

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

Prepared By:

Adam Erenstein – Manager of Consulting Services

TRINITY CONSULTANTS

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(505) 266-6611

December 2024

Project 243201.0142





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

November 27, 2024

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. – Caprock Compressor Station*

Dear Permit Programs Manager:

On behalf of El Paso Natural Gas Company, LLC, we are submitting this application to meet requirements of a Title V Renewal application pursuant to 20.2.70.300.B.(2) NMAC, which requires a Title V Permit renewal application be submitted at least twelve (12) months prior to expiration of the current Title V Operating Permit (current permit expires December 18, 2025).

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, electronic files, and an application check. 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 Wade Janecek with El Paso Natural Gas Company, LLC at (303) 914-7602 or by email at wade_janecek@kindermorgan.com.

Sincerely,

TRINITY CONSULTANTS

Adam Erenstein
Manager of Consulting Services

cc: Wade Janecek (El Paso natural Gas Company, LLC)
Trinity Project File 243201.0142

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, LLC		November 27, 2024
Permittee/Company Contact	Phone	Email
Wade Janecek	(303) 914-7602	Wade_Janecek@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.): 572	Updating Permit/NOI #: P132-R4
1	Facility Name: Caprock 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 Tatum, NM head west on US-380 W and go approximately 16.2 miles. Turn left onto Epperson Lane and go approximately 0.6 miles and the destination will be on the right.		
2	Plant Operator Company Name: El Paso Natural Gas Company, L.L.C.	Phone/Fax: (719) 473-2300 / N/A	
a	Plant Operator Address: 2 North Nevada Ave., Colorado Springs, CO 80903		

b	Plant Operator's New Mexico Corporate ID or Tax ID: 46-0809216	
3	Plant Owner(s) name(s): El Paso Natural Gas Company, L.L.C.	Phone/Fax: (719) 473-2300 / N/A
a	Plant Owner(s) Mailing Address(s): 2 North Nevada Ave., Colorado Springs, CO 80903	
4	Bill To (Company): El Paso Natural Gas Company, L.L.C.	Phone/Fax: (719) 473-2300 / N/A
a	Mailing Address: 2 North Nevada Ave., Colorado Springs, CO 80903	E-mail: Wade_Janecek@kindermorgan.com
5	☐ Preparer: Trinity Consultants ☐ Consultant: Adam Erenstein	Phone/Fax: (505) 266-6611
a	Mailing Address: 9400 Holly Blvd NE, Building 3, Suite B, Albuquerque, NM 87122	E-mail: aerenstein@trinityconsultants.com
6	Plant Operator Contact: Rory Taylor	Phone/Fax: (505) 722-3634
a	Address: 84 El Paso Circle, Gallup, NM 87301	E-mail: Rory_Taylor@kindermorgan.com
7	Air Permit Contact: Wade Janecek	Title: EHS Engineer
a	E-mail: Wade_Janecek@kindermorgan.com	Phone/Fax: (303) 914-7602
b	Mailing Address: 100 Sun Ave. NE, 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: P-132-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: NSR-3261-M1-R1
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: 37.5 MMscf*	Daily: 900 MMscf*	Annually: 382,500 MMscf*
b	Proposed	Hourly: 37.5 MMscf*	Daily: 900 MMscf*	Annually: 382,500 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: 37.5 MMscf*	Daily: 900 MMscf*	Annually: 382,500 MMscf*

b	Proposed	Hourly: 37.5 MMscf*	Daily: 900 MMscf*	Annually: 382,500 MMscf*
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*Provided for informational purposes only; Not intended to be an enforceable condition.

Section 1-D: Facility Location Information

1	Section: 25	Range: 33E	Township: 11S	County: Lea	Elevation (ft): 4237
2	UTM Zone: ☐ 12 or ☒ 13			Datum: ☐ NAD 27 ☐ NAD 83 ☒ WGS 84	
a	UTM E (in meters, to nearest 10 meters): 632,610 m E			UTM N (in meters, to nearest 10 meters): 3,688,980 m N	
b	AND Latitude (deg., min., sec.): 33°19'54.7"			Longitude (deg., min., sec.): -103°34'30.5"	
3	Name and zip code of nearest New Mexico town: Tatum, 88267				
4	Detailed Driving Instructions from nearest NM town (attach a road map if necessary): From Tatum, NM head west on US-380 W and go approximately 16.2 miles. Turn left onto Epperson Lane and go approximately 0.6 miles and the destination will be on the right.				
5	The facility is 16.2 (distance) miles west-northwest (direction) of Tatum (nearest town).				
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: Lea County, Chaves County				
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: Salt Creek Wilderness				
10	Shortest distance (in km) from facility boundary to the boundary of the nearest Class I area (to the nearest 10 meters): 77.5				
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: 1650 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? N/A				

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: _____ N/A _____ 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): Ted Meinhold		Phone: (713) 420-2765
a	R.O. Title: Operations Vice President	R.O. e-mail: Ted_Meinhold@kindermorgan.com	
b	R. O. Address: 1001 Louisiana, Suite 1417, Houston, TX 77002		
2	Alternate Responsible Official (20.2.70.300.D.2 NMAC): Don Perkins		Phone: (413) 896-6097
a	A. R.O. Title: Operations Director	A. R.O. e-mail: Don_Perkins@kindermorgan.com	
b	A. R. O. Address: 2527 Foresight Circle, Grand Junction, CO 81505		
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 St., 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 Duarte, (505) 831-7763 and Rory Taylor, (505) 722-3634		

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: Local pollution control programs: None. Tribes: None. States: Texas (48 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: Adam Erenstein, aaerenstein@trinityconsultants.com, (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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Change Log – Do **not** submit this page with your application.

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 #	Manufact-urer's Rated Capacity ³ (Specify Units)	Requested Permitted Capacity ³ (Specify Units)	Date of Manufacture ²	Controlled by Unit #	Source Classi-fication 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	M3702R	127602	7,040 hp	6,026 hp	1/1/1957	N/A	31000203	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	N/A	N/A
							~1957	A-01					
A-02	Regenerative Cycle Turbine	General Electric	M3572R	127605	5,700 hp	4,879 hp	1/1/1958	N/A	31000203	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	N/A	N/A
							~1958	A-02					
AUX-A1	Backup Auxiliary Reciprocating Engine	CAT	G3406 TA	CTS00251	201 hp	201 hp	Unknown	N/A	20200253	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	4SRB	N/A
							Oct-02	AUX-A1					
F-001	Facility Wide Fugitives	-	-	-	-	-	1/1/1957	-	31088811	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	N/A	N/A
							1/1/1957	-					
SMM/M 1	Startup, Shutdown, Maintenance and Malfunction Pneumatic	-	-	-	-	-	1/1/1957	-	20200253	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	N/A	N/A
							1/1/1957	-					
P-1	Controllers and Pumps	-	-	-	-	-	1/1/1957	-	31088811	☐ Existing (unchanged) ☒ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	N/A	N/A
							1/1/1957	-					
										☐ 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 <https://www.env.nm.gov/wp-content/uploads/sites/2/2017/10/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 Tank	-	-	7440	-	-	☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			-	gal	IA List Item #5	Aug-57	
T-002	Coolant (Ambitrol of Equivalent) Tank	-	-	1600	-	-	☐ Existing (unchanged) ☒ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			-	gal	IA List Item #5	Aug-57	
T-003	Used Oil/Water Tank	-	-	1000	-	-	☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			-	gal	IA List Item #5	Apr-85	
T-004	Coolant (Ambitrol of Equivalent) Tank	-	-	1110	-	-	☐ Existing (unchanged) ☒ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			-	gal	IA List Item #5	Jan-74	
T-005	Used Oil Tank	-	-	1000	-	-	☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			-	gal	IA List Item #5	Apr-85	
T-006	Used Oil Tank	-	-	250	-	-	☐ Existing (unchanged) ☒ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			-	gal	IA List Item #5	Apr-85	
							☐ 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
							☐ 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.

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]

¹ List each control device on a separate line. For each control device, list all emission units controlled by the control device.

Table 2-E: Requested Allowable Emissions

Unit & stack numbering must be consistent throughout the application package. Fill all cells in this table with the emission numbers or a "-" symbol. A "--" symbol indicates that emissions of this pollutant are not expected. Numbers shall be expressed to at least 2 decimal points (e.g. 0.41, 1.41, or 1.41E⁻⁴).

Unit No.	NOx		CO		VOC		SOx		PM ^{1.3}		PM10 ¹		PM2.5 ¹		H ₂ S		Lead	
	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	41.20	180.46	6.40	28.03	0.74	3.22	0.41	1.80	-	-	0.35	1.55	0.35	1.55	-	-	-	-
A-02	20.92	91.63	6.40	28.03	0.72	3.17	0.36	1.57	-	-	0.31	1.35	0.31	1.35	-	-	-	-
AUX-A1 ²	**	**	**	**	**	**	**	**	-	-	**	**	**	**	-	-	-	-
F-001	-	-	-	-	0.44	1.94	-	-	-	-	-	-	-	-	-	-	-	-
Totals	62.12	272.09	12.80	56.06	1.90	8.34	0.77	3.37	0.00	0.00	0.66	2.90	0.66	2.90	-	-	-	-

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 it is a regulated air pollutant under PSD (20.2.74 NMAC) and Title V (20.2.70 NMAC).

²With the changes to MACT ZZZZ, unit AUX-A1 is no longer an insignificant activity. However, it is not subject to any emission limitations under MACT ZZZZ or permitting under 20.272 NMAC; therefore, no emissions are displayed.

³ TSP emission standard was repealed on November 30, 2018.

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

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).

* Indicates an hourly emission rate is not appropriate for this unit.

☒ I have elected to leave this table blank because this facility does not have any stacks/vents that split emissions from a single source or combine emissions from more than one source listed in table 2-A. Additionally, the emission rates of all stacks match the Requested allowable emission rates stated in Table 2-E.

[illegible]

Table 2-H: Stack Exit Conditions

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-J: Fuel

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

Unit No.	Fuel Type (low sulfur Diesel, ultra low sulfur diesel, Natural Gas, Coal, ...)	Fuel Source: purchased commercial, pipeline quality natural gas, residue gas, raw/field natural gas, process gas (e.g. SRU tail gas) or other	Specify Units				
			Lower Heating Value	Hourly Usage	Annual Usage	% Sulfur	% Ash
A-01	Natural Gas	Pipeline Quality Natural Gas	932 BTU/scf	57.35 Mscf	502.73 MMscf	5 grains S / 100 scf	N/A
A-02	Natural Gas	Pipeline Quality Natural Gas	932 BTU/scf	50.26 Mscf	440.57 MMscf	5 grains S / 100 scf	N/A
AUX-A1	Natural Gas	Pipeline Quality Natural Gas	932 BTU/scf	1.8 Mscf	0.89 MMScf	5 grains S / 100 scf	N/A

Table 2-K: Liquid Data for Tanks Listed in Table 2-L

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.

[illegible]

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	
					MG: Medium Gray	
					BL: Black	
					OT: Other (specify)	

Note: 1.00 bbl = 0.159 M³ = 42.0 gal**Table 2-M: Materials Processed and Produced** (Use additional sheets as necessary.)

Material Processed				Material Produced			
Description	Chemical Composition	Phase (Gas, Liquid, or Solid)	Quantity (specify units)	Description	Chemical Composition	Phase	Quantity (specify units)
N/A - This facility is a natural gas compressor station; no material is processed at this facility.							

Table 2-N: CEM Equipment

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.

Unit No.	Parameter/Pollutant Measured	Location of Measurement	Unit of Measure	Acceptable Range	Frequency of Maintenance	Nature of Maintenance	Method of Recording	Averaging Time
N/A - There is no PEM equipment at this facility.								

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.	GWPs ¹	1	298	25	22,800	footnote 3										
A-01	mass GHG	27371.6	0.052	0.52											27372.1	
	CO ₂ e	27371.6	15.4	12.9												27399.8
A-02	mass GHG	23988.64	0.045	0.45											23989.1	
	CO ₂ e	23988.6	13.5	11.3												24013.4
F-001	mass GHG	4.9	-	127.9											132.9	
	CO ₂ e	4.9	-	3198.3												3203.2
SSM	mass GHG	10.0	-	450.0											460.0	
	CO ₂ e	10.0	-	11250.0												11260.0
AUX-A1	mass GHG	**	**	**											**	
	CO ₂ e	**	**	**												**
	mass GHG															
	CO ₂ e															
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	CO ₂ e															
	mass GHG															
	CO ₂ e															
Total	mass GHG	51375.1	0.1	578.9											51954.1	
	CO ₂ e	51375.1	28.8	14472.5												65876.4

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.

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 P132-R4 for Caprock 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 renewal application be submitted at least twelve months prior to expiration of the current permit. Title V Permit P132-R4 expires on December 18, 2025.

Caprock Compressor Station is currently permitted under Operating Permit P132-R3 (issued December 18, 2020) and NSR Permit 3261M1R1 (issued October 20, 2025). The facility compresses natural gas for transportation purposes. Equipment at this facility includes one General Electric Company M3702R (Frame 3) regenerative cycle turbine, one General Electric Company M3572R (Frame 3) regenerative cycle turbine (units A-01 and A-02, respectively), and a CAT G3408 TA auxiliary reciprocating engine for the emergency power (unit AUX-A1).

Additional emissions at this facility result from facility-wide fugitives (unit F-001) and startup, shutdown, and routine maintenance (unit SSM). Insignificant activities include six storage tanks (T-001 to T-006) used to store lube oil, used oil and coolant.

One technical revision has been made to Caprock Compressor Station since the previous Title V Renewal. Additionally, names, addresses, telephone numbers, and other administrative information have been updated where applicable. The revisions are detailed below:

3261M1R1

This technical revision added Alternative Test Method ALT-82 as an alternative for 40 CFR 60, Appendix A, Reference Method 9 for monitoring opacity at Caprock Compressor Station as required by 20.2.61.114 NMAC and current operating permit P132-R3. The use of ALT-082 was approved during a pre-application meeting with NMED on December 05, 2023.

