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November 6, 2020

Mr. Ted Schooley  
Permit Programs Manager  
NMED Air Quality Bureau  
525 Camino de los Marquez Suite 1  
Santa Fe, NM 87505-1816

RE: *Application for Title V Renewal  
El Paso Natural Gas Company LLC. – Eunice B & C Compressor Station*

Dear Mr. Schooley:

On behalf of El Paso Natural Gas Company L.L.C., a Kinder Morgan Company, we are submitting this application for a Title V renewal for Eunice B & C Compressor Station. This submittal is pursuant to 20.2.70.300.B.2 NMAC, which requires a Title V application to be submitted at least twelve months prior to the expiration of the current permit. Title V Permit P251-R1 expires on December 21, 2021.

The facility is located approximately 8 miles northwest of Eunice, NM. The facility is currently permitted under NSR permit 1009-M2-R3 and Title V permit P251-R1. The format and content of this application are consistent with the Bureau's current policy regarding Title V applications.

Enclosed are two hard copies of the application, including an original certification and two discs containing the electronic files. Please feel free to contact either myself at [aerenstein@trinityconsultants.com](mailto:aerenstein@trinityconsultants.com) or Doug Hamm, EHS Engineer with Kinder Morgan, at (719) 329-5634 if you have any questions regarding this application..

Sincerely,

Adam Erenstein  
Manager of Consulting Services

Cc: Doug Hamm (Kinder Morgan)

Trinity Project File: 203201.0093

**HEADQUARTERS**

12700 Park Central Dr, Ste 2100, Dallas, TX 75251 / P 800.229.6655 / P 972.661.8100 / F 972.385.9203

<p><b>Mail Application To:</b></p> <p>New Mexico Environment Department Air Quality Bureau Permits Section 525 Camino de los Marquez, Suite 1 Santa Fe, New Mexico, 87505</p> <p>Phone: (505) 476-4300 Fax: (505) 476-4375 www.env.nm.gov/aqb</p>		<p><b>For Department use only:</b></p> <p>AIRES No.:</p>
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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. [See Section 1-I for submittal instructions for other permits.](#)

**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.: [redacted] in the amount of [redacted]

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.

This facility qualifies to receive assistance from the Small Business Environmental Assistance program (SBEAP) and qualifies for 50% of the normal application and permit fees. Enclosed is a check for 50% of the normal application fee which will be verified with the Small Business Certification Form for your company.

This facility qualifies to receive assistance from the Small Business Environmental Assistance Program (SBEAP) but does not qualify for 50% of the normal application and permit fees. To see if you qualify for SBEAP assistance and for the small business certification form go to [https://www.env.nm.gov/aqb/sbap/small\\_business\\_criteria.html](https://www.env.nm.gov/aqb/sbap/small_business_criteria.html) ).

**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 <sup>st</sup> 3 to 5 #s of permit IDEA ID No.): 669	Updating Permit/NOI #: P251-R1
1	Facility Name: Eunice B & C Compressor Station	Plant primary SIC Code (4 digits): 4922	
		Plant NAIC code (6 digits):	
a	Facility Street Address (If no facility street address, provide directions from a prominent landmark): Refer to Section 1-D 4.		
2	Plant Operator Company Name: El Paso Natural Gas Company, L.L.C.	Phone/Fax: (719) 329-5634 / (719) 329-5732	
a	Plant Operator Address: 2 North Nevada, 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) 329-5634 / (719) 329-5732
a	Plant Owner(s) Mailing Address(s): 2 North Nevada, Colorado Springs, CO 80903	
4	Bill To (Company): El Paso Natural Gas Company, L.L.C.	Phone/Fax: (719) 329-5634 / (719) 329-5732
a	Mailing Address: 2 North Nevada, Colorado Springs, CO 80903	E-mail: <a href="mailto:Douglas_Hamm@KinderMorgan.com">Douglas_Hamm@KinderMorgan.com</a>
5	<input checked="" type="checkbox"/> Preparer: Adam Erenstein <input checked="" type="checkbox"/> Consultant: Trinity Consultants	Phone/Fax: (505) 266-6611
a	Mailing Address: 9400 Holly Blvd NE, Building 3, Suite 300 Albuquerque, NM 87122	E-mail: <a href="mailto:arenstein@trinityconsultants.com">arenstein@trinityconsultants.com</a>
6	Plant Operator Contact: Chris Terrell	Phone/Fax: (575) 492-3128
a	Address: 2316 W. Bender Blvd, Hobbs, NM 88240	E-mail: <a href="mailto:Christopher_Terrell@kindermorgan.com">Christopher_Terrell@kindermorgan.com</a>
7	Air Permit Contact: Doug Hamm	Title: EHS Engineer
a	E-mail: <a href="mailto:Douglas_Hamm@KinderMorgan.com">Douglas_Hamm@KinderMorgan.com</a>	Phone/Fax: (719) 329-5634 / (719) 329-5732
b	Mailing Address: 2 North Nevada, Colorado Springs, CO 80903	
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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	1.b If yes to question 1.a, is it currently operating in New Mexico? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
3	Is the facility currently shut down? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, give month and year of shut down (MM/YY):
4	Was this facility constructed before 8/31/1972 and continuously operated since 1972? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
6	Does this facility have a Title V operating permit (20.2.70 NMAC)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, the permit No. is: P-251-R1
7	Has this facility been issued a No Permit Required (NPR)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, the NPR No. is: N/A
8	Has this facility been issued a Notice of Intent (NOI)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, the NOI No. is: N/A
9	Does this facility have a construction permit (20.2.72/20.2.74 NMAC)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, the permit No. is: 1009-M2-R3
10	Is this facility registered under a General permit (GCP-1, GCP-2, etc.)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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: 29.2 MMscf	Daily: 700 MMscf	Annually: 256 Bscf
b	Proposed	Hourly: 29.2 MMscf	Daily: 700 MMscf	Annually: 256 Bscf
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: 29.2 MMscf	Daily: 700 MMscf	Annually: 256 Bscf

