,3-Butadiene	0.0042	0.00006160 g/bhp-hr	GRI Field
Acrolein	0.0179	0.00026000 g/bhp-hr	GRI Field
Propional	0.0597	0.00086500 g/bhp-hr	GRI Field
Benzene	0.0371	0.00053840 g/bhp-hr	GRI Field
Toluene	0.0284	0.00041100 g/bhp-hr	GRI Field
Xylenes(m,p,o)	0.0858	0.00124410 g/bhp-hr	GRI Field
2,2,4-Trimethylpentane	0.1107	0.00160530 g/bhp-hr	GRI Field
n-Hexane	0.1039	0.00150580 g/bhp-hr	GRI Field
Phenol	0.0076	0.00011010 g/bhp-hr	GRI Field
Naphthalene	0.0005	0.00000760 g/bhp-hr	GRI Field
2-Methylnaphthalene	0.0001	0.00000130 g/bhp-hr	GRI Field
Biphenyl	0.0228	0.00033050 g/bhp-hr	GRI Field
Phenanthrene	0.0000	0.00000050 g/bhp-hr	GRI Field
Chrysene	0.0001	0.00000100 g/bhp-hr	GRI Field
Beryllium	0.0000	0.00000010 g/bhp-hr	GRI Field
Phosphorous	0.0045	0.00006520 g/bhp-hr	GRI Field
Chromium	0.0006	0.00000820 g/bhp-hr	GRI Field
Manganese	0.0012	0.00001750 g/bhp-hr	GRI Field
Nickel	0.0004	0.00000610 g/bhp-hr	GRI Field
Cobalt	0.0001	0.00000160 g/bhp-hr	GRI Field
Arsenic	0.0000	0.00000060 g/bhp-hr	GRI Field
Selenium	0.0000	0.00000030 g/bhp-hr	GRI Field
Cadmium	0.0000	0.00000020 g/bhp-hr	GRI Field

Lead	0.0002	0.00000340 g/bhp-hr	GRI Field
Total	2.8501		
<u>Criteria Pollutants</u>			
CO	145.4298	2.10828420 g/bhp-hr	GRI Field
NMHC	13.3737	0.19387800 g/bhp-hr	GRI Field
NOx	86.3744	1.25216290 g/bhp-hr	GRI Field
SO2	0.0709	0.00102720 g/bhp-hr	GRI Field
<u>Other Pollutants</u>			
Methane	68.0967	0.98719230 g/bhp-hr	GRI Field
Acetylene	0.4943	0.00716540 g/bhp-hr	GRI Field
Ethylene	0.9626	0.01395450 g/bhp-hr	GRI Field
Ethane	10.3528	0.15008370 g/bhp-hr	GRI Field
Propane	1.1037	0.01600000 g/bhp-hr	GRI Field
Isobutane	0.3311	0.00480000 g/bhp-hr	GRI Field
Butane	0.3587	0.00520000 g/bhp-hr	GRI Field
Cyclopentane	0.1139	0.00165110 g/bhp-hr	GRI Field
Butyrald/Isobutyraldehyde	0.0924	0.00134000 g/bhp-hr	GRI Field
n-Pentane	5.5977	0.08115000 g/bhp-hr	GRI Field
Cyclohexane	0.4224	0.00612400 g/bhp-hr	GRI Field
Methylcyclohexane	0.6092	0.00883120 g/bhp-hr	GRI Field
n-Octane	0.2200	0.00318890 g/bhp-hr	GRI Field
1,3,5-Trimethylbenzene	0.2069	0.00300000 g/bhp-hr	GRI Field
n-Nonane	0.0367	0.00053260 g/bhp-hr	GRI Field
Vanadium	0.0000	0.00000070 g/bhp-hr	GRI Field
Copper	0.0014	0.00002050 g/bhp-hr	GRI Field
Molybdenum	0.0014	0.00002030 g/bhp-hr	GRI Field
Barium	0.0016	0.00002290 g/bhp-hr	GRI Field

GRI-HAPCalc® 3.0
Fugitive Emissions Report

Facility ID:	PECOS RIVER	Notes:
Operation Type:	COMPRESSOR STATION	
Facility Name:	PECOS RIVER COMPRESSOR STATION	
User Name:		
Units of Measure:	U.S. STANDARD	

*Note: Emissions less than 5.00E-09 tons (or tonnes) per year are considered insignificant and are treated as zero.
These emissions are indicated on the report with a "0".
Emissions between 5.00E-09 and 5.00E-05 tons (or tonnes) per year are represented on the report with "0.0000".*

Fugitive Emissions

Calculation Method: EPA Average Factors

User Inputs

<u>Component</u>	<u>Gas Service</u>	<u>Light Liquid Service</u>	<u>Heavy Liquid Service</u>
Connections:	737	0	0
Flanges	120	0	0
Open-Ended Lines:	14	0	0
Pumps:	0	0	0
Valves:	257	0	0
Others:	30	0	0

Calculated Emissions (ton/yr)

<u>Chemical Name</u>	<u>Emissions</u>
<u>HAPs</u>	
Benzene	0.0037
Toluene	0.0062
Ethylbenzene	0.0003
Xylenes(m,p,o)	0.0016
Total	0.0118

Criteria Pollutants

NMHC	1.2712
NMEHC	0.5561

LII > Electronic Code of Federal Regulations (e-CFR) > Title 40—Protection of Environment
> CHAPTER I—ENVIRONMENTAL PROTECTION AGENCY > SUBCHAPTER C—AIR PROGRAMS
> PART 98—MANDATORY GREENHOUSE GAS REPORTING > Subpart A—General Provision
> **Table A-1 to Subpart A of Part 98—Global Warming Potentials, 100-Year Time Horizon**

40 CFR Appendix Table A-1 to Subpart A of Part 98 - Table A-1 to Subpart A of Part 98—Global Warming Potentials, 100-Year Time Horizon

CFR

Table A-1 to Subpart A of Part 98—Global Warming Potentials, 100-Year Time Horizon

TABLE A-1 TO SUBPART A OF PART 98—GLOBAL WARMING POTENTIALS, 100-YEAR TIME HORIZON

Name	CAS No.	Chemical formula	Global warming potential (100 yr.)
Chemical-Specific GWPs			
Carbon dioxide	124-38-9	CO2	1
Methane	74-82-8	CH4	ad 28
Nitrous oxide	10024-97-2	N2O	ad 265
Fully Fluorinated GHGs			
Sulfur hexafluoride	2551-62-4	SF6	ad 23,500
Trifluoromethyl sulphur pentafluoride	373-80-8	SF5CF3	d 17,400
Nitrogen trifluoride	7783-54-2	NF3	d 16,100
PFC-14 (Perfluoromethane)	75-73-0	CF4	ad 6,630

§ 98.38

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(31) Total quantity of each liquid fossil fuel combusted in the reporting year, as defined in § 98.6 (gallons) (Equation C–13).

(32) Total quantity of each gaseous fossil fuel combusted in the reporting year, as defined in § 98.6 (scf) (Equation C–13).

(33) High heat value of the each solid fossil fuel (Btu/lb) (Equation C–13).

(34) High heat value of the each liquid fossil fuel (Btu/gallons) (Equation C–13).

(35) High heat value of the each gaseous fossil fuel (Btu/scf) (Equation C–13).

(36) Fuel-specific carbon based F-factor per fuel (scf CO₂/mmBtu) (Equation C–13).

[79 FR 63783, Oct. 24, 2014]

§ 98.38 Definitions.

All terms used in this subpart have the same meaning given in the Clean Air Act and subpart A of this part.

TABLE C–1 TO SUBPART C OF PART 98—DEFAULT CO₂ EMISSION FACTORS AND HIGH HEAT VALUES FOR VARIOUS TYPES OF FUEL

DEFAULT CO₂ EMISSION FACTORS AND HIGH HEAT VALUES FOR VARIOUS TYPES OF FUEL

Fuel type	Default high heat value	Default CO ₂ emission factor
Coal and coke	mmBtu/short ton	kg CO ₂ /mmBtu
Anthracite	25.09	103.69
Bituminous	24.93	93.28
Subbituminous	17.25	97.17
Lignite	14.21	97.72
Coal Coke	24.80	113.67
Mixed (Commercial sector)	21.39	94.27
Mixed (Industrial coking)	26.28	93.90
Mixed (Industrial sector)	22.35	94.67
Mixed (Electric Power sector)	19.73	95.52
Natural gas	mmBtu/scf	kg CO ₂ /mmBtu
(Weighted U.S. Average)	1.026 × 10 ^{−3}	53.06
Petroleum products	mmBtu/gallon	kg CO ₂ /mmBtu
Distillate Fuel Oil No. 1	0.139	73.25
Distillate Fuel Oil No. 2	0.138	73.96
Distillate Fuel Oil No. 4	0.146	75.04
Residual Fuel Oil No. 5	0.140	72.93
Residual Fuel Oil No. 6	0.150	75.10
Used Oil	0.138	74.00
Kerosene	0.135	75.20
Liquefied petroleum gases (LPG) ¹	0.092	61.71
Propane ¹	0.091	62.87
Propylene ²	0.091	67.77
Ethane ¹	0.068	59.60
Ethanol	0.084	68.44
Ethylene ²	0.058	65.96
Isobutane ¹	0.099	64.94
Isobutylene ¹	0.103	68.86
Butane ¹	0.103	64.77
Butylene ¹	0.105	68.72
Naphtha (<401 deg F)	0.125	68.02
Natural Gasoline	0.110	66.88
Other Oil (>401 deg F)	0.139	76.22
Pentanes Plus	0.110	70.02
Petrochemical Feedstocks	0.125	71.02
Petroleum Coke	0.143	102.41
Special Naphtha	0.125	72.34
Unfinished Oils	0.139	74.54
Heavy Gas Oils	0.148	74.92
Lubricants	0.144	74.27
Motor Gasoline	0.125	70.22
Aviation Gasoline	0.120	69.25
Kerosene-Type Jet Fuel	0.135	72.22

Environmental Protection Agency

Pt. 98, Subpt. C, Table C-2

DEFAULT CO₂ EMISSION FACTORS AND HIGH HEAT VALUES FOR VARIOUS TYPES OF FUEL—
Continued

Fuel type	Default high heat value	Default CO ₂ emission factor
Asphalt and Road Oil	0.158	75.36
Crude Oil	0.138	74.54
Other fuels—solid	mmBtu/short ton	kg CO ₂ /mmBtu
Municipal Solid Waste	9.95 ³	90.7
Tires	28.00	85.97
Plastics	38.00	75.00
Petroleum Coke	30.00	102.41
Other fuels—gaseous	mmBtu/scf	kg CO ₂ /mmBtu
Blast Furnace Gas	0.092×10^{-3}	274.32
Coke Oven Gas	0.599×10^{-3}	46.85
Propane Gas	2.516×10^{-3}	61.46
Fuel Gas ⁴	1.388×10^{-3}	59.00
Biomass fuels—solid	mmBtu/short ton	kg CO ₂ /mmBtu
Wood and Wood Residuals (dry basis) ⁵	17.48	93.80
Agricultural Byproducts	8.25	118.17
Peat	8.00	111.84
Solid Byproducts	10.39	105.51
Biomass fuels—gaseous	mmBtu/scf	kg CO ₂ /mmBtu
Landfill Gas	0.485×10^{-3}	52.07
Other Biomass Gases	0.655×10^{-3}	52.07
Biomass Fuels—Liquid	mmBtu/gallon	kg CO ₂ /mmBtu
Ethanol	0.084	68.44
Biodiesel (100%)	0.128	73.84
Rendered Animal Fat	0.125	71.06
Vegetable Oil	0.120	81.55

¹ The HHV for components of LPG determined at 60 °F and saturation pressure with the exception of ethylene.

² Ethylene HHV determined at 41 °F (5 °C) and saturation pressure.

³ Use of this default HHV is allowed only for: (a) Units that combust MSW, do not generate steam, and are allowed to use Tier 1; (b) units that derive no more than 10 percent of their annual heat input from MSW and/or tires; and (c) small batch incinerators that combust no more than 1,000 tons of MSW per year.

⁴ Reporters subject to subpart X of this part that are complying with § 98.243(d) or subpart Y of this part may only use the default HHV and the default CO₂ emission factor for fuel gas combustion under the conditions prescribed in § 98.243(d)(2)(i) and (d)(2)(ii) and § 98.252(a)(1) and (a)(2), respectively. Otherwise, reporters subject to subpart X or subpart Y shall use either Tier 3 (Equation C-5) or Tier 4.

⁵ Use the following formula to calculate a wet basis HHV for use in Equation C-1: $HHV_w = ((100 - M)/100) \cdot HHV_d$ where HHV_w = wet basis HHV, M = moisture content (percent) and HHV_d = dry basis HHV from Table C-1.

[78 FR 71950, Nov. 29, 2013]

TABLE C-2 TO SUBPART C OF PART 98—DEFAULT CH₄ AND N₂O EMISSION FACTORS
FOR VARIOUS TYPES OF FUEL

Fuel type	Default CH ₄ emission factor (kg CH ₄ /mmBtu)	Default N ₂ O emission factor (kg N ₂ O/mmBtu)
Coal and Coke (All fuel types in Table C-1)	1.1×10^{-02}	1.6×10^{-03}
Natural Gas	1.0×10^{-03}	1.0×10^{-04}
Petroleum (All fuel types in Table C-1)	3.0×10^{-03}	6.0×10^{-04}
Fuel Gas	3.0×10^{-03}	6.0×10^{-04}
Municipal Solid Waste	3.2×10^{-02}	4.2×10^{-03}
Tires	3.2×10^{-02}	4.2×10^{-03}
Blast Furnace Gas	2.2×10^{-05}	1.0×10^{-04}
Coke Oven Gas	4.8×10^{-04}	1.0×10^{-04}
Biomass Fuels—Solid (All fuel types in Table C-1, except wood and wood residuals)	3.2×10^{-02}	4.2×10^{-03}
Wood and wood residuals	7.2×10^{-03}	3.6×10^{-03}
Biomass Fuels—Gaseous (All fuel types in Table C-1)	3.2×10^{-03}	6.3×10^{-04}

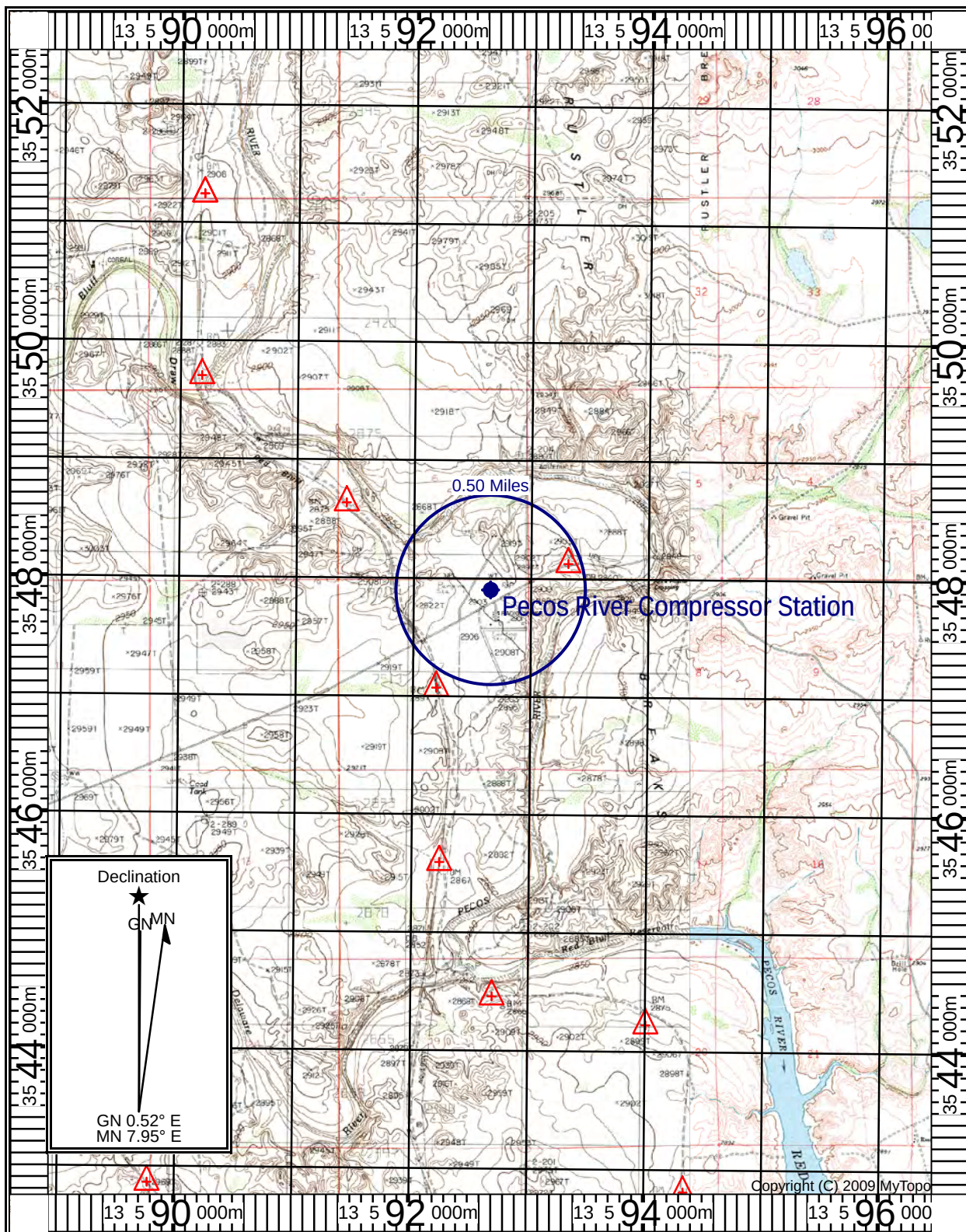
Section 8

Map(s)

A map such as a 7.5 minute topographic quadrangle showing the exact location of the source. The map shall also include the following:

The UTM or Longitudinal coordinate system on both axes	An indicator showing which direction is north
A minimum radius around the plant of 0.8km (0.5 miles)	Access and haul roads
Topographic features of the area	Facility property boundaries
The name of the map	The area which will be restricted to public access
A graphical scale	

A topographic map is attached.



Map Name: RED BLUFF

Horizontal Datum: WGS84

Print Date: 06/21/19

Scale: 1 inch = 4,166 ft.

Map Center: 13 0592647 E 3547634 N

SCALE 1:50000



Section 9

Proof of Public Notice

(for NSR applications submitting under 20.2.72 or 20.2.74 NMAC)

(This proof is required by: 20.2.72.203.A.14 NMAC “Documentary Proof of applicant’s public notice”)

☒ **I have read the AQB “Guidelines for Public Notification for Air Quality Permit Applications”**

This document provides detailed instructions about public notice requirements for various permitting actions. It also provides public notice examples and certification forms. Material mistakes in the public notice will require a re-notice before issuance of the permit.

Unless otherwise allowed elsewhere in this document, the following items document proof of the applicant’s Public Notification. Please include this page in your proof of public notice submittal with checkmarks indicating which documents are being submitted with the application.

New Permit and **Significant Permit Revision** public notices must include all items in this list.

Technical Revision public notices require only items 1, 5, 9, and 10.

Per the Guidelines for Public Notification document mentioned above, include:

1. ☐ A copy of the certified letter receipts with post marks (20.2.72.203.B NMAC)
 2. ☐ A list of the places where the public notice has been posted in at least four publicly accessible and conspicuous places, including the proposed or existing facility entrance. (e.g: post office, library, grocery, etc.)
 3. ☐ A copy of the property tax record (20.2.72.203.B NMAC).
 4. ☐ A sample of the letters sent to the owners of record.
 5. ☐ A sample of the letters sent to counties, municipalities, and Indian tribes.
 6. ☐ A sample of the public notice posted and a verification of the local postings.
 7. ☐ A table of the noticed citizens, counties, municipalities and tribes and to whom the notices were sent in each group.
 8. ☐ A copy of the public service announcement (PSA) sent to a local radio station and documentary proof of submittal.
 9. ☐ A copy of the classified or legal ad including the page header (date and newspaper title) or its affidavit of publication stating the ad date, and a copy of the ad. When appropriate, this ad shall be printed in both English and Spanish.
 10. ☐ A copy of the display ad including the page header (date and newspaper title) or its affidavit of publication stating the ad date, and a copy of the ad. When appropriate, this ad shall be printed in both English and Spanish.
 11. ☐ A map with a graphic scale showing the facility boundary and the surrounding area in which owners of record were notified by mail. This is necessary for verification that the correct facility boundary was used in determining distance for notifying land owners of record.
-

N/A – This application is being submitted under 20.2.70 NMAC.

Section 10

Written Description of the Routine Operations of the Facility

A written description of the routine operations of the facility. Include a description of how each piece of equipment will be operated, how controls will be used, and the fate of both the products and waste generated. For modifications and/or revisions, explain how the changes will affect the existing process. In a separate paragraph describe the major process bottlenecks that limit production. The purpose of this description is to provide sufficient information about plant operations for the permit writer to determine appropriate emission sources.

Pecos River Compressor Station is a natural gas compressor station that compresses natural gas and delivers the compressed gas to a pipeline for mainline transportation. This facility consists primarily of three General Electric Company M3572R regenerative cycle turbines (units A-01, A-02 and A-03), powering the compressors. The facility is designed to compress and transport approximately 1,450 MMscf/day of pipeline quality natural gas.

Section 11

Source Determination

Source submitting under 20.2.70, 20.2.72, 20.2.73, and 20.2.74 NMAC

Sources applying for a construction permit, PSD permit, or operating permit shall evaluate surrounding and/or associated sources (including those sources directly connected to this source for business reasons) and complete this section. Responses to the following questions shall be consistent with the Air Quality Bureau's permitting guidance, Single Source Determination Guidance, which may be found on the Applications Page in the Permitting Section of the Air Quality Bureau website.

Typically, buildings, structures, installations, or facilities that have the same SIC code, that are under common ownership or control, and that are contiguous or adjacent constitute a single stationary source for 20.2.70, 20.2.72, 20.2.73, and 20.2.74 NMAC applicability purposes. Submission of your analysis of these factors in support of the responses below is optional, unless requested by NMED.

A. Identify the emission sources evaluated in this section (list and describe):
Please refer to Table 2-A

B. Apply the 3 criteria for determining a single source:

SIC Code: Surrounding or associated sources belong to the same 2-digit industrial grouping (2-digit SIC code) as this facility, OR surrounding or associated sources that belong to different 2-digit SIC codes are support facilities for this source.

☒ **Yes** ☐ **No**

Common Ownership or Control: Surrounding or associated sources are under common ownership or control as this source.

☒ **Yes** ☐ **No**

Contiguous or Adjacent: Surrounding or associated sources are contiguous or adjacent with this source.

☒ **Yes** ☐ **No**

C. Make a determination:

- ☒ The source, as described in this application, constitutes the entire source for 20.2.70, 20.2.72, 20.2.73, or 20.2.74 NMAC applicability purposes. If in "A" above you evaluated only the source that is the subject of this application, all "YES" boxes should be checked. If in "A" above you evaluated other sources as well, you must check **AT LEAST ONE** of the boxes "NO" to conclude that the source, as described in the application, is the entire source for 20.2.70, 20.2.72, 20.2.73, and 20.2.74 NMAC applicability purposes.
- ☐ The source, as described in this application, **does not** constitute the entire source for 20.2.70, 20.2.72, 20.2.73, or 20.2.74 NMAC applicability purposes (A permit may be issued for a portion of a source). The entire source consists of the following facilities or emissions sources (list and describe):

Section 12

Section 12.A

PSD Applicability Determination for All Sources

(Submitting under 20.2.72, 20.2.74 NMAC)

A PSD applicability determination for all sources. For sources applying for a significant permit revision, apply the applicable requirements of 20.2.74.AG and 20.2.74.200 NMAC and to determine whether this facility is a major or minor PSD source, and whether this modification is a major or a minor PSD modification. It may be helpful to refer to the procedures for Determining the Net Emissions Change at a Source as specified by Table A-5 (Page A.45) of the EPA New Source Review Workshop Manual to determine if the revision is subject to PSD review.