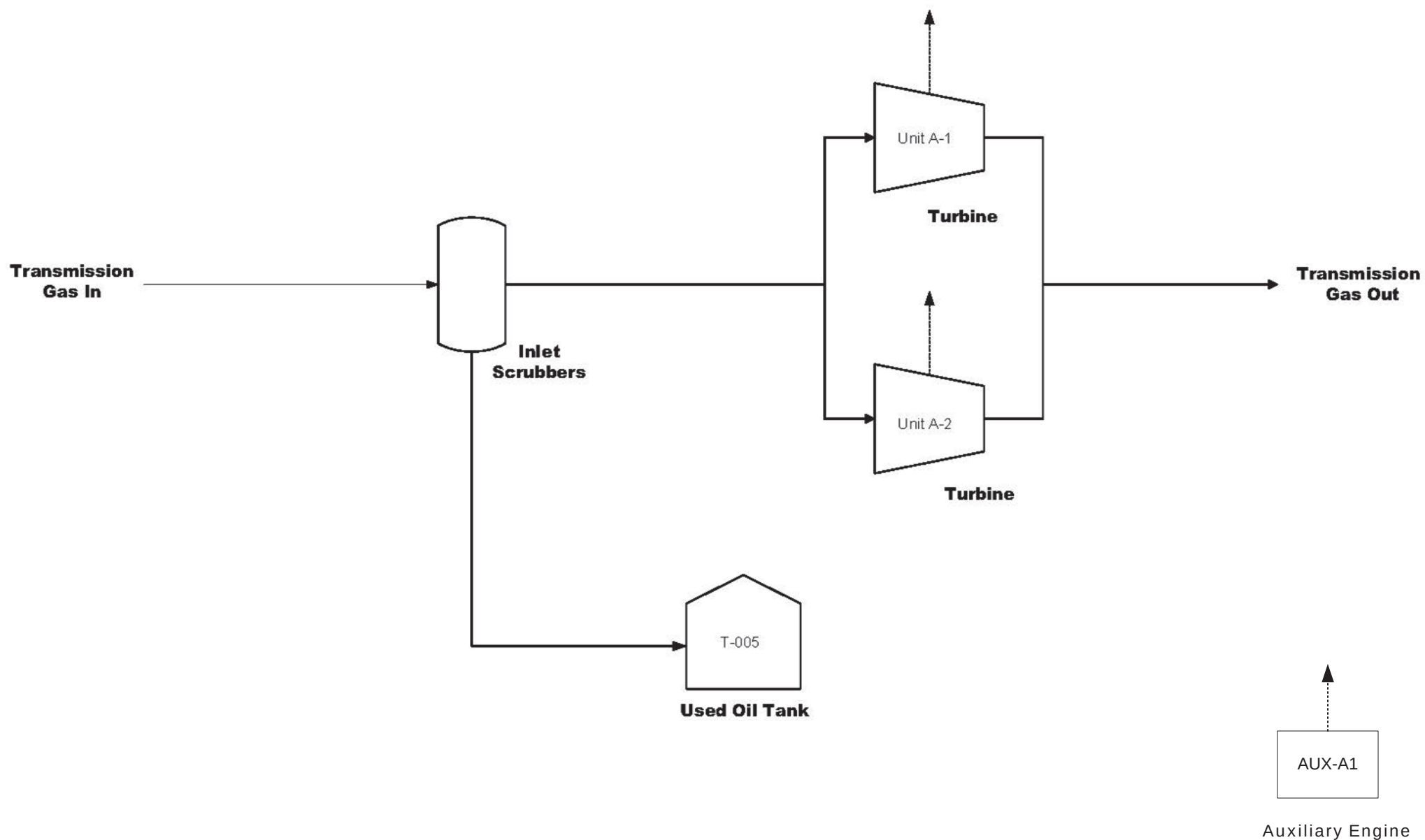
Additionally, an Alternative Emission Standard (AES) for NO_x was applied to the existing natural gas-fired regenerative cycle turbines A-01 and A-02 in accordance with Kinder Morgan's AES for NO_x dated April 12, 2023 and approved by NMED June 26, 2023. The AES NO_x limit was calculated using the highest hourly performance test data for each model with a 20% safety factor and 8,760 operating hours per year. In addition, carbon monoxide (CO) emissions from A-01 and A-02 became enforceable limits to comply with the third and latest version of EPNG's Alternate Compliance Plan (ACP).

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 diagram for the facility is attached.



**Process Flow Diagram
Caprock 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.

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 units at Caprock Compressor Station include the following:

- One GE Frame 3 M3702R regenerative cycle turbine (unit A-01)
- One GE Frame 3 M3572R regenerative cycle turbine (unit A-02)
- One CAT G3408 TA auxiliary reciprocating engine for the backup generator (unit AUX-A1)
- Facility-wide fugitive emissions (unit F-001)
- Startup, shutdown and maintenance emissions (unit SSM)

Turbines (A-01 and A-02)

The emission rates for NO_x, CO and VOC were calculated using testing data. A safety factor was used for the VOC emission rate. The SO₂ emission rate was calculated using a maximum sulfur content in the fuel of 5 grains/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. Test data is submitted with this Title V renewal to show that the turbines comply with the permitted limits.

Greenhouse gas emission rates were calculated and updated using the emission factors from Tables C-1 and C-2 in 40 CFR 98 Subpart C and the fuel consumption rate of the turbines.

CAT G3408 TA Engine (AUX-A1)

The emission factor for NO_x, CO, & VOC were calculated using manufacture specification. PM and HAP emissions were calculated based on U.S. EPA, AP-42, Section 3.2 Natural Gas-fired Reciprocating Engines, Table 3.2-3 Uncontrolled Emission Factors for 4-stroke rich-burn engines. SO₂ emissions were calculated based on fuel consumption and a maximum fuel sulfur content of 5 gr S/100 scf. Operation of AUX-A1 is limited to 500 hours per year.

Fugitives (F-001)

The fugitive emissions for the facility were calculated using a representative gas analysis and component count. HAP emissions for the fugitives were calculated using GRI-HAPCalc.

Startup, Shutdown and Maintenance and Malfunction (SSM/M1)

Emissions from startup, shutdown, and maintenance and malfunction were calculated using the predicted number of SSM events, the volume of gas blown down per event, and a representative inlet gas analysis.

The following equipment can be vented during a facility blowdown venting event for a total of 968.91 Mscf/event.

Additional facility blowdown includes:

- Turbine Planned Maintenance and Normal Shutdown with a maximum of 51.7 Mscf/event; and
- Turbine Normal Startup with a maximum of 54.6 Mscf/event.

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)

Emission Summary

Unit	NO _x		CO		VOC		SO ₂		PM		H ₂ S		Total HAP		Acetaldehyde		Formaldehyde		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	lb/hr	tpy	
A-01	41.20	180.46	6.40	28.03	0.74	3.22	0.41	1.80	0.35	1.55	-	-	0.65	2.83	0.27	1.18	0.26	1.15	27399.80
A-02	20.92	91.63	6.40	28.03	0.72	3.17	0.36	1.57	0.31	1.35	-	-	0.52	2.29	0.22	0.95	0.21	0.93	24013.38
F-001	-	-	-	-	0.44	1.94	-	-	-	-	-	-	0.0071	0.031	-	-	-	-	3203.23
AUX-A1 ¹	0.57	0.14	0.029	0.0072	0.018	0.0045	2.26	0.0070	0.028	0.0070	-	-	0.048	0.0027	0.0041	2.35E-04	0.030	1.72E-03	43.11
SSM/M1	-	-	-	-	*	10.0	-	-	-	-	0.056	0.0025	*	0.057	-	-	-	-	11260.00
Totals	62.69	272.23	12.83	56.07	1.92	18.34	3.03	3.38	0.69	2.91	0.056	0.0025	1.22	5.20	0.49	2.13	0.51	2.08	65919.53

Notes

¹With the changes to MACT ZZZZ, unit AUX-A1 is no longer an insignificant activity. However, it is not subject to any emission limitations under MACT ZZZZ or permitting under 20.2.72 NMAC.

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

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

Unit: A-01
Description: GE Regenerative Cycle Turbine (model M3702R)

ISO Rating: 7040 hp
Site Rating: 6026 hp Site rating provided for informational purposes only; ISO rating used for calculations.
Fuel Heating Value: 931.9 Btu/scf
Fuel Consumption: 502.7 MMscf/yr
Heat Input: 53.5 MMBtu/hr Fuel consumption * Fuel Heating Value * 1 yr/8760 hours
Heat Input Rate: 7596.3 Btu/hp-hr Heat input / horsepower * 10⁶ Btu/MMBtu

Emission Calculations²

NO _x	CO	VOC	SO ₂ ¹	TSP ^{4,5}	PM ₁₀	PM _{2.5}	Acetaldehyde ²	Formaldehyde ²	Total HAPs ²	
41.2	6.4	0.13		6.60E-03	6.60E-03	6.60E-03				lb/MMBtu
			5							lb/hr Permit limits, based on test data
41.2	6.4	0.13	0.41	0.35	0.35	0.35	0.27	0.26	0.65	grains S/100 scf
180.5	28.0	0.56	1.8	1.5	1.5	1.5	1.2	1.2	2.8	lb/hr
		475%								tons/yr
41.2	6.4	0.74	0.41	0.35	0.35	0.35	0.27	0.26	0.65	Safety Factor
180.5	28.0	3.2	1.8	1.5	1.5	1.5	1.2	1.2	2.8	lb/hr (from above) * (1 + SF)
										tons/yr (from above) * (1 + SF)

¹ SO₂ emission rate based on sulfur content of 5gr S/100scf

² HAP tpy emission rate from GRI-HAPCalc 3.01 calculated using ISO hp instead of derate hp;

³ For emission rates based on test data, testing data and regression analysis are included in this application

⁴ All PM lb/hr Emission Rate = EF (lb/MMBtu) * Fuel Consumption (MMBtu/hp-hr) * hp (ISO Rating value)

From lb/hr, tpy Emission Rate = lb/hr * Yearly Operating Hours * 1ton/2000lb

⁵ EF of all PM from AP42 3.1 table 3.1-2a: Emission Factors for Criteria Pollutants and Greenhouse Gases from Stationary Gas Turnbines

GHG Emission Calculations

CO ₂	CH ₄	N ₂ O		
53.02	1.00E-03	1.00E-04	kg/MMBtu	40 CFR 98, Subpart C, Tables C-1 and C-2
24838074	468	47	kg / yr	
27371.6	0.52	0.05	tons / yr	
27371.6	12.9	15.4	tons/yr CO ₂ e	

Unit: A-02
Description: GE Regenerative Cycle Turbine (model M3572R)

ISO Rating: 5700 hp
Site Rating: 4879 hp Site rating provided for informational purposes only; ISO rating used for calculations.
Fuel Heating Value: 931.9 Btu/scf
Fuel Consumption: 440.57 MMscf/yr
Heat Input: 46.9 MMBtu/hr Fuel consumption * Fuel Heating Value * 1 yr/8760 hours
Heat Input Rate: 8222.5 Btu/hp-hr Heat input / horsepower * 10⁶ Btu/MMBtu

Criteria Pollutant Emission Calculations

NO _x	CO	VOC	SO ₂ ¹	TSP ^{4,5}	PM ₁₀	PM _{2.5}	Acetaldehyde ²	Formaldehyde ²	Total HAPs ²	
20.9	6.4	0.13		6.60E-03	6.60E-03	6.60E-03				lb/MMBtu
			5	0.31	0.31	0.31				lb/hr Permit limits, based on test data
20.9	6.4	0.13	0.36	0.31	0.31	0.31	0.22	0.21	0.52	grains S/100 scf
91.6	28.0	0.55	1.6	1.4	1.4	1.4	0.95	0.93	2.3	lb/hr
		475%								tons/yr
20.9	6.4	0.72	0.36	0.31	0.31	0.31	0.22	0.21	0.52	Safety Factor
91.6	28.0	3.2	1.6	1.4	1.4	1.4	0.95	0.93	2.3	lb/hr (from above) * (1 + SF)
										tons/yr (from above) * (1 + SF)

¹ SO₂ emission rate based on sulfur content of 5gr S/100scf

² HAP tpy emission rate from GRI-HAPCalc 3.01 calculated using ISO hp instead of derate hp;

³ For emission rates based on test data, testing data and regression analysis are included in this application

⁴ All PM lb/hr Emission Rate = EF (lb/MMBtu) * Fuel Consumption (MMBtu/hp-hr) * hp (ISO Rating value)

From lb/hr, tpy Emission Rate = lb/hr * Yearly Operating Hours * 1ton/2000lb

⁵ EF of all PM from AP42 3.1 table 3.1-2a: Emission Factors for Criteria Pollutants and Greenhouse Gases from Stationary Gas Turnbines

GHG Emission Calculations

CO ₂	CH ₄	N ₂ O		
53.02	1.00E-03	1.00E-04	kg/mmBtu	40 CFR 98, Subpart C, Tables C-1 and C-2
21768272	411	41	kg / yr	
23988.6	0.45	0.0452	tons / yr	
23988.6	11.3	13.5	tons/yr CO ₂ e	

Unit: F-001
Description: Facility-wide fugitives

Facility hours of operation per year: 8,760 hr/yr

Component Count and TOC calculation

Emission Source	Component Count ¹	Emission Factor ²		TOC (lb/hr)
		(kg/hr/source)	(lb/hr/source)	
Valves	486	0.0200	0.04409	21.429
Relief Valves	9	0.1880	0.41446	3.730
Open-Ended Lines	23	0.0220	0.04850	1.116
Compressor Seals	4	0.2040	0.44974	1.799
Pump Seals (Liq. Service)	0	0.0630	0.13889	0.000
Flanges & Connections	986	0.0011	0.00243	2.391
Total # of Components	1,508	Total TOC Emissions:		30.5

¹Based on EPNG representative component count per process unit multiplied by the number of process units
²Based on EPA-453/R-93-026 (Table 2-3: Gas Plant Average Emission Factors - Total Organic Compounds, TOC)

Gas Analysis

Component	MW	Dry vol/mol%	MW * dry vol %	Mass Fraction (dry)
Nitrogen	28.01	0.30%	0.085	0.50%
Oxygen	31.99	0.00%	0.000	0.00%
CO ₂	44.01	1.36%	0.598	3.56%
H ₂ S	34.08	0.00%	0.000	0.00%
Methane	16.04	96.45%	15.473	91.99%
Ethane	30.07	1.43%	0.430	2.56%
Propane	44.10	0.30%	0.134	0.79%
I-Butane	58.12	0.06%	0.034	0.20%
N-Butane	58.12	0.05%	0.031	0.19%
I-Pentane	72.15	0.02%	0.013	0.08%
N-Pentane	72.15	0.01%	0.009	0.05%
Hexanes +	86.18	0.02%	0.015	0.09%
Total		100.00%	16.82	100%

NMHC	1.9%	1.40%	mixture VOC wt%
NMEHC (VOC)	0.46%	95.94%	mixture TOC wt%

Fugitive Emissions Calculation

Fugitive TOC Emissions: 30.464 lb/hr

Fugitive VOC Emissions: 1.9 tpy VOC tpy = TOC lb/hr * (VOC mol% / TOC mol %) * 8760 hrs/yr / 2000 lb/ton

Fugitive CH₄ Emissions: 127.93 tpy

Fugitive CO₂ Emissions: 4.9 tpy

Sample Calculation:

VOC tpy = 30.5 lb TOC / hr * 1.40% VOC wt % / 95.94% TOC wt % * 8760 hr / yr * 1 ton / 2000 lb

Fugitive HAP emissions (from GRI-HAPCalc):

Benzene	Toluene	Ethylbenzene	Xylenes	Total HAPs	
0.0049	0.0082	0.0004	0.0021	0.0156	tpy
100%	100%	100%	100%	100%	%
0.0022	0.0037	0.0002	0.0010	0.0071	lb/hr
0.0098	0.0164	0.0008	0.0042	0.0312	tpy

GRI-HAPCalc
Safety Factor

Unit:SSM/M1

Description:Facility-wide SSM/M1 emissions

Gas Analysis (Typical)		
VOC weight %:	2.00%	Nominal
CO2 weight %:	2.00%	Nominal
CH4 weight %:	90.00%	Nominal
Gas molecular weight:	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:	51.7 Mscf/event	Estimated (varies)
VOC Emissions:	46.4 lb/event	lb/scf * scf/event * VOC wt %
SSM Emission Rates, Annual		
Annual volume:	1861.2 Mscf/yr	Expected blowdown volume
VOC Emissions:	0.8 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:	54.6 Mscf/event	Estimated (varies)
VOC Emissions:	49 lb/event	lb/scf * scf/event * VOC wt %
SSM Emission Rates, Annual		
Annual volume:	8190 Mscf/yr	Expected blowdown volume
VOC Emissions:	3.7 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:	968.91 Mscf/event	Estimated (varies)
VOC Emissions:	870 lb/event	lb/scf * scf/event * VOC wt %
SSM Emission Rates, Annual		
Annual volume:	3875.64 Mscf/yr	Assumes multiple events per year
VOC Emissions:	1.740 tons/yr	lb/event * event/year * ton/2000lb

Facility Blowdown Total		
VOC Emissions:	10.0 tons/yr	
HAP emissions:	0.163 tons/yr	Assumes same HAP/VOC ratio as fugitives
CO2 Emissions:	10.0 tons/yr	VOC Emissions / %VOC * %CO2
CH4 Emissions:	450.0 tons/yr	VOC Emissions / %VOC * %CH4
CO2e Emissions:	11260.0 tons/yr	
VOC Emissions (SSM):	6.25	

Facility-Wide SSM/M Total					
VOC	HAP	CO2	CH4	CO2e	
10.0	0.069	10.0	450.0	11260.0	tons/yr

Unit:SSM/M1

Description:Facility-wide startup, shutdown, maintenance and malfunction emissions

Gas Analysis (Typical)			
<i>H₂S</i>	0.25 100	gr H ₂ S scf	Nominal (Max amount allowed in pipeline quality natural gas)

Turbine Blowdown Venting (BD-Unit)			
SSM Emission Rates, Per Event			
<i>Event Description:</i>	Planned Maintenance and Normal Shutdown		
<i>Volume per event:</i>	51.7 Mscf/event	Estimated (varies)	
<i>H₂S Emissions:</i>	0.018 lb/event	gr/scf * scf/event * 1lb/7000gr	
SSM Emission Rates, Annual			
<i>Annual volume:</i>	1861.2 Mscf/yr	Expected blowdown volume	
<i>H₂S Emissions:</i>	0.0003 tons/yr	gr/scf * scf/event * 1lb/7000gr * ton/2000 lb	

Turbine Starting Gas (BD-Unit)			
SSM Emission Rates, Per Event			
<i>Event Description:</i>	Normal Startup		
<i>Volume per event:</i>	54.6 Mscf/event	Estimated (varies)	
<i>H₂S Emissions:</i>	0.020 lb/event	gr/scf * scf/event * 1lb/7000gr	
SSM Emission Rates, Annual			
<i>Annual volume:</i>	8190 Mscf/yr	Expected blowdown volume	
<i>H₂S Emissions:</i>	0.0015 tons/yr	gr/scf * scf/event * 1lb/7000gr * ton/2000 lb	

Facility Blowdown Venting (BD-ESD)			
SSM Emission Rates, Per Event			
<i>Event Description:</i>	Station ESD		
<i>Volume per event:</i>	968.91 Mscf/event	Estimated (varies)	
<i>H₂S Emissions:</i>	0.346 lb/event	gr/scf * scf/event * 1lb/7000gr	
SSM Emission Rates, Annual			
<i>Annual volume:</i>	3875.64 Mscf/yr	Expected blowdown volume	
<i>H₂S Emissions:</i>	6.92E-04 tons/yr	gr/scf * scf/event * 1lb/7000gr * ton/2000 lb	
<i>Facility H₂S Total:</i>	0.0025 tons/yr		

Facility Blowdown Total	
<i>H₂S Emissions:</i>	0.0025 tons/yr

Facility-Wide SSM/M Total	
H₂S	tons/yr

Unit: AUX-A1
Description: G3406 TA; 4-Stroke Rich Burn Engine

ISO Rating: 201 hp
Site Rating: 201 hp
Fuel consumption: 7329 BTU/bhp-hr
Heat Input: 1.5 MMBtu/hr
Fuel Heat Value: 931.9 BTU/scf
Operation Time: 500 hr/yr

Emission Calculations

NOx	CO	VOC	SO ₂ ¹	PM	Acetaldehyde	Formaldehyde	Total HAPs		
19.7	1.0	0.63						g/bhp-hr	Engine Specificaiton
				0.019	0.0028	0.021	0.032	lb/MMBtu	AP-42 Table 3.2-3
			5					gr S/100scf	
0.57	0.029	0.018	2.26	0.028	0.0041	0.030	0.048	lb/hr	
0.14	0.007	0.0045	0.56	0.0070	2.35E-04	0.0017	0.0027	tons/yr	

¹SO₂ emission rate based on fuel sulfur content of 5 gr S/100scf and Site Rating

SO₂ (lb/hr) = 5gr S/100scf * Heat input (Btu/hp-hr) * Site rating (hp) / Fuel Heating value (Btu/scf) * 1lb/7000gr * Stoichometric ratio (64/32)

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
1	25	298	GWP	40 CFR 98 Table A-1
39082	0.74	0.07	kg / yr	
43.1	0.00081	0.000081	tons / yr	
43.07	0.020	0.024	tons/yr CO ₂ e	

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 emission for this application:

- Turbines (A-01 and A-02)
 - o GRI-HAPCalc Output
 - o 40 CFR 98 Subpart C, Tables C-1 and C-2
 - o Test Data
 - o Alternate Emission Standards
 - Calculated per this facility's ACP and AES. The fully approved ACP and AES are attached to Section 20 of the application for reference.
- CAT G3406 Engine (AUX-1)
 - o Manufacture Specification Sheet
 - o U.S. EPA, AP-42, Section 3.2 Natural Gas-fired Reciprocating Engines
 - o 40 CFR 98 Subpart C, Tables C-1 and C-2
- Fugitives (F-001)
 - o GRI-HAPCalc Output

GRI-HAPCalc® 3.01**Turbine Report**

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

Notes:

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: A - 1
Hours of Operation: 8,760 Yearly
Rate Power: 7040 hp
Fuel Type: NATURAL GAS
Emission Factor Set: FIELD > EPA > LITERATURE
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			
PAHs	0.0007	0.00000970 g/bhp-hr	EPA
Formaldehyde	1.1503	0.01693680 g/bhp-hr	GRI Field
Acetaldehyde	1.1774	0.01733570 g/bhp-hr	GRI Field
1,3-Butadiene	0.0042	0.00006160 g/bhp-hr	GRI Field
Acrolein	0.0177	0.00026000 g/bhp-hr	GRI Field
Propional	0.0587	0.00086500 g/bhp-hr	GRI Field
Propylene Oxide	0.0086	0.00012730 g/bhp-hr	EPA
Benzene	0.0366	0.00053840 g/bhp-hr	GRI Field
Toluene	0.0279	0.00041100 g/bhp-hr	GRI Field
Ethylbenzene	0.0095	0.00014050 g/bhp-hr	EPA
Xylenes(m,p,o)	0.0845	0.00124410 g/bhp-hr	GRI Field
2,2,4-Trimethylpentane	0.1090	0.00160530 g/bhp-hr	GRI Field
n-Hexane	0.1023	0.00150580 g/bhp-hr	GRI Field
Phenol	0.0075	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	0.0224	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
Phosphorus	0.0044	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
Mercury	0.0002	0.00000270 g/bhp-hr	GRI Field
Lead	0.0002	0.00000340 g/bhp-hr	GRI Field

Total 2.8251

Criteria Pollutants

PM	1.9677	0.02897200 g/bhp-hr	EPA
CO	143.1924	2.10828420 g/bhp-hr	GRI Field
NMHC	13.1680	0.19387800 g/bhp-hr	GRI Field
NMEHC	0.6261	0.00921840 g/bhp-hr	EPA
NOx	85.0456	1.25216290 g/bhp-hr	GRI Field
SO2	0.0698	0.00102720 g/bhp-hr	GRI Field

Other Pollutants

Methane	67.0491	0.98719230 g/bhp-hr	GRI Field
Acetylene	0.4867	0.00716540 g/bhp-hr	GRI Field
Ethylene	0.9478	0.01395450 g/bhp-hr	GRI Field
Ethane	10.1935	0.15008370 g/bhp-hr	GRI Field
Propane	1.0867	0.01600000 g/bhp-hr	GRI Field
Isobutane	0.3260	0.00480000 g/bhp-hr	GRI Field
Butane	0.3532	0.00520000 g/bhp-hr	GRI Field
Cyclopentane	0.1121	0.00165110 g/bhp-hr	GRI Field
Butyrald/Isobutyraldehyde	0.0910	0.00134000 g/bhp-hr	GRI Field
n-Pentane	5.5116	0.08115000 g/bhp-hr	GRI Field
Cyclohexane	0.4159	0.00612400 g/bhp-hr	GRI Field
Methylcyclohexane	0.5998	0.00883120 g/bhp-hr	GRI Field
n-Octane	0.2166	0.00318890 g/bhp-hr	GRI Field
1,3,5-Trimethylbenzene	0.2038	0.00300000 g/bhp-hr	GRI Field
n-Nonane	0.0362	0.00053260 g/bhp-hr	GRI Field
CO2	32,795.7535	482.86607780 g/bhp-hr	EPA
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

Unit Name: A - 2

Hours of Operation: 8,760 Yearly
Rate Power: 5700 hp
Fuel Type: NATURAL GAS
Emission Factor Set: FIELD > EPA > LITERATURE
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			
PAHs	0.0005	0.00000970 g/bhp-hr	EPA
Formaldehyde	0.9314	0.01693680 g/bhp-hr	GRI Field
Acetaldehyde	0.9533	0.01733570 g/bhp-hr	GRI Field
1,3-Butadiene	0.0034	0.00006160 g/bhp-hr	GRI Field
Acrolein	0.0143	0.00026000 g/bhp-hr	GRI Field

Propional	0.0476	0.00086500 g/bhp-hr	GRI Field
Propylene Oxide	0.0070	0.00012730 g/bhp-hr	EPA
Benzene	0.0296	0.00053840 g/bhp-hr	GRI Field
Toluene	0.0226	0.00041100 g/bhp-hr	GRI Field
Ethylbenzene	0.0077	0.00014050 g/bhp-hr	EPA
Xylenes(m,p,o)	0.0684	0.00124410 g/bhp-hr	GRI Field
2,2,4-Trimethylpentane	0.0883	0.00160530 g/bhp-hr	GRI Field
n-Hexane	0.0828	0.00150580 g/bhp-hr	GRI Field
Phenol	0.0061	0.00011010 g/bhp-hr	GRI Field
Naphthalene	0.0004	0.00000760 g/bhp-hr	GRI Field
2-Methylnaphthalene	0.0001	0.00000130 g/bhp-hr	GRI Field
Biphenyl	0.0182	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
Phosphorus	0.0036	0.00006520 g/bhp-hr	GRI Field
Chromium	0.0005	0.00000820 g/bhp-hr	GRI Field
Manganese	0.0010	0.00001750 g/bhp-hr	GRI Field
Nickel	0.0003	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
Mercury	0.0001	0.00000270 g/bhp-hr	GRI Field
Lead	0.0002	0.00000340 g/bhp-hr	GRI Field
Total	2.2876		