- A. This facility is:
- ☐ a minor PSD source before and after this modification (if so, delete C and D below).
 - ☐ a major PSD source before this modification. This modification will make this a PSD minor source.
 - ☐ an existing PSD Major Source that has never had a major modification requiring a BACT analysis.
 - ☐ an existing PSD Major Source that has had a major modification requiring a BACT analysis
 - ☐ a new PSD Major Source after this modification.
- B. This facility **[is or is not]** one of the listed 20.2.74.501 Table I – PSD Source Categories. The “project” emissions for this modification are **[significant or not significant]**. **[Discuss why.]** The “project” emissions listed below **[do or do not]** only result from changes described in this permit application, thus no emissions from other **[revisions or modifications, past or future]** to this facility. Also, specifically discuss whether this project results in “de-bottlenecking”, or other associated emissions resulting in higher emissions. The project emissions (before netting) for this project are as follows [see Table 2 in 20.2.74.502 NMAC for a complete list of significance levels]:
- a. NOx: **XX.X** TPY
 - b. CO: **XX.X** TPY
 - c. VOC: **XX.X** TPY
 - d. SOx: **XX.X** TPY
 - e. PM: **XX.X** TPY
 - f. PM10: **XX.X** TPY
 - g. PM2.5: **XX.X** TPY
 - h. Fluorides: **XX.X** TPY
 - i. Lead: **XX.X** TPY
 - j. Sulfur compounds (listed in Table 2): **XX.X** TPY
 - k. GHG: **XX.X** TPY
- C. Netting **[is required, and analysis is attached to this document.] OR [is not required (project is not significant)] OR [Applicant is submitting a PSD Major Modification and chooses not to net.]**
- D. BACT is **[not required for this modification, as this application is a minor modification.] OR [required, as this application is a major modification. List pollutants subject to BACT review and provide a full top down BACT determination.]**
- E. If this is an existing PSD major source, or any facility with emissions greater than 250 TPY (or 100 TPY for 20.2.74.501 Table 1 – PSD Source Categories), determine whether any permit modifications are related, or could be considered a single project with this action, and provide an explanation for your determination whether a PSD modification is triggered.
-

N/A- This application is being submitted under 20.2.70 NMAC.

Section 13

Determination of State & Federal Air Quality Regulations

This section lists each state and federal air quality regulation that may apply to your facility and/or equipment that are stationary sources of regulated air pollutants.

Not all state and federal air quality regulations are included in this list. Go to the Code of Federal Regulations (CFR) or to the Air Quality Bureau's regulation page to see the full set of air quality regulations.

Required Information for Specific Equipment:

For regulations that apply to specific source types, in the 'Justification' column **provide any information needed to determine if the regulation does or does not apply. For example**, to determine if emissions standards at 40 CFR 60, Subpart IIII apply to your three identical stationary engines, we need to know the construction date as defined in that regulation; the manufacturer date; the date of reconstruction or modification, if any; if they are or are not fire pump engines; if they are or are not emergency engines as defined in that regulation; their site ratings; and the cylinder displacement.

Required Information for Regulations that Apply to the Entire Facility:

See instructions in the 'Justification' column for the information that is needed to determine if an 'Entire Facility' type of regulation applies (e.g. 20.2.70 or 20.2.73 NMAC).

Regulatory Citations for Regulations That Do Not, but Could Apply:

If there is a state or federal air quality regulation that does not apply, but you have a piece of equipment in a source category for which a regulation has been promulgated, you must **provide the low level regulatory citation showing why your piece of equipment is not subject to or exempt from the regulation. For example** if you have a stationary internal combustion engine that is not subject to 40 CFR 63, Subpart ZZZZ because it is an existing 2 stroke lean burn stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, your citation would be 40 CFR 63.6590(b)(3)(i). **We don't want a discussion of every non-applicable regulation, but if it is possible a regulation could apply, explain why it does not. For example**, if your facility is a power plant, you do not need to include a citation to show that 40 CFR 60, Subpart OOO does not apply to your non-existent rock crusher.

Regulatory Citations for Emission Standards:

For each unit that is subject to an emission standard in a source specific regulation, such as 40 CFR 60, Subpart OOO or 40 CFR 63, Subpart HH, include the low level regulatory citation of that emission standard. Emission standards can be numerical emission limits, work practice standards, or other requirements such as maintenance. **Here are examples:** a glycol dehydrator is subject to the general standards at 63.764C(1)(i) through (iii); an engine is subject to 63.6601, Tables 2a and 2b; a crusher is subject to 60.672(b), Table 3 and all transfer points are subject to 60.672(e)(1)

Federally Enforceable Conditions:

All federal regulations are federally enforceable. All Air Quality Bureau State regulations are federally enforceable except for the following: affirmative defense portions at 20.2.7.6.B, 20.2.7.110(B)(15), 20.2.7.11 through 20.2.7.113, 20.2.7.115, and 20.2.7.116; 20.2.37; 20.2.42; 20.2.43; 20.2.62; 20.2.63; 20.2.86; 20.2.89; and 20.2.90 NMAC. Federally enforceable means that EPA can enforce the regulation as well as the Air Quality Bureau and federally enforceable regulations can count toward determining a facility's potential to emit (PTE) for the Title V, PSD, and nonattainment permit regulations.

INCLUDE ANY OTHER INFORMATION NEEDED TO COMPLETE AN APPLICABILITY DETERMINATION OR THAT IS RELEVANT TO YOUR FACILITY'S NOTICE OF INTENT OR PERMIT.

EPA Applicability Determination Index for 40 CFR 60, 61, 63, etc: <http://cfpub.epa.gov/adi/>

STATE REGULATIONS:

<u>STATE REGU- LATIONS CITATION</u>	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:	
20.2.1 NMAC	General Provisions	Yes	Facility	General Provisions apply to Notice of Intent, Construction, and Title V permit applications.	
20.2.3 NMAC	Ambient Air Quality Standards NMAAQs	Yes	Facility	20.2.3 NMAC is a SIP approved regulation that limits the maximum allowable concentration of Total Suspended Particulates, Sulfur Compounds, Carbon Monoxide and Nitrogen Dioxide. This facility meets maximum allowable concentrations of TSP, SO ₂ , H ₂ S, CO, and NO _x under this regulation.	
20.2.7 NMAC	Excess Emissions	Yes	Facility	This regulation establishes requirements for the facility if operations at the facility result in any excess emissions. The owner or operator will operate the source at the facility having an excess emission, to the extent practicable, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions. The facility will also notify the NMED of any excess emission per 20.2.7.110 NMAC. All Title V major sources are subject to Air Quality Control Regulations, as defined in 20.2.7 NMAC, and are thus subject to the requirements of this regulation.	
20.2.23 NMAC	Fugitive Dust Control	N/A	N/A	This facility is not authorized under a NOI. This regulation is not applicable.	
20.2.33 NMAC	Gas Burning Equipment - Nitrogen Dioxide	N/A	N/A	Pecos River Compressor Station does not have any existing gas burning equipment with a heat input of greater than 1,000,000 MMBtu/yr. The facility is not subject to this regulation and does not have emission sources that meet the applicability requirements under 20.2.34.108 NMAC.	
20.2.34 NMAC	Oil Burning Equipment: NO ₂	N/A	N/A	This facility does not have any oil burning equipment with a heat input of greater than 1,000,000 MMBtu/yr. The facility is not subject to this regulation and does not have emission sources that meet the applicability requirements under 20.2.34.108 NMAC.	
20.2.35 NMAC	Natural Gas Processing Plant – Sulfur	N/A	N/A	This regulation establishes sulfur emission standards for natural gas processing plants. This facility does not meet the definition of a “natural gas processing plant”, as defined in 20.2.35.7 NMAC.	
20.2.37 and 20.2.36 NMAC	Petroleum Processing Facilities and Petroleum Refineries	N/A	N/A	These regulations were repealed by the Environmental Improvement Board. If you had equipment subject to 20.2.37 NMAC before the repeal, your combustion emission sources are now subject to 20.2.61 NMAC.	
20.2.38 NMAC	Hydrocarbon Storage Facility	N/A	N/A	This facility is not a tank battery operating in conjunction with a petroleum production or processing facility, as defined in 20.2.38.7 NMAC.	
20.2.39 NMAC	Sulfur Recovery Plant - Sulfur	N/A	N/A	This regulation establishes sulfur emission standards for sulfur recovery plants which are not part of petroleum or natural gas processing facilities. This regulation does not apply to the facility because Pecos River Compressor Station does not have a sulfur recovery plant.	
20.2.50 NMAC	Oil and Gas Sector – Ozone Precursor Pollutants	Yes	Facility	This regulation establishes emission standards for volatile organic compounds (VOC) and oxides of nitrogen (NO_x) for oil and gas production, processing, compression, and transmission sources. 20.2.50 NMAC subparts below: Include the construction status of applicable units as “New”, “Existing”, “Relocation of Existing”, or “Reconstructed” as defined by this Part in your justification: Check the box for the subparts that are applicable: ☒ 113 – Engines and Turbines ☐ 114 – Compressor Seals	113: Units A-1, A-2 and A-3 are existing units and EPNG will comply with all applicable requirements of this rule and have submitted an ACP. EPNG will comply with the requirements of this subpart 114—N/A—Reciprocating compressors located at transmission compressor stations are not subject to the requirements of 20.2.50.114 NMAC. 115—N/A—There are no Flares, ECDs, Thermal Oxidizers, or Vapor Recovery Units at this facility. 116: This facility will be permitted to contain facility-wide fugitives (Unit F-001) and EPNG will comply with all

<u>STATE REGU- LATIONS CITATION</u>	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:	
				☐ 115 – Control Devices and Closed Vent Systems ☒ 116 – Equipment Leaks and Fugitive Emissions ☐ 117 – Natural Gas Well Liquid Unloading ☐ 118 – Glycol Dehydrators ☐ 119 – Heaters ☐ 120 – Hydrocarbon Liquid Transfers ☐ 121 – Pig Launching and Receiving ☒ 122 – Pneumatic Controllers and Pumps ☐ 123 – Storage Vessels ☐ 124 – Well Workovers ☐ 125 – Small Business Facilities ☐ 126 – Produced Water Management Unit ☐ 127 – Flowback Vessels and Preproduction Operations	requirements. 117—N/A—Natural Gas well liquid unloading does not occur at this facility; therefore, this Subpart does not apply. 118—N/A—there are no glycol dehydrator operations at this facility; therefore, this subpart does not apply. 119—N/A—There are no heaters located at this facility; therefore, this subpart does not apply. 120—N/A—there are no hydrocarbon liquid transfers located at this facility; therefore, this subpart does not apply. 121-N/A- This facility does not contain any applicable Units under this subpart; therefore, this Subpart does not apply. 122: EPNG will comply with the requirements of this subpart. 123—N/A—There are no permitted hydrocarbon storage vessels at this facility; therefore, this subpart does not apply. 124—N/A—There are no oil or natural gas wells located at this facility; therefore, this subpart does not apply. 125—N/A—This facility does not qualify as a small business facility; therefore, this subpart does not apply. 126—N/A—There are no produced water management units at this facility; therefore, this subpart does not apply. 127—N/A—There are no wells located at this facility; therefore, this subpart does not apply
20.2.61.109 NMAC	Smoke & Visible Emissions	Yes	A-01, A-02, A-03	This regulation establishes controls on smoke and visible emissions from certain sources, including stationary combustion equipment. Units A-01, A-02 and A-03 are stationary combustion equipment which comply by using pipeline-quality natural gas.	
20.2.70 NMAC	Operating Permits	Yes	Facility	This regulation establishes requirements for obtaining an operating permit. Pecos River Compressor Station is a major source and is therefore subject to 20.2.70 NMAC.	
20.2.71 NMAC	Operating Permit Fees	Yes	Facility	This regulation establishes a schedule of operating permit emission fees. The facility is subject to 20.2.70 NMAC and is therefore subject to requirements of this regulation.	
20.2.72 NMAC	Construction Permits	Yes	Facility	This regulation establishes the requirements for obtaining a construction permit. This facility is subject to 20.2.72 NMAC and has been issued NSR Permit 3260-M1.	

<u>STATE REGU- LATIONS</u> CITATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
20.2.73 NMAC	NOI & Emissions Inventory Requirements	Yes	Facility	This regulation establishes emission inventory requirements. This facility meets the applicability requirements of 20.2.73.300 NMAC. The facility will meet all applicable reporting requirements under 20.2.73.300.B.1 NMAC.
20.2.74 NMAC	Permits – Prevention of Significant Deterioration (PSD)	Yes	Facility	This regulation establishes requirements for obtaining a prevention of significant deterioration permit. Pecos River Compressor Station is an existing PSD major source. The facility has not undergone a major modification and does not currently require a PSD permit.
20.2.75 NMAC	Construction Permit Fees	N/A	Facility	This regulation establishes a schedule of operating permit emission fees. The facility is subject to 20.2.71 NMAC (Operating Permit Emission Fees) and, therefore, is not subject to the requirements of this regulation for this permitting action, per 20.2.75.11.E. In the event of an NSR permit action, EPNG would be required to pay the appropriate filing and review fees.
20.2.77 NMAC	New Source Performance	N/A	Units subject to 40 CFR 60	This regulation establishes state authority to implement new source performance standards (NSPS) for stationary sources. Pecos River Compressor Station does not have any units subject to a New Source Performance Standard (NSPS). Accordingly, this regulation does not apply.
20.2.78 NMAC	Emission Standards for HAPS	N/A	Units Subject to 40 CFR 61	This regulation establishes state authority to implement emission standards for hazardous air pollutants subject to 40 CFR Part 61. This facility does not emit hazardous air pollutants which are subject to the requirements of 40 CFR Part 61 and is therefore not subject to this regulation.
20.2.79 NMAC	Permits – Nonattainment Areas	N/A	N/A	This regulation establishes the requirements for obtaining a nonattainment area permit. This facility is not located in a non-attainment area and therefore is not subject to this regulation.
20.2.80 NMAC	Stack Heights	N/A	N/A	This regulation establishes requirements for the evaluation of stack heights and other dispersion techniques. The units with emissions routed to a stack were constructed before December 31, 1970 and, therefore, are not subject to this regulation (20.2.80.110.A)
20.2.82 NMAC	MACT Standards for source categories of HAPS	N/A	N/A	This regulation applies to all sources emitting hazardous air pollutants, which are subject to the requirements of 40 CFR Part 63, as amended through January 31, 2009. The facility does not have any units subject to a MACT standard, as amended through December 31, 2010. Pecos River is an area source of HAPS.

FEDERAL REGULATIONS:

<u>FEDERAL REGU- LATIONS</u> CITATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
40 CFR 50	NAAQS	Yes	Facility	This regulation defines national ambient air quality standards. Pecos River Compressor Station meets all applicable national ambient air quality standards for PM ₁₀ , PM _{2.5} , SO ₂ , H ₂ S, CO, and NO _x under this regulation.
NSPS 40 CFR 60, Subpart A	General Provisions	N/A	N/A	This regulation defines general provisions for relevant standards that have been set under this part. The facility is not subject to this regulation because no NSPS Subparts apply.
NSPS 40 CFR 60.40a, Subpart Da	Subpart Da, Performance Standards for Electric Utility Steam Generating Units	N/A	N/A	This regulation establishes standards of performance for electric utility steam generating units. This regulation does not apply because the facility does not operate any electric utility steam generating units.

<u>FEDERAL REGU- LATIONS CITATION</u>	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
NSPS 40 CFR60.40b Subpart Db	Electric Utility Steam Generating Units	N/A	N/A	This regulation establishes standards of performance for industrial-commercial-institutional steam generating units. This regulation does not apply because this facility does not operate any industrial-commercial-institutional steam generating units.
40 CFR 60.40c, Subpart Dc	Standards of Performance for Small Industrial-Commercial- Institutional Steam Generating Units	N/A	N/A	This regulation establishes standards of performance for industrial-commercial-institutional steam generating units. This regulation does not apply because this facility does not operate any industrial-commercial-institutional steam generating units.
NSPS 40 CFR 60, Subpart Ka	Standards of Performance for Storage Vessels for Petroleum Liquids for which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984	N/A	N/A	This regulation establishes performance standards for storage vessels for petroleum liquids for which construction, reconstruction, or modification commenced after May 18, 1978, and prior to July 23, 1984. The capacities of the tanks at the facility are less than 40,000 gallons and are not subject to this regulation. [40 CFR Part 60.110a(a)]
NSPS 40 CFR 60, Subpart Kb	Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984	N/A	N/A	This facility does not have any tanks with a storage capacity equal to or greater than 75 cubic meters used to store volatile organic liquids (VOL) for which construction, reconstruction or modification commenced after July 23, 1984.
NSPS 40 CFR 60.330 Subpart GG	Stationary Gas Turbines	N/A	N/A	The General Electric regenerative cycle turbines at Pecos River Compressor Station were constructed prior to October 3, 1977. These turbines have not been modified or reconstructed since October 3, 1977. Accordingly, these units are not subject to this subpart.
NSPS 40 CFR 60, Subpart KKK	Leaks of VOC from Onshore Gas Plants	N/A	N/A	This regulation defines standards of performance for equipment leaks of VOC emissions from onshore gas plants for which construction, reconstruction, or modification commenced after January 20, 1984, and on or before August 23, 2011. This regulation does not apply as the facility is not a gas plant.
NSPS 40 CFR Part 60 Subpart LLL	Standards of Performance for Onshore Natural Gas Processing: SO₂ Emissions	N/A	N/A	This regulation establishes standards of performance for SO ₂ emissions from onshore natural gas processing for which construction, reconstruction, or modification of the amine sweetening unit commenced after January 20, 1984 and on or before August 23, 2011. This regulation does not apply as this facility is not a natural gas processing plant.
NSPS 40 CFR Part 60 Subpart OOOO	Standards of Performance for Crude Oil and Natural Gas Production, Transmission, and Distribution for which construction, modification or reconstruction	N/A	N/A	This regulation establishes standards of performance for crude oil and natural gas production, transmission and distribution. The facility does not have any affected units that have been modified or reconstructed on or after August 23, 2011. [40 CFR 60.5360 (Subpart OOOO)]

<u>FEDERAL REGU- LATIONS CITATION</u>	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
	commenced after August 23, 2011 and before September 18, 2015			
NSPS 40 CFR Part 60 Subpart OOOOa	Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015	N/A	N/A	This regulation establishes standards of performance for crude oil and natural gas production, transmission and distribution. The facility does not have any affected units that have been modified or reconstructed on or after September 18, 2015.
NSPS 40 CFR Part 60 Subpart OOOOb	Standards of Performance for Crude Oil and Natural Gas Facilities for Which Construction, Modification or Reconstruction Commenced After December 6, 2022	No	N/A	There are no OOOOb affected facilities in this application; therefore, this regulation does not apply.
NSPS 40 CFR 60 Subpart IIII	Standards of performance for Stationary Compression Ignition Internal Combustion Engines	N/A	N/A	This regulation establishes standards of performance for stationary combustion ignition engines. This facility does not have any CI units.
NSPS 40 CFR Part 60 Subpart JJJJ	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines	N/A	N/A	This regulation establishes standards of performance for stationary spark ignition combustion engines. This facility does not have any RICE units.
NSPS 40 CFR 60 Subpart TTTT	Standards of Performance for Greenhouse Gas Emissions for Electric Generating Units	N/A	N/A	This facility does not have any electric generating units. This regulation does not apply.
NSPS 40 CFR 60 Subpart UUUU	Emissions Guidelines for Greenhouse Gas Emissions and Compliance Times for Electric Utility Generating Units	N/A	N/A	This facility does not have any electric generating units. This regulation does not apply.
NSPS 40 CFR 60, Subparts WWW, Cc, and Cf	Standards of performance for Municipal Solid Waste (MSW) Landfills	N/A	N/A	This facility is not a Municipal Solid Waste Landfill. This regulation does not apply.
NESHAP 40 CFR 61 Subpart A	General Provisions	Potentially	Facility	Pecos River Compressor Station does not emit or have threshold quantities of regulated substances at the facility and/or the facility is not involved in the triggering activity. Subpart M could potentially apply and is discussed below.
NESHAP 40 CFR 61 Subpart E	National Emission Standards for Mercury	N/A	N/A	This regulation establishes a national emission standard for mercury. The facility does not have stationary sources which process mercury ore to recover mercury, use mercury chlor-alkali cells to produce chlorine gas and alkali metal hydroxide, and incinerate or dry wastewater treatment plant sludge [40 CFR Part 61.50]. The facility is not subject to this regulation.

<u>FEDERAL REGU- LATIONS</u> CITATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
NESHAP 40 CFR 61 Subpart M	National Emission Standards for Asbestos	Potentially	Facility	Although this standard does not apply to this facility under routine operating conditions, in the case of asbestos demolition, Subpart M would apply.
NESHAP 40 CFR 61 Subpart V	National Emission Standards for Equipment Leaks (Fugitive Emission Sources)	N/A	N/A	This regulation establishes national emission standards for equipment leaks (fugitive emission sources). The facility does not have equipment that operates in volatile hazardous air pollutant (VHAP) service [40 CFR Part 61.240]. The regulated activities subject to this regulation do not take place at this facility. The facility is not subject to this regulation.
MACT 40 CFR 63, Subpart A	General Provisions	N/A	N/A	This regulation defines general provisions for relevant standards that have been set under this part. This facility does not have any units subject to a MACT standard. Pecos River is an area source of HAPs
MACT 40 CFR 63.760 Subpart HH	Oil and Natural Gas Production Facilities	N/A	N/A	This regulation establishes national emission standards for hazardous air pollutants from oil and natural gas production facilities. This facility is not an Oil or Natural Gas Production Facility, as defined by this regulation; therefore, this facility is not subject to this regulation.
MACT 40 CFR 63 Subpart HHH	Natural Gas Transmission and Storage Facilities	N/A	N/A	Pecos River Compressor Station is not a major source of HAPs, nor does it contain an affected unit. As stated in 63.1270(c), a facility that does not contain an affected source is not subject to the requirements of this subpart.
MACT 40 CFR 63 Subpart DDDDD	National Emission Standards for Hazardous Air Pollutants for Major Industrial, Commercial, and Institutional Boilers & Process Heaters	N/A	N/A	This facility does not have any industrial, commercial, or institutional boilers or process heaters. This regulation does not apply.
MACT 40 CFR 63 Subpart UUUUU	National Emission Standards for Hazardous Air Pollutants Coal & Oil Fire Electric Utility Steam Generating Unit	N/A	N/A	This facility does not have any coal or oil fired electric utility steam generating units. This regulation does not apply.
MACT 40 CFR 63 Subpart ZZZZ	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE MACT)	N/A	N/A	This regulation defines national emissions standards for HAPs for stationary Reciprocating Internal Combustion Engines. This facility does not have any RICE units.
40 CFR 64	Compliance Assurance Monitoring	N/A	N/A	Not applicable as facility has no units meeting the criteria of this part; specifically, no emissions units are controlled major sources. In general terms, a CAM-affected unit must: •Be at a major source that is required to obtain a part 70 or 71 permit; •Be subject to an emission limit for a pollutant; •Use a control device to achieve compliance with that limit; and •Have a pre-control potential to emit for that pollutant greater than major source level. Although Pecos River Compressor Station is a Title V major source with a part 70 permit, none of the units at this facility use a control device (as defined by the CAM rule) to achieve compliance with emission limits..

<u>FEDERAL REGU- LATIONS CITATION</u>	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
Title IV – Acid Rain 40 CFR 72	Acid Rain	N/A	N/A	This part establishes the acid rain program. This part does not apply because the facility is not covered by this regulation. [40 CFR Part 72.6]
Title IV – Acid Rain 40 CFR 73	Sulfur Dioxide Allowance Emissions	N/A	N/A	This regulation establishes sulfur dioxide allowance emissions for certain types of facilities. This part does not apply because the facility is not the type covered by this regulation [40 CFR Part 73.2].
Title IV-Acid Rain 40 CFR 75	Continuous Emissions Monitoring	N/A	N/A	This facility does not generate commercial electric power or electric power for sale. This regulation does not apply.
Title IV – Acid Rain 40 CFR 76	Acid Rain Nitrogen Oxides Emission Reduction Program	N/A	N/A	This regulation establishes an acid rain nitrogen oxides emission reduction program. This regulation applies to each coal-fired utility unit that is subject to an acid rain emissions limitation or reduction requirement for SO ₂ . This part does not apply because the facility does not operate any coal-fired units [40 CFR Part 76.1].
Title VI – 40 CFR 82	Protection of Stratospheric Ozone	N/A	N/A	EPNG owns appliances containing CFCs and is therefore subject to this requirement. However, this requirement imposes no obligations on the facility beyond those imposed on any individual or corporate owner of such appliances and is mentioned here only in the interest of being thorough. EPNG uses only certified technicians for the maintenance, service, repair and disposal of appliances and maintains the appropriate records for this requirement.

Section 14

Operational Plan to Mitigate Emissions

(Submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

-
- ☒ **Title V Sources** (20.2.70 NMAC): By checking this box and certifying this application the permittee certifies that it has developed an Operational Plan to Mitigate Emissions During Startups, Shutdowns, and Emergencies defining the measures to be taken to mitigate source emissions during startups, shutdowns, and emergencies as required by 20.2.70.300.D.5(f) and (g) NMAC. This plan shall be kept on site to be made available to the Department upon request. This plan should not be submitted with this application.
- ☐ **NSR** (20.2.72 NMAC), **PSD** (20.2.74 NMAC) & **Nonattainment** (20.2.79 NMAC) **Sources:** By checking this box and certifying this application the permittee certifies that it has developed an Operational Plan to Mitigate Source Emissions During Malfunction, Startup, or Shutdown defining the measures to be taken to mitigate source emissions during malfunction, startup, or shutdown as required by 20.2.72.203.A.5 NMAC. This plan shall be kept on site to be made available to the Department upon request. This plan should not be submitted with this application.
- ☒ **Title V** (20.2.70 NMAC), **NSR** (20.2.72 NMAC), **PSD** (20.2.74 NMAC) & **Nonattainment** (20.2.79 NMAC) **Sources:** By checking this box and certifying this application the permittee certifies that it has established and implemented a Plan to Minimize Emissions During Routine or Predictable Startup, Shutdown, and Scheduled Maintenance through work practice standards and good air pollution control practices as required by 20.2.7.14.A and B NMAC. This plan shall be kept on site or at the nearest field office to be made available to the Department upon request. This plan should not be submitted with this application.
-

EPNG maintains the required planning and excess emission mitigation documents at Pecos River Compressor Station.