Criteria Pollutants

PM	1.5932	0.02897200 g/bhp-hr	EPA
CO	115.9371	2.10828420 g/bhp-hr	GRI Field
NMHC	10.6616	0.19387800 g/bhp-hr	GRI Field
NMEHC	0.5069	0.00921840 g/bhp-hr	EPA
NOx	68.8579	1.25216290 g/bhp-hr	GRI Field
SO2	0.0565	0.00102720 g/bhp-hr	GRI Field

Other Pollutants

Methane	54.2869	0.98719230 g/bhp-hr	GRI Field
Acetylene	0.3940	0.00716540 g/bhp-hr	GRI Field
Ethylene	0.7674	0.01395450 g/bhp-hr	GRI Field
Ethane	8.2533	0.15008370 g/bhp-hr	GRI Field
Propane	0.8799	0.01600000 g/bhp-hr	GRI Field
Isobutane	0.2640	0.00480000 g/bhp-hr	GRI Field
Butane	0.2860	0.00520000 g/bhp-hr	GRI Field
Cyclopentane	0.0908	0.00165110 g/bhp-hr	GRI Field
Butyrald/Isobutyraldehyde	0.0737	0.00134000 g/bhp-hr	GRI Field
n-Pentane	4.4625	0.08115000 g/bhp-hr	GRI Field
Cyclohexane	0.3368	0.00612400 g/bhp-hr	GRI Field
Methylcyclohexane	0.4856	0.00883120 g/bhp-hr	GRI Field
n-Octane	0.1754	0.00318890 g/bhp-hr	GRI Field
1,3,5-Trimethylbenzene	0.1650	0.00300000 g/bhp-hr	GRI Field
n-Nonane	0.0293	0.00053260 g/bhp-hr	GRI Field
CO2	26,553.3800	482.86607780 g/bhp-hr	EPA
Vanadium	0.0000	0.00000070 g/bhp-hr	GRI Field

Copper	0.0011	0.00002050 g/bhp-hr	GRI Field
Molybdenum	0.0011	0.00002030 g/bhp-hr	GRI Field
Barium	0.0013	0.00002290 g/bhp-hr	GRI Field

98.36(e)(3)

Within 30 days of receipt of a written request from the Administrator, you shall submit explanations of the following:

98.36(e)(3)(i)

An explanation of how company records are used to quantify fuel consumption, if the Tier 1 or Tier 2 Calculation Methodology is used to calculate CO₂ emissions.

98.36(e)(3)(ii)

An explanation of how company records are used to quantify fuel consumption, if solid fuel is combusted and the Tier 3 Calculation Methodology is used to calculate CO₂ emissions.

98.36(e)(3)(iii)

An explanation of how sorbent usage is quantified.

98.36(e)(3)(iv)

An explanation of how company records are used to quantify fossil fuel consumption in units that uses CEMS to quantify CO₂ emissions and combusts both fossil fuel and biomass.

98.36(e)(3)(v)

An explanation of how company records are used to measure steam production, when it is used to calculate CO₂ mass emissions under §98.33(a)(2)(iii) or to quantify solid fuel usage under §98.33(c)(3).

98.36(e)(4)

Within 30 days of receipt of a written request from the Administrator, you shall submit the verification data and information described in paragraphs (e)(2)(iii), (e)(2)(v), and (e)(2)(vii) of this section.

[Amended at 75 FR page 79151, Dec. 17, 2010]

§ 98.37 Records that must be retained.

In addition to the requirements of §98.3(g), you must retain the applicable records specified in §§98.34(f) and (g), 98.35(b), and 98.36(e).

§ 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

Fuel type	Default high heat value	Default CO₂ emission factor
Coal and coke	mmBtu/short ton	kg CO ₂ /mmBtu
Anthracite	25.09	103.54
Bituminous	24.93	93.40
Subbituminous	17.25	97.02
Lignite	14.21	96.36
Coke	24.80	102.04
Mixed (Commercial sector)	21.39	95.26
Mixed (Industrial coking)	26.28	93.65
Mixed (Industrial sector)	22.35	93.91
Mixed (Electric Power sector)	19.73	94.38
Natural gas	mmBtu/scf	kg CO ₂ /mmBtu
(Weighted U.S. Average)	1.028 x 10 ⁻³	53.02
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	0.135	74.00
Kerosene	0.135	75.20
Liquefied petroleum gases (LPG)	0.092	62.98
Propane	0.091	61.46
Propylene	0.091	65.95
Ethane	0.069	62.64
Ethanol	0.084	68.44
Ethylene	0.100	67.43
Isobutane	0.097	64.91
Isobutylene	0.103	67.74
Butane	0.101	65.15
Butylene	0.103	67.73
Naphtha (<401 deg F)	0.125	68.02
Natural Gasoline	0.110	66.83
Other Oil (>401 deg F)	0.139	76.22
Pentanes Plus	0.110	70.02
Petrochemical Feedstocks	0.129	70.97
Petroleum Coke	0.143	102.41
Special Naphtha	0.125	72.34
Unfinished Oils	0.139	74.49
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
Asphalt and Road Oil	0.158	75.36
Crude Oil	0.138	74.49
Other fuels-solid.	mmBtu/short ton	kg CO ₂ /mmBtu
Municipal Solid Waste	9.95 1	90.7
Tires	26.87	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 x 10 ⁻³	274.32
Coke Oven Gas	0.599 x 10 ⁻³	46.85
Propane Gas	2.516 x 10 ⁻³	61.46
Fuel Gas 2	1.388 x 10 ⁻³	59.00
Biomass fuels—solid	mmBtu/short ton	kg CO ₂ /mmBtu
Wood and Wood Residuals	15.38	93.80
Agricultural Byproducts	8.25	118.17
Peat	8.00	111.84
Solid Byproducts	25.83	105.51
Biomass fuels—gaseous	mmBtu/scf	kg CO ₂ /mmBtu
Biogas (Captured methane)	0.841 x 10 ⁻³	52.07
Biomass Fuels—Liquid	mmBtu/gallon	kg CO ₂ /mmBtu
Ethanol	0.084	68.44
Biodiesel	0.128	73.84

Rendered Animal Fat	0.125	71.06
Vegetable Oil	0.120	81.55

¹ 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.

² 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.

Table C-2 to Subpart C of Part 98 —Default CH₄ and N₂O Emission Factors for Various Types of Fuel

Default CH₄ and N₂O Emission Factors for Various Types of Fuel

Fuel type	Default CH₄ emission factor (kg CH₄ / mmBtu)	Default N₂O emission factor (kg N₂O / mmBtu)
Coal and Coke (All fuel types in Table C-1)	1.1 x 10 ⁻⁰²	1.6 x 10 ⁻⁰³
Natural Gas	1.0 x 10 ⁻⁰³	1.0 x 10 ⁻⁰⁴
Petroleum (All fuel types in Table C-1)	3.0 x 10 ⁻⁰³	6.0 x 10 ⁻⁰⁴
Municipal Solid Waste	3.2 x 10 ⁻⁰²	4.2 x 10 ⁻⁰³
Tires	3.2 x 10 ⁻⁰²	4.2 x 10 ⁻⁰³
Blast Furnace Gas	2.2 x 10 ⁻⁰⁵	1.0 x 10 ⁻⁰⁴
Coke Oven Gas	4.8 x 10 ⁻⁰⁴	1.0 x 10 ⁻⁰⁴
Biomass Fuels—Solid (All fuel types in Table C-1)	3.2 x 10 ⁻⁰²	4.2 x 10 ⁻⁰³
Biogas	3.2 x 10 ⁻⁰³	6.3 x 10 ⁻⁰⁴
Biomass Fuels—Liquid (All fuel types in Table C-1)	1.1 x 10 ⁻⁰³	1.1 x 10 ⁻⁰⁴

Note: Those employing this table are assumed to fall under the IPCC definitions of the “Energy Industry” or “Manufacturing Industries and Construction”. In all fuels except for coal the values for these two categories are identical. For coal combustion, those who fall within the IPCC “Energy Industry” category may employ a value of 1g of CH₄/mmBtu.

[75 FR page 79154, Dec. 17, 2010]

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ENGINE SPEED:	1800	FUEL:	NATURAL GAS
COMPRESSION RATIO:	10.3:1	FUEL SYSTEM:	LPG IMPCO
AFTERCOOLER (°F):	130		
JACKET WATER (°F):	210	MIN. FUEL PRESS. (psig):	1.5
COOLING SYSTEM:	COMBINED	MIN. METHANE NUMBER:	80
IGNITION SYSTEM:	CDIS	MAX. RATED ALTITUDE (ft):	5000
EXHAUST MANIFOLD:	WET	AT AMBIENT TEMP (°F):	77
COMBUSTION:	STOICH	NOx EMISSION LEVEL:	STD

RATING AND EFFICIENCY	NOTES	LOAD	100%	75%	50%
LHV OF FUEL		btu/scf	919.6	919.6	919.6
ENGINE POWER		bhp	301	226	151
ENGINE EFFICIENCY	(1)	%	34.7	32.7	29.5
THERMAL EFFICIENCY	(5)	%	50.1	52.2	55.5
TOTAL EFFICIENCY	(6)	%	84.8	84.9	85.0

ENGINE DATA					
FUEL CONSUMPTION	(1)	btu/bhp-hr	7329	7782	8637
AIR FLOW	(WET)	lb/hr	2136	1652	1144
AIR FLOW	(WET)	scfm	466	360	250
COMPRESSOR OUT PRESS.		in. Hg (abs)	45.4	42.4	37.5
COMPRESSOR OUT TEMP.		°F	203	177	147
INLET MAN. PRESS.		in. Hg (abs)	41.3	32.6	23.2
INLET MAN. TEMP.	(10)	°F	133	133	132
TIMING	(11)	°BTDC	22	22	22
EXHAUST STACK TEMP.		°F	977	968	957
EXHAUST FLOW (@STACK TEMP)	(WET)	cfm	1424	1086	756
EXHAUST FLOW	(WET)	lb/hr	2246	1740	1209

EMISSIONS					
NOx (as NO2)	(9)	g/bhp-hr	19.7	20.4	18.7
CO	(9)	g/bhp-hr	1	1	1.1
THC	(9)	g/bhp-hr	4.2	4.5	4.7
NMHC	(9)	g/bhp-hr	0.63	0.68	0.71
EXHAUST O2 (DRY)		%	4.0	3.4	2.2
LAMBDA			1.24	1.19	1.12

HEAT BALANCE DATA					
LHV INPUT	(1)	btu/min	36767	29280	21664
HEAT REJ. TO JACKET	(2) (7)	btu/min	11946	10351	8638
HEAT REJ. TO A/C	(3) (8)	btu/min	694	352	94
HEAT REJ. TO ATMOSPHERE	(4)	btu/min	1471	1171	867
HEAT REJ. TO EXH (LHV to 77°F)	(2)	btu/min	9892	7831	5684
HEAT REJ. TO EXH (LHV to 350°F)	(2)	btu/min	6460	4944	3388

CONDITIONS AND DEFINITIONS

ENGINE RATING OBTAINED AND PRESENTED IN ACCORDANCE WITH ISO 3046/1 (STD. REF. CONDITIONS OF 25°C, 100 KPA).

NO OVERLOAD PERMITTED AT RATING SHOWN. CONSULT ALTITUDE CURVES FOR APPLICATIONS ABOVE MAXIMUM RATED ALTITUDE AND/OR TEMPERATURE.

- 1) FUEL CONSUMPTION TOLERANCE ACCORDING TO ISO 3046/1. TOLERANCE IS ±5% OF FULL LOAD DATA
- 2) HEAT REJECTION TO JACKET AND EXHAUST TOLERANCE IS ±10% OF FULL LOAD DATA.
- 3) HEAT REJECTION TO A/C TOLERANCE IS ±5% OF FULL LOAD DATA.
- 4) HEAT REJECTION TO ATMOSPHERE TOLERANCE IS ±50% OF FULL LOAD DATA.
- 5) THERMAL EFFICIENCY: JACKET WATER +EXH. HEAT TO 350°F
- 6) TOTAL EFFICIENCY: ENGINE EFF. + THERMAL EFF. TOLERANCE IS +/- 10% OF FULL LOAD DATA
- 7) TOTAL JW HEAT: JACKET HEAT + OIL COOLER HEAT (HEAT RATE BASED ON TREATED WATER)
- 8) TOTAL A/C HEAT: A/C HEAT x A/C HEAT REJ. FACTOR (HEAT RATE BASED ON TREATED WATER)
- 9) EMISSION DATA SHOWN ARE NOT TO EXCEED VALUES.
PUBLISHED PART LOAD DATA MAY REQUIRE ENGINE ADJUSTMENT.
- 10) MEASURED BETWEEN AFTERCOOLER OUTLET AND PLENUM ENTRY.
- 11) TIMING INDICATED IS FOR USE WITH A MINIMUM FUEL METHANE NUMBER SPECIFIED. CONSULT THE APPROPRIATE FUEL USAGE GUIDE FOR TIMING AT OTHER METHANE NUMBERS.

FUEL USAGE GUIDE

DERATE FACTOR/ENGINE TIMING vs METHANE NUMBER

<30	30	35	40	45	50	55	60	65	70	75	80 to 100
0	0/--	0/--	0/--	0/--	0/--	0/--	0/--	0/--	1.0/19	1.0/22	1.0/22

ALTITUDE DERATION FACTORS

A	130	1.00	1.00	1.00	0.98	0.95	0.91	0.88	0.84	0.81	0.78	0.75	0.72	0.69
M	120	1.00	1.00	1.00	1.00	0.96	0.93	0.89	0.86	0.82	0.79	0.76	0.73	0.70
B	110	1.00	1.00	1.00	1.00	0.98	0.94	0.91	0.87	0.84	0.80	0.77	0.74	0.71
I	100	1.00	1.00	1.00	1.00	1.00	0.96	0.92	0.89	0.85	0.82	0.79	0.75	0.72
E	90	1.00	1.00	1.00	1.00	1.00	0.98	0.94	0.90	0.87	0.83	0.80	0.77	0.74
N	80	1.00	1.00	1.00	1.00	1.00	0.99	0.96	0.92	0.88	0.85	0.81	0.78	0.75
T	70	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.94	0.90	0.86	0.83	0.80	0.76
	60	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.95	0.92	0.88	0.85	0.81	0.78
(°F)	50	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.94	0.90	0.86	0.83	0.79
		0	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000	12000

ALTITUDE (FEET ABOVE SEA LEVEL)

AFTERCOOLER HEAT REJECTION FACTORS

A	130	1.80	1.96	2.13	2.30	2.47	2.64	2.64	2.64	2.64	2.64	2.64	2.64	2.64
M	120	1.63	1.79	1.96	2.12	2.29	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.46
B	110	1.47	1.63	1.79	1.95	2.12	2.29	2.29	2.29	2.29	2.29	2.29	2.29	2.29
I	100	1.31	1.46	1.62	1.78	1.94	2.11	2.11	2.11	2.11	2.11	2.11	2.11	2.11
E	90	1.14	1.29	1.45	1.60	1.76	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93
N	80	1.00	1.12	1.28	1.43	1.59	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75
T	70	1.00	1.00	1.11	1.26	1.41	1.57	1.57	1.57	1.57	1.57	1.57	1.57	1.57
	60	1.00	1.00	1.00	1.08	1.24	1.39	1.39	1.39	1.39	1.39	1.39	1.39	1.39
(°F)	50	1.00	1.00	1.00	1.00	1.06	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21
		0	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000	12000

ALTITUDE (FEET ABOVE SEA LEVEL)

FUEL USAGE GUIDE:

This table shows the derate factor required for a given fuel and what engine timing to use. Note that deration occurs as the methane number decreases. Methane number is a scale to measure ignition and burning characteristics of various fuels. Representative values are shown below.

Methane	100.00	
Ethane	44.00	Most dry pipeline natural gas has a methane number of 67 or above. The gas quality should be analyzed to
Propane	34.00	determine the percentage of each constituent and then determine the methane number. Consult the dealer or
n-Butane	10.00	factory for assistance.
Hydrogen	0.00	

ALTITUDE DERATION FACTORS:

This table shows the deration required for various ambient temperatures and altitudes. Use this information to help determine actual engine power for your site.

ACTUAL ENGINE RATING:

It is important to note that the Altitude/Temperature deration and the Fuel Usage Guide deration are not cumulative, i.e., they are not to be added together. The same is true for the Low Energy Fuel deration (reference the Caterpillar Methane Number Program) and the Fuel Usage Guide deration. However, the Altitude/Temperature deration and Low Energy Fuel deration are cumulative; and they must be added together in the method shown below. To determine the actual power available, take the lowest rating between 1) and 2).

- 1) (Altitude/Temperature Deration) + (Low Energy Fuel Deration)
- 2) Fuel Usage Guide Deration

Note: For NA's always add the Low Energy Fuel deration to the Altitude/Temperature deration. For TA engines only add the Low Energy Fuel deration to the Altitude/Temperature deration whenever the Altitude/Temperature deration is less than 1.0 (100%). This will give the actual rating for the engine at the conditions specified.

AFTERCOOLER HEAT REJECTION FACTORS:

Aftercooler heat rejection is given for standard conditions of 77°F and 500 ft altitude. To maintain a constant inlet air manifold temperature, as the ambient air temperature goes up, so must the heat rejection. As altitude increases, the turbocharger must work harder to overcome the lower atmospheric pressure. This increases the amount of heat that must be removed from the inlet air by the aftercooler. Use the aftercooler heat rejection factor to adjust for ambient and altitude conditions. Multiply this factor by the standard aftercooler heat rejection. Failure to properly account for these factors could result in detonation and cause the engine to shut down or fail.

Table 3.2-3. UNCONTROLLED EMISSION FACTORS FOR 4-STROKE RICH-BURN
 ENGINES^a
 (SCC 2-02-002-53)

Pollutant	Emission Factor (lb/MMBtu) ^b (fuel input)	Emission Factor Rating
Criteria Pollutants and Greenhouse Gases		
NO _x ^c 90 - 105% Load	2.21 E+00	A
NO _x ^c <90% Load	2.27 E+00	C
CO ^c 90 - 105% Load	3.72 E+00	A
CO ^c <90% Load	3.51 E+00	C
CO ₂ ^d	1.10 E+02	A
SO ₂ ^e	5.88 E-04	A
TOC ^f	3.58 E-01	C
Methane ^g	2.30 E-01	C
VOC ^h	2.96 E-02	C
PM10 (filterable) ^{i,j}	9.50 E-03	E
PM2.5 (filterable) ^j	9.50 E-03	E
PM Condensable ^k	9.91 E-03	E
Trace Organic Compounds		
1,1,2,2-Tetrachloroethane ^l	2.53 E-05	C
1,1,2-Trichloroethane ^l	<1.53 E-05	E
1,1-Dichloroethane	<1.13 E-05	E
1,2-Dichloroethane	<1.13 E-05	E
1,2-Dichloropropane	<1.30 E-05	E
1,3-Butadiene ^l	6.63 E-04	D
1,3-Dichloropropene ^l	<1.27 E-05	E
Acetaldehyde ^{l,m}	2.79 E-03	C
Acrolein ^{l,m}	2.63 E-03	C
Benzene ^l	1.58 E-03	B
Butyr/isobutyraldehyde	4.86 E-05	D
Carbon Tetrachloride ^l	<1.77 E-05	E

Table 3.2-3. UNCONTROLLED EMISSION FACTORS FOR 4-STROKE RICH-BURN ENGINES
(Concluded)

Pollutant	Emission Factor (lb/MMBtu) ^b (fuel input)	Emission Factor Rating
Chlorobenzene ¹	<1.29 E-05	E
Chloroform ¹	<1.37 E-05	E
Ethane ⁿ	7.04 E-02	C
Ethylbenzene ¹	<2.48 E-05	E
Ethylene Dibromide ¹	<2.13 E-05	E
Formaldehyde ^{1,m}	2.05 E-02	A
Methanol ¹	3.06 E-03	D
Methylene Chloride ¹	4.12 E-05	C
Naphthalene ¹	<9.71 E-05	E
PAH ¹	1.41 E-04	D
Styrene ¹	<1.19 E-05	E
Toluene ¹	5.58 E-04	A
Vinyl Chloride ¹	<7.18 E-06	E
Xylene ¹	1.95 E-04	A

^a Reference 7. Factors represent uncontrolled levels. For NO_x, CO, and PM-10, “uncontrolled” means no combustion or add-on controls; however, the factor may include turbocharged units. For all other pollutants, “uncontrolled” means no oxidation control; the data set may include units with control techniques used for NO_x control, such as PCC and SCR for lean burn engines, and PSC for rich burn engines. Factors are based on large population of engines. Factors are for engines at all loads, except as indicated. SCC = Source Classification Code. TOC = Total Organic Compounds. PM10 = Particulate Matter ≤ 10 microns (μm) aerodynamic diameter. A “<” sign in front of a factor means that the corresponding emission factor is based on one-half of the method detection limit.

^b Emission factors were calculated in units of (lb/MMBtu) based on procedures in EPA Method 19. To convert from (lb/MMBtu) to (lb/10⁶ scf), multiply by the heat content of the fuel. If the heat content is not available, use 1020 Btu/scf. To convert from (lb/MMBtu) to (lb/hp-hr) use the following equation:

$$\text{lb/hp-hr} = (\text{lb/MMBtu}) (\text{heat input, MMBtu/hr}) (1/\text{operating HP, 1/hp})$$

^c Emission tests with unreported load conditions were not included in the data set.

^d Based on 99.5% conversion of the fuel carbon to CO₂. CO₂ [lb/MMBtu] = (3.67)(%CON)(C)(D)(1/h), where %CON = percent conversion of fuel carbon to CO₂,

GRI-HAPCalc® 3.0
Fugitive Emissions Report

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

Notes:

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>
HAPs	
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

Data Summary

General Information

Date	8/23/2023	Manufacturer	GE
Company	EL PASO NATURAL GAS COMPANY LLC	Engine Model	M3702RC
Station	CAPROCK	Rated BHP	5550
State	NM	Rated RPM	6000
Unit No.	A-01	Rated BSFC	N/A

Analyzer Information

Manufacturer	TESTO
Model	350
Serial Number	61494899

Test Data

Run	1	2	3	Average
Date	8/23/2023	8/23/2023	8/23/2023	
Time	11:35	12:05	12:35	
Ambient Data				
Ambient Temp (°F)	88	90	91	90
Relative Humidity (%)	39.7	36.1	35.5	37.1
Barometric Pressure ("Hg)	27.13	27.13	27.12	27.13
Absolute Humidity (grains/LB)	86.9	84.1	85.3	85.4
Operating Data				
Panel Horsepower	4040	3992	4078	4037
HP Speed (RPM)	6903	6897	6898	6899.3
LP Speed (RPM)	5935	5937	5937	5936.3
% Load	72.8%	71.9%	73.5%	72.7%
Fuel Static Press (PSIG)	132.3	133.0	133.2	133
Fuel Diff Press ("H ₂ O)	77.0	75.4	73.8	75
Fuel Temperature (°F)	84	84	91	86
Panel Fuel Use (SCFH)	60333	60000	59333	59889
Orifice Fuel Use (SCFH)				
Fuel Use (SCFH)	60333	60000	59333	59889
F-Factor(dscf/MMBTU)	8677	8677	8677	8677
UDHV (BTU/dscf)	1038	1038	1038	1038
Heat Rate (LHV) (BTU/HP-HR)	14032	14122	13670	13941
T1 Temp. (°F)	88	90	91	90
T5 Temp. (°F)	881	880	879	880
PCD Pressure (psig)	N/A	N/A	N/A	
Suct. Press. (psig)	566	561	556	561
Suct. Temp. (°F)	84	84	84	84
Disc. Press. (psig)	671	666	660	666
Disc. Temp. (°F)	110	110	110	110
Compressor Flow (mmscf/d)	N/A	N/A	N/A	
Catalyst Inlet Temp. (°F)	N/A	N/A	N/A	
Catalyst Outlet Temp. (°F)	N/A	N/A	N/A	
Catalyst Diff. Pressure ("H ₂ O)	N/A	N/A	N/A	

Emissions Results					
Run	1	2	3	Average	Permit
NO (ppmvd Raw Measured Dry)	47.00	47.85	48.30	47.72	
NO (ppmvd Bias Corrected)	47.09	47.95	48.40	47.81	
NO ₂ (ppmvd Raw Measured Dry)	6.57	6.65	6.62	6.61	
NO ₂ (ppmvd Bias Corrected)	6.18	6.26	6.23	6.22	
NO _x (ppmvd Raw Measured Dry)	53.57	54.50	54.92	54.33	
NO _x (ppmvd Bias Corrected)	53.27	54.21	54.63	54.04	
NO _x (ppmvd @ 15% O ₂)	120.11	122.19	122.34	121.54	
Calculated from Panel NOX (g/bhp-hr)	3.10	3.18	3.08	3.12	
NO _x (lb/hr)	27.61	27.94	27.66	27.74	45 PASS
NO _x (tpy)	120.95	122.37	121.15	121.49	
NO _x (lb/mmbtu)	0.44	0.45	0.45	0.45	
CO (ppmvd Raw Measured Dry)	10.00	9.95	10.00	9.98	
CO (ppmvd Bias Corrected)	10.02	9.97	10.02	10.00	
CO (ppmvd @ 15% O ₂)	22.59	22.47	22.44	22.50	
Calculated from Panel CO (g/bhp-hr)	0.36	0.36	0.34	0.35	
CO (lb/hr)	3.16	3.13	3.09	3.13	7.9 PASS
CO (tpy)	13.85	13.70	13.53	13.69	
CO (lb/mmbtu)	0.05	0.05	0.05	0.05	
O ₂ (% Raw Measured Dry)	18.31	18.31	18.30	18.31	
O ₂ (% Bias Corrected)	18.28	18.28	18.27	18.28	

Data Summary

General Information

Date	8/23/2023	Manufacturer	GE
Company	EL PASO NATURAL GAS COMPANY LLC	Engine Model	M3702RC
Station	CAPROCK	Rated BHP	4405
State	NM	Rated RPM	6000
Unit No.	A-02	Rated BSFC	N/A

Analyzer Information

Manufacturer	TESTO
Model	350
Serial Number	61494899

Test Data

	Run	1	2	3	
	Date	8/23/2023	8/23/2023	8/23/2023	Average
	Time	8:12	8:42	9:12	
Ambient Data					
Ambient Temp (°F)		77	82	79	79
Relative Humidity (%)		51.4	50.5	47.2	49.7
Barometric Pressure ("Hg)		27.22	27.22	27.21	27.22
Absolute Humidity (grains/LB)		78.4	91.0	76.9	82.1
Operating Data					
Panel Horsepower		4792	4729	4703	4741
HP Speed (RPM)		6899	6901	6896	6898.7
LP Speed (RPM)		4810	4781	4765	4785.3
% Load		108.8%	107.4%	106.8%	107.6%
Fuel Static Press (PSIG)		130.8	130.3	130.7	131
Fuel Diff Press ("H ₂ O)		31.5	31.6	31.5	32
Fuel Temperature (°F)		109	109	109	109
Panel Fuel Use (SCFH)		39753	39419	39726	39633
Orifice Fuel Use (SCFH)					
Fuel Use (SCFH)		39753	39419	39726	39633
F-Factor(dscf/MMBTU)		8677	8677	8677	8677
UDHV (BTU/dscf)		1038	1038	1038	1038
Heat Rate (LHV) (BTU/HP-HR)		7794	7832	7937	7854
T1 Temp. (°F)		77	82	79	79
T5 Temp. (°F)		951	951	951	951
PCD Pressure (psig)		N/A	N/A	N/A	
Suct. Press. (psig)		672	674	677	674
Suct. Temp. (°F)		109	109	109	109
Disc. Press. (psig)		741	743	745	743
Disc. Temp. (°F)		124	123	123	123
Compressor Flow (mmscf/d)		N/A	N/A	N/A	
Catalyst Inlet Temp. (°F)		N/A	N/A	N/A	
Catalyst Outlet Temp. (°F)		N/A	N/A	N/A	
Catalyst Diff. Pressure ("H ₂ O)		N/A	N/A	N/A	