Section 15

Alternative Operating Scenarios

(Submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

Alternative Operating Scenarios: Provide all information required by the department to define alternative operating scenarios. This includes process, material and product changes; facility emissions information; air pollution control equipment requirements; any applicable requirements; monitoring, recordkeeping, and reporting requirements; and compliance certification requirements. Please ensure applicable Tables in this application are clearly marked to show alternative operating scenario.

Construction Scenarios: When a permit is modified authorizing new construction to an existing facility, NMED includes a condition to clearly address which permit condition(s) (from the previous permit and the new permit) govern during the interval between the date of issuance of the modification permit and the completion of construction of the modification(s). There are many possible variables that need to be addressed such as: Is simultaneous operation of the old and new units permitted and, if so for example, for how long and under what restraints? In general, these types of requirements will be addressed in Section A100 of the permit, but additional requirements may be added elsewhere. Look in A100 of our NSR and/or TV permit template for sample language dealing with these requirements. Find these permit templates at: https://www.env.nm.gov/aqb/permit/aqb_pol.html. Compliance with standards must be maintained during construction, which should not usually be a problem unless simultaneous operation of old and new equipment is requested.

In this section, under the bolded title “Construction Scenarios”, specify any information necessary to write these conditions, such as: conservative-realistic estimated time for completion of construction of the various units, whether simultaneous operation of old and new units is being requested (and, if so, modeled), whether the old units will be removed or decommissioned, any PSD ramifications, any temporary limits requested during phased construction, whether any increase in emissions is being requested as SSM emissions or will instead be handled as a separate Construction Scenario (with corresponding emission limits and conditions, etc.

The term “alternative operating scenario” is not defined by regulation. EPNG understands this term to apply to one or more sources that may routinely operate with alternative fuels or raw materials and/or on a significantly different schedule that may potentially affect emissions. Based on this understanding, Pecos River Compressor Station does not have any alternative operating scenarios.

Units at the facility may be shut down from time to time due to factors including, but not limited to, market demand, maintenance, malfunctions, and emergency shutdowns. Operating in alternative modes and temporary shutdowns are not alternative operating scenarios, as EPNG understands them.

Section 16

Air Dispersion Modeling

- 1) Minor Source Construction (20.2.72 NMAC) and Prevention of Significant Deterioration (PSD) (20.2.74 NMAC) ambient impact analysis (modeling): Provide an ambient impact analysis as required at 20.2.72.203.A(4) and/or 20.2.74.303 NMAC and as outlined in the Air Quality Bureau's Dispersion Modeling Guidelines found on the Planning Section's modeling website. If air dispersion modeling has been waived for one or more pollutants, attach the AQB Modeling Section modeling waiver approval documentation.
- 2) SSM Modeling: Applicants must conduct dispersion modeling for the total short term emissions during routine or predictable startup, shutdown, or maintenance (SSM) using realistic worst case scenarios following guidance from the Air Quality Bureau's dispersion modeling section. Refer to "Guidance for Submittal of Startup, Shutdown, Maintenance Emissions in Permit Applications (http://www.env.nm.gov/aqb/permit/app_form.html) for more detailed instructions on SSM emissions modeling requirements.
- 3) Title V (20.2.70 NMAC) ambient impact analysis: Title V applications must specify the construction permit and/or Title V Permit number(s) for which air quality dispersion modeling was last approved. Facilities that have only a Title V permit, such as landfills and air curtain incinerators, are subject to the same modeling required for preconstruction permits required by 20.2.72 and 20.2.74 NMAC.

What is the purpose of this application?	Enter an X for each purpose that applies
New PSD major source or PSD major modification (20.2.74 NMAC). See #1 above.	
New Minor Source or significant permit revision under 20.2.72 NMAC (20.2.72.219.D NMAC). See #1 above. Note: Neither modeling nor a modeling waiver is required for VOC emissions.	
Reporting existing pollutants that were not previously reported.	
Reporting existing pollutants where the ambient impact is being addressed for the first time.	
Title V application (new, renewal, significant, or minor modification. 20.2.70 NMAC). See #3 above.	X
Relocation (20.2.72.202.B.4 or 72.202.D.3.c NMAC)	
Minor Source Technical Permit Revision 20.2.72.219.B.1.d.vi NMAC for like-kind unit replacements.	
Other: i.e. SSM modeling. See #2 above.	
This application does not require modeling since this is a No Permit Required (NPR) application.	
This application does not require modeling since this is a Notice of Intent (NOI) application (20.2.73 NMAC).	
This application does not require modeling according to 20.2.70.7.E(11), 20.2.72.203.A(4), 20.2.74.303, 20.2.79.109.D NMAC and in accordance with the Air Quality Bureau's Modeling Guidelines.	

Check each box that applies:

- ☐ See attached, approved modeling **waiver for all** pollutants from the facility.
- ☐ See attached, approved modeling **waiver for some** pollutants from the facility.
- ☐ Attached in Universal Application Form 4 (UA4) is a **modeling report for all** pollutants from the facility.
- ☐ Attached in UA4 is a **modeling report for some** pollutants from the facility.
- ☒ No modeling is required.

Section 17

Compliance Test History

(Submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

To show compliance with existing NSR permits conditions, you must submit a compliance test history. The table below provides an example.

Compliance Test History Table

Unit No.	Test Description	Test Date
A-01	Turbine Compliance Test – NO _x & CO	06/10/2020
A-01	Turbine Compliance Test – NO _x & CO	06/15/2021
A-01	Turbine Compliance Test – NO _x & CO	07/19/2022
A-01	Turbine Compliance Test – NO _x & CO	06/20/2023
A-01	Turbine Compliance Test – NO _x & CO	07/09/2024
A-02	Turbine Compliance Test – NO _x & CO	06/10/2020
A-02	Turbine Compliance Test – NO _x & CO	06/15/2021
A-02	Turbine Compliance Test – NO _x & CO	06/08/2022
A-02	Turbine Compliance Test – NO _x & CO	07/13/2023
A-02	Turbine Compliance Test – NO _x & CO	07/09/2024
A-03	Turbine Compliance Test – NO _x & CO	06/18/2020
A-03	Turbine Compliance Test – NO _x & CO	06/15/2021
A-03	Turbine Compliance Test – NO _x & CO	06/08/2022
A-03	Turbine Compliance Test – NO _x & CO	06/20/2023
A-03	Turbine Compliance Test – NO _x & CO	07/09/2024

Section 19

Requirements for Title V Program

Who Must Use this Attachment:

- * Any major source as defined in 20.2.70 NMAC.
 - * Any source, including an area source, subject to a standard or other requirement promulgated under Section 111 - Standards of Performance for New Stationary Sources, or Section 112 Hazardous Air Pollutants, of the 1990 federal Clean Air Act ("federal Act"). Non-major sources subject to Sections 111 or 112 of the federal Act are exempt from the obligation to obtain an 20.2.70 NMAC operating permit until such time that the EPA Administrator completes rulemakings that require such sources to obtain operating permits. In addition, sources that would be required to obtain an operating permit solely because they are subject to regulations or requirements under Section 112(r) of the federal Act are exempt from the requirement to obtain an Operating Permit.
 - * Any Acid Rain source as defined under title IV of the federal Act. The Acid Rain program has additional forms. See <http://www.env.nm.gov/aqb/index.html>. Sources that are subject to both the Title V and Acid Rain regulations are encouraged to submit both applications simultaneously.
 - * Any source in a source category designated by the EPA Administrator ("Administrator"), in whole or in part, by regulation, after notice and comment.
-

Pecos River Compressor Station is a major source, as defined in 20.2.70 NMAC.

19.1 - 40 CFR 64, Compliance Assurance Monitoring (CAM) (20.2.70.300.D.10.e NMAC)

Any source subject to 40CFR, Part 64 (Compliance Assurance Monitoring) must submit all the information required by section 64.7 with the operating permit application. The applicant must prepare a separate section of the application package for this purpose; if the information is already listed elsewhere in the application package, make reference to that location. Facilities not subject to Part 64 are invited to submit periodic monitoring protocols with the application to help the AQB to comply with 20.2.70 NMAC. Sources subject to 40 CFR Part 64, must submit a statement indicating your source's compliance status with any enhanced monitoring and compliance certification requirements of the federal Act.

After reasonable inquiry, EPNG states that the facility does not meet the applicability requirements of 40 CFR 64.2. Specifically, no sources at the facility are controlled major sources of regulated pollutants. EPNG will submit the necessary items should the facility or requirements change such that this regulation becomes applicable.

19.2 - Compliance Status (20.2.70.300.D.10.a & 10.b NMAC)

Describe the facility's compliance status with each applicable requirement at the time this permit application is submitted. This statement should include descriptions of or references to all methods used for determining compliance. This statement should include descriptions of monitoring, recordkeeping and reporting requirements and test methods used to determine compliance with all applicable requirements. Refer to Section 2, Tables 2-N and 2-O of the Application Form as necessary. (20.2.70.300.D.11 NMAC) For facilities with existing Title V permits, refer to most recent Compliance Certification for existing requirements. Address new requirements such as CAM, here, including steps being taken to achieve compliance.

EPNG believes that Pecos River Compressor Station is in compliance with each applicable requirement identified in Section 19.2. This belief was formed after reasonable inquiry. In the event that EPNG should discover new information affecting the compliance status of the facility, EPNG will make appropriate notification and/or take corrective action.

Pursuant to Condition A109 of Title V Permit P129-R4, EPNG has certified compliance with the terms of conditions of the permit. The most recent certification was submitted within 30 days of the end of every 12-month reporting period. The 12-month reporting period starts on September 1st of each year. EPNG has continued to be in compliance with applicable requirements.

19.3 - Continued Compliance (20.2.70.300.D.10.c NMAC)

Provide a statement that your facility will continue to be in compliance with requirements for which it is in compliance at the time of permit application. This statement must also include a commitment to comply with other applicable requirements as they come into effect during the permit term. This compliance must occur in a timely manner or be consistent with such schedule expressly required by the applicable requirement.

As described in Section 19.2, after reasonable inquiry EPNG states that Pecos River Compressor Station will continue to operate in compliance with applicable requirements. Additionally, EPNG will meet additional applicable requirements that become effective during the permit term in a timely manner or on such a time schedule as expressly required by the applicable requirement. In the event EPNG should discover new information affecting the compliance status of the facility, EPNG will make appropriate notifications and/or take corrective actions as appropriate.

19.4 - Schedule for Submission of Compliance (20.2.70.300.D.10.d NMAC)

You must provide a proposed schedule for submission to the department of compliance certifications during the permit term. This certification must be submitted annually unless the applicable requirement or the department specifies a more frequent period. A sample form for these certifications will be attached to the permit.

Condition A109 of Operating Permit P129-R4 requires EPNG to submit compliance certification reports to the New Mexico Environment Department (NMED) Air Quality Bureau (aqb) and to the EPA within 30 days of the end of every 12-month reporting period. The 12-month reporting period starts on September 1st of each year.

19.5 - Stratospheric Ozone and Climate Protection

In addition to completing the four (4) questions below, you must submit a statement indicating your source's compliance status with requirements of Title VI, Section 608 (National Recycling and Emissions Reduction Program) and Section 609 (Servicing of Motor Vehicle Air Conditioners).

1. Does your facility have any air conditioners or refrigeration equipment that uses CFCs, HCFCs or other ozone-depleting substances? ☒ Yes ☐ No
 2. Does any air conditioner(s) or any piece(s) of refrigeration equipment contain a refrigeration charge greater than 50 lbs? ☐ Yes ☒ No
(If the answer is yes, describe the type of equipment and how many units are at the facility.)
 3. Do your facility personnel maintain, service, repair, or dispose of any motor vehicle air conditioners (MVACs) or appliances ("appliance" and "MVAC" as defined at 82. 152)? ☐ Yes ☒ No
 4. Cite and describe which Title VI requirements are applicable to your facility (i.e. 40 CFR Part 82, Subpart A through G.)
-

EPNG believes that Title VI, Section 608 (National Recycling and Emissions Reduction Program) of the Clean Air Act may apply to this facility. EPNG may own refrigeration equipment containing CFCs meeting the criteria of this Section, specifically 40 CFR 82, Subpart F, which applies to owners of CFC-containing appliances (40 CFR 82.150(b) and 40 CFR 82.152). EPNG

may own appliances affected by this subpart and abides by this regulation. EPNG is in compliance with the requirements of this Section.

EPNG does not service motor vehicle air conditioners at this facility and, therefore, Section 609 does not apply.

Pecos River Compressor Station will continue to operate in compliance with the requirements of Title VI, Section 608 of the Clean Air Act, as they apply to this facility.

19.6 - Compliance Plan and Schedule

Applications for sources, which are not in compliance with all applicable requirements at the time the permit application is submitted to the department, must include a proposed compliance plan as part of the permit application package. This plan shall include the information requested below:

A. Description of Compliance Status: (20.2.70.300.D.11.a NMAC)

A narrative description of your facility's compliance status with respect to all applicable requirements (as defined in 20.2.70 NMAC) at the time this permit application is submitted to the department.

B. Compliance plan: (20.2.70.300.D.11.B NMAC)

A narrative description of the means by which your facility will achieve compliance with applicable requirements with which it is not in compliance at the time you submit your permit application package.

C. Compliance schedule: (20.2.70.300D.11.c NMAC)

A schedule of remedial measures that you plan to take, including an enforceable sequence of actions with milestones, which will lead to compliance with all applicable requirements for your source. This schedule of compliance must be at least as stringent as that contained in any consent decree or administrative order to which your source is subject. The obligations of any consent decree or administrative order are not in any way diminished by the schedule of compliance.

D. Schedule of Certified Progress Reports: (20.2.70.300.D.11.d NMAC)

A proposed schedule for submission to the department of certified progress reports must also be included in the compliance schedule. The proposed schedule must call for these reports to be submitted at least every six (6) months.

E. Acid Rain Sources: (20.2.70.300.D.11.e NMAC)

If your source is an acid rain source as defined by EPA, the following applies to you. For the portion of your acid rain source subject to the acid rain provisions of title IV of the federal Act, the compliance plan must also include any additional requirements under the acid rain provisions of title IV of the federal Act. Some requirements of title IV regarding the schedule and methods the source will use to achieve compliance with the acid rain emissions limitations may supersede the requirements of title V and 20.2.70 NMAC. You will need to consult with the Air Quality Bureau permitting staff concerning how to properly meet this requirement.

NOTE: The Acid Rain program has additional forms. See <http://www.env.nm.gov/aqb/index.html>. Sources that are subject to both the Title V and Acid Rain regulations are **encouraged** to submit both applications **simultaneously**.

EPNG states that Pecos River Compressor Station is in compliance with the applicable requirements in this section. No compliance plan, compliance schedule, or compliance reports are required.

19.7 - 112(r) Risk Management Plan (RMP)

Any major sources subject to section 112(r) of the Clean Air Act must list all substances that cause the source to be subject to section 112(r) in the application. The permittee must state when the RMP was submitted to and approved by EPA.

Pecos River Compressor Station is not subject to the requirements of 40 CFR 68, Chemical Accident Prevention Provisions. The definitions in 40 CFR 68.3 state the term “stationary source” does not apply to transportation of any regulated substance or any other extremely hazardous substance under the provisions of this part, provided that such transportation is regulated under 49 CFR Parts 192, 193 or 195 (DOT Office of Pipeline Safety Regulations). Pecos River Compressor Station is regulated under the DOT Office of Pipeline Safety Regulations and, therefore, is not subject to 112(r).

19.8 - Distance to Other States, Bernalillo, Indian Tribes and Pueblos

Will the property on which the facility is proposed to be constructed or operated be closer than 80 km (50 miles) from other states, local pollution control programs, and Indian tribes and pueblos (20.2.70.402.A.2 and 20.2.70.7.B NMAC)?

(If the answer is yes, state which apply and provide the distances.)

States: Texas (~7 km)

19.9 - Responsible Official

Responsible Official: Heriberto Carreon
R.O. Title: Director-Operations Division 4
R.O. Address: 4711 S. Western Amarillo, TX 79109
Phone: (806) 354-3108
R.O. Email: Heriberto_Carreon@kindermorgan.com

Section 20

Other Relevant Information

Other relevant information. Use this attachment to clarify any part in the application that you think needs explaining. Reference the section, table, column, and/or field. Include any additional text, tables, calculations or clarifying information.

Additionally, the applicant may propose specific permit language for AQB consideration. In the case of a revision to an existing permit, the applicant should provide the old language and the new language in track changes format to highlight the proposed changes. If proposing language for a new facility or language for a new unit, submit the proposed operating condition(s), along with the associated monitoring, recordkeeping, and reporting conditions. In either case, please limit the proposed language to the affected portion of the permit.

EPNG would like to identify the North American Energy Standards Board (NAESB) Day as the basis for records tracking at Pecos River Compressor Station and other facilities.

The United States uses six different standardized time zones from east to west; the energy industry uses a seventh time zone developed by the NAESB. This Board serves as an industry platform for the development and promotion of industry practices and standards that lead to the seamless marketing of wholesale and retail natural gas and electricity. Since 2003, the NAESB Day has been recognized by its customers, the business community, participants, and federal and state regulatory entities. As such, a NAESB Day is a 24-hour period derived from a uniform time zone that occurs simultaneously nationwide and is the basis of EPNG's COMET data acquisition system "day" data. Unit information defined and stored according to the NAESB Day includes monitored gas flows or volumes, hours of operation, maintenance and repair activities, and routine emissions.

Data obtained from outside agencies (including test reports and summaries) or submitted pursuant to 20.2.7 NMAC reporting requirements is based on the "day" as defined by the local time zone.

Responsible Official authority for the purposes of 40 CFR Part 70 and state-specific certification requirements are delegated to the individual holding the position of Director of Operations for Kinder Morgan, Inc. and its subsidiaries and affiliates, including without limitation those entities listed within the Responsible Official Designation memorandum Attachment A on the following page.

The position of Director of Operations meets the definition of Responsible Official in 40 CFR 70.2 and the applicable state regulations. Specifically, the Director of Operations is responsible for the overall operation of the regulated facilities with gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars).



Interoffice Memo

Date: January 21, 2025

To: File

Cc: Jessica Toll, Director of Operations, and Director of EHS

From: Kenneth W. Grubb
Chief Operating Officer

RE: Responsible Official Designation

As Chief Operating Officer of Kinder Morgan's Natural Gas business unit, I hereby authorize and delegate Responsible Official authority for the purposes of 40 CFR Part 70 and state-specific certification requirements to the individual holding the position of Director of Operations for Kinder Morgan, Inc. and its subsidiaries and affiliates, including without limitation those entities listed in Attachment A.

The position of Director of Operations meets the definition of Responsible Official in 40 CFR 70.2 and the applicable state regulations. Specifically, the Director of Operations is responsible for the overall operation of the regulated facilities with gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars).

Kenneth W. Grubb
Chief Operating Officer

Attachment A
Arlington Storage Company, LLC
Banquete Hub LLC
Bear Creek Storage Company, L.L.C.
Bighorn Gas Gathering, L.L.C.
BPX (Eagle Ford) Gathering LLC
Camino Real Gas Gathering Company LLC
Cantera Gas Company LLC
Cheyenne Plains Gas Pipeline Company, L.L.C.
CIG Gas Storage Company LLC
Colorado Interstate Gas Company, L.L.C.
Colorado Interstate Issuing Corporation
Copano Energy Finance Corporation
Copano Energy Services/Upper Gulf Coast LLC
Copano Field Services GP, L.L.C.
Copano Field Services/North Texas, L.L.C.
Copano Field Services/South Texas LLC
Copano Field Services/Upper Gulf Coast LLC
Copano Liberty, LLC
Copano NGL Services (Markham), L.L.C.
Copano NGL Services LLC
Copano Pipelines Group, L.L.C.
Copano Pipelines/North Texas, L.L.C.
Copano Pipelines/Rocky Mountains, LLC
Copano Pipelines/South Texas LLC
Copano Pipelines/Upper Gulf Coast LLC
Copano Processing LLC
Copano Risk Management LLC
Copano Terminals LLC
CPNO Services LLC
Dos Caminos, LLC
Eagle Ford Gathering LLC
Eagle Ford Midstream LLC
El Paso Citrus Holdings, Inc.

El Paso Natural Gas Company, L.L.C.
El Paso Noric Investments III, L.L.C.
Elba Express Company, L.L.C.
Elba Liquefaction Company, L.L.C.
EP Ruby LLC
EPBGP Contracting Services LLC
Greenholly Gathering Pipeline LLC
Gulf Coast Express Pipeline LLC
Gulf LNG Energy (Port), LLC
Gulf LNG Energy, LLC
Gulf LNG Holdings Group, LLC
Gulf LNG Liquefaction Company, LLC
Gulf LNG Pipeline, LLC
Hiland Partners Holdings LLC
Horizon Pipeline Company, L.L.C.
Kinder Morgan Altamont LLC
Kinder Morgan Border Pipeline LLC
Kinder Morgan Endeavor LLC
Kinder Morgan EP Midstream LLC
Kinder Morgan Freedom Pipeline LLC
Kinder Morgan Gas Natural de Mexico, S. de R.L. de C.V.
Kinder Morgan Illinois Pipeline LLC
Kinder Morgan Keystone Gas Storage LLC
Kinder Morgan Louisiana Pipeline Holding LLC
Kinder Morgan Louisiana Pipeline LLC
Kinder Morgan Mexico LLC
Kinder Morgan NatGas O&M LLC
Kinder Morgan NGPL Holdings LLC
Kinder Morgan North Texas Pipeline LLC
Kinder Morgan Pecos Valley LLC
Kinder Morgan SNG Operator LLC
Kinder Morgan Tejas Pipeline GP LLC
Kinder Morgan Tejas Pipeline LLC
Kinder Morgan Texas Pipeline LLC
Kinder Morgan Treating Odessa LLC

Kinder Morgan Utica LLC
Kinder Morgan Utopia Holdco LLC
Kinder Morgan Utopia LLC
KinderHawk Field Services LLC
Kiowa Lateral LLC
KM Eagle Gathering LLC
KM Gas Marketing LLC
KM Liquids Marketing LLC
KM Louisiana Midstream LLC
KM Treating GP LLC
KM Utopia Operator LLC
Liberty Pipeline Group, LLC
Midco LLC
Midcontinent Express Pipeline LLC
Mission Natural Gas Company LLC
Mojave Pipeline Company, L.L.C.
Mojave Pipeline Operating Company, L.L.C.
Natural Gas Pipeline Company of America LLC
NEP DC Holdings, LLC
NET Mexico Pipeline LLC
Net Mexico Pipeline Partners, LLC
Net Midstream, LLC
NGPL Finance LLC
NGPL Holdings LLC
NGPL Intermediate Holdings LLC
NGPL PipeCo LLC
Permian Highway Pipeline LLC
Red Cedar Gathering Company
Sierrita Gas Pipeline LLC
Sonoran Pipeline LLC
Southern Gulf LNG Company, L.L.C.
Southern Liquefaction Company LLC
Southern LNG Company, L.L.C.
Southern Natural Gas Company, L.L.C.
Southern Natural Issuing Corporation

Stagecoach Energy Solutions LLC
Stagecoach Gas Services LLC
Stagecoach Operating Services LLC
Stagecoach Pipeline & Storage Company LLC
Tejas Gas, LLC
Tejas Natural Gas, LLC
Tennessee Gas Pipeline Company, L.L.C.
Tennessee Gas Pipeline Issuing Corporation
TransColorado Gas Transmission Company LLC
Trident Intrastate Pipeline LLC
Twin Tier Pipeline LLC
Webb/Duval Gatherers
WYCO Development LLC
Wyoming Interstate Company, L.L.C.
Young Gas Storage Company, Ltd.



December 16, 2024

Delivered via E-Mail
Brian.Polgar@env.nm.gov

Mr. Brian Polgar
Compliance & Enforcement Section Chief
Air Quality Bureau
New Mexico Environment Department
525 Camino de los Marquez, Suite 1
Santa Fe, NM 87505

Re: Kinder Morgan, Inc. Alternative Compliance Plan for Gas Turbines and Engines Subject to the New Mexico Ozone Precursor Rule, Revision

Dear Mr. Polgar:

Kinder Mogan, Inc. (KM) hereby submits a revision to the subject Alternative Compliance Plan (ACP), previously approved by the Air Quality Bureau on March 22, 2024.

This revision includes the following changes:

Facility	County	Update
Eunice	Lea	Update NOx standards for two turbine units to reflect manufacturer data for core installations obtained during the permitting process.
Station 167	Lea	Update CO standard for three engines to include an additional margin of safety.
Monument	Lea	Permanent removal of one emission unit from service.
San Juan River	San Juan	Update CO standard for three Solar turbines to include an additional margin of safety.
Caprock	Lea	Update CO standard for two GE turbines to include an additional margin of safety.
Pecos River	Eddy	Update CO standard for three GE turbines to show additional reduction.
Afton	Dona Ana	Update CO standard for three GE turbines to show additional reduction.
Belen	Valencia	Update CO standard for two GE turbines to include an additional margin of safety.
Rio Vista	San Juan	Update NOx standard for one turbine unit to reflect manufacturer data for core installation obtained during the project scoping.