Emissions Results

	Run	1	2	3	Average	Permit	
NO (ppmvd Raw Measured Dry)		35.65	35.85	36.45	35.98		
NO (ppmvd Bias Corrected)		35.72	35.92	36.52	36.06		
NO ₂ (ppmvd Raw Measured Dry)		9.24	9.16	9.11	9.17		
NO ₂ (ppmvd Bias Corrected)		8.84	8.76	8.71	8.77		
NO _x (ppmvd Raw Measured Dry)		44.89	45.01	45.56	45.15		
NO _x (ppmvd Bias Corrected)		44.56	44.68	45.24	44.83		
NO _x (ppmvd @ 15% O ₂)		96.67	96.23	96.68	96.53		
Calculated from Panel NO _x (g/bhp-hr)		1.39	1.39	1.41	1.40		
NO _x (lb/hr)		14.64	14.45	14.64	14.58	39.3	PASS
NO _x (tpy)		64.14	63.31	64.11	63.85		
NO _x (lb/mmbtu)		0.35	0.35	0.35	0.35		
CO (ppmvd Raw Measured Dry)		20.15	20.05	20.10	20.10		
CO (ppmvd Bias Corrected)		20.19	20.09	20.14	20.14		
CO (ppmvd @ 15% O ₂)		43.80	43.26	43.05	43.37		
Calculated from Panel CO (g/bhp-hr)		0.38	0.38	0.38	0.38		
CO (lb/hr)		4.04	3.96	3.97	3.99	7.9	PASS
CO (tpy)		17.69	17.33	17.37	17.46		
CO (lb/mmbtu)		0.10	0.10	0.10	0.10		
O ₂ (% Raw Measured Dry)		18.20	18.18	18.16	18.18		
O ₂ (% Bias Corrected)		18.18	18.16	18.14	18.16		

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 site map is attached.

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- 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.

Caprock Compressor Station is a natural gas compressor station that compresses natural gas and delivers compressed gas to a pipeline for mainline transportation. This facility consists primarily of one General Electric Company M3702R regenerative cycle turbine (unit A-01) and one General Electric Company M3572R regenerative cycle turbine (unit A-02) powering the compressors. The facility is designed to compress and transport pipeline quality natural gas. An auxiliary emergency generator engine (AUX-A1) is maintained at the facility to provide electric power in the event that service from the local utility is interrupted. Operation of AUX-A1 is limited to 500 hours per year.

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/>

Table of State Regulations:

<u>State Regulation Citation</u>	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification: (You may delete instructions or statements that do not apply in the justification column to shorten the document.)	
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 State Implementation Plan (SIP) approved regulation that limits the maximum allowable concentration of Sulfur Compounds, Carbon Monoxide and Nitrogen Dioxide. This facility meets maximum allowable concentrations of 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 source are subject to Air Quality Control Regulations, as defined in 20.2.7 NMAC, and are thus subject the requirements of this regulation.	
20.2.23 NMAC	Fugitive Dust Control	N/A	Facility	This facility does not process, handle, transport, or store “bult material” as defined in 20.2.23.108.A NMAC. This regulation does not apply as this is a Title V Renewal and not a NOI.	
20.2.33 NMAC	Gas Burning Equipment - Nitrogen Dioxide	No	N/A	Caprock 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; therefore, this regulation does not apply.	
20.2.34 NMAC	Oil Burning Equipment: NO ₂	No	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; therefore, this regulation does not apply.	
20.2.35 NMAC	Natural Gas Processing Plant – Sulfur	No	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; therefore, this regulation does not apply.	
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	No	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; therefore, this regulation does not apply.	
20.2.39 NMAC	Sulfur Recovery Plant - Sulfur	No	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 Caprock Compressor Station does not have a sulfur recovery plant; therefore, this regulation does not apply.	
20.2.50 NMAC	Oil and Gas Sector – Ozone Precursor Pollutants			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	113- Units A-01, A-02, and AUX-A1 are existing units and EPNG will comply with all applicable requirements of this rule and have submitted an ACP. The approved ACP is attached to Section 20 of this application. 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

State Regulation Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification: (You may delete instructions or statements that do not apply in the justification column to shorten the document.)	
				☐ 114 – Compressor Seals ☐ 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	Recovery Units at this facility. 116- EPNG will comply with the requirements of this subpart. 117—N/A—There are no natural gas wells with liquid unloading operations 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—there are no pipeline pig launching or receiving operations at this facility; 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, AUX-A1	This regulation establishes controls on smoke and visible emissions from certain sources, including stationary combustion equipment. Units A-01, A-02, and AUX-A1 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. Caprock Compressor Station is a Title V major sources and is therefore subject to this regulation.	

State Regulation Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification: (You may delete instructions or statements that do not apply in the justification column to shorten the document.)
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 3261M1.
20.2.73 NMAC	NOI & Emissions Inventory Requirements	Yes	Facility	This regulation establishes emission inventory requirements. The 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. All facilities that are a Title V Major Source as defined at 20.2.70.7.R NMAC, are subject to Emissions Inventory Reporting.
20.2.74 NMAC	Permits – Prevention of Significant Deterioration (PSD)	Yes	Facility	This regulation establishes requirements for obtaining a prevention of significant deterioration permit. Caprock 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	No	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, 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	No	Units subject to 40 CFR 60	This regulation establishes state authority to implement new source performance standards (NSPS) for stationary sources. Caprock 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	No	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	No	Facility	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	No	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	No	Units Subject to 40 CFR 63	The facility does not have any units subject to a MACT standard, as amended through December 31, 2010. The portion of the MACT ZZZZ that covers AUX-A1 was promulgated after December 31, 2010. Units A-01 and A-02 are not subject to any MACT standards.

Table of Applicable Federal Regulations (Note: This is not an exhaustive list):

Federal Regulation 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. Caprock 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	No	Units subject to 40 CFR 60	This regulation defines general provision for relevant standards that have been set under this part. The facility is not subject to this regulation because no NSPS Subparts apply.

<u>Federal Regulation Citation</u>	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
NSPS 40 CFR60.40a, Subpart Da	Subpart Da, Performance Standards for Electric Utility Steam Generating Units	No	N/A	This regulation establishes standards of performance for electric utility steam generating units. This facility does not operate any electric utility steam generating units therefore, this regulation does not apply.
NSPS 40 CFR60.40b Subpart Db	Electric Utility Steam Generating Units	No	N/A	This regulation establishes standards of performance for industrial-commercial-institutional steam generating units. This facility does not operate any industrial-commercial-institutional steam generating units therefore this regulation does not apply.
40 CFR 60.40c, Subpart Dc	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units	No	N/A	This regulation establishes standards of performance for industrial-commercial-institutional steam generating units. This facility does not operate any industrial-commercial-institutional steam generating units therefore this regulation does not apply.
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	No	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 for the tanks at the facility are less than 40,000 gallons and are not subject to this regulation.
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	No	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 the construction, reconstruction, or modification of commenced after July 23, 1984.
NSPS 40 CFR 60.330 Subpart GG	Stationary Gas Turbines	No	N/A	The General Electric regenerative cycle turbines at Caprock 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 this subpart.
NSPS 40 CFR 60, Subpart KKK	Leaks of VOC from Onshore Gas Plants	No	N/A	This regulation defines standards of performance for equipment leaks of VOC emissions from onshore natural gas processing plants for which construction, reconstruction, or modification commenced after January 20, 1984, and on or before August 23, 2011. This facility is not a gas plant therefore this regulation does not apply.

<u>Federal Regulation Citation</u>	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
NSPS 40 CFR Part 60 Subpart LLL	Standards of Performance for Onshore Natural Gas Processing: SO ₂ Emissions	No	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 facility is not a gas plant therefore this regulation does not apply.
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 commenced after August 23, 2011 and before September 18, 2015	No	N/A	This regulation establishes standards of performance for crude oil and natural gas production, transmission, and distribution. This facility does not have any affected units that have been constructed, modified, or reconstructed on or after August 23, 2011.
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	No	N/A	This regulation establishes standards of performance for crude oil and natural gas production, transmission, and distribution. This facility does not have any affected units that have been constructed, modified, or reconstructed on or after September 18, 2015.
NSPS 40 CFR 60 Subpart IIII	Standards of performance for Stationary Compression Ignition Internal Combustion Engines	No	N/A	This regulation establishes standards of performance for stationary compression ignition combustion engines. This facility does not operate any stationary compression ignition combustion engines; therefore, this subpart does not apply.
NSPS 40 CFR Part 60 Subpart JJJJ	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines	No	N/A	This regulation establishes standards of performance for stationary spark ignition combustion engines. AUX-A1 is a stationary SI ICE which was constructed prior to June 12, 2006; therefore, this regulation does not apply.
NSPS 40 CFR Part 60 Subpart KKKK	Standards of Performance for Stationary Combustion Turbines	No	N/A	This regulation establishes standards of performance for stationary combustion turbines. The Caprock Compressor Station turbines units A-01 and A-02 were constructed prior to February 18, 2005. These turbines have not been modified or reconstructed since February 18, 2005. Accordingly, these units are not subject to this subpart.
NSPS 40 CFR 60 Subpart TTTT	Standards of Performance for Greenhouse Gas Emissions for Electric Generating Units	No	N/A	This regulation establishes standards of performance for electric generating units. This facility does not operate any electric generating units therefore this subpart doesn't apply.

<u>Federal Regulation Citation</u>	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
NSPS 40 CFR 60 Subpart UUUU	Emissions Guidelines for Greenhouse Gas Emissions and Compliance Times for Electric Utility Generating Units	No	N/A	This regulation establishes standards of performance for electric utility generating units. This facility does not operate any electric utility generating units therefore this regulation does apply.
NSPS 40 CFR 60, Subparts WWW, XXX, Cc, and Cf	Standards of performance for Municipal Solid Waste (MSW) Landfills	No	N/A	These regulations establish standards of performance for municipal solid waste landfills. This facility is not a municipal solid waste landfill therefore this regulation does not apply.
NESHAP 40 CFR 61 Subpart A	General Provisions	Yes (potentially)	Facility (potentially)	Caprock 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	No	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 increase or dry wastewater treatment plant sludge. This facility is not subject to this regulation.
NESHAP 40 CFR 61 Subpart M	National Emission Standards for Asbestos	Yes (potentially)	Facility (potentially)	This standard does not apply to the facility under normal operating conditions; however, 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)	No	N/A	This regulation establishes national emissions standards for equipment leaks (fugitive emission sources). The facility does not have equipment that operates in volatile hazardous air pollutant (VHAP) service. 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	Yes	AUX-A1	This regulation defines general provisions for relevant standards that have been set under this part. Unit AUX-A1 is subject to MACT ZZZZ.
MACT 40 CFR 63.760 Subpart HH	Oil and Natural Gas Production Facilities	No	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 it is not subject to this regulation.
MACT 40 CFR 63 Subpart HHH	Natural Gas Transimion Storage Facilities.	No	N/A	This facility 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	No	N/A	This regulation establishes national emission and operating limitations for HAP emissions from stationary combustion turbines located at major sources of HAPs. This facility is not a major source of HAPs and, therefore, units A-1 and A-2 are not subject to this subpart.
MACT 40 CFR 63 Subpart UUUUU	National Emission Standards for Hazardous Air Pollutants Coal &	No	N/A	These regulations establish standards of performance for coal and oil fire electric utility steam generating units. This facility does not operate any coal or oil fire electric utility steam generating units therefore this subpart does not apply.

Federal Regulation Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
	Oil Fire Electric Utility Steam Generating Unit			
MACT 40 CFR 63 Subpart ZZZZ	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE MACT)	Yes	AUX-A1	This regulation defines national emissions standards for HAPs for stationary reciprocating Internal Combustion Engines. Unit AUX-A1 is an existing (constructed prior to 6/12/2006) auxiliary reciprocating engine for the backup generator located at an area source of HAPs. This unit was constructed before June 12, 2006, and is subject to the operation and maintenance requirements of this subpart. The emergency stationary RICE listed in paragraphs (f)(1) through (3) of this section are not subject to this subpart. The stationary RICE must meet the definition of an emergency stationary RICE in §63.6675, which includes operating according to the provisions specified in §63.6640(f).
40 CFR 64	Compliance Assurance Monitoring	Yes	N/A	This regulation defines compliance assurance monitoring. Caprock Compressor Station is a Title V major source. However, none of the units at the facility are required to use a control device to achieve compliance with an emission limit.
40 CFR 68	Chemical Accident Prevention	No	N/A	This facility is regulated under DOT Office of Pipeline Safety Regulations (49 CRF 192, 193, and 195); therefore, it is not subject to this regulation. This regulation arises from section 112(r) of the Clean Air Act and establishes threshold based on inventoried quantities of specific substances in process. As established at 40 CFR 68.3, the term “stationary source” does not apply to the 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).
Title IV – Acid Rain 40 CFR 72	Acid Rain	No	N/A	This part establishes the acid rain program. This facility is not a source of acid rain.
Title IV – Acid Rain 40 CFR 73	Sulfur Dioxide Allowance Emissions	No	N/A	This regulation establishes sulfur dioxide allowance emissions for certain types of facilities. This subpart does not apply
Title IV-Acid Rain 40 CFR 75	Continuous Emissions Monitoring	No	N/A	This regulation applies to each effected unit subject to Acid Rain Emissions limitations or reduction requirements for SO ₂ or NO _x .
Title IV – Acid Rain 40 CFR 76	Acid Rain Nitrogen Oxides Emission Reduction Program	No	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 facility does not operate any coal-fired units therefore this part does not apply.

<u>Federal Regulation Citation</u>	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
Title VI – 40 CFR 82	Protection of Stratospheric Ozone	Yes	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.
CAA Section 112(r)	Hazardous Air Pollutants Prevention of Accidental Releases	No	N/A	As established at 40 CFR 68.3, the term “stationary source” does not apply to the 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).

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.
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EPNG maintains the required planning and excess emission mitigation documents at Caprock 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: www.env.nm.gov/air-quality/permitting-section-procedures-and-guidance/. 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, Caprock 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.

Dispersion modeling is not required as part of this Title V operating permit renewal application. A modeled demonstration of compliance with National Ambient Air Quality Standards (NAAQS) and New Mexico Ambient Air Quality Standards (NMAAQs) was submitted to satisfy items of the NMED and EPNG settlement agreement effective June 3, 2005. NSR Permit 3261 was issued on the basis of the compliance demonstration. No changes have been made affecting regulated equipment or emissions at the facility since compliance was demonstrated.

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.

Compliance Test History Table

Unit No.	Test Description	Test Date
A-01	Emission Testing for NOx and CO	09/09/2020, 11/09/2021, 08/09/2022, 08/23/2023, 10/28/2024
A-02	Emission Testing for NOx and CO	10/23/2019, 09/09/2020, 08/09/2022, 08/23/2023, 09/24/2024

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 www.env.nm.gov/air-quality/air-quality-title-v-operating-permits-guidance-page/. 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.
-

Caprock 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 Caprock 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 P132-R4, EPNG has certified compliance with the terms of conditions of the permit. The most recent certification was submitted by the January 31st deadline. Since that time, 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 Caprock 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 P132-R4 requires EPNG to submit compliance certification reports to the New Mexico Environment Department (NMED) Air Quality Bureau (AQB) and to the EPA no later than January 31st 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.)
-

40 CFR 82 Subpart F. El Paso Natural Gas Company owns appliances containing regulated refrigerants. EPNG outsources services and repairs of its air conditioners at Caprock Compressor Station to refrigeration companies who utilize certified technicians.

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 www.env.nm.gov/air-quality/air-quality-title-v-operating-permits-guidance-page/. Sources that are subject to both the Title V and Acid Rain regulations are **encouraged** to submit both applications **simultaneously**.

EPNG states that Caprock 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.

Caprock 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). Caprock 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.)

Caprock Compressor Station is not within 50 miles of other states, local pollution control programs, or Indian tribes and Pueblos.

19.9 - Responsible Official

Responsible Official: Ted Meinhold

R.O Address: 1001 Louisiana, Suite 1417, Houston, TX 77002

Phone: (713) 420-2765

R.O. Email: Ted_meinhold@kindermorgan.com

Alternate Responsible Official: Don Perkins

A.R.O. Address: 2527 Foresight Circle, Grand Junction, CO 81505

Phone: (413) 896-6097

A.R.O Email: Don_perkins@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.

NAESB Day

EPNG would like to identify the North American Energy Standards Board (NAESB) Day as the basis for records tracking at Caprock 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. The 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.

Alternate Compliance Plan

Documents outlining the Alternative Compliance Plan (ACP) for this facility are attached. Additionally, the NMED conditional approval of this ACP has been attached. As Caprock Compressor Station was approved for the use of Alternative Emission Standards (AES) on June 26, 2023, to comply with the ACP, relevant documents outlining the AES and the NMED conditional approval have also been attached.

ALT-82

On 02/15/2011, the US EPA announced their approval of the broadly applicable alternative test method ALT-082 as an alternative for 40 CFR 60, Appendix A, Reference Method 9. Attached is the Federal Register notice for EPA approval for ALT-082 and a section of Caprock Compressor Station's NSR Permit No: P3261-M1-R1 demonstrating the inclusion of ALT-082 language in A111 Facility: 20.2.61 NMAC Opacity A. 20.2.61 NMAC Opacity Requirements (Units A-01, A-02).

than registrants will generally be allowed to sell, distribute, or use existing stocks until such stocks are exhausted, provided that such sale, distribution, or use is consistent with the terms of the previously approved labeling on, or that accompanied, the canceled products.

B. EPA Registration Nos. 065092-00001 and 075015-0001 Listed in Table 1 of Unit II.

The cancellation of these products will be effective December 15, 2014. Thereafter, registrants will be prohibited from selling or distributing these two pesticide products, except for export consistent with FIFRA section 17 or for proper disposal. Persons other than registrants will generally be allowed to sell, distribute, or use existing stocks until such stocks are exhausted, provided that such sale, distribution, or use is consistent with the terms of the previously approved labeling on, or that accompanied, the canceled products.

List of Subjects

Environmental protection, Pesticides and pests.

Dated: February 2, 2012.

Richard P. Keigwin, Jr.,

*Director, Pesticide Re-evaluation Division,
Office of Pesticide Programs.*

[FR Doc. 2012-2982 Filed 2-14-12; 8:45 am]

BILLING CODE 6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

[FRL-9632-6]

Public Water System Supervision Program Approval for the State of Illinois; Tentative Approval

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: Notice is hereby given that the State of Illinois submitted a primacy application for its approved Public Water System Supervision Program. Illinois is applying its Long Term 2 Enhanced Surface Water Treatment Regulations to all Illinois water systems that use surface water and ground water under the influence of surface water as a source, thereby satisfying the requirements of the Long-Term 2 Enhanced Surface Water Treatment Rule. Illinois is also applying its Stage 2 Disinfectants and Disinfection By-products Regulations to all Illinois community and noncommunity water systems that add and/or deliver water that is treated with a primary or residual disinfectant other than ultraviolet light,

thereby satisfying the requirements of the Stage 2 Disinfectants and Disinfection Byproducts Rule.

EPA has determined that the state regulations and procedures submitted by the State to EPA for review are no less stringent than the corresponding federal regulations. Therefore, EPA intends to award primacy to Illinois for Long-Term 2 Enhanced Surface Water Treatment and Stage 2 Disinfectants and Disinfection By-product Rules implementation. Any interested party may request a public hearing. A request for a public hearing must be submitted by March 16, 2012, to the Regional Administrator at the EPA Region 5 address shown below. The Regional Administrator may deny frivolous or insubstantial requests for a hearing. However, if a substantial request for a public hearing is made by March 16, 2012; EPA Region 5 will hold a public hearing. If EPA Region 5 does not receive a timely and appropriate request for a hearing and the Regional Administrator does not elect to hold a hearing on her own motion, this determination shall become final and effective on March 16, 2012. Any request for a public hearing shall include the following information: The name, address, and telephone number of the individual, organization, or other entity requesting a hearing; a brief statement of the requesting person's interest in the Regional Administrator's determination and a brief statement of the information that the requesting person intends to submit at such hearing; and the signature of the individual making the request, or, if the request is made on behalf of an organization or other entity, the signature of a responsible official of the organization or other entity.

ADDRESSES: All documents relating to this determination are available for inspection at the following offices: Illinois Pollution Control Board at the James R. Thompson Center, 100 W. Randolph, Suite 11-500, Chicago, Illinois 60601, and the United States Environmental Protection Agency, Region 5, Ground Water and Drinking Water Branch (WG-15J), 77 West Jackson Boulevard, Chicago, Illinois 60604.

FOR FURTHER INFORMATION CONTACT: Janet Kuefler, EPA Region 5, Ground Water and Drinking Water Branch, at the address given above, by telephone at (312) 582-5814, or at kuefler.janet@epa.gov.

Authority: Section 1413 of the Safe Drinking Water Act, as amended, 42 U.S.C. 300g-2 (1996), and 40 CFR part 142 of the

National Primary Drinking Water Regulations.

Dated: January 23, 2012.

Susan Hedman,

Regional Administrator, Region 5.

[FR Doc. 2012-3588 Filed 2-14-12; 8:45 am]

BILLING CODE 6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

[EPA-HQ-OAR-2007-1196; FRL-9631-7]

Recent Postings of Broadly Applicable Alternative Test Methods

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of availability.

SUMMARY: This notice announces the broadly applicable alternative test method approval decisions the EPA has made under and in support of New Source Performance Standards (NSPS) and the National Emission Standards for Hazardous Air Pollutants (NESHAP) under the Clean Air Act (CAA) in 2011.

FOR FURTHER INFORMATION CONTACT: An electronic copy of each alternative test method approval document is available on the EPA's Web site at www.epa.gov/ttn/emc/approalt.html. For questions about this notice, contact Ms. Lula H. Melton, Air Quality Assessment Division, Office of Air Quality Planning and Standards (E143-02), Environmental Protection Agency, Research Triangle Park, NC 27711; telephone number: 919-541-2910; fax number: 919-541-0516; email address: melton.lula@epa.gov. For technical questions about individual alternative test method decisions, refer to the contact person identified in the individual approval documents.

SUPPLEMENTARY INFORMATION:

I. General Information

A. Does this notice apply to me?

This notice will be of interest to entities regulated under 40 Code of Federal Regulations (CFR) parts 59, 60, 61, and 63, state, local, and tribal agencies, and the EPA Regional Offices responsible for implementation and enforcement of regulations under 40 CFR parts 60, 61, and 63.

B. How can I get copies of this information?

You may access copies of the broadly applicable alternative test method approval documents from the EPA's Web site at www.epa.gov/ttn/emc/approalt.html.

II. Background

Broadly applicable alternative test method approval decisions made by the EPA in 2011 under the National Volatile Organic Compound Emission Standards for Consumer and Commercial Products, 40 CFR part 59, NSPS, 40 CFR part 60, and NESHAP, 40 CFR parts 61 and 63 are identified in this notice (see Table 1). Source owners and operators may voluntarily use these broadly applicable alternative test methods subject to their specific applicability. Use of these broadly applicable alternative test methods does not change the applicable emission standards.

As explained in a previous **Federal Register** notice published at 72 FR 4257 (January 30, 2007) and found on the EPA's Web site at www.epa.gov/ttn/emc/approalt.html, the EPA Administrator has the authority to approve the use of alternative test methods to comply with requirements under 40 CFR parts 60, 61, and 63. This authority is found in sections 60.8(b)(3), 61.13(h)(1)(ii), and 63.7(e)(2)(ii). In the past, we have performed thorough technical reviews of numerous requests for alternatives and modifications to test methods and procedures. Based on these reviews, we have often found that these changes or alternatives would be equally valid and appropriate to apply to other sources within a particular class, category, or subcategory. Consequently, we have concluded that, where a method modification or an

alternative method is clearly broadly applicable to a class, category, or subcategory of sources, it is both more equitable and efficient to approve its use for all appropriate sources and situations at the same time.

It is important to clarify that alternative methods are not mandatory but permissive. Sources are not required to employ such a method but may choose to do so in appropriate cases. Source owners or operators should review the specific broadly applicable alternative method approval decision on the EPA's Web site at <http://www.epa.gov/ttn/emc/approalt.html> before electing to employ it. As per 63.7(f)(5), by electing to use an alternative method for 40 CFR part 63 standards, the source owner or operator must continue to use the alternative method until approved otherwise.

The criteria for approval and procedures for submission and review of broadly applicable alternative test methods are outlined at 72 FR 4257 (January 30, 2007). We will continue to announce approvals for broadly applicable alternative test methods on the EPA's Web site at www.epa.gov/ttn/emc/approalt.html and annually publish a notice that summarizes approvals for broadly applicable alternative test methods.

This notice comprises a summary of ten such approval documents added to our Technology Transfer Network from January 1, 2011, through December 31, 2011. The alternative method decision

letter/memo number, the reference method affected, sources allowed to use this alternative, and the modification or alternative method allowed are summarized in Table 1 of this notice. Please refer to the complete copies of these approval documents available from the EPA's Web site at www.epa.gov/ttn/emc/approalt.html as the table serves only as a brief summary of the broadly applicable alternative test methods. If you are aware of reasons why a particular alternative test method approval that we issued should not be broadly applicable, we request that you make us aware of the reasons in writing, and we will revisit the broad approval. Any objection to a broadly applicable alternative test method, as well as the resolution of that objection, will be announced on the EPA's Web site at www.epa.gov/ttn/emc/approalt.html and in the subsequent **Federal Register** notice. If we decide to retract a broadly applicable test method, we would continue to grant case-by-case approvals, as appropriate, and would (as states, local and tribal agencies and the EPA Regional Offices should) consider the need for an appropriate transition period for users either to request case-by-case approval or to transition to an approved method.

Dated: February 9, 2012.

Mary E. Henigin,

Acting Director, Office of Air Quality Planning and Standards.

TABLE 1—APPROVED ALTERNATIVE TEST METHODS AND MODIFICATIONS TO TEST METHODS REFERENCED IN OR PUBLISHED UNDER APPENDICES IN 40 CFR PARTS 59, 60, 61, AND 63 MADE BETWEEN JANUARY 2011 AND DECEMBER 2011

Alternative method decision letter/memo No.	As an alternative or modification to . . .	For . . .	You may . . .
ALT-068	Method 24—Determination of Volatile Matter Content, Water Content, Density, Volume Solids, and Weight Solids of Surface Coatings.	Sources subject to 40 CFR part 59, subpart D—National Volatile Organic Emissions for Architectural Coatings.	Use method in 40 CFR part 59, subpart D, Appendix A in lieu of Method 24.
ALT-081	Method 25C—Determination of Non-methane Organic Compounds (NMOC) in Landfill Gases.	Sources subject to 40 CFR part 60, subpart WWW—Standards of Performance for Municipal Solid Waste Landfills.	Use a combination of Method 25C probes and leachate vents and gas wells to collect NMOC samples.
ALT-082	Method 9—Visual Determination of the Opacity of Emissions from Stationary Sources.	Sources subject to 40 CFR parts 60, 61, and 63.	Use the American Society for Testing and Materials (ASTM) D 7520-09 with specified limitations in lieu of Method 9.
ALT-084	ASTM D 6216-98	Continuous opacity monitoring systems (COMS) specified in Performance Specification 1 (PS-1) of 40 CFR, part 60, Appendix B.	Certify your COMS with either ASTM D 6216-98, D 6216-03, or D 6216-07.
ALT-085	ASTM D 4084-07	Sources subject to 40 CFR part 63, subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters.	Use ASTM D 5504-08 to determine the hydrogen sulfide concentration in fuel gas at boilers in lieu of ASTM D 4084-07.