The attached revision to the ACP incorporates these changes. Relative to the prior plan, this revision represents an additional NOx reduction of 39.4 tons, and an equivalent CO reduction, within 0.2 tons of the prior plan.

We appreciate your review of the attached ACP, and we look forward to hearing from you. If you have any questions, please contact me at 713.420.3463 or at tom_mitchell@kindermorgan.com.

Sincerely,

R. Thomas Mitchell
Manager, EHS

Enclosure



New Mexico Ozone Precursor Rule Alternative Compliance Plan

Submitted to:
New Mexico Environmental Department
Air Quality Bureau - Compliance & Enforcement Section
1190 St. Francis Dr. Suite N4050
Santa Fe, NM 87505

June 2023
Revision 1: August 2023
Revision 2: January 2024
Revision 3: December 2024

New Mexico Alternative Compliance Plan

December 2024

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1 Executive Summary

The New Mexico Environmental Department (NMED) proposed, and the New Mexico Environment Improvement Board (Board) adopted, the Ozone Precursor rule under 20.2.50 NMAC to reduce ozone precursor emissions—specifically nitrogen oxides (“NO_x”) and volatile organic compounds (“VOCs”)—at sources causing or contributing to ambient ozone concentrations that exceed ninety-five percent of the national ambient air quality standard for ozone. The Ozone Precursor Rule also sets carbon monoxide (CO) emission limits in conjunction with the NO_x and VOC limits. In lieu of meeting the emission standards established under 20.2.50.113 for stationary natural gas-fired combustion engines and turbines, owners and operators may elect to comply with the emission standards through an Alternative Compliance Plan (ACP) and/or an Alternate Emission Standard (AES) approved by the department.

Kinder Morgan, Inc. (Kinder Morgan) on behalf of itself and its subsidiaries and affiliates El Paso Natural Gas Company, L.L.C. (EPNG), Natural Gas Pipeline of America (NGPL), and TransColorado Gas Transmission Company LLC (TC) (collectively “Kinder Morgan”) request approval of an ACP for the stationary natural gas-fired combustion engines and turbines identified in Appendix A, attached hereto. The proposed ACP demonstrates that Kinder Morgan will achieve a greater reduction in emissions than if emission standards were applied individually to each engine or turbine separately. The proposed ACP does not include NMNEHC emissions because all units subject to 20.2.50.113 currently meet the NMNEHC standards established under 20.2.50.113 for existing stationary natural gas-fired combustion engines and turbines.

This ACP addresses CO emissions from all subject units in the Kinder Morgan fleet and NO_x emissions from units not addressed in the separately submitted plan for NO_x that comply with 20.2.50.113 NMAC through an Alternative Emission Standards, pursuant to 20.2.50.113(B)(11) NMAC.¹ Table 1-1 summarizes the total amount of allowable emissions under the proposed ACP compared to the total allowable emissions under 20.2.50.113 for existing engines and turbines. If approved by NMED Kinder Morgan will meet the total allowable emissions established under the emission standards of 20.2.50.113 by January 1, 2028, for both engines and turbines, a year before the compliance schedule outlined in the rule for engines. Under the proposed ACP, Kinder Morgan will achieve a total NO_x reduction of 770.7 tons by January 1, 2028. Of which, 93.7% of NO_x reduction will be in the Permian Basin.

¹ See Statement of Reasons, at 111 (Section 113 “offers significant flexibility for sources that are unable to meet the emissions standards of Part 50: they may reduce the annual hours of operation, they may seek an Alternative Compliance Plan ACP to meet an equivalent amount of emission reductions, **and/or** they may seek alternative emissions standards if they can demonstrate that they cannot meet the existing standards through an ACP”) (emphasis added).

Table 1-1 Comparison of Proposed ACP and 20.2.50.113 Total Allowable Emissions

Pollutant	Scenario	TPY Total Allowable Emissions	ACP Total Proposed Emissions Meet 20.2.50.113 Total Allowable Emissions?
NOx	Proposed ACP	968.1	Yes
	20.2.50.113 Total Allowable Emissions ¹	1,064.6	
CO	Proposed ACP	597.4	Yes
	20.2.50.113 Total Allowable Emissions ¹	601.8	

1 - To be conservative, Kinder Morgan is using the lower of the current permit limits and the allowable mass emissions under the ozone precursor rule to establish the final allowable NOx and CO emission rates for the ACP.

2 Regulatory Background

The Board adopted the Ozone Precursor rule under 20.2.50 NMAC to reduce ozone precursor emissions—specifically nitrogen oxides (“NOx”) and volatile organic compounds (“VOCs”)—at sources causing or contributing to ambient ozone concentrations that exceed ninety-five percent of the national ambient air quality standard for ozone. Sources located in Chaves, Dona Ana, Eddy, Lea, Rio Arriba, Sandoval, San Juan, and Valencia counties are subject to the rule. Kinder Morgan owns and operates multiple stationary natural gas-fired spark ignition engines and stationary natural gas-fired combustion turbines with a maximum design rating equal to or greater than 1,000 hp located at 12 different facilities in counties subject to 20.2.50 NMAC.

Applicable existing portable or stationary natural gas-fired spark ignition engines, compression ignition engines, or natural gas-fired combustion turbines shall meet the emissions standards in 20.2.50.113 listed in Table 2-1 and Table 2-2. Owners or operators shall comply with the emission standards for a specified percentage of all the company’s equipment subject to the standards by the dates specified in Table 2-3 below.

Table 2-1 Emission Standards for Existing Natural Gas-Fired Spark Ignition Engines

Engine Type	Rated bhp	NOx	CO	NMNEHC (as propane)
2 Stroke Lean Burn	>1,000	3.0 g/bhp-hr	0.60 g/bhp-hr	0.70 g/bhp-hr
4-Stroke Lean Burn	>1,000 bhp and <1,775 bhp	2.0 g/bhp-hr	0.60 g/bhp-hr	0.70 g/bhp-hr
4-Stroke Lean Burn	≥1,775 bhp	0.5 g/bhp-hr	0.60 g/bhp-hr	0.70 g/bhp-hr
Rich Burn	>1,000 bhp	0.5 g/bhp-hr	0.60 g/bhp-hr	0.70 g/bhp-hr

Table 2-2 Emission Standards for Existing Stationary Combustion Turbines

Turbine Rating (bhp)	NOx (ppmvd @15% O ₂)	CO (ppmvd @ 15% O ₂)	NMNEHC (as propane, ppmvd @15% O ₂)
≥1,000 and <4,100	150	50	9
≥4,100 and <15,000	50	50	9
≥15,000	50	50 or 93% reduction	5 or 50% reduction

Table 2-3 Engine and Turbine Compliance Schedule

Unit	30% Compliance Due Date	65% Compliance Due Date	100% Compliance Due Date
Engines	January 1, 2025	January 1, 2027	January 1, 2029
Turbines	January 1, 2024	January 1, 2026	January 1, 2028

In lieu of meeting the emission standards established under 20.2.50.113 for portable and stationary natural gas-fired combustion engines and turbines, owners and operators may elect to comply with the emission standards through an ACP approved by NMED. In particular, the Board adopted Paragraphs (10) and (11) of Subsection B of 20.2.50.113 NMAC “for the reasons stated in the NMED Rebuttal . . . and the supporting argument by Kinder Morgan.” State of New Mexico, Environmental Improvement Board, Statement of Reasons and Final Order, In the Matter of Proposed New Regulation 20.2.50 NMAC – Oil and Gas Sector – Ozone Precursor Pollutants, No. EIB 21-27, at pp. 111 (June 27, 2022) (hereinafter, Statement of Reasons). In particular, and citing to Kinder Morgan’s supporting argument in the Board rulemaking, the Board stated that “[w]hile the emissions thresholds provided in Tables 1 and 3 for existing engines and turbines are appropriate in most cases, circumstances may exist where it is technically impracticable or economically infeasible to achieve compliance.” Id. at 111. Recognizing these practical limitations, the Board’s final rule “offers significant flexibility for sources that are unable to meet the emissions standards of Part 50: they may reduce the annual hours of operation, they may seek an Alternative Compliance Plan ACP to meet an equivalent amount of emission reductions, and/or they may seek alternative emissions standards if they can demonstrate that they cannot meet the existing standards through an ACP.” Id. at 111 (emphasis added). Thus, an operator may have in place both an AES (or multiple AESs for individual units), and an ACP.

The purpose of this report is to meet the requirement from 20.2.50.113(10) as follows:

“In lieu of complying with the emission standards for individual engines and turbines established in Subsection B of 20.2.50.113 NMAC, an owner or operator may elect to comply with the emission standards through an Alternative Compliance Plan (ACP) approved by the department. An ACP must include the list of engines or turbines subject to the ACP, and a demonstration that the total allowable emissions for the engines or turbines subject to the ACP will not exceed the total allowable emissions under the emission standards of this Part.”

3 Alternative Compliance Plan

To establish a baseline of equivalent emission reductions per year, Kinder Morgan calculated emissions for each engine or turbine if it were to meet the emissions standard set in the ozone rule (20.2.50.113.B) on a unit-by-unit basis for those units covered by the ACP. The allowable mass emissions under the ozone rule are then compared to the current permit limits. To be conservative, Kinder Morgan is using the lower of the current permit limits and the allowable mass emissions under the ozone precursor rule to establish the final allowable NOx and CO emission rates for the ACP. Using the compliance schedule outlined in 20.2.50.113.B.2 for existing stationary natural gas-fired spark ignition engines and 20.2.50.113.B.7 for stationary natural gas-fired combustion turbines, Kinder Morgan determined the associated emission reductions for each year beginning with current permitted emissions, and projecting through January 1, 2029. This was then compared with the planned ACP schedule of emission control implementations.

Table 3-1 and 3-2 show the current permitted NOx and CO emissions for units addressed in the ACP, annual milestones required by 20.2.50.113 and achieved by the proposed ACP based on the schedules outlined in 20.2.50.113.B.(2) and (7).

Table 3-1 NOx Compliance Schedule under the Ozone Precursor Rule and the Proposed ACP

		Allowable Emissions under 20.2.50.113 (tpy)	ACP Proposed Emissions (tpy)
Current Permitted Emissions		1738.8	1738.8
20.2.50.113 Annual Milestones	1/1/2024	1718.5	1652.4
	1/1/2025	1536.5	1431.0
	1/1/2026	1512.8	1353.2
	1/1/2027	1300.6	968.1
	1/1/2028	1276.8	968.1
	1/1/2029	1064.6	968.1
Final per 20.2.50.113		1064.6	968.1

Table 3-2 CO Compliance Schedule under the Ozone Precursor Rule and the Proposed ACP

		Allowable Emissions (tpy)	ACP Proposed Emissions (tpy)
Current		1253.2	1253.2
20.2.50.113 Annual Milestones	1/1/2024	1192.2	1183.6
	1/1/2025	1057.8	1096.0
	1/1/2026	986.7	833.4
	1/1/2027	829.8	816.8
	1/1/2028	758.7	597.4
	1/1/2029	601.8	597.4
Final per 20.2.50.113		601.8	597.4

If approved by NMED, as demonstrated by Tables 3-1 & 3-2, Kinder Morgan will meet the total allowable emissions established under the emission standards of 20.2.50.113 by January 1, 2028, for both engines and turbines, a year before the compliance schedule outlined in the rule for engines and turbines.

NOx reductions will be attained by adding low emission combustion (LE) upgrades on selected engines, and exchanging a Solar turbine component with a lower NOx component on selected turbines. The LE upgrades include a software update and tuning on the controls. The Solar turbine component exchange includes installation of the Solar SoloNOx system. CO emissions will be reduced by installing oxidation catalysts on selected engines or submitting permit revision applications to establish lower CO permit limits based upon actual performance. The specific technology to be used on each unit is included in Appendix A.

Note, to be conservative, Kinder Morgan is using the lower of the current permit limits and the allowable mass emissions under the ozone precursor rule to establish the final allowable NOx and CO emission rates for the proposed ACP. In other words, Kinder Morgan is not claiming credit on reductions for existing units whose permitted limits are already below the allowable emission rates under the ozone precursor rule. Additionally, for each unit in the ACP, the proposed emission rate is provided on an hourly mass emission limit or performance limit basis consistent with the expected representation in the operating permits. These emission rates are converted to an annual basis assuming continuous operation (8,760 hr/yr). Emission reductions are calculated as the difference between the current permit limits and the proposed annual emission rate.

The ACP implementation or retrofitting schedule is depicted by the last column of Appendix A, to be completed in advance of the January 1 compliance date of the following calendar year.

Appendix A

ACP Control Technology Summary and Implementation Schedule

Compressor Station	Unit ID	Type	Current Permit Limits TPY		Ozone Rule Emission Standards g/hp-hr for engines; ppm for turbines		Total Allowable Under Ozone Rule (TPY)		Lower of Rule Emissions and Current Permit Limits (TPY)		Alternative Compliance Plan Summary	Total Emission Under ACP (PPH)		Total Emission Under ACP (TPY)		Total Reduction Under ACP (TPY)		Implementation Schedule By Year
			NOx	CO	NOx	CO	NOx	CO	NOx	CO		NOx	CO	NOx	CO	NOx	CO	
Caprock	A-01	Turbine	201.0	32.9	50.0	50.0	53.4	20.1	53.4	20.1	Subject to AES for NOx; Lower CO to 6.4 lb/hr 20% of highest test	--	6.4	--	28.0	--	4.9	2024
Caprock	A-02	Turbine	172.1	34.5	50.0	50.0	32.9	20.1	32.9	20.1	Subject to AES for NOx; Lower CO to 6.4 lb/hr 20% of highest test	--	6.4	--	28.0	--	6.5	2024
Eunice M/L	B-01	Turbine	83.2	26.3	50.0	50.0	39.2	18.4	39.2	18.4	Solar Taurus 60 component exchange to lower emissions to 25 ppm NOx and 50 ppm CO	5.8	2.3	25.4	10	57.8	16.3	2023
Eunice M/L	C-01	Turbine	25.4	30.9	50.0	50.0	50.8	28.9	25.4	28.9	Solar Taurus 60 component exchange to lower emissions to 9 ppm NOx and 25 ppm CO	2.51	2.3	11.0	10	14.4	20.9	2024
Eunice M/L	C-02	Turbine	25.4	30.9	50.0	50.0	50.8	30.7	25.4	30.7	Solar Taurus 60 component exchange to lower emissions to 9 ppm NOx and 25 ppm CO	2.51	2.3	11.0	10	14.4	20.9	2023 (CO) 2024 (NOx)
Eunice M/L	C-03	Engine	36.5	9.1	0.5	0.6	17.1	20.6	17.1	9.1	Install low emission combustion (LE) technology to reduce NOx emissions; Keep current CO permit limits	0.5 g/hp-hr	2.1	17.1	9.1	19.4	0.0	2023
Monument Plant	A-01	Engine	125.0	11.8	3.0	0.6	29.0	5.8	29.0	5.8	Install low emission combustion (LE) technology to reduce NOx emissions; Add Oxidation Catalyst for 70% CO reduction	3.0 g/hp-hr	0.8	29.0	3.5	96.0	8.3	2024
Monument Plant	A-02	Engine	125.0	11.8	3.0	0.6	29.0	5.8	29.0	5.8	Install low emission combustion (LE) technology to reduce NOx emissions; Add Oxidation Catalyst for 70% CO reduction	3.0 g/hp-hr	0.8	29.0	3.5	96.0	8.3	2026
Monument Plant	A-03	Engine	125.0	11.8	3.0	0.6	29.0	5.8	29.0	5.8	Install low emission combustion (LE) technology to reduce NOx emissions; Add Oxidation Catalyst for 70% CO reduction	3.0 g/hp-hr	0.8	29.0	3.5	96.0	8.3	2026
Monument Plant	A-04	Engine	17.1	19.7	3.0	0.6	29.0	5.8	17.1	5.8	Keep Current Permit Limits	3.9	4.50	17.1	19.7	0.0	0.0	2027
Monument Plant	A-05	Engine	17.1	19.7	3.0	0.6	29.0	5.8	17.1	5.8	Keep Current Permit Limits	3.9	4.50	17.1	19.7	0.0	0.0	2027
Monument Plant	B-01	Engine	38.5	44.0	3.0	0.6	66.0	13.2	38.5	13.2	Remove unit from service in 2025	0.0	0.0	0	0.0	38.5	44.0	2025
Pecos River	A-01	Turbine	233.0	35.0	50.0	50.0	56.5	28.4	56.5	28.4	Subject to AES for NOx; Lower CO by 0.5 lb/hr	--	7.5	--	32.9	--	2.2	2025
Pecos River	A-02	Turbine	233.0	35.0	50.0	50.0	56.5	28.4	56.5	28.4	Subject to AES for NOx; Lower CO by 0.5 lb/hr	--	7.5	--	32.9	--	2.2	2025
Pecos River	A-03	Turbine	233.0	35.0	50.0	50.0	56.5	28.4	56.5	28.4	Subject to AES for NOx; Lower CO by 0.5 lb/hr	--	7.5	--	32.9	--	2.2	2025
Rio Vista	A-01	Turbine	17.5	29.2	150.0	50.0	17.5	10.0	17.5	10.0	Keep current NOx permit limits; Reduce CO permit limits to actual plus 20%	4.0	4.5	17.5	19.9	0.00	9.3	2024
Rio Vista	A-02	Turbine	17.5	29.2	150.0	50.0	17.5	10.0	17.5	10.0	Keep current NOx permit value and CO actual plus 20%	4.0	4.5	17.5	19.9	0.00	9.3	2024
Rio Vista	A-03	Turbine	62.2	17.0	50.0	50.0	38.4	23.3	38.4	17.0	Solar Centaur 50 component exchange to lower emissions to 25 ppm NOx and 50 ppm CO	25 PPM	50PPM	22.9	13.6	39.3	3.4	2025
Roswell	A-01	Engine	78.8	78.8	3.0	0.6	98.5	19.7	78.8	19.7	Keep current NOx permit limits; Add Oxidation Catalyst for 80% CO reduction	18.0	2.5	78.8	11.2	0.0	67.6	2025
Roswell	A-02	Engine	78.8	78.8	3.0	0.6	98.5	19.7	78.8	19.7	Keep current NOx permit limits; Add Oxidation Catalyst for 80% CO reduction	18.0	2.5	78.8	11.2	0.0	67.6	2025
Roswell	A-03	Engine	78.8	78.8	3.0	0.6	98.5	19.7	78.8	19.7	Keep current NOx permit limits; Add Oxidation Catalyst for 80% CO reduction	18.0	2.5	78.8	11.2	0.0	67.6	2025
San Juan River	A-01	Turbine	17.5	29.2	150.0	50.0	17.5	10.0	17.5	10.0	Keep current NOx permit limits; Repermit CO to lower permit limits	4.0	4.5	17.5	19.7	0.00	9.5	2024
San Juan River	A-02	Turbine	17.5	29.2	150.0	50.0	17.5	10.0	17.5	10.0	Keep current NOx permit limits; Repermit CO to lower permit limits	4.0	4.5	17.5	19.7	0.00	9.5	2024
San Juan River	A-03	Turbine	17.5	29.2	150.0	50.0	17.5	10.0	17.5	10.0	Keep current NOx permit limits; Repermit CO to lower permit limits	4.0	4.5	17.5	19.7	0.00	9.5	2024
Washington Ranch Storage	A-01	Engine	119.5	119.5	3.0	0.6	130.4	26.1	119.5	26.1	Keep current NOx permit limits; Add Oxidation Catalyst for 80% CO reduction	27.3	2.2	119.5	9.8	0.0	109.7	2027
Washington Ranch Storage	B-02	Engine	119.5	119.5	3.0	0.6	130.4	26.1	119.5	26.1	Keep current NOx permit limits; Add Oxidation Catalyst for 80% CO reduction	27.3	2.2	119.5	9.8	0.0	109.7	2027
Maljamar	1	Engine	154.5	14.1	3.0	0.6	57.9	11.6	57.9	11.6	Install low emission combustion (LE) technology to reduce NOx emissions; Add Oxidation Catalyst for 80% CO reduction	3.0 g/hp-hr	0.8	57.9	3.3	96.6	10.8	2023 (CO) 2024 (NOx)
Maljamar	2	Engine	154.5	14.1	3.0	0.6	57.9	11.6	57.9	11.6	Install low emission combustion (LE) technology to reduce NOx emissions; Add Oxidation Catalyst for 80% CO reduction	3.0 g/hp-hr	0.8	57.9	3.3	96.6	10.8	2023 (CO) 2026 (NOx)
Maljamar	3	Engine	154.5	14.1	3.0	0.6	57.9	11.6	57.9	11.6	Install low emission combustion (LE) technology to reduce NOx emissions; Add Oxidation Catalyst for 80% CO reduction	3.0 g/hp-hr	0.8	57.9	3.3	96.6	10.8	2023 (CO) 2026 (NOx)
Blanco	389	Engine	16.0	4.0	0.5	0.6	11.4	13.7	11.4	4.0	Install low emission combustion (LE) technology to reduce NOx emissions; Keep current CO permit limits	0.5 g/hp-hr	0.9	11.4	4.0	4.6	0.0	2023
Blanco	390	Engine	16.0	4.0	0.5	0.6	11.4	13.7	11.4	4.0	Install low emission combustion (LE) technology to reduce NOx emissions; Keep current CO permit limits	0.5 g/hp-hr	0.9	11.4	4.0	4.6	0.0	2023
Afton	A-1	Turbine	224.5	35.7	50.0	50.0	51.4	28.6	51.4	28.6	Subject to AES for NOx; Lower CO by 0.4 lb/hr	--	7.7	--	33.7	--	2.0	2025
Afton	A-2	Turbine	224.5	35.7	50.0	50.0	51.4	28.6	51.4	28.6	Subject to AES for NOx; Lower CO by 0.4 lb/hr	--	7.7	--	33.7	--	2.0	2025
Afton	A-3	Turbine	224.5	35.7	50.0	50.0	51.4	28.6	51.4	28.6	Subject to AES for NOx; Lower CO by 0.4 lb/hr	--	7.7	--	33.7	--	2.0	2025
Belen	A-1	Turbine	169.0	34.5	50.0	50.0	34.9	20.1	34.9	20.1	Subject to AES for NOx; Keep current CO permit limits	--	7.9	--	34.5	--	0.0	2024
Belen	A-2	Turbine	169.0	34.5	50.0	50.0	34.9	20.1	34.9	20.1	Subject to AES for NOx; Keep current CO permit limits	--	7.9	--	34.5	--	0.0	2024
Total (TPY)			1738.8	1253.2			1247.6	639.0	1064.6	601.8				968.1	597.4	770.7	655.8	



February 4, 2025

Douglas Hamm
EHS Engineer
Kinder-Morgan Operations Support Group
2 North Nevada Avenue
Colorado Springs, Colorado 80903

Via electronic mail

Electronic mail: Douglas_Hamm@kindermorgan.com

Re: Conditional Approval of Revised Alternative Compliance Plan submitted December 16, 2024

Dear Douglas Hamm,

Kinder Morgan, Inc. submitted to the Air Quality Bureau ("AQB") a revised proposed Alternative Compliance Plan ("ACP") on December 16, 2024. The plan contained a description and summary tables showing how Kinder Morgan expects to meet the engine and turbine performance standards at 20.2.50 NMAC ("Part 50"), Section 113 as a fleet. Part 50 allows companies to demonstrate alternative compliance with the standards by demonstrating that "the total allowable emissions for the engines or turbines subject to the ACP will not exceed the total allowable emissions under the emission standards ..." (20.2.50.113.B(10) NMAC)

The Plan revises allowable emissions of nitrogen oxides ("NOx") and/or carbon monoxide ("CO") at 16 fleet turbines and 5 fleet engines at 9 facilities throughout the State of New Mexico, based on the previous plan which NMED conditionally approved on March 22, 2024. The revision includes an additional emissions reduction of 52.7 tons per year of NOx and an insignificant increase of 0.3 tons per year of CO. Because the previously approved plan reduced CO emissions 41.8 tons per year beyond the required reductions for the fleet, the revised plan still meets the requirements in Part 50 and is, therefore, approvable.

AQB did not require Kinder Morgan to repeat the third party verifier process, but did require that the revised plan proceed through an additional public comment process. AQB posted the revised plan for public comment on December 18, 2024, with the public comment period running from December 18, 2024 to January 17, 2025. Kinder Morgan published announcements December 20-24, 2024 regarding the availability of the revised plan for public comment in the *Carlsbad Current Argus*, *Albuquerque Journal*, *Tri-City Record*, *Hobbs News Sun*, *Roswell Daily Record*, and *Las Cruces Sun*.

AQB received no public comments.

Following AQB analysis of the proposed revised ACP, the Department concurs that the ACP meets the requirements of Part 50, Section 113. The Department has determined that the ACP submitted in December 2024 is satisfactory and will serve to demonstrate compliance with Section 113 of Part 50 if all requirements in the ACP are followed. This includes permit revisions, unit removals and control installation deadlines. AQB had already agreed to a permit application schedule to meet the deadlines within the previously approved plan; Kinder Morgan has submitted a revised schedule to AQB and will work directly with the Permitting Section Chief regarding that schedule. Any scheduling changes due to AQB resource constraints will not impact the approval

of this ACP, provided Kinder Morgan updates the AQB Compliance & Enforcement Section Chief of any delays or deviations from the approved ACP schedule. Volatile Organic Compounds ("VOC") emissions were not included in the ACP, so VOC standards apply to individual engines and turbines.

The revised ACP as submitted is conditionally approved as noted above.

The Department appreciates Kinder Morgan's diligence in planning for compliance with the Ozone Precursor Rule (Part 50).

Cindy Hollenberg
Bureau Chief
Air Quality Bureau

Cc: Bruce Baizel, Compliance & Enforcement Division Director
Casey Stavert, AQB Inspections Supervisor
Shea Schleman, AQB Compliance Reports Manager
Melinda Owens, AQB Permitting Section Chief
Julia Kuhn, AQB Major Source Manager



New Mexico Alternative Emission Standards Proposal

Prepared for
El Paso Natural Gas Company, LLC

November 2022

Revision April 2023

New Mexico Alternative Emission Standards Proposal

April 2023

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1 Executive Summary

The New Mexico Environmental Department (NMED) proposed and the New Mexico Environmental Improvement Board (EIB) finalized the Ozone Precursor rule under 20.2.50 NMAC to reduce ozone emissions at sources causing or contributing to ambient ozone concentrations that exceed ninety-five percent of the national ambient air quality standard for ozone. In lieu of meeting the emission standards established under 20.2.50.113 for portable and stationary natural gas-fired combustion engines or turbines, owners and operators may submit a request for alternative emission standards for a specific engine or turbine based on technical impracticability or economic infeasibility. El Paso Natural Gas Company, L.L.C. (EPNG), a subsidiary of Kinder Morgan, Inc. (Kinder Morgan), requests alternative emission standards for ten (10) GE stationary natural gas-fired combustion turbines on the basis of economic infeasibility.

EPNG conducted a technical and economic analysis of emission controls for the 10 GE stationary natural gas-fired combustion turbines to reduce NO_x emissions. The only technically practicable technology for each turbine is Selective Catalytic Reduction (SCR). In general, NMED considers costs in excess of \$7,500/ton of pollutant reduced to be economically infeasible. As noted in Kinder Morgan's Technical Testimony filed on July 28, 2021, and further documented in this submission, the cost per ton of installing SCR on these 10 GE turbines ranges up to \$458,302 based on actual historical operating hours. Even in the most conservative case, based on Potential to Emit (PTE), installing SCR on these 10 GE turbines is not economically feasible. A review of potential control technologies and cost analyses are presented in Sections 3 and 4. The economic infeasibility of SCR installation is summarized below in Table 1-1. EPNG has concluded that alternative emission standards (AES) for NO_x for the 10 GE gas turbines are warranted because the cost of compliance for technically practicable retrofit emission control technologies is not economically feasible, and the units' NO_x emissions cannot be addressed through an Alternate Compliance Plan (ACP).

Table 1-1 Summary of Cost Effectiveness Evaluation

Turbine Location	Unit No.	Permitted Turbine Rating (hp)	Cost Effectiveness (\$/ton NO_x Removed) Based on Actual Emissions*	Cost Effectiveness (\$/ton NO_x Removed) Based on PTE
Afton	A-01	6,150	\$123,236	\$11,697
Afton	A-02	6,150	\$458,302	\$11,097
Afton	A-03	6,150	\$48,516	\$11,097
Belen	A-01	4,737	\$88,704	\$30,794
Belen	A-02	4,737	\$60,982	\$29,214
Caprock	A-01	6,026	\$80,398	\$9,933
Caprock	A-02	4,879	\$54,935	\$29,283
Pecos River	A-01	7,150	\$27,877	\$8,261
Pecos River	A-02	7,150	\$22,517	\$11,097
Pecos River	A-03	7,150	\$26,527	\$11,097

*The data in the second-to-last column are from Kinder Morgan's Technical Testimony filed on July 28, 2021 before the EIB in which KM used the average actual emissions from 2018 to 2020. This data was ultimately relied upon by the EIB in support of adoption of Paragraphs (10) and (11) of Subsection B of 20.2.50.113 NMAC, which are the options to comply with the emissions limits through an AES or ACP. See State of New Mexico, Environmental Improvement Board, Statement of Reasons and Final Order, In the Matter of Proposed New Regulation 20.2.50 NMAC – Oil and Gas Sector – Ozone Precursor Pollutants, No. EIB 21-27, at pp. 100-101 (June 27, 2022) (hereinafter, Statement of Reasons). The last column shows cost-ineffectiveness calculations based on the more conservative PTE scenario. Even if the Department considers the overly conservative approach of using PTE to estimate the cost-per-ton, installation of SCR remains economically infeasible. See Section 4, Cost Analysis, for additional discussion regarding the economic infeasibility evaluation.

2 Introduction

The regulatory background and turbine information are summarized below.

2.1 Regulatory Background

The New Mexico EIB finalized the Ozone Precursor rule under 20.2.50 NMAC to reduce ozone emissions at existing and new sources causing or contributing to ambient ozone concentrations that exceed ninety-five percent of the national ambient air quality standard for ozone. Sources located in Chaves, Dona Ana, Eddy, Lea, Rio Arriba, Sandoval, San Juan, and Valencia counties are subject to the rule.

EPNG owns and operates 10 existing GE stationary natural gas-fired combustion turbines with a maximum design rating equal to or greater than 1,000 hp, as summarized in Table 2-1. These 10 GE turbines are included in this AES proposal.

Table 2-1 EPNG Sources Included in The AES

Engine Location	Unit No.	Turbine Manufacturer	Turbine Model	Hourly NOx Permit Limit	Annual NOx Permit Limit
Afton	A-01	GE	MS3712R-A	51.3 pph	224.5 tpy
Afton	A-02	GE	MS3712R-A	51.3 pph	224.5 tpy
Afton	A-03	GE	MS3712R-A	51.3 pph	224.5 tpy
Belen	A-01	GE	MS3572R-C	38.6 pph	169.0 tpy
Belen	A-02	GE	MS3572R-C	38.6 pph	169.0 tpy
Caprock	A-01	GE	MS3702R-C	45.9 pph	201.0 tpy
Caprock	A-02	GE	MS3572R-C	39.3 pph	172.1 tpy
Pecos River	A-01	GE	MS3712R-A	51.3 pph	232.6 tpy
Pecos River	A-02	GE	MS3712R-A	51.3 pph	232.6 tpy
Pecos River	A-03	GE	MS3712R-A	51.3 pph	232.6 tpy
Total					2,082.4 tpy

The Ozone Precursor Rule, at 20.2.50.113.B(11) NMAC states that “the owner or operator may submit a request for alternative emission standards for a specific engine or turbine based on technical impracticability or economic infeasibility.” The rule further states that “[t]he owner or operator is not required to submit an ACP proposal under Paragraph (10) of Subsection B of 20.2.50.113 NMAC prior to submission of a request for alternative emission standards under this Paragraph (11), provided that the owner or operator satisfies Subparagraph (b) of Paragraph (11) of Subsection B of 20.2.50.113 NMAC, below.” See 20.2.50.113.B.(11) NMAC (emphasis added). Subparagraph (b) of Paragraph (11) of Subsection B of 20.2.50.113 NMAC requires the owner or operator “[p]repare a demonstration detailing why

emissions from the individual engine or turbine cannot be addressed through an ACP in a technically practicable or economically feasible manner.” Thus, this demonstration does not require the submission of a comprehensive ACP, but does require a *reasonable* (but not exhaustive) showing that the target emission standards for these individual turbines are not technically practicable or economically feasible, even through an ACP.

Regarding technical practicability and economic feasibility, in particular, the EIB adopted Paragraphs (10) and (11) of Subsection B of 20.2.50.113 NMAC “for the reasons stated in the NMED Rebuttal . . . and the supporting argument by Kinder Morgan.” State of New Mexico, Environmental Improvement Board, Statement of Reasons and Final Order, In the Matter of Proposed New Regulation 20.2.50 NMAC – Oil and Gas Sector – Ozone Precursor Pollutants, No. EIB 21-27, at pp. 111 (June 27, 2022) (hereinafter, Statement of Reasons). In particular, and citing to Kinder Morgan’s supporting argument in the EIB rulemaking, the EIB stated that “[w]hile the emissions thresholds provided in Tables 1 and 3 for existing engines and turbines are appropriate in most cases, circumstances may exist where it is technically impracticable or economically infeasible to achieve compliance.” *Id.* at 111. Recognizing these practical limitations, the EIB’s final rule “offers significant flexibility for sources that are unable to meet the emissions standards of Part 50: they may reduce the annual hours of operation, they may seek an Alternative Compliance Plan ACP to meet an equivalent amount of emission reductions, and/or they may seek alternative emissions standards if they can demonstrate that they cannot meet the existing standards through an ACP.” *Id.* at 111 (emphasis added). Thus, an operator may have in place both an AES (or multiple AESs for individual units), and an ACP. Further to costs, the EIB made clear that “[c]ost-effectiveness thresholds above which a certain control technology will be considered infeasible can vary, but, in general, the Department considers costs in excess of \$7,500 per ton of pollutant reduced to be infeasible.” *Id.*

EPNG is requesting an AES for NO_x for these 10 existing GE gas turbines on the basis that achieving the Table 3 emission standards found in 20.2.50.113 NMAC is economically infeasible. The 10 GE gas turbines subject to the AES proposal are subject to the NO_x emission standard of 50 ppmvd @15% O₂. EPNG converted the emission standard to pounds per hour (pph) for each GE gas turbine subject to the AES proposal. The allowable annual emission rates under the Ozone Precursor rule are calculated by converting the pph emission rates to an annual basis assuming continuous operation (8,760 hr/yr). The required emission reductions are calculated as the difference between the current permit limits (tpy) and the allowable annual emission rates (tpy) under the Ozone Precursor rule. The combined total permitted NO_x emissions for the 10 GE turbines is 2,082.4 tpy. The total allowable NO_x emissions under the Ozone Precursor rule, 20.2.50.113.B NMAC (Table 3), for the 10 GE turbines is 452.0 tpy by January 1, 2028. Therefore, the total required NO_x emission reductions for the 10 GE turbines is 1,630.4 tpy, to be incrementally achieved, by January 1, 2028. See 20.2.50.113.B.(7) NMAC. A summary of allowable emissions under the rule and the reductions proposed by the AES for the 10 GE turbines is listed below in Table 2-2.

Table 2-2 Allowable Emissions and Proposed Reductions for 10 GE Turbines

Units	Permitted NOx Emissions (tpy)	Allowable Hourly NOx Emissions (pph) (equivalent of 50 ppmvd @ 15% O ₂)	Allowable Annual NOx Emissions Complying the Rule (tpy)	NOx Reduction Required by the Rule (tpy)	NOx Reduction Proposed by AES (tpy)
Afton A-1	224.5	11.3	49.5	175.0	23.0
Afton A-2	224.5	11.3	49.5	175.0	23.0
Afton A-3	224.5	11.3	49.5	175.0	23.0
Belen A-1	169.0	7.7	33.7	135.3	77.5
Belen A-2	169.0	7.7	33.7	135.3	77.5
Caprock A-1	201.0	12.3	53.9	147.1	20.5
Caprock A-2	172.1	7.7	33.7	138.4	80.5
Pecos River A-1	232.6	11.3	49.5	183.1	31.1
Pecos River A-2	232.6	11.3	49.5	183.1	31.1
Pecos River A-3	232.6	11.3	49.5	183.1	31.1
Total	2,082.4		452.0	1,630.4	418.3

Kinder Morgan is in the process of developing an Alternate Compliance Plan (ACP) for the engines and turbines subject to the rule operated by Kinder Morgan or its affiliates and subsidiaries, including EPNG, TransColorado Gas Transmission Co., LLC, and Natural Gas Pipeline Company of America, LLC. The ACP will be submitted in accordance with 20.250.113(B)(10). The 10 GE turbines are excluded from the ACP for NOx emissions because they cannot meet the emission standards through an ACP for the following reasons:

- Technology limits the available control options for the 10 GE turbines to Selective Catalytic Reduction (SCR). See Section 3 (Potential Control Technology Review).
- Installing SCR on the 10 GE turbines is not economically feasible. See Section 4 (Cost Analysis and Proposed Alternative Emissions Standards); see also Appendix A-1 (Control Cost Estimate Based on Potential to Emit for El Paso Natural Gas Company GE Turbines); Appendix [A-2] (Control Cost Estimate Based on Actual Emissions for El Paso Natural Gas Company GE Turbines).
- Including the 10 GE turbines in an ACP with the remainder of Kinder Morgan's fleet is not possible. See Section 5 (Exclusion from ACP).

Notwithstanding the lack of cost effective control strategies, the inability to address via an ACP, and the limitations on reducing hours of operations or capacity, Kinder Morgan has proposed reductions in permit allowable emission rates

for NOx. Under the proposed AES, Kinder Morgan proposes to reduce 418.3 tons of NOx emission annually combined from the 10 GE gas turbines. See Section 6 (Proposed Alternative Emission Standards).

3 Potential Control Technologies Review

Potential control technologies and their feasibility are discussed in Section 3.1. The technical feasibility of the available control technologies is summarized in Section 3.2.

3.1 Potentially Available Control Technologies and Technical Feasibility Evaluation

Potentially available control technologies to reduce NO_x from the stationary natural gas-fired combustion turbines are summarized below. The technical feasibility of installation of each control technology is also evaluated for the ten turbines.

3.1.1 Water or Steam Injection

Water or steam injection operates by introducing water or steam into the flame area of the gas turbine combustor. The injected fluid provides a heat sink that absorbs some of the heat of combustion, thereby reducing the peak flame temperature and the formation of thermal NO_x. The water injected into the turbine must be of high purity such that no dissolved solids are injected into the turbine. Dissolved solids in the water may damage the turbine due to corrosion and/or the formation of deposits in the hot section of the turbine. The requirement of high-purity water can be expensive to retrofit because EPNG does not have water treatment systems on-site. Moreover, the consumption of water can be very high for a large turbine. Such high water usage may pose problems for the local water supply and is an added expense. This is important, especially in dry regions such as New Mexico. Although water/steam injection acts to reduce NO_x emissions, the lower average temperature within the combustor may produce higher levels of CO and hydrocarbons because of incomplete combustion. Additionally, water/stream injection results in a decrease in combustion efficiency and an increase in maintenance requirements due to wear on the turbine and combustor.

Water or steam injection is not, however, available for all types of unit. The ten turbines included in this request are GE Frame 3 turbines. Based on feedback from GE representatives, water or steam injection technology is not available to the GE Frame 3 gas turbines. Accordingly, this NO_x control method is not technically feasible. See Appendix A-3 (Letter from Baker Hughes dated October 16, 2019 and provided in the Ozone Precursor rulemaking as attachment T to Kinder Morgan's rebuttal technical testimony).

3.1.2 Lean Head End Combustion Liner Upgrade and Dry Low-NOX (DLN) Combustors

The liner of a turbine surrounds the combustion process and allows for various airflows to pass through into the combustion zone. The liner is subject to high temperatures due to the combustion process which it contains. Because of this, the life of the liner is limited. Replacing the old combustion liner with a new, upgraded liner is a common retrofit. Combustion liners have a limited lifespan and are designed to be replaced.

Lean pre-mix technology, also referred to as dry low-NOX (DLN) combustion technology, is a pollution prevention technology that controls NO_x emissions. DLN inhibits the conversion of atmospheric nitrogen

to NO_x in the turbine combustor. This is accomplished by reducing the combustor temperature using lean mixtures of air and/or fuel staging or by decreasing the residence time of the combustor through combustion chamber design. For existing turbines, the combustion chamber would need to be redesigned and reconfigured to allow for lean pre-mixing or fuel staging.

In lean combustion systems, excess air is introduced into the combustion zone to produce a significantly leaner fuel/air mixture than is required for complete combustion. This excess air reduces the overall flame temperature because a portion of the energy released from the fuel must be used to heat the excess air to the reaction temperature. Pre-mixing the fuel and air prior to introduction into the combustion zone provides a uniform fuel/air mixture and prevents localized high-temperature regions within the combustor area. The fuel-to-air ratio must be maintained within a relatively narrow range to obtain low NO_x without blowout and without increasing carbon monoxide (CO) emissions, which are generated during incomplete combustion.¹ Since NO_x formation rates are an exponential function of temperature, turbines having frequent and rapid load changes may experience a brief spike in NO_x emissions with DLN technology.

Based upon feedback from GE, DLN control technology combined with a liner upgrade is not available to GE Frame 3 Models A and C turbines; therefore, this is not a technically feasible technology.

3.1.3 EM_x/SCONO_x

EM_xTM (the second generation of the SCONO_x NO_x Absorber Technology) utilizes a coated oxidation catalyst to remove both NO_x and CO without a reagent, such as NH₃. Hydrogen (H₂) is used as the basis for the proprietary catalyst regeneration process. The SCONO_x system consists of a platinum-based catalyst coated with potassium carbonate to oxidize NO and CO. The NO₂ molecules are subsequently absorbed on the treated surface of the SCONO_x catalyst. The catalyst is installed in the flue gas with a temperature range between 300°F to 700°F.²

The EM_xTM/SCONO_xTM catalyst system is designed to operate effectively at temperatures ranging from 300 to 700 °F. The 10 GE turbines requiring AES have an exhaust temperature of approximately 850-950°F.³

EM_xTM/SCONO_xTM applications on turbines with outlet temperatures this high have not been identified. Consequently, EM_xTM/SCONO_xTM is not technically feasible for the control of NO_x emissions from the 10 GE turbines.

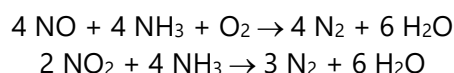
3.1.4 Selective Catalytic Reduction (SCR)

Selective catalytic reduction (SCR) is a post-combustion gas treatment process in which urea or ammonia (NH₃) is injected into the exhaust gas upstream of a catalyst bed. On the catalyst surface, ammonia and nitric oxide (NO) react to form diatomic nitrogen and water vapor. The chemical reactions can be expressed as:

¹ "Retrofitability of DLN/DLE system," GE Technology Insights 2013.

² BACT Analysis for JEA-Greenland Energy Center Units 1 and 2, Combined Cycle Combustion Turbines. Prepared by Black & Veatch (September 2008).

³ Per average of 2016, 2017, and 2018 emissions test summaries.

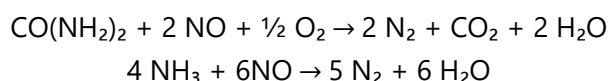


When operated within the optimum temperature range, the reaction can result in removal efficiencies of 90 percent.⁴ In order for the SCR system to function properly, the exhaust gas must be within a particular temperature range (typically between 450 and 850 °F), dependent on the material of the catalyst. SCR units have the ability to function effectively under fluctuating temperature conditions, although fluctuation in exhaust gas temperature reduces removal efficiency slightly by disturbing the NH₃/NO_x molar ratio. SCR installations typically have an operating range of 450 to 850°F. The exhaust temperatures of the turbines included in this evaluation are approximately 850-950°F, which is higher than the typical SCR operating range. SCRs may operate at higher temperatures but this generally results in lower efficiencies (between 70-85%).⁵ SCR is therefore considered technically feasible.

It should be noted that there are several operational issues that may inhibit the effectiveness of SCR as a control option for turbines at natural gas compressor stations. The NH₃/NO_x molar ratio of 1:1 must be carefully controlled to allow for optimum NO_x reduction while limiting the amount of unreacted NH₃ emitted to the atmosphere (known as “ammonia slip”). This ratio is difficult to control in units that have the variable loads experienced at compressor stations. The unit loading and speed of the turbines fluctuate continually according to the time of day, changes in the weather, and customer demands. Throughout the day, units are started and stopped, and loads are changed to keep pipeline operating pressures within safe operating parameters and keep volumes sufficient to meet customer obligations. Although the variable nature of compressor station turbine loads does not make SCR operation technically infeasible, the inherent lag between CEM sampling and ammonia injection for the turbines may cause hourly NO_x emission limits to be exceeded during periods of increased load and unreacted NH₃ emissions (“ammonia slip”) to increase during periods of load loss.

3.1.5 Selective Non-Catalytic Reduction (SNCR)

SNCR is a post-combustion NO_x control technology based on the reaction of urea or ammonia with NO_x. In the SNCR chemical reaction, urea [CO(NH₂)₂] or ammonia is injected into the combustion gas path to reduce the NO_x to nitrogen and water. The overall reaction schemes for both urea and ammonia systems can be expressed as follows:



⁴ U.S. EPA, Office of Air Quality Planning and Standards. OAQPS Control Cost Manual Section 4-2 Chapter 2, updated on June 12, 2019.

⁵ U.S. EPA, Office of Air Quality Planning and Standards. OAQPS Control Cost Manual Section 4-2 Figure 2.2, updated on June 12, 2019.

Typical removal efficiencies for SNCR range from 40 to 60 percent.⁶ An important consideration for implementing SNCR is the operating temperature range. The optimum temperature range is approximately 1,600 to 2,000°F.⁷ Operation at temperatures below this range results in ammonia slip (when non-reacted NH₃ is emitted to the atmosphere). The temperature range required for the effective operation of this technology is above the peak exhaust temperature for the GE gas turbines assessed here. For this reason, it has been determined that this control technology is not feasible for the GE gas turbines at EPNG facilities.

3.1.6 Replacement with Electric Drive

In anticipation of potential comments, EPNG documents in this submission that replacement of these 10 turbines with electric motors is neither required by the applicable rule.

In particular, in the context of existing sources in particular, the Department's purpose is to identify "control" opportunities. See NMSA 1978, Section 74-2-5(C) (providing the EIB authority to adopt a plan "to control emissions of oxides of nitrogen . . .") (emphasis added). The use of "control" here contemplates that emissions sources will install controls to reduce emissions—not eliminate or replace those emissions sources altogether. See *West Virginia v. EPA*, 142 S. Ct. 2587, 2612 n.3 (2022) ("Section 111(d) empowers EPA to guide States in establishing standards of performance for existing sources, not to direct existing sources to effectively cease to exist.") (internal quotations and citations omitted). Cf. *Sierra Club v. EPA*, 499 F.3d 653, 657 (7th Cir. 2007) (not requiring a control technology that would "redefine the source" in the context of new source permitting).

3.1.7 Good Combustion Practices (base case)

NO_x emissions are caused by the oxidation of nitrogen gas in the combustion air during fuel combustion. This occurs due to high combustion temperatures and insufficiently mixed air and fuel in the combustion chamber, where pockets of excess oxygen occur. By following concepts from engineering knowledge, experience, and manufacturer's recommendations, good combustion practices for the operation of the units can be developed and maintained by training maintenance personnel on equipment maintenance, routinely scheduling inspections, conducting overhauls as appropriate for the equipment involved, and using pipeline quality natural gas. By maintaining good combustion practices, the unit will operate as intended with the lowest NO_x emissions.

Utilizing good combustion practices and fuel selection were identified in this review for the control of NO_x emissions from combustion turbines; therefore, it has been determined that this method of NO_x control is feasible for the GE gas turbines at EPNG facilities. EPNG has developed Turbine Inspection and Maintenance Schedules Best Practices procedures, which are based on manufacturer recommendations, and EPNG has systems in place to ensure that its turbines are operated and maintained in accordance with these procedures. These practices are currently in use at all facilities, and the PTE is reflective of operations following good combustion practices. No further assessment of these control practices is included in this report.

⁶ U.S. EPA, Office of Air Quality Planning and Standards. OAQPS Control Cost Manual Section 4-2 Chapter 1, updated on April 25, 2019.

⁷ U.S. EPA, Clean Air Technology Center. Oxides of nitrogen (NOX), Why and How They Are Controlled. Research Triangle Park, North Carolina. p. 18, EPA-456/F-99-006R, November 1999.

3.2 Technical Feasibility Summary

The technical feasibility of potential control technologies is summarized in Table 3-1.

Table 3-1 Technical Feasibility of NO_x Emission Control Technologies for 10 GE Turbines

Section	Technology	Technically Feasible?
3.1.1	Water or Steam Injection	No
3.1.2	Lean Head End Combustion Liner Upgrade and Dry Low-NOX (DLN) Combustors	No
3.1.3	EM _x /SCONO _x	No
3.1.4	SCR	Yes
3.1.5	SNCR	No
3.1.7	Good Combustion Practices	Yes

4 Cost Analysis

4.1 Cost of Compliance

Economic impacts were analyzed using vendor cost estimates along with the procedures found in the EPA Air Pollution Control Cost Manual (CCM) as applicable. The sources of the control equipment cost data are noted in each of the control cost analysis worksheets in Appendix A-1 and Appendix A-2.