TABLE 1—APPROVED ALTERNATIVE TEST METHODS AND MODIFICATIONS TO TEST METHODS REFERENCED IN OR PUBLISHED UNDER APPENDICES IN 40 CFR PARTS 59, 60, 61, AND 63 MADE BETWEEN JANUARY 2011 AND DECEMBER 2011—Continued

Alternative method decision letter/memo No.	As an alternative or modification to . . .	For . . .	You may . . .
ALT-086	ASTM D 3792 (GC Procedure) or ASTM D 4017 (Karl Fisher Titration).	Sources subject to 40 CFR parts 60, 61, and 63.	Use ASTM D 7358-07 to determine the water content of coatings in lieu of ASTM D 3792 or ASTM D 4017.
ALT-087	Conducting a stratification test as required by Method 7E when testing reciprocating internal combustion engines.	Sources subject to 40 CFR part 60, subpart IIII—Standards of Performance for Stationary Compression Ignition Internal Combustion Engines and subpart JJJJ—Standards of Performance for Stationary Spark Ignition Internal Combustion Engines.	Use single-point sampling at the centroid of the exhaust when using Method 7E to determine NO _x emissions from Federally-regulated engines.
ALT-088	Using a mass flowmeter calibrated against Method 2—Determination of Stack Gas Velocity and Volumetric Flow Rate (Type S Pitot Tube).	Sources subject to 40 CFR part 60, subpart WWW—Standards of Performance for Municipal Solid Waste Landfills.	Use the mass flowmeter recently calibrated by the manufacturer for measuring flow rate in lieu of calibration by Method 2.
ALT-089	ASTM D 4084-07	Sources subject to 40 CFR part 63, subpart DDDDD—National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters.	Use Method 15 to measure H ₂ S in refinery fuel gas in lieu of ASTM D 4084-07.
ALT-090	Determining vapor pressure required by 40 CFR part 60, subpart Kb.	Source applicability determination in accordance with Section 60.110b of 40 CFR part 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.	Use the “Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatography” dated May 28, 2002 by David Littlejohn and Donald Lucas to measure vapor pressure of any volatile organic liquid containing heavy crude oil.

Source owners or operators should review the specific broadly applicable alternative method approval letter on the EPA's Web site at www.epa.gov/ttn/emc/approalt.html before electing to employ it.

[FR Doc. 2012-3581 Filed 2-14-12; 8:45 am]

BILLING CODE 6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

[FRL-9632-3]

Request for Nominations to the National and Governmental Advisory Committees to the U.S. Representative to the Commission for Environmental Cooperation

AGENCY: Environmental Protection Agency.

ACTION: Notice of request for nominations.

SUMMARY: The U.S. Environmental Protection Agency (EPA) is inviting nominations from a diverse range of qualified candidates to be considered for appointment to fill vacancies on the

National Advisory Committee (NAC) and the Governmental Advisory Committee (GAC) to the U.S. Representative to the Commission for Environmental Cooperation (CEC). Vacancies on these two committees are expected to be selected by March 31, 2012. We encourage nominations to be submitted as soon as possible. Additional sources may be utilized in the solicitation of nominees.

SUPPLEMENTARY INFORMATION: The National Advisory Committee and the Governmental Advisory Committee advise the EPA Administrator in her capacity as the U.S. Representative to the CEC Council. The Committees are authorized under Articles 17 and 18 of the North American Agreement on Environmental Cooperation (NAAEC), the North American Free Trade Agreement (NAFTA) Implementation Act, Public Law 103-182, and as directed by Executive Order 12915, entitled “Federal Implementation of the North American Agreement on Environmental Cooperation.” The Committees are responsible for providing advice to the United States

Representative on a wide range of strategic, scientific, technological, regulatory and economic issues related to implementation and further elaboration of the NAAEC. The National Advisory Committee consists of 13 representatives from environmental non-profit groups, business and industry, and educational institutions. The Governmental Advisory Committee consists of 12 representatives from state, local, and tribal governments. Members are appointed by the EPA Administrator for a two-year term. The Committees usually meet 3 times per year and the average workload for committee members is approximately 10 to 15 hours per month. Members serve on the committees in a voluntary capacity. Although we are unable to provide compensation or an honorarium for your services, you may receive travel and per diem allowances, according to applicable federal travel regulations. EPA is seeking nominations from all sectors, including academia, industry, non-governmental organizations, and state, local and tribal governments. Nominees will be considered according



SUSANA MARTINEZ
GOVERNOR

JOHN A. SANCHEZ
LIEUTENANT GOVERNOR

New Mexico ENVIRONMENT DEPARTMENT

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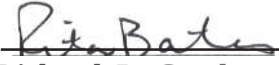
RYAN FLYNN
CABINET SECRETARY

BUTCH TONGATE
DEPUTY SECRETARY

AIR QUALITY BUREAU NEW SOURCE REVIEW PERMIT Issued under 20.2.72 NMAC

Certified Mail No: 7011 3500 0002 1597 8584
Return Receipt Requested

NSR Permit No:	3261-MI
Facility Name:	Caprock Compressor Station
Permittee Name:	El Paso Natural Gas Company, L.L.C.
Mailing Address:	5151 East Broadway Suite 1680 Tucson, AZ 85711
TEMPO/IDEA ID No:	572 - PRN20140001
AIRS No:	350250011
Permitting Action:	Significant Permit Revision
Source Classification:	Title V Major, PSD Major
Facility Location:	33°19'54.7" N and -103°34'30.5" W
County:	Lea
Air Quality Bureau Contact	Linsey Hurst
Main AQB Phone No.	(505) 476-4300


-v) Richard L. Goodyear, PE
") Bureau Chief
Air Quality Bureau

12/29/14
Date

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A110 Facility: Fuel Sulfur Requirements**A. Fuel Sulfur Requirements**

Requirement: All combustion emission units shall combust only natural gas containing no more than 5.0 grains of total sulfur per 100 dry standard cubic feet (scf) and is either composed of at least 70% methane by volume or has a gross calorific value between 950 and 1100 Btu per standard cubic foot.

Monitoring: None

Recordkeeping: The permittee shall demonstrate compliance with the natural gas limit on total sulfur content by maintaining records of a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, or fuel gas analysis, specifying the allowable limit or less. If fuel gas analysis is used, the analysis shall not be older than **one year**.

Reporting: The permittee shall report in accordance with Section B110.

A111 Facility: 20.2.61 NMAC Opacity**A. 20.2.61 NMAC Opacity Limit (Units A-01 and A-02)**

Requirement: Visible emissions from all stationary combustion emission stacks shall not equal or exceed an opacity of 20 percent in accordance with the requirements at 20.2.61.109 NMAC.

Monitoring: Use of natural gas fuel constitutes compliance with 20.2.61 NMAC unless opacity equals or exceeds 20% averaged over a 10-minute period. When any visible emissions are observed during operation other than during startup mode, opacity shall be measured over a 10-minute period, in accordance with the procedures at 40 CFR 60, Appendix A, Reference Method 9 (~~EPA Method 9~~) or Alternative Test Method ALT-082 as required by 20.2.61.114 NMAC, or the operator will be allowed to shut down the equipment to perform maintenance/repair to eliminate the visible emissions. Following completion of equipment maintenance/repair, the operator shall conduct visible emission observations following startup in accordance with the following procedures:

- Visible emissions observations shall be conducted over a 10-minute period during operation after completion of startup mode in accordance with the procedures at 40 CFR 60, Appendix A, Reference Method 22 (~~EPA Method 22~~). If no visible emissions are observed, no further action is required.
- If any visible emissions are observed during completion of the EPA Reference Method 22 observation, subsequent opacity observations shall be conducted over a 10-minute period, in accordance with the procedures at EPA-Reference Method 9 or Alternative Method ALT-082 as required by 20.2.61.114 NMAC.

For the purposes of this condition, *Startup mode* is defined as the startup period that is described in the facility's startup plan.

Recordkeeping: If no visible emissions were observed, none.

If any visible emissions observations were conducted, the permittee shall keep records in accordance with the requirements of Section B109 and as follows:

- For any visible emissions observations conducted in accordance with EPA Method 22, record the information on the form referenced in EPA Method 22, Section 11.2.
- For any opacity observations conducted in accordance with the requirements of EPA Method 9 or Alternative Method ALT-082, record the information on the form referenced in EPA Method 9, Sections 2.2 and 2.4.

Reporting: The permittee shall report in accordance with Section B110.



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

Appendix A: Control Technology Summary and 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
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Via electronic mail

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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



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 20.2.50.113(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.

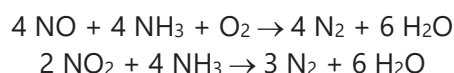
3.1.4 Selective Catalytic Reduction (SCR)

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.

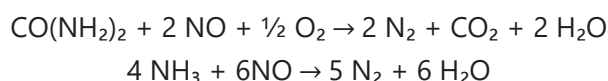


When operated within the optimum temperature range, the reaction can result in removal efficiencies of 90 percent.⁴ In order for the SCR system to function properly, the exhaust gas must be within a particular temperature range (typically between 450 and 850 °F), dependent on the material of the catalyst. 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

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:	\$	29,283.08	\$/ton
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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



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 (NO_x) 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

Kinder Morgan, Inc.
Alternative Compliance Plan, 20.2.50 NMAC
Proposed NSR Revisions - Application Submittal Schedule
April 18, 2024
(Updated January 27, 2025)

Compressor Station	* Proposed NSR Revision Application Submittal Date
Roswell	Sep-24
TC Blanco	Oct-24
Afton	Oct-24
Eunice M/L	May-25
Belen	May-25
Rio Vista	Jun-25
San Juan River	Jul-25
Caprock	Aug-25
Monument Plant	Aug-25
Pecos River	Apr-26
Washington Ranch Storage	Apr-27
Maljamar (Grandfathered - No NSR)	N/A

*Applications to be submitted by the end of calendar month. Delays or changes to schedule to be approved by NMED in advance.

Hamm, Douglas

From: Owens, Melinda, ENV <Melinda.Owens@env.nm.gov>
Sent: Thursday, February 13, 2025 9:29 AM
To: Hamm, Douglas
Cc: Kuhn, Julia, ENV; Bajracharya, Urshula, ENV
Subject: RE: [EXTERNAL] Kinder Morgan - Permit Revision Schedule - ACP

[This email message was received from the Internet and came from outside of Kinder Morgan.]

WARNING: EXTERNAL EMAIL: PROCEED WITH CAUTION.

Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

Hi, Doug

Sorry for the slow response; I've been out a couple of days. Your proposed application submittal is approved by the Major Source managers.

Thanks,

Melinda Owens
Permitting Section Chief
NMED - Air Quality Bureau
525 Camino de los Marquez, Suite 1
Santa Fe, New Mexico 87505
Direct: 505.629.8504 | Fax: 505.476.4375 | AQB Main Line: 505.476.4300
Melinda.Owens@env.nm.gov | <https://www.env.nm.gov/air-quality/>



“Innovation, Science, Collaboration, Compliance”

From: Hamm, Douglas <Douglas_Hamm@kindermorgan.com>
Sent: Monday, February 10, 2025 9:09 AM
To: Owens, Melinda, ENV <Melinda.Owens@env.nm.gov>
Subject: FW: [EXTERNAL] Kinder Morgan - Permit Revision Schedule - ACP

Good morning, Melinda:

Per my voicemail this morning, can you respond by email with your acceptance of this new schedule, or recommend any changes that you would like to see?

In the revised ACP approval (also attached), we were asked to work directly with you for the schedule update.

Thank you,

Doug

Doug Hamm | KINDER-MORGAN
Office: 719-329-5634 | **Cell:** 719-424-2890

From: Hamm, Douglas
Sent: Monday, January 27, 2025 3:11 PM
To: Polgar, Brian, ENV <Brian.Polgar@env.nm.gov>; Kuhn, Julia, ENV <Julia.Kuhn@env.nm.gov>
Cc: Hollenberg, Cindy, ENV <Cindy.Hollenberg@env.nm.gov>; Owens, Melinda, ENV <Melinda.Owens@env.nm.gov>
Subject: RE: [EXTERNAL] Kinder Morgan - Permit Revision Schedule - ACP

Julia and Brian:

As discussed by phone with each of you this morning, please see attached update to the proposed schedule, to accommodate additional time for review and approval of the ACP revision.

Please respond by email if this schedule is determined to be acceptable. If you have any questions or additional concerns, please feel free to contact me.

Thank you,

Section 22: Certification

Company Name: El Paso Natural Gas LLC

I, Donald W Perkins, 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 9th day of December, 2024, upon my oath or affirmation, before a notary of the State of

Colorado

[Signature]
*Signature

12/9/2024
Date

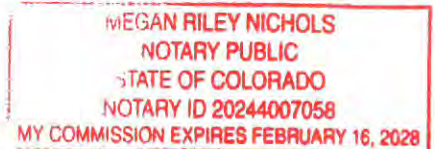
Donald W Perkins
Printed Name

Director
Title

Scribed and sworn before me on this 9 day of December, 2024.

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

16 day of February, 2028.



[Signature]
Notary's Signature

12/9/2024
Date

Megan Riley Nichols
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.