Overall, economic feasibility is evaluated on a dollar-per-ton (\$/ton) basis using the annual operating cost (\$/year) divided by the annual emission reduction achieved by the control device (ton/yr). The initial capital cost was annualized over a 25-year period and added to the annual operating costs, and the interest rate reflects EPNG's actual cost of borrowing. To be conservative in the cost analysis, the highest actual performance test data plus 20% safety factor is used to calculate the annual emission reduction rates. EPNG compared the cost-effectiveness to a \$7,500/ton threshold to evaluate if the control is economically feasible.⁸ This cost threshold is cited in the preamble to rulemaking for 20.2.50 NMAC and has been utilized by other states to define an acceptable level for determination of cost effectiveness for control technologies. EPNG calculated cost-per-ton estimates based on actual historic emissions as well as potential emissions. As shown above and below, the economic feasibility values (under both scenarios displayed) are above \$7,500 for all 10 GE turbine units.

4.1.1 Control Cost Effectiveness Evaluation

The details of the turbine control cost effectiveness evaluation based on potential emissions are included in Appendix A-1 and Appendix A-2. The findings of the economic analysis based on the average actual annual emissions from 2018 to 2020 and PTE are summarized in Table 4-1.

⁸ Statement of Reasons, at 111 ("[I]n general, the Department considers costs in excess of \$7,500 per ton of pollutant reduced to be in feasible.").

Table 4-1 Cost Effectiveness of SCR for the Turbines

Turbine Location	Unit No.	Cost Effectiveness (\$/ton NO_x Removed) Based on Actual Emissions	Cost Effectiveness Based on PTE (\$/ton NO_x Removed)	Cost Effective?
Afton	A-01	\$123,236	\$11,697	No
Afton	A-02	\$458,302	\$11,097	No
Afton	A-03	\$48,516	\$11,097	No
Belen	A-01	\$88,704	\$30,794	No
Belen	A-02	\$60,982	\$29,214	No
Caprock	A-01	\$80,398	\$9,933	No
Caprock	A-02	\$54,935	\$29,283	No
Pecos River	A-01	\$27,877	\$8,261	No
Pecos River	A-02	\$22,517	\$11,097	No
Pecos River	A-03	\$26,527	\$11,097	No

Regarding Table 4-1, the data in the third column are from Kinder Morgan’s Technical Testimony filed on July 28, 2021 before the EIB in which KM used the average actual emissions from 2018 to 2020. This data was ultimately relied upon by the EIB in support of adoption of Paragraphs (10) and (11) of Subsection B of 20.2.50.113 NMAC, which are the options to comply with the emissions limits through an AES or ACP. See State of New Mexico, Environmental Improvement Board, Statement of Reasons and Final Order, In the Matter of Proposed New Regulation 20.2.50 NMAC – Oil and Gas Sector – Ozone Precursor Pollutants, No. EIB 21-27, at pp. 100-101 (June 27, 2022) (hereinafter, Statement of Reasons). Notably, in NMED’s rebuttal testimony (Ex. 1) during the Ozone Precursor rulemaking, the agency had raised questions with respect to how Kinder Morgan arrived at its cost-per-ton estimates, inquiring into the use of actual operating hours and actual emissions data. See NMED Ex. 1, at 46–48 (performing an estimation of cost effectiveness based on “full permitted capacity,” i.e., PTE). In response, Kinder Morgan presented sur-rebuttal testimony on September 20, 2021 responsive to the Department’s questions. In that sur-rebuttal testimony, Kinder Morgan presented additional cost-per-ton analyses using averaged operating costs over a 10-year period. The analysis demonstrated that the actual hours of operation/actual emissions were reasonably applied in the original analysis, and the cost-per-ton remained well above the reasonableness threshold of \$7,500 per ton of NO_x reduced. Based on this discussion and these findings, the Department presented and the EIB approved Paragraphs (10) and (11) of Subsection B of 20.2.50.113 NMAC to account for technical practicality and economic reasonableness, as required by statute. NMSA § 74-2-105(F) (requiring that the EIB “shall give weight it deems appropriate to . . . technical practicability and economic reasonableness of reducing or eliminating air contaminants . . .”). This approach, to consider historical actual emissions is further consistent with the recommendation made by the Western

Regional Air Partnership (WRAP) when conducting the four-factor analysis for Regional Haze.⁹ These data show that this path forward is, without a doubt, not cost-effective.

Finally, the last column shows cost-ineffectiveness calculations based on the more conservative PTE scenario.

As demonstrated by the data in Table 1-1 and the enclosed Appendices, even if the Department considers the overly conservative approach of using PTE to estimate the cost-per-ton, installation of SCR remains cost ineffective.

Based on the information provided in Table 4-1, the only available control technology for the 10 GE turbines, SCR, was considered to be economically infeasible.

⁹ Supplementary Information for Four Factor Analyses by WRAP States, Revised Draft Report (April 20, 2010); see also ADEQ Regional Haze State Implementation Plan 2028, Emissions Projection Methodology; 40 C.F.R. Part 51, Appendix Y (discussing in relevant part how to calculate baseline emissions for the purpose of cost-effectiveness analysis for Best Available Retrofit Technology, which should “represent a realistic depiction of the anticipated annual emissions for the source. . . . you will estimate the anticipated annual emissions based upon actual emissions from a baseline period.”).

5 Exclusion from ACP is Appropriate

5.1 The 10 GE Turbines cannot be Incorporated into an ACP

As noted above, Subparagraph (b) of Paragraph (11) of Subsection B of 20.2.50.113 NMAC requires the owner or operator “[p]repare a demonstration detailing why emissions from the individual engine or turbine cannot be addressed through an ACP in a technically practicable or economically feasible manner.” This demonstration does not require the submission of a comprehensive ACP, but does require a reasonable analysis showing that the target emissions standards for these individual turbines are not technically practicable or economically feasible, even through an ACP. This Section 5 is responsive to this requirement.

An ACP must include the list of engines or turbines subject to the ACP, and a demonstration that the total allowable emissions for the engines or turbines subject to the ACP will not exceed the total allowable emissions under the emission standards of this Part. See 20.2.50.113. B.(7) NMAC. Kinder Morgan cannot satisfy this requirement if it includes the 10 GE turbines in the ACP. Total allowable NOx emissions under the rule for the rest of Kinder Morgan’s entire fleet consisting of 17 engines and nine (9) non-GE turbines (26 units in total), excluding the 10 GE turbines, is 1,064.6 tpy. If the GE turbines in question were included in the ACP, the required reduction from the 10 GE turbines alone would be 1,630.4 tpy, an amount that exceeds the total allowable emissions from the 26 units that comprise the remainder of Kinder Morgan’s fleet subject to the rule. Even if the 26 non-GE units were entirely shut down, Kinder Morgan could not achieve the required reductions while still operating the 10 GE turbines.

Furthermore, shutting down or reducing the capacity of the fleet of GE turbines, is not a feasible option at this time. The GE turbines, and in fact, the entire fleet of Kinder Morgan engines and turbines, are part of interstate natural gas pipelines that are subject to regulation by the Federal Energy Regulatory Commission (FERC) under the federal Natural Gas Act. See, e.g., 18 C.F.R. § 284.7(a) (setting forth requirements for interstate natural gas firm transportation service). FERC approves or “certificates” the pipeline to deliver natural gas. Kinder Morgan’s entire pipeline system, as certificated by FERC, is based on the fact that Kinder Morgan can move gas 24 hours a day, 365 days a year at its designed capacity. Shutting down one or more of the company’s turbines or engines would require that Kinder Morgan seek and obtain approval from FERC to abandon these units. In addition to being a lengthy administrative process, it is unlikely that FERC would approve shutting down the 10 GE turbines because it would diminish Kinder Morgan’s ability to meet its obligations under the Natural Gas Act, drive up the cost of natural gas in the southwest United States, and deprive downstream consumers in New Mexico and other states of clean-burning natural gas to heat their homes and cook their food. Notably, multiple recent news articles and industry studies have discussed the relationship between market prices and pipeline

capacity or deliverability. For example, an NGI article from January 20, 2023 discussed the high prices in New England caused by lack of adequate pipeline delivery capacity to into the region.¹⁰

Additionally, market conditions project stable, if not increased, demand for natural gas. The Energy Information Administration's 2023 Annual Energy Outlook (AEO) analyzes long-term energy trends in the United States. In the context of the energy transition, while the AEO anticipates growth in renewable generating capacity, relative to 2022, the AEO projects that "natural gas generating capacity ranges from an increase of between 20% to 87% through 2050."¹¹ The AEO also concludes that "[d]espite the shift toward renewable sources and batteries in electricity generation, domestic natural gas consumption remains relatively stable," however, "Natural gas production . . . in some cases continues to grow in response to international demand for liquefied natural gas, supported by associated natural gas produced along with crude oil."¹²

In summary, at this time, shutting down or reducing capacity of the GE turbines as part of an ACP is not a viable solution.

¹⁰ Natural Gas Intelligence, "New England Gas Prices Soared in 2022 Amid Stiffer Global LNG Competition," (Jan. 20, 2023), available at <https://www.naturalgasintel.com/haynesville-output-to-top-16-bcf-d-as-total-lower-48-production-continues-to-climb/>.

¹¹ U.S. Energy Information Administration, Annual Energy Outlook 2023 (March 16, 2023) [hereinafter, AEO], available at <https://www.eia.gov/outlooks/aeo/narrative/index.php> ("Despite the growth in adopting heat pumps, natural gas-fired heating equipment, including furnaces and boilers, continue to account for the largest share of energy consumption for space heating in U.S. residential and commercial buildings across all cases through 2050.").

¹² See AEO, at Figures 14 and 17.

6 EPNG's Proposed Alternative Emissions Standards

Notwithstanding the limitations EPNG faces with respect to the 10 GE turbines, and to demonstrate its commitment to reasonable emissions reductions, EPNG will reduce its permitted limits as part of the AES. In particular, after a detailed review of testing conducted on the 10 GE Frame 3 turbines and similar turbines in Kinder Morgan's nationwide fleet, Kinder Morgan has identified achievable reductions in permitted NO_x emissions for these GE turbines. Thus, EPNG has proposed 418.3 tpy of NO_x emissions reductions (see Table 2-2) from the current permitted allowable NO_x emissions for these GE Frame 3 turbines.

6.1 Proposed Alternative Emission Standards

Under 20.2.50.113.B(11), the Ozone Precursor rule states an owner or operator may submit a request for AES for a specific engine or turbine based on technical impracticability or economic infeasibility.

EPNG expects the turbine operation in the future to be similar to current operations. However, turbine operation is highly dependent on product demand, weather patterns, pipeline maintenance, and upstream/downstream pipeline impacts. These factors create a considerable amount of uncertainty as to the expected annual operating hours of each turbine for a specific year, and make hours limitations impracticable.

Thus, to be conservative in establishing the AES, the operating hours were assumed to be 8,760 hours per year. In order to maintain an acceptable margin to compliance, EPNG calculated the AES using the highest hourly performance test data for each model with a 20% safety factor and 8,760 operating hours per year. The resulting emissions are lower than permitted emissions for each turbine but are more representative of the physical and operational design at the locations these turbines are installed. Specifically, the combined proposed annual NO_x emissions from the 10 GE turbines show a reduction of 418.3 tons compared to the current permitted values. Kinder Morgan believes these reductions demonstrate a good faith effort to meet the requirements of the rule to the best of our ability given cost, technology, and national regulatory obligations.

EPNG is proposing to accept these AES as enforceable emission limitations. Because the emission standards found in 20.2.50.113 NMAC are in units of parts per million by volume (ppmvd), expressed on a dry basis at 15 percent oxygen (15% O₂), EPNG converted the AES in pph to ppmvd @15% O₂. The proposed AES for each turbine are presented in Table 6-1, and the reduction in emissions, as compared with annual permitted emissions, are shown in Table 6-2.

Table 6-1 Proposed Alternative Emissions Standards for NO_x in pph and ppmvd@15% O₂

Turbine Location	Unit No.	Proposed Hourly NO_x Emissions	Proposed Annual NO_x Emissions	Proposed NO_x Limit (ppmvd@15% O₂)
Afton	A-01	46.0 pph	201.5 tpy	202
Afton	A-02	46.0 pph	201.5 tpy	202
Afton	A-03	46.0 pph	201.5 tpy	202
Belen	A-01	20.9 pph	91.5 tpy	131
Belen	A-02	20.9 pph	91.5 tpy	131
Caprock	A-01	41.2 pph	180.5 tpy	169
Caprock	A-02	20.9 pph	91.6 tpy	131
Pecos River	A-01	46.0 pph	201.5 tpy	202
Pecos River	A-02	46.0 pph	201.5 tpy	202
Pecos River	A-03	46.0 pph	201.5 tpy	202
Total			1,664.1	

Table 6-2 Annual NO_x Emissions Comparisons between Current Permit and Proposed AES

Turbine Location	Unit No.	Annual NO_x Permit Limit (tpy)	Proposed Annual NO_x Emissions (tpy)	NO_x Reduction Proposed by AES (tpy)
Afton	A-01	224.5	201.5	23.0
Afton	A-02	224.5	201.5	23.0
Afton	A-03	224.5	201.5	23.0
Belen	A-01	169.0	91.5	77.5
Belen	A-02	169.0	91.5	77.5
Caprock	A-01	201.0	180.5	20.5
Caprock	A-02	172.1	91.6	80.5
Pecos River	A-01	232.6	201.5	31.1
Pecos River	A-02	232.6	201.5	31.1
Pecos River	A-03	232.6	201.5	31.1
Total		2,082.4	1,664.1	418.3

In order to convert from pph to ppmvd@15% O₂, the following inputs are needed: %O₂ measured in the test, high heating value (HHV) of natural gas, fuel specific EPA F-Factor (dscf/mmBtu), conversion factor for NO_x from ppm to lb/dscf, and fuel flow of natural gas measured in the test (scfh). Because Pecos River A-03 had the highest hourly tested emission rate for GE model MS3712R-A, it is used in the sample calculation below to convert the hourly NO_x emission rate to ppmvd@15% O₂.

Inputs: %O₂ measured during test = 18.92%

HHV of pipeline quality natural gas = 1,032 Btu/scf

Fuel specific EPA F-Factor determine during test = 8,694 dscf/mmBtu

Conversion factor for NO_x = (ppm x 1.194E-07)

Fuel flow measured in test = 59,867 scfh

Proposed AES NO_x hourly emission rate = 46.0 lb/hr

lb/mmscf = 46.0 (lb/hr) x 1,000,000 (scf/1 mmscf) / 59,867 (scf/hr) = 768.04

lb/mmBtu = 768.04 (lb/mmscf) / 1,032 (Btu/scf) = 0.744

Concentration (lb/dscf) = 0.744 (lb/mmBtu) x ((20.9-%O₂)/20.9) / 8,694 (dscf/mmBtu) = 8.11E-06

Bias corrected concentration (ppm) = 8.11E-06 / (1.194E-07) = 67.9

Bias corrected concentration (ppmvd@15% O₂) = 67.9 x 5.9 / (20.9-%O₂) = 202

Appendix A-1

Control Cost Estimate Based on Potential to Emit for El Paso Natural Gas Company GE Turbines

El Paso Natural Gas Company, LLC

Afton Compressor Station - 50 ppmvd NO_x based on PTE

Unit: A-01	Interest Rate:	8.53% <-- EPNG Actual Interest Rate
GE Model M3712R Turbine	Period (yrs):	25 <-- EPA Air Pollution Control Cost Manual
Base Case		
NO _x lb/hr:	46.00 lb/hr	<--highest actual test data for GE M3712R-A plus 20% safety factor
NO _x tpy:	201.48 tpy	<-- Calculated using the highest actual test data plus 20% and 8760 operating hours.
SCR		
NO _x Reduction:	75.5%	<-- Reach the 50 ppmc Nox limit
NO _x lb/hr:	11.25 lb/hr	<-- Based on highest test result of GE M3712R-A at equivalent reduction to 50 ppmvd.
NO _x tpy:	49.28 tpy	<-- Expected annual NOx emissions (ton/yr) after SCR
Turbine Housing Reconfiguration	\$ -	<-- Presumed to be included in CE2107005 shown below (Emission Controls CWIP)
SCR Capital Investment	\$ 13,258,524	<-- CE2107005 Caprock internal est 07/16/2021 (Emission CWIP+ Regen CWIP +Regen RWIP)
Total Capital Investment	\$ 13,258,524	
Annualized TCI:	\$ 1,298,747	<-- Based on interest rate, year and TCI
Annual Administrative Costs:	\$ 3,424	<-- Based on 0.03 x (Operator Cost + 0.4 x Annual Maintenance Cost)
Annual O&M Costs:	\$ 478,225	<-- Annual Cost Estimate (A-01)
Total Annual Costs:	\$ 1,780,396	
Emissions Reduction:	152.2 tpy	
Cost Effectiveness:	\$ 11,697.36	\$/ton

Afton Unit A-01: Cost Estimate

Total Capital Investment (TCI) =

\$ 13,258,524

Annual Costs

Total Annual Cost (TAC)

TAC = Direct Annual Costs + Indirect Annual Costs

Direct Annual Costs (DAC) =	\$478,225
Indirect Annual Costs (IDAC) =	\$1,302,171
Total annual costs (TAC) = DAC + IDAC	\$1,780,396

Direct Annual Costs (DAC)

DAC = (Annual Maintenance Cost) + (Annual Reagent Cost) + (Annual Electricity Cost) + (Annual Catalyst Cost)

Annual Maintenance Cost =	0.005 x TCI	\$66,293	
Annual Operating Labor Cost =	Operator Labor Rate x Operator Hours/Day x Operating Days/Year =	\$87,600	
Annual Reagent Cost =	Reagent Consumption Rate/Hour x Cost of R _{reagent} x Operating Hours/Year =	\$218,124	Vendor quote - \$2.49/gal of aqueous ammonia delivered to site; Per vendor 6/9/2022 email, at 100% full load, ammonia consumption rate is approximately 10 gph
Annual Electricity Cost =	Electricity Consumption Rate x Cost of E _{electricity} x Operating Hours/Year =	\$29,609	Vendor quote - 50 kW, Default rate of \$0.0676/kWh and 8760 hrs used in the calculation
Annual Catalyst Replacement Cost =	Catalyst replacement cost \$ x FWF =	\$76,600	Catalyst replacement cost = \$250,000 per vendor, FWF = 0.3064 based on 24,000 hr catalyst life and 8.53% interest rate.
Direct Annual Cost =		\$478,225	

Indirect Annual Cost (IDAC)

IDAC = Administrative Charges + Capital Recovery Costs

Administrative Charges (AC) =	0.03 x (Operator Cost + 0.4 x Annual Maintenance Cost) =	\$3,424
Capital Recovery Costs (CR)=	CRF x TCI =	\$1,298,747
Indirect Annual Cost (IDAC) =	AC + CR =	\$1,302,171

Cost Effectiveness

Cost Effectiveness = Total Annual Cost/ NOx Removed/year

Total Annual Cost (TAC) =	\$1,780,396 Per Year
NOx Removed =	152.2 tons/year
Cost Effectiveness =	\$11,697.36

El Paso Natural Gas Company, LLC

Afton Compressor Station - 50 ppmvd NO_x based on PTE

Unit: A-02		Interest Rate:	8.53%	<-- EPNG Actual Interest Rate
GE Model M3712R Turbine		Period (yrs):	25	<-- EPA Air Pollution Control Cost Manual
Base Case				
NO _x lb/hr:	46.00 lb/hr	<--highest actual test data for GE M3712R-A plus 20% safety factor		
NO _x tpy:	201.48 tpy	<-- Calculated using the highest actual test data plus 20% and 8760 operating hours.		
SCR				
NO _x Reduction:	75.5%	<-- Reach the 50 ppmc Nox limit		
NO _x lb/hr:	11.25 lb/hr	<-- Based on highest test result of GE M3712R-A at equivalent reduction to 50 ppmvd.		
NO _x tpy:	49.28 tpy	<-- Expected annual NOx emissions (ton/yr) after SCR		
Turbine Housing Reconfiguration	\$ -	<-- Presumed to be included in CE2107005 shown below		
SCR Capital Investment	\$ 12,371,394	<-- CE2107005 Caprock internal est 07/16/2021 (Emission CWIP+ Regen CWIP +Regen RWIP) +\$1MM cost increase		
Total Capital Investment	\$ 12,371,394			
Annualized TCI:	\$ 1,211,848	<-- Based on interest rate, year and TCI		
Annual Administrative Costs:	\$ 3,370	<-- Based on 0.03 x (Operator Cost + 0.4 x Annual Maintenance Cost)		
Annual O&M Costs:	\$ 473,790	<-- Annual Cost Estimate (A-02)		
Total Annual Costs:	\$ 1,689,008			
Emissions Reduction:	152.2 tpy			
Cost Effectiveness:	\$ 11,096.93	\$/ton		

Afton Unit A-02: Cost Estimate

Total Capital Investment (TCI) =	\$ 12,371,394
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Total Annual Cost (TAC)

TAC = Direct Annual Costs + Indirect Annual Costs

Direct Annual Costs (DAC) =	\$473,790
Indirect Annual Costs (IDAC) =	\$1,215,218
Total annual costs (TAC) = DAC + IDAC	\$1,689,008

Direct Annual Costs (DAC)

DAC = (Annual Maintenance Cost) + (Annual Reagent Cost) + (Annual Electricity Cost) + (Annual Catalyst Cost)

Annual Maintenance Cost =	0.005 x TCI	\$61,857
Annual Operating Labor Cost =	Operator Labor Rate x Operator Hours/Day x Operating Days/Year =	\$87,600
Annual Reagent Cost =	Reagent Consumption Rate/Hour x Cost of R_{reagent} x Operating Hours/Year =	\$218,124
Annual Electricity Cost =	Electricity Consumption Rate x Cost of $E_{\text{electricity}}$ x Operating Hours/Year =	\$29,609
Annual Catalyst Replacement Cost =	Catalyst replacement cost \$ x FWF =	\$76,600
Direct Annual Cost =		\$473,790

Indirect Annual Cost (IDAC)

IDAC = Administrative Charges + Capital Recovery Costs

Administrative Charges (AC) =	0.03 x (Operator Cost + 0.4 x Annual Maintenance Cost) =	\$3,370
Capital Recovery Costs (CR) =	CRF x TCI =	\$1,211,848
Indirect Annual Cost (IDAC) =	AC + CR =	\$1,215,218

Cost Effectiveness

Cost Effectiveness = Total Annual Cost/ NOx Removed/year

Total Annual Cost (TAC) =	\$1,689,008 Per Year
NOx Removed =	152.2 tons/year
Cost Effectiveness =	\$11,096.93

El Paso Natural Gas Company, LLC

Afton Compressor Station - 50 ppmvd NO_x based on PTE

Unit: A-03		Interest Rate:	8.53% <-- EPNG Actual Interest Rate
GE Model M3712R Turbine		Period (yrs):	25 <-- EPA Air Pollution Control Cost Manual
Base Case			
NO _x lb/hr:	46.00 lb/hr	<--highest actual test data for GE M3712R-A plus 20% safety factor	
NO _x tpy:	201.48 tpy	<-- Calculated using the highest actual test date plus 20% and 8760 operating hours.	
SCR			
NO _x Reduction:	75.5%	<-- Reach the 50 ppmc Nox limit	
NO _x lb/hr:	11.25 lb/hr	<-- Based on highest test result of GE M3712R-A at equivalent reduction to 50 ppmvd.	
NO _x tpy:	49.28 tpy	<-- Expected annual NOx emissions (ton/yr) after SCR	
Turbine Housing Reconfiguration	\$ -	<-- Presumed to be included in CE2107005 shown below	
SCR Capital Investment	\$ 12,371,394	<-- CE2107005 Caprock internal est 07/16/2021 (Emission CWIP+ Regen CWIP +Regen RWIP) +\$1 MM cost increase per vendor	
Total Capital Investment	\$ 12,371,394		
Annualized TCI:	\$ 1,211,848	<-- Based on interest rate, year and TCI	
Annual Administrative Costs:	\$ 3,370	<-- Based on 0.03 x (Operator Cost + 0.4 x Annual Maintenance Cost)	
Annual O&M Costs:	\$ 473,790	<-- Annual Cost Estimate (A-03)	
Total Annual Costs:	\$ 1,689,008		
Emissions Reduction:	152.2 tpy		
Cost Effectiveness:	\$ 11,096.93	\$/ton	

Afton Unit A-03: Cost Estimate

Total Capital Investment (TCI) =

\$ 12,371,394

Total Annual Cost (TAC)

TAC = Direct Annual Costs + Indirect Annual Costs

Direct Annual Costs (DAC) =	\$473,790
Indirect Annual Costs (IDAC) =	\$1,215,218
Total annual costs (TAC) = DAC + IDAC	\$1,689,008

Direct Annual Costs (DAC)

DAC = (Annual Maintenance Cost) + (Annual Reagent Cost) + (Annual Electricity Cost) + (Annual Catalyst Cost)

Annual Maintenance Cost =	0.005 x TCI	\$61,857	
Annual Operating Labor Cost =	Operator Labor Rate x Operator Hours/Day x Operating Days/Year =	\$87,600	
Annual Reagent Cost =	Reagent Consumption Rate/Hour x Cost of R_{reagent} x Operating Hours/Year =	\$218,124	Vendor quote - \$2.49/gal of aqueous ammonia delivered to site; Per vendor 6/9/2022 email, at full load, ammonia consumption rate is approximately 10 gph
Annual Electricity Cost =	Electricity Consumption Rate x Cost of $E_{\text{electricity}}$ x Operating Hours/Year =	\$29,609	Vendor quote - 50 kW, Default rate of \$0.0676/kWh and 8760 hrs used in the calculation
Annual Catalyst Replacement Cost =	Catalyst replacement cost \$ x FWF =	\$76,600	Catalyst replacement cost = \$250,000 per vendor, FWF = 0.3064 based on 24,000 hr catalyst life and 8.53% interest rate.
Direct Annual Cost =		\$473,790	

Indirect Annual Cost (IDAC)

IDAC = Administrative Charges + Capital Recovery Costs

Administrative Charges (AC) =	0.03 x (Operator Cost + 0.4 x Annual Maintenance Cost) =	\$3,370
Capital Recovery Costs (CR)=	CRF x TCI =	\$1,211,848
Indirect Annual Cost (IDAC) =	AC + CR =	\$1,215,218

Cost Effectiveness

Cost Effectiveness = Total Annual Cost/ NOx Removed/year

Total Annual Cost (TAC) =	\$1,689,008 Per Year
NOx Removed =	152.2 tons/year
Cost Effectiveness =	\$11,096.93

El Paso Natural Gas Company, LLC

Belen Compressor Station - 50 ppmvd NO_x based on PTE

Unit: A-01	Interest Rate:	8.53%	<-- EPNG Actual Interest Rate
GE Model M3572R Turbine	Period (yrs):	25	<-- EPA Air Pollution Control Cost Manual
Base Case			
NO _x lb/hr:	20.90 lb/hr	<--highest actual test date for GE M3572R-C plus 20% safety factor	
NO _x tpy:	91.54 tpy	<-- Calculated using the highest actual test data plus 20% and 8760 operating hours.	
SCR			
NO _x Reduction:	63.2%	<-- Reach the 50 ppmc NO _x limit	
NO _x lb/hr:	7.70 lb/hr	<-- Based on highest test result of GE M3572R-C at equivalent reduction to 50 ppmvd.	
NO _x tpy:	33.73 tpy	<-- Expected annual NO _x emissions (ton/yr) after SCR	
Turbine Housing Reconfiguration	\$ -	<-- Presumed to be included in CE2107005 shown below (Emission Controls CWIP)	
SCR Capital Investment	<u>\$ 13,258,524</u>	<-- CE2107005 Caprock internal est 07/16/2021 + \$1 MM cost increase per vendor June 2022 letter	
Total Capital Investment	<u>\$ 13,258,524</u>		
Annualized TCI:	\$ 1,298,747	<-- Based on interest rate, year and TCI	
Administrative Costs:	\$ 3,424	<--Based on 0.03 x (Operator Cost + 0.4 x Annual Maintenance Cost)	
Annual O&M Costs:	<u>\$ 478,225</u>	<-- Annual Cost Estimate (A-01)	
Total Annual Costs:	<u>\$ 1,780,396</u>		
Emissions Reduction:	57.8 tpy		
Cost Effectiveness:	\$ 30,794.18	\$/ton	

Belen Unit A-01: Cost Estimate

Total Capital Investment (TCI) =

\$ 13,258,524

Annual Costs

Total Annual Cost (TAC)

TAC = Direct Annual Costs + Indirect Annual Costs

Direct Annual Costs (DAC) =	\$478,225
Indirect Annual Costs (IDAC) =	\$1,302,171
Total annual costs (TAC) = DAC + IDAC	\$1,780,396

Direct Annual Costs (DAC)

DAC = (Annual Maintenance Cost) + (Annual Reagent Cost) + (Annual Electricity Cost) + (Annual Catalyst Cost)

Annual Maintenance Cost =	0.005 x TCI	\$66,293	
Annual Operating Labor Cost =	Operator Labor Rate x Operator Hours/Day x Operating Days/Year =	\$87,600	
Annual Reagent Cost =	Reagent Consumption Rate/Hour x Cost of R _{reagent} x Operating Hours/Year =	\$218,124	Vendor quote - \$2.49/gal of aqueous ammonia delivered to site; Per vendor 6/9/2022 email, at 100% full load, ammonia consumption rate is approximately 10 gph
Annual Electricity Cost =	Electricity Consumption Rate x Cost of E _{electricity} x Operating Hours/Year =	\$29,609	Vendor quote - 50 kW, Default rate of \$0.0676/kWh and 8760 hrs used in the calculation
Annual Catalyst Replacement Cost =	Catalyst replacement cost \$ x FWF =	\$76,600	Catalyst replacement cost = \$250,000 per vendor, FWF = 0.3064 based on 24,000 hr catalyst life and 8.53% interest rate.
Direct Annual Cost =		\$478,225	

Indirect Annual Cost (IDAC)

IDAC = Administrative Charges + Capital Recovery Costs

Administrative Charges (AC) =	0.03 x (Operator Cost + 0.4 x Annual Maintenance Cost) =	\$3,424
Capital Recovery Costs (CR)=	CRF x TCI =	\$1,298,747
Indirect Annual Cost (IDAC) =	AC + CR =	\$1,302,171

Cost Effectiveness

Cost Effectiveness = Total Annual Cost/ NO_x Removed/year

Total Annual Cost (TAC) =	\$1,780,396 Per Year
NO _x Removed =	57.8 tons/year
Cost Effectiveness =	\$30,794.18

El Paso Natural Gas Company, LLC

Belen Compressor Station - 50 ppmvd NOx based on PTE

Unit: A-02	Interest Rate:	8.53%	<-- EPNG Actual Interest Rate
GE Model M3572R Turbine	Period (yrs):	25	<-- EPA Air Pollution Control Cost Manual
Base Case			
NO _x lb/hr:	20.90 lb/hr	<--highest actual test date for GE M3572R-C plus 20% safety factor	
NO _x tpy:	91.54 tpy	<-- Calculated using the highest actual test data plus 20% and 8760 operating hours.	
SCR			
NO _x Reduction:	63.2%	<-- Reach the 50 ppmc NOx limit	
NO _x lb/hr:	7.70 lb/hr	<-- Based on highest test result of GE M3572R-C at equivalent reduction to 50 ppmvd.	
NO _x tpy:	33.73 tpy	<-- Expected annual NOx emissions (ton/yr) after SCR	
Turbine Housing Reconfiguration	\$ -	<-- Presumed to be included in CE2107005 shown below	
SCR Capital Investment	\$ 12,371,394	<-- CE2107005 Caprock internal est 07/16/2021 (Emission CWIP+ Regen CWIP +Regen RWIP) + \$1 MM cost increase per vendor	
Total Capital Investment	\$ 12,371,394		
Annualized TCI:	\$ 1,211,848	<-- Based on interest rate, year and TCI	
Administrative Costs:	\$ 3,370	<--Based on 0.03 x (Operator Cost + 0.4 x Annual Maintenance Cost)	
Annual O&M Costs:	\$ 473,790	<-- Annual Cost Estimate (A-02)	
Total Annual Costs:	\$ 1,689,008		
Emissions Reduction:	57.8 tpy		
Cost Effectiveness:	\$ 29,213.50	\$/ton	

Belen Unit A-02: Cost Estimate

Total Capital Investment (TCI) =

\$ 12,371,394

Annual Costs

Total Annual Cost (TAC)

TAC = Direct Annual Costs + Indirect Annual Costs

Direct Annual Costs (DAC) =	\$473,790
Indirect Annual Costs (IDAC) =	\$1,215,218
Total annual costs (TAC) = DAC + IDAC	\$1,689,008

Direct Annual Costs (DAC)

DAC = (Annual Maintenance Cost) + (Annual Reagent Cost) + (Annual Electricity Cost) + (Annual Catalyst Cost)

Annual Maintenance Cost =	0.005 x TCI	\$61,857	
Annual Operating Labor Cost =	Operator Labor Rate x Operator Hours/Day x Operating Days/Year =	\$87,600	
Annual Reagent Cost =	Reagent Consumption Rate/Hour x Cost of R_{reagent} x Operating Hours/Year =	\$218,124	Vendor quote - \$2.49/gal of aqueous ammonia delivered to site; Per vendor 6/9/2022 email, at 100% full load, ammonia consumption rate is approximately 10 gph
Annual Electricity Cost =	Electricity Consumption Rate x Cost of $E_{\text{electricity}}$ x Operating Hours/Year =	\$29,609	Vendor quote - 50 kW, Default rate of \$0.0676/kWh and 8760 hrs used in the calculation
Annual Catalyst Replacement Cost =	Catalyst replacement cost \$ x FWF =	\$76,600	Catalyst replacement cost = \$250,000 per vendor, FWF = 0.3064 based on 24,000 hr catalyst life and 8.53% interest rate.
Direct Annual Cost =		\$473,790	

Indirect Annual Cost (IDAC)

IDAC = Administrative Charges + Capital Recovery Costs

Administrative Charges (AC) =	0.03 x (Operator Cost + 0.4 x Annual Maintenance Cost) =	\$3,370
Capital Recovery Costs (CR)=	CRF x TCI =	\$1,211,848
Indirect Annual Cost (IDAC) =	AC + CR =	\$1,215,218

Cost Effectiveness

Cost Effectiveness = Total Annual Cost/ NOx Removed/year

Total Annual Cost (TAC) =	\$1,689,008 Per Year
NOx Removed =	57.8 tons/year
Cost Effectiveness =	\$29,213.50

El Paso Natural Gas Company, LLC

Caprock Compressor Station - 50 ppmvd NOx based on PTE

Unit: A-01		Interest Rate:	8.53% <-- EPNG Actual Interest Rate
GE Model M3702R Turbine		Period (yrs):	25 <-- EPA Air Pollution Control Cost Manual
Base Case			
NO _x lb/hr:	41.20 lb/hr	<--highest actual test data for GE M3702R-C plus 20% safety factor	
NO _x tpy:	180.46 tpy	<-- Calculated using the highest actual test data plus 20% and 8,760 operating hours per year.	
SCR			
NO _x Reduction:	70.1%	<-- Reach the 50 ppmc Nox limit	
NO _x lb/hr:	12.30 lb/hr	<-- Based on highest test result of GE M3702R-C at equivalent reduction to 50 ppmvd.	
NO _x tpy:	53.87 tpy	<-- Expected annual NOx emissions (ton/yr) after SCR	
Turbine Housing Reconfiguration	\$ -	<-- Presumed to be included in CE2107005 shown below (Emission Controls CWIP)	
SCR Capital Investment	\$ 8,180,921	<-- CE2107005 Caprock internal est 07/16/2021 + \$1MM per vendor June 2022 letter for 25% cost increase	
Total Capital Investment	\$ 8,180,921		
Annualized TCI:	\$ 801,367	<-- Based on interest rate, year and TCI	
Administrative Costs:	\$ 3,119	<--Based on 0.03 x (Operator Cost + 0.4 x Annual Maintenance Cost)	
Annual O&M Costs:	\$ 452,837	<-- Annual Cost Estimate (A-01)	
Total Annual Costs:	\$ 1,257,324		
Emissions Reduction:	126.6 tpy		
Cost Effectiveness:	\$ 9,932.88	\$/ton	

Caprock Unit A-01: Cost Estimate

Total Capital Investment (TCI) =

\$ 8,180,921

Annual Costs

Total Annual Cost (TAC)

TAC = Direct Annual Costs + Indirect Annual Costs

Direct Annual Costs (DAC) =	\$452,837
Indirect Annual Costs (IDAC) =	\$804,486
Total annual costs (TAC) = DAC + IDAC	\$1,257,324

Direct Annual Costs (DAC)

DAC = (Annual Maintenance Cost) + (Annual Reagent Cost) + (Annual Electricity Cost) + (Annual Catalyst Cost)

Annual Maintenance Cost =	0.005 x TCI	\$40,905	
Annual Operating Labor Cost =	Operator Labor Rate x Operator Hours/Day x Operating Days/Year =	\$87,600	
Annual Reagent Cost =	Reagent Consumption Rate/Hour x Cost of R _{reagent} x Operating Hours/Year =	\$218,124	Vendor quote - \$2.49/gal of aqueous ammonia delivered to site; Per vendor 6/09/22 quote, at 100% full load, ammonia consumption rate is approximately 10 gph
Annual Electricity Cost =	Electricity Consumption Rate x Cost of E _{electricity} x Operating Hours/Year =	\$29,609	Default rate of \$0.0676/kWh and 8760 hrs used in the calculation
Annual Catalyst Replacement Cost =	Catalyst replacement cost \$ x FWF =	\$76,600	Catalyst replacement cost = \$250,000 per vendor, FWF = 0.3064 based on 24,000 hr catalyst life and 8.53% interest rate.
Direct Annual Cost =		\$452,837	

Indirect Annual Cost (IDAC)

IDAC = Administrative Charges + Capital Recovery Costs

Administrative Charges (AC) =	0.03 x (Operator Cost + 0.4 x Annual Maintenance Cost) =	\$3,119
Capital Recovery Costs (CR)=	CRF x TCI =	\$801,367
Indirect Annual Cost (IDAC) =	AC + CR =	\$804,486

Cost Effectiveness

Cost Effectiveness = Total Annual Cost/ NOx Removed/year

Total Annual Cost (TAC) =	\$1,257,324 Per Year
NOx Removed =	126.6 tons/year
Cost Effectiveness =	\$9,932.88

El Paso Natural Gas Company, LLC

Caprock Compressor Station - 50 ppmvd NOx based on PTE

Unit: A-02		Interest Rate:	8.53%	<-- EPNG Actual Interest Rate
GE Model M3572R Turbine		Period (yrs):	25	<-- EPA Air Pollution Control Cost Manual
Base Case				
NO _x lb/hr:	20.92 lb/hr	<--highest actual test data for GE M3572R-C plus 20% safety factor		
NO _x tpy:	91.61 tpy	<-- Calculated using the highest actual test data plus 20% and 8,760 operating hours per year.		
SCR				
NO _x Reduction:	63%	<-- Reach the 50 ppmvd NO _x limit		
NO _x lb/hr:	7.70 lb/hr	<-- Based on highest test result of GE M3572R-C at equivalent reduction to 50 ppmvd.		
NO _x tpy:	33.73 tpy	<-- Expected annual NO _x emissions (ton/yr) after SCR		
Turbine Housing Reconfiguration	\$ -	<-- Presumed to be included in CE2107005 shown below		
SCR Capital Investment	\$ 12,430,361	<-- CE2107005 Caprock internal est 07/16/2021 (Emission CWIP+ Regen CWIP +Regen RWIP) plus \$1MM cost increase per vendor		
Total Capital Investment	\$ 12,430,361			
Annualized TCI:	\$ 1,217,624	<-- Based on interest rate, year and TCI		
Administrative Costs:	\$ 3,374	<--Based on 0.03 x (Operator Cost + 0.4 x Annual Maintenance Cost)		
Annual O&M Costs:	\$ 474,085	<-- Annual Cost Estimate (A-02)		
Total Annual Costs:	\$ 1,695,083			
Emissions Reduction:	57.9 tpy			
Cost Effectiveness:	\$ 29,440.47	\$/ton		

Caprock Unit A-02: Cost Estimate

Total Capital Investment (TCI) =

\$ 12,430,361

Annual Costs

Total Annual Cost (TAC)

TAC = Direct Annual Costs + Indirect Annual Costs

Direct Annual Costs (DAC) =	\$474,085
Indirect Annual Costs (IDAC) =	\$1,220,998
Total annual costs (TAC) = DAC + IDAC	\$1,695,083

Direct Annual Costs (DAC)

DAC = (Annual Maintenance Cost) + (Annual Reagent Cost) + (Annual Electricity Cost) + (Annual Catalyst Cost)

Annual Maintenance Cost =	0.005 x TCI	\$62,152	
Annual Operating Labor Cost =	Operator Labor Rate x Operator Hours/Day x Operating Days/Year =	\$87,600	
Annual Reagent Cost =	Reagent Consumption Rate/Hour x Cost of R_{reagent} x Operating Hours/Year =	\$218,124	Vendor quote - \$2.49/gal of aqueous ammonia delivered to site; Per ArieNox 6/09/22 quote, at 100% full load, ammonia consumption rate is approximately 10 gph
Annual Electricity Cost =	Electricity Consumption Rate x Cost of $E_{\text{electricity}}$ x Operating Hours/Year =	\$29,609	Vendor quote - 50 kW, Default rate of \$0.0676/kWh and 8760 hrs used in the calculation
Annual Catalyst Replacement Cost =	Catalyst replacement cost \$ x FWF =	\$76,600	Catalyst replacement cost = \$250,000 per vendor, FWF = 0.3064 based on 24,000 hr catalyst life and 8.53% interest rate.
Direct Annual Cost =		\$474,085	

Indirect Annual Cost (IDAC)

IDAC = Administrative Charges + Capital Recovery Costs

Administrative Charges (AC) =	0.03 x (Operator Cost + 0.4 x Annual Maintenance Cost) =	\$3,374
Capital Recovery Costs (CR)=	CRF x TCI =	\$1,217,624
Indirect Annual Cost (IDAC) =	AC + CR =	\$1,220,998

Cost Effectiveness

Cost Effectiveness = Total Annual Cost/ NOx Removed/year

Total Annual Cost (TAC) =	\$1,695,083 Per Year
NOx Removed =	57.9 tons/year
Cost Effectiveness =	\$29,283.08

El Paso Natural Gas Company, LLC
Pecos River Compressor Station - 50 ppmv NOx based on PTE

A-01	Interest Rate:	8.53%	<- EPNG Actual Interest Rate
GE Model M3712R Turbine	Period (yrs):	25	<- EPA Air Pollution Control Cost Manual
Base Case			
NO _x lb/hr:	46.00 lb/hr	<-Highest actual test data for GE M3712R-A plus 20% safety factor	
NO _x tpy:	201.48 tpy	<- Calculated using the highest actual test date plus 20% and 8760 operating hours.	
SCR			
NO _x Reduction:	75.5%	<- Reach the 50 ppmvd NO _x limit	
NO _x lb/hr:	11.25 lb/hr	<- Based on highest test result of GE M3712R-A at equivalent reduction to 50 ppmvd.	
NO _x tpy:	49.28 tpy	<- Expected annual NO _x emissions (ton/yr) after SCR	
Turbine Housing Reconfiguration	\$ -	<- Presumed to be included in CE2107005 shown below (Emission Controls CWIP)	
SCR Capital Investment	\$ 8,180,921	<- CE2107005 Caprock internal est 07/16/2021 + \$1 MM (Vendor's June 2022 email indicate cost increase of 25% from the 2021 quote)	
Total Capital Investment	\$ 8,180,921		
Annualized TCI:	\$ 801,367	<- Based on interest rate, year and TCI	
Administrative Costs:	\$ 3,119	<-Based on 0.03 x (Operator Cost + 0.4 x Annual Maintenance Cost)	
Annual O&M Costs:	\$ 452,837	<- Annual Cost Estimate (A-01)	
Total Annual Costs:	\$ 1,257,324		
Emissions Reduction:	152.2 tpy		
Cost Effectiveness:	\$ 8,260.73	\$/ton	

Pecos River Unit A-01: Cost Estimate

Total Capital Investment (TCI) =

\$ 8,180,921

Annual Costs

Total Annual Cost (TAC)

TAC = Direct Annual Costs + Indirect Annual Costs

Direct Annual Costs (DAC) =	\$452,837
Indirect Annual Costs (IDAC) =	\$804,486
Total annual costs (TAC) = DAC + IDAC	\$1,257,324

Direct Annual Costs (DAC)

DAC = (Annual Maintenance Cost) + (Annual Reagent Cost) + (Annual Electricity Cost) + (Annual Catalyst Cost)

Annual Maintenance Cost =	0.005 x TCI	\$40,905	
Annual Operating Labor Cost =	Operator Labor Rate x Operator Hours/Day x Operating Days/Year =	\$87,600	
Annual Reagent Cost =	Reagent Consumption Rate/Hour x Cost of R_{reagent} x Operating Hours/Year =	\$218,124	Vendor quote - \$2.49/gal of aqueous ammonia delivered to site; Per vendor 6/9/2022 email, at 100% full load, ammonia consumption rate is approximately 10 gph
Annual Electricity Cost =	Electricity Consumption Rate x Cost of $E_{\text{electricity}}$ x Operating Hours/Year =	\$29,609	Vendor quote - 50 kW, Default rate of \$0.0676/kWh and 8760 hrs used in the calculation
Annual Catalyst Replacement Cost =	Catalyst replacement cost \$ x FWF =	\$76,600	Catalyst replacement cost = \$250,000 per vendor, FWF = 0.3064 based on 24,000 hr catalyst life and 8.53% interest rate.
Direct Annual Cost =		\$452,837	

Indirect Annual Cost (IDAC)

IDAC = Administrative Charges + Capital Recovery Costs

Administrative Charges (AC) =	0.03 x (Operator Cost + 0.4 x Annual Maintenance Cost) =	\$3,119
Capital Recovery Costs (CR) =	CRF x TCI =	\$801,367
Indirect Annual Cost (IDAC) =	AC + CR =	\$804,486

Cost Effectiveness

Cost Effectiveness = Total Annual Cost/ NOx Removed/year

Total Annual Cost (TAC) =	\$1,257,324 Per Year
NOx Removed =	152.2 tons/year
Cost Effectiveness =	\$8,260.73

El Paso Natural Gas Company, LLC

Pecos River Compressor Station - 50 ppmvd NOx based on PTE

A-02	Interest Rate:	8.53%	
GE Model M3712R Turbine	Period (yrs):	25	<-- EPA Air Pollution Control Cost Manual
Base Case			
NO _x lb/hr:	46.00 lb/hr		<-- Highest actual test data for GE M3712R-A plus 20% safety factor
NO _x tpy:	201.48 tpy		<-- Calculated using the highest actual test date plus 20% and 8760 operating hours.
SCR			
NO _x Reduction:	75.5%		<-- Reach the 50 ppmvd NO _x limit
NO _x lb/hr:	11.25 lb/hr		<-- Based on highest test result of GE M3712R-A at equivalent reduction to 50 ppmvd.
NO _x tpy:	49.28 tpy		<-- Expected annual NO _x emissions (ton/yr) after SCR
Turbine Housing Reconfiguration	\$	-	<-- Presumed to be included in CE2107005 shown below
SCR Capital Investment	\$	12,371,394	<-- CE2107005 Caprock internal est 07/16/2021 (Emission CWIP+ Regen CWIP +Regen RWIP) + \$1 MM cost increase per vendor
Total Capital Investment	\$	12,371,394	
Annualized TCI:	\$	1,211,848	<-- Based on interest rate, year and TCI
Administrative Costs:	\$	3,370	<-- Based on 0.03 x (Operator Cost + 0.4 x Annual Maintenance Cost)
Annual O&M Costs:	\$	473,790	<-- Annual Cost Estimate (A-02)
Total Annual Costs:	\$	1,689,008	
Emissions Reduction:		152.2 tpy	
Cost Effectiveness:	\$	11,096.93	\$/ton

Pecos River Unit A-02: Cost Estimate

Total Capital Investment (TCI) =

\$ 12,371,394

Annual Costs

Total Annual Cost (TAC)

TAC = Direct Annual Costs + Indirect Annual Costs

Direct Annual Costs (DAC) =	\$473,790
Indirect Annual Costs (IDAC) =	\$1,215,218
Total annual costs (TAC) = DAC + IDAC	\$1,689,008

Direct Annual Costs (DAC)

DAC = (Annual Maintenance Cost) + (Annual Reagent Cost) + (Annual Electricity Cost) + (Annual Catalyst Cost)

Annual Maintenance Cost =	0.005 x TCI	\$61,857	
Annual Operating Labor Cost =	Operator Labor Rate x Operator Hours/Day x Operating Days/Year =	\$87,600	
Annual Reagent Cost =	Reagent Consumption Rate/Hour x Cost of R_{reagent} x Operating Hours/Year =	\$218,124	Vendor quote - \$2.49/gal of aqueous ammonia delivered to site; Per vendor 6/9/2022 email, at 100% full load, ammonia consumption rate is approximately 10 gph
Annual Electricity Cost =	Electricity Consumption Rate x Cost of $E_{\text{electricity}}$ x Operating Hours/Year =	\$29,609	Vendor quote - 50 kW, Default rate of \$0.0676/kWh and 8760 hrs used in the calculation
Annual Catalyst Replacement Cost =	Catalyst replacement cost \$ x FWF =	\$76,600	Catalyst replacement cost = \$250,000 per vendor, FWF = 0.3064 based on 24,000 hr catalyst life and 8.53% interest rate.
Direct Annual Cost =		\$473,790	

Indirect Annual Cost (IDAC)

IDAC = Administrative Charges + Capital Recovery Costs

Administrative Charges (AC) =	0.03 x (Operator Cost + 0.4 x Annual Maintenance Cost) =	\$3,370
Capital Recovery Costs (CR)=	CRF x TCI =	\$1,211,848
Indirect Annual Cost (IDAC) =	AC + CR =	\$1,215,218

Cost Effectiveness

Cost Effectiveness = Total Annual Cost/ NOx Removed/year

Total Annual Cost (TAC) =	\$1,689,008 Per Year
NOx Removed =	152.2 tons/year
Cost Effectiveness =	\$11,096.93

El Paso Natural Gas Company, LLC

Pecos River Compressor Station - 50 ppmv NOx based on PTE

Unit: A-03	Interest Rate:	8.53%
GE Model M3712R Turbine	Period (yrs):	25 <-- EPA Air Pollution Control Cost Manual
Base Case		
NO _x lb/hr:	46.00 lb/hr	<-- Highest actual test data for GE M3712R-A plus 20% safety factor
NO _x tpy:	201.48 tpy	<-- Calculated using the highest actual test date plus 20% and 8760 operating hours.
SCR		
NO _x Reduction:	75.5%	<-- Reach the 50 ppmvd NO _x limit
NO _x lb/hr:	11.25 lb/hr	<-- Based on highest test result of GE M3712R-A at equivalent reduction to 5
NO _x tpy:	49.28 tpy	<-- Expected annual NO _x emissions (ton/yr) after SCR
Turbine Housing Reconfiguration	\$ -	<-- Presumed to be included in CE2107005 shown below
SCR Capital Investment	\$ 12,371,394	<-- CE2107005 Caprock internal est 07/16/2021 (Emission CWIP+ Regen CWIP+RWIP) + \$1MM
Total Capital Investment	\$ 12,371,394	
Annualized TCI:	\$ 1,211,848	<-- Based on interest rate, year and TCI
Administrative Costs:	\$ 3,370	<-- Based on 0.03 x (Operator Cost + 0.4 x Annual Maintenance Cost)
Annual O&M Costs:	\$ 473,790	<-- Annual Cost Estimate (A-03)
Total Annual Costs:	\$ 1,689,008	
Emissions Reduction:	152.2 tpy	
Cost Effectiveness:	\$ 11,096.93	\$/ton

Pecos River Unit A-03: Cost Estimate

Total Capital Investment (TCI) =

\$ 12,371,394

Annual Costs

Total Annual Cost (TAC)

TAC = Direct Annual Costs + Indirect Annual Costs

Direct Annual Costs (DAC) =	\$473,790
Indirect Annual Costs (IDAC) =	\$1,215,218
Total annual costs (TAC) = DAC + IDAC	\$1,689,008

Direct Annual Costs (DAC)

DAC = (Annual Maintenance Cost) + (Annual Reagent Cost) + (Annual Electricity Cost) + (Annual Catalyst Cost)

Annual Maintenance Cost =	0.005 x TCI	\$61,857	
Annual Operating Labor Cost =	Operator Labor Rate x Operator Hours/Day x Operating Days/Year =	\$87,600	
Annual Reagent Cost =	Reagent Consumption Rate/Hour x Cost of R _{reagent} x Operating Hours/Year =	\$218,124	Vendor quote - \$2.49/gal of aqueous ammonia delivered to site; Per vendor 6/9/2022 email, at 100% full load, ammonia consumption rate is approximately 10 gph
Annual Electricity Cost =	Electricity Consumption Rate x Cost of E _{electricity} x Operating Hours/Year =	\$29,609	Vendor quote - 50 kW, Default rate of \$0.0676/kWh and 8760 hrs used in the calculation
Annual Catalyst Replacement Cost =	Catalyst replacement cost \$ x FWF =	\$76,600	Catalyst replacement cost = \$250,000 per vendor, FWF = 0.3064 based on 24,000 hr catalyst life and 8.53% interest rate.
Direct Annual Cost =		\$473,790	

Indirect Annual Cost (IDAC)

IDAC = Administrative Charges + Capital Recovery Costs

Administrative Charges (AC) =	0.03 x (Operator Cost + 0.4 x Annual Maintenance Cost) =	\$3,370
Capital Recovery Costs (CR)=	CRF x TCI =	\$1,211,848
Indirect Annual Cost (IDAC) =	AC + CR =	\$1,215,218

Cost Effectiveness

Cost Effectiveness = Total Annual Cost/ NOx Removed/year

Total Annual Cost (TAC) =	\$1,689,008 Per YearP
NOx Removed =	152.2 tons/year
Cost Effectiveness =	\$11,096.93

Appendix A-2

Control Cost Estimate Based on Actual Emissions for El Paso Natural Gas Company GE Turbines

El Paso Natural Gas Company, LLC

Afton Compressor Station - 50 ppmc NOx based on Last Emissions Test

GE Model M3712R Turbine A-01		Interest Rate: Period (yrs):	3.25% <-- EPA Default Interest Rate 20 <-- EPA Air Pollution Control Cost Manual
Base Case			
NO _x lb/hr:	23.92 lb/hr	<-- July 29, 2020 portable analyzer stack test result (permit limit is 51.26 lb/hr)	
NO _x tpy:	14.81 tpy	<-- Calculated 7/29/2020 stack test results and 2011 through 2020 avg actual operating hours.	
SCR			
NO _x Reduction:	56.5%	<-- Reach the 50 ppmc Nox from 2020 emissions test	
NO _x lb/hr:	10.40 lb/hr	<-- Based on reaching the 50 ppmc Nox limit (estimated from 1994 emission test)	
NO _x tpy:	6.44 tpy	<-- Expected annually NOx emissions (ton/yr) after SCR	
Turbine Housing Reconfiguration	\$ -	<-- Presumed to be included in CE2107005 shown below (Emission Controls CWIP)	
SCR Capital Investment	\$ 12,258,524	<-- CE2107005 Caprock internal est 07/16/2021	
Total Capital Investment	\$ 12,258,524		
Annualized TCI:	\$ 843,128	<-- Based on interest rate, year and TCI	
Administrative Charge	\$ 3,364		
Annual O&M Costs:	\$ 185,066	<-- EPA Cost Control Spreadsheet	
Total Annual Costs:	\$ 1,031,557		
Emissions Reduction:	8.4 tpy		
Cost Effectiveness:	\$ 123,236.19	\$/ton	

El Paso Natural Gas Company, LLC
Afton Compressor Station - 50 ppmc NOx based on Last Emissions Test

GE Model M3712R Turbine		Interest Rate:	3.25%
A-02		Period (yrs):	20 <-- EPA Air Pollution Control Cost Manual
Base Case			
NO _x lb/hr:		23.92 lb/hr	<-- July 29, 2020 portable analyzer stack test result (permit limit is 51.26 lb/hr)
NO _x tpy:		3.62 tpy	<-- Calculated 7/29/2020 stack test results and 2011 through 2020 avg actual operating hours.
SCR			
NO _x Reduction:		56.5%	<-- Reach the 50 ppmc NOx from 2020 emissions test
NO _x lb/hr:		10.40 lb/hr	<-- Based on reaching the 50 ppmc NOx limit (estimated from 1994 emission test)
NO _x tpy:		1.58 tpy	<-- Expected annually NOx emissions (ton/yr) after SCR
Turbine Housing Reconfiguration		\$ -	<-- Presumed to be included in CE2107005 shown below
SCR Capital Investment		\$ 11,371,394	<-- CE2107005 Caprock internal est 07/16/2021 (Emission CWIP+ Regen CWIP +Regen RWIP)
Total Capital Investment		\$ 11,371,394	
Annualized TCI:		\$ 782,112	<-- Based on interest rate, year and TCI
Administrative Charge		\$ 3,310	
Annual O&M Costs:		\$ 153,309	<-- EPA Cost Control Spreadsheet
Total Annual Costs:		\$ 938,731	
Emissions Reduction:		2.0 tpy	
Cost Effectiveness:		\$ 458,301.93 \$/ton	

El Paso Natural Gas Company, LLC
Afton Compressor Station - 50 ppmc NOx based on Last Emissions Test

GE Model M3712R Turbine		Interest Rate:	3.25%
A-03		Period (yrs):	20 <-- EPA Air Pollution Control Cost Manual
Base Case			
NO _x lb/hr:	23.92 lb/hr	<-- July 29, 2020 portable analyzer stack test result (permit limit is 51.26 lb/hr)	
NO _x tpy:	37.23 tpy	<-- Calculated 7/29/2020 stack test results and 2011 through 2020 avg actual operating hours.	
SCR			
NO _x Reduction:	56.5%	<-- Reach the 50 ppmc Nox from 2020 emissions test	
NO _x lb/hr:	10.40 lb/hr	<-- Based on reaching the 50 ppmc Nox limit (estimated from 1994 emission test)	
NO _x tpy:	16.19 tpy	<-- Expected annually NOx emissions (ton/yr) after SCR	
Turbine Housing Reconfiguration	\$	-	<-- Presumed to be included in CE2107005 shown below
SCR Capital Investment	\$	11,371,394	<-- CE2107005 Caprock internal est 07/16/2021 (Emission CWIP+ Regen CWIP +Regen RWIP)
Total Capital Investment	\$	11,371,394	
Annualized TCI:	\$	782,112	<-- Based on interest rate, year and TCI
Administrative Charge	\$	3,310	
Annual O&M Costs:	\$	235,383	<-- EPA Cost Control Spreadsheet
Total Annual Costs:	\$	1,020,806	
Emissions Reduction:		21.0 tpy	
Cost Effectiveness:	\$	48,516.22	\$/ton

El Paso Natural Gas Company, LLC
Belen Compressor Station - 50 ppmc NOx based on Last Emissions Test

GE Model M3712R Turbine		Interest Rate:	3.25%	<-- EPA Default Interest Rate
A-01		Period (yrs):	20	<-- EPA Air Pollution Control Cost Manual
Base Case				
NO _x lb/hr:	15.75 lb/hr	<-- March 30, 2021 portable analyzer stack test result (permit limit is 38.5 lb/hr)		
NO _x tpy:	21.60 tpy	<-- Calculated 3/30/2021 stack test results and 2018 through 2020 avg actual operating hours.		
SCR				
NO _x Reduction:	56.1%	<-- Reach the 50 ppmc NOx from 2021 emissions test		
NO _x lb/hr:	6.91 lb/hr	<-- Based on reaching the 50 ppmc NOx limit (estimated from 1994 emission test)		
NO _x tpy:	9.48 tpy	<-- Expected annually NOx emissions (ton/yr) after SCR		
Turbine Housing Reconfiguration	\$	-	<-- Presumed to be included in CE2107005 shown below (Emission Controls CWIP)	
SCR Capital Investment	\$	12,258,524	<-- CE2107005 Caprock internal est 07/16/2021	
Total Capital Investment	\$	12,258,524		
Annualized TCI:	\$	843,128	<-- Based on interest rate, year and TCI	
Administrative Charge	\$	3,364		
Annual O&M Costs:	\$	229,030	<-- EPA Cost Control Spreadsheet	
Total Annual Costs:	\$	1,075,521		
Emissions Reduction:		12.1 tpy		
Cost Effectiveness:	\$	88,704.23	\$/ton	

El Paso Natural Gas Company, LLC
Belen Compressor Station - 50 ppmc NOx based on Last Emissions Test

GE Model M3712R Turbine		Interest Rate:	3.25%
A-02		Period (yrs):	20 <-- EPA Air Pollution Control Cost Manual
Base Case			
NO _x lb/hr:	15.75 lb/hr	<-- March 30, 2021 portable analyzer stack test result (permit limit is 38.5 lb/hr)	
NO _x tpy:	30.47 tpy	<-- Calculated 3/30/2021 stack test results and 2018 through 2020 avg actual operating hours.	
SCR			
NO _x Reduction:	56%	<-- Reach the 50 ppmc Nox from 2021 emissions test	
NO _x lb/hr:	6.91 lb/hr	<-- Based on reaching the 50 ppmc Nox limit (estimated from 1994 emission test)	
NO _x tpy:	13.37 tpy	<-- Expected annually NOx emisions (ton/yr) after SCR	
Turbine Housing Reconfiguration	\$ -	<-- Presumed to be included in CE2107005 shown below	
SCR Capital Investment	\$ 11,371,394	<-- CE2107005 Caprock internal est 07/16/2021 (Emission CWIP+ Regen CWIP +Regen RWIP)	
Total Capital Investment	\$ 11,371,394		
Annualized TCI:	\$ 782,112	<-- Based on interest rate, year and TCI	
Administrative Charge	\$ 3,310		
Annual O&M Costs:	\$ 257,491	<-- EPA Cost Control Spreadsheet	
Total Annual Costs:	\$ 1,042,913		
Emissions Reduction:	17.1 tpy		
Cost Effectiveness:	\$ 60,981.61 \$/ton		

El Paso Natural Gas Company, LLC

Caprock Compressor Station - 50 ppmc NOx limiting factor

GE Model M3712R Turbine		Interest Rate:	3.25% <-- EPA Default Interest Rate
A-01		Period (yrs):	20 <-- EPA Air Pollution Control Cost Manual
Base Case			
NO _x lb/hr:		34.35 lb/hr	<-- Sept. 29, 2020 portable analyzer stack test result (permit limit is 45.9 lb/hr)
NO _x tpy:		11.51 tpy	<-- Calculated 9/29/2020 stack test results and 2018 through 2020 avg actual operating hours.
SCR			
NO _x Reduction:		66.2%	<-- Reach the 50 ppmc NOx limit
NO _x lb/hr:		11.62 lb/hr	<-- Based on reaching the 50 ppmc NOx limit (estimated from 1994 emission test)
NO _x tpy:		3.89 tpy	<-- Expected annually NOx emissions (ton/yr) after SCR
Turbine Housing Reconfiguration		\$ -	<-- Presumed to be included in CE2107005 shown below (Emission Controls CWIP)
SCR Capital Investment		\$ 7,180,921	<-- CE2107005 Caprock internal est 07/16/2021
Total Capital Investment		\$ 7,180,921	
Annualized TCI:		\$ 493,896	<-- Based on interest rate, year and TCI
Annual O&M Costs:		\$ 118,454	<-- EPA Cost Control Spreadsheet
Total Annual Costs:		\$ 612,350	
Emissions Reduction:		7.6 tpy	
Cost Effectiveness:		\$ 80,398.40 \$/ton	

El Paso Natural Gas Company, LLC

Caprock Compressor Station - 50 ppmc NOx limiting factor

GE Model M3712R Turbine		Interest Rate:	3.25%
A-02		Period (yrs):	20 <-- EPA Air Pollution Control Cost Manual
Base Case			
NO _x lb/hr:		16.83 lb/hr	<-- highest most recent test 9/29/2020 portable analyzer
NO _x tpy:		29.64 tpy	<-- Calculated using 2018 through 2020 average actual operating hours and 9/29/2020 results.
SCR			
NO _x Reduction:		56%	<-- Reach the 50 ppmc Nox limit
NO _x lb/hr:		7.38 lb/hr	<-- Based on reaching the 50 ppmc Nox limit (estimated from 1994 emission test)
NO _x tpy:		13.00 tpy	<-- Expected annually NOx emissions (ton/yr) after SCR
Turbine Housing Reconfiguration		\$ -	<-- Presumed to be included in CE2107005 shown below
SCR Capital Investment		\$ 11,430,361	<-- CE2107005 Caprock internal est 07/16/2021 (Emission CWIP+ Regen CWIP +Regen R
Total Capital Investment		\$ 11,430,361	
Annualized TCI:		\$ 786,167	<-- Based on interest rate, year and TCI
Annual O&M Costs:		\$ 128,097	<-- EPA Cost Control Spreadsheet
Total Annual Costs:		\$ 914,265	
Emissions Reduction:		16.6 tpy	
Cost Effectiveness:		\$ 54,935.11 \$/ton	

El Paso Natural Gas Company, LLC
Pecos River Compressor Station - 50 ppmc NOx based on Last Emissions Test

GE Model M3712R Turbine		Interest Rate:	3.25%	<-- EPA Default Interest Rate
A-01		Period (yrs):	20	<-- EPA Air Pollution Control Cost Manual
Base Case				
NO _x lb/hr:		23.46	lb/hr	<-- June 10, 2020 portable analyzer stack test result (permit limit is 53.1 lb/hr)
NO _x tpy:		49.90	tpy	<-- Calculated 6/10/2020 stack test results and 2018 through 2020 avg actual operating hours.
SCR				
NO _x Reduction:		53.5%		<-- Reach the 50 ppmc Nox from 2020 emissions test
NO _x lb/hr:		10.90	lb/hr	<-- Based on reaching the 50 ppmc Nox limit (estimated from 1994 emission test)
NO _x tpy:		23.18	tpy	<-- Expected annually NOx emisions (ton/yr) after SCR
Turbine Housing Reconfiguration		\$	-	<-- Presumed to be included in CE2107005 shown below (Emission Controls CWIP)
SCR Capital Investment		\$	7,180,921	<-- CE2107005 Caprock internal est 07/16/2021
Total Capital Investment		\$	7,180,921	
Annualized TCI:		\$	493,896	<-- Based on interest rate, year and TCI
Administrative Charge		\$	3,059	
Annual O&M Costs:		\$	247,776	<-- EPA Cost Control Spreadsheet
Total Annual Costs:		\$	744,730	
Emissions Reduction:			26.7	tpy
Cost Effectiveness:		\$	27,877.28	\$/ton

El Paso Natural Gas Company, LLC

Pecos River Compressor Station - 50 ppmc NOx based on Last Emissions Test

GE Model M3712R Turbine		Interest Rate:	3.25%
A-02		Period (yrs):	20 <-- EPA Air Pollution Control Cost Manual
Base Case			
NO _x lb/hr:		27.34 lb/hr	<-- June 10, 2020 portable analyzer stack test result (permit limit is 53.1 lb/hr)
NO _x tpy:		81.55 tpy	<-- Calculated 6/10/2020 stack test results and 2018 through 2020 avg actual operating hours.
SCR			
NO _x Reduction:		60.1%	<-- Reach the 50 ppmc Nox from 2020 emissions test
NO _x lb/hr:		10.90 lb/hr	<-- Based on reaching the 50 ppmc Nox limit (estimated from 1994 emission test)
NO _x tpy:		32.51 tpy	<-- Expected annually NOx emissions (ton/yr) after SCR
Turbine Housing Reconfiguration		\$ -	<-- Presumed to be included in CE2107005 shown below
SCR Capital Investment		\$ 11,371,394	<-- CE2107005 Caprock internal est 07/16/2021 (Emission CWIP+ Regen CWIP +Regen RWIP)
Total Capital Investment		\$ 11,371,394	
Annualized TCI:		\$ 782,112	<-- Based on interest rate, year and TCI
Administrative Charge		\$ 3,310	
Annual O&M Costs:		\$ 318,729	<-- EPA Cost Control Spreadsheet
Total Annual Costs:		\$ 1,104,151	
Emissions Reduction:		49.0 tpy	
Cost Effectiveness:		\$ 22,516.97	\$/ton

El Paso Natural Gas Company, LLC

Pecos River Compressor Station - 50 ppmc NOx based on Last Emissions Test

GE Model M3712R Turbine		Interest Rate:	3.25%
A-03		Period (yrs):	20 <-- EPA Air Pollution Control Cost Manual
Base Case			
NO _x lb/hr:	27.39 lb/hr	<-- June 18, 2020 portable analyzer stack test result (permit limit is 53.1 lb/hr)	
NO _x tpy:	67.20 tpy	<-- Calculated 6/18/2020 stack test results and 2018 through 2020 avg actual operating hours.	
SCR			
NO _x Reduction:	60.2%	<-- Reach the 50 ppmc Nox from 2020 emissions test	
NO _x lb/hr:	10.90 lb/hr	<-- Based on reaching the 50 ppmc Nox limit (estimated from 1994 emission test)	
NO _x tpy:	26.74 tpy	<-- Expected annually NOx emissions (ton/yr) after SCR	
Turbine Housing Reconfiguration	\$ -	<-- Presumed to be included in CE2107005 shown below	
SCR Capital Investment	\$ 11,371,394	<-- CE2107005 Caprock internal est 07/16/2021 (Emission CWIP+ Regen CWIP +Regen RWIP)	
Total Capital Investment	\$ 11,371,394		
Annualized TCI:	\$ 782,112	<-- Based on interest rate, year and TCI	
Administrative Charge	\$ 3,310		
Annual O&M Costs:	\$ 287,807	<-- EPA Cost Control Spreadsheet	
Total Annual Costs:	\$ 1,073,229		
Emissions Reduction:	40.5 tpy		
Cost Effectiveness:	\$ 26,526.85	\$/ton	

Appendix A-3

**Baker Hughes Letter Dated October 16, 2019 and Provided in the
Ozone Precursor Rulemaking as Attachment T to Kinder Morgan's
Rebuttal Technical Testimony**

October 16, 2019

SUBJECT: FRAME 3 EMISSIONS TECHNOLOGY FOR AGED MODELS (FR3 A to G)

The first General Electric 2 shaft, Frame size 3 gas turbines were introduced in 1951. The first-generation models were Frame 3 A to G which were manufactured from 1951 to 1966. Emissions abatement technology was not developed for the Frame 3 gas turbines until the 1970's.

Baker Hughes currently does not have any NOx abatement systems applicable to the Frame 3 A - F machines. Only a preliminary study was performed several years ago on the Frame 3F for LHE liner, no material was manufactured or supplied. We do not have water injection or DLN for the 32F.

There are currently no plans to develop NOx abatement technology for this model machine. It would take significant resources for such a study to take place.

PECOS RIVER 1	Gas turbine unit serial number 95025
PECOS RIVER 2	Gas turbine unit serial number 95053
PECOS RIVER 3	Gas turbine unit serial number 95055

Regards,

Tom Hadden
Senior Sales Manager
Turbomachinery & Process Solutions
Baker Hughes
11330 Clay Road | Houston, TX 77041, USA



June 26, 2023

Weiwen Daly
Kinder Morgan
1657 Cole Blvd., Suite 300
Lakewood, Colorado 80401
Weiwen_Daly@kindermorgan.com

Via electronic mail

Re: Alternative Emission Standards Proposal for El Paso Natural Gas – Conditional Approval

Dear Weiwen Daly,

Pursuant to 20.2.50.113.B(11) NMAC, Kinder Morgan submitted on December 2, 2022 to New Mexico Environment Department (Department), Air Quality Bureau (AQB or Bureau) a request to approve an Alternative Emission Standard (AES) for ten GE Gas Turbines for El Paso Natural Gas Company, L.L.C. (EPNG). The request included alternative reductions for nitrogen oxides (NOx) due to economic infeasibility for retrofit emissions control technologies deemed technically feasible. The submitted proposal included an independent third party certification of the evaluation.

On December 20, 2022, the Bureau requested further information, including a demonstration that the standards could not be met through an Alternative Compliance Plan and conversion of units to those found in 20.2.50.113 NMAC. This information was supplied to the Bureau on April 24, 2023.

On May 3, 2023, the Bureau notified Kinder Morgan that the complete proposal had been posted to the Department web site and would be available on the public comment portal for 30 days. This notice also included instructions for publishing "in a newspaper of general circulation." Proof of publication in 4 county newspapers was submitted to the Bureau on May 15, 2023.

No public comments were received. However, the Bureau requested further clarification regarding ongoing costs on June 20, 2023. Kinder Morgan responded on June 21, 2023.

With the completion of all required documentation, notification and clarification, the Department hereby conditionally approves the AES proposal for the ten GE turbines referenced in the proposal. The approval is conditional only to the extent that, when any turbine is permanently replaced, the replacement turbine shall be considered "new" pursuant to the rule and must comply with the emissions standards in Table 3. However, short-term replacements and reinstallation of the existing turbines do not affect the status and will still be considered existing; they will remain covered under this Alternative Emission Standard.

Please note that the emissions reductions and alternative standards for the affected turbines are considered enforceable under this rule (20.2.50 NMAC). Please work with Permitting to determine what actions, if any, are necessary to memorialize the emission limits in permits.

If you have any questions regarding this conditional approval, please do not hesitate to contact me.

Regards,

Cindy Hollenberg, AQB Compliance & Enforcement Section Chief

Ecc: Elizabeth Bisbey-Kuehn, Chief, Air Quality Bureau
Brian Polgar, AQB Inspections Manager
Shea Schleman, AQB Compliance Reports Manager
Casey Stavert, AQB Inspections Supervisor

Section 22: Certification

Company Name: El Paso Natural Gas Company, LLC

I, Heriberto Carreon, hereby certify that the information and data submitted in this application are true and as accurate as possible, to the best of my knowledge and professional expertise and experience.

Signed this 26th day of February, 2025, upon my oath or affirmation, before a notary of the State of

Texas.

Heriberto Carreon
*Signature

2/26/25
Date

Heriberto Carreon
Printed Name

Operations Director
Title

Scribed and sworn before me on this 26 day of February, 2025.

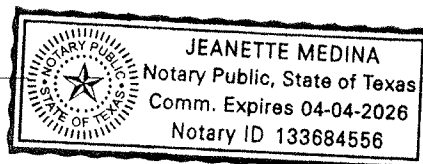
My authorization as a notary of the State of Texas expires on the

4th day of April, 2026

Jeanette Medina
Notary's Signature

2/26/2025
Date

Jeanette Medina
Notary's Printed Name



*For Title V applications, the signature must be of the Responsible Official as defined in 20.2.70.7.AE NMAC.