b	Proposed	Hourly: 29.2 MMscf	Daily: 700 MMscf	Annually: 256 Bscf
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### Section 1-D: Facility Location Information

1	Section: 5	Range: 36E	Township: 21S	County: Lea	Elevation (ft): 3,574
2	UTM Zone: <input type="checkbox"/> 12 or <input checked="" type="checkbox"/> 13			Datum: <input type="checkbox"/> NAD 27 <input type="checkbox"/> NAD 83 <input checked="" type="checkbox"/> WGS 84	
a	UTM E (in meters, to nearest 10 meters): 660,850 m E			UTM N (in meters, to nearest 10 meters): 3,599,030 m N	
b	AND Latitude (deg., min., sec.): 32°31'1.14"N			Longitude (deg., min., sec.): 103°17'15.03"W	
3	Name and zip code of nearest New Mexico town: Eunice, NM				
4	Detailed Driving Instructions from nearest NM town (attach a road map if necessary): From the center of Eunice, NM, head north on Main street and turn left onto NM-176 W/State Hwy 176 W/Ave O. Continue for 6.4 miles then continue onto NM-8 N. Continue for 2.5 miles then turn left onto NM-175 W. After 1.5 miles turn right onto Gulf Rd and the facility will be on the right after 0.3 miles.				
5	The facility is 8.13 miles northwest of Eunice, NM.				
6	Status of land at facility (check one): <input checked="" type="checkbox"/> Private <input type="checkbox"/> Indian/Pueblo <input type="checkbox"/> Federal BLM <input type="checkbox"/> Federal Forest Service <input type="checkbox"/> 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: <b>Municipalities:</b> Eunice, NM; <b>Indian Tribes:</b> None; <b>Counties:</b> Lea County, NM				
8	<b>20.2.72 NMAC applications only:</b> 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 <a href="http://www.env.nm.gov/aqb/modeling/classIareas.html">www.env.nm.gov/aqb/modeling/classIareas.html</a> )? <input type="checkbox"/> Yes <input type="checkbox"/> No (20.2.72.206.A.7 NMAC) If yes, list all with corresponding distances in kilometers: N/A				
9	Name nearest Class I area: Carlsbad Caverns National Park				
10	Shortest distance (in km) from facility boundary to the boundary of the nearest Class I area (to the nearest 10 meters): 108 km				
11	Distance (meters) from the perimeter of the Area of Operations (AO is defined as the plant site inclusive of all disturbed lands, including mining overburden removal areas) to nearest residence, school or occupied structure: 2,554 m				
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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If yes, what is the name and permit number (if known) of the other facility?				

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

1	Facility <b>maximum</b> operating ( $\frac{\text{hours}}{\text{day}}$ ): 24	( $\frac{\text{days}}{\text{week}}$ ): 7	( $\frac{\text{weeks}}{\text{year}}$ ): 52	( $\frac{\text{hours}}{\text{year}}$ ): 8,760
2	Facility's maximum daily operating schedule (if less than 24 $\frac{\text{hours}}{\text{day}}$ )? Start: N/A		<input type="checkbox"/> AM <input type="checkbox"/> PM	End: N/A <input type="checkbox"/> AM <input type="checkbox"/> PM
3	Month and year of anticipated start of construction: N/A – Title V Permit Application			
4	Month and year of anticipated construction completion: N/A – Title V Permit Application			
5	Month and year of anticipated startup of new or modified facility: N/A – Title V Permit Application			
6	Will this facility operate at this site for more than one year? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, specify:		
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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
4	Will this facility be a source of federal Hazardous Air Pollutants (HAP)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
a	If Yes, what type of source? <input type="checkbox"/> Major ( <input type="checkbox"/> $\geq 10$ tpy of any single HAP <b>OR</b> <input type="checkbox"/> $\geq 25$ tpy of any combination of HAPS) <b>OR</b> <input checked="" type="checkbox"/> Minor ( <input type="checkbox"/> $< 10$ tpy of any single HAP <b>AND</b> <input checked="" type="checkbox"/> $< 25$ tpy of any combination of HAPS)		
5	Is any unit exempt under 20.2.72.202.B.3 NMAC? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
a	If yes, include the name of company providing commercial electric power to the facility: _____ 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	<input type="checkbox"/> I have filled out Section 18, "Addendum for Streamline Applications." <input checked="" type="checkbox"/> 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): Heriberto (Eddie) Carreon		Phone: (806) 354-3108
a	R.O. Title: Operations Director	R.O. e-mail: <a href="mailto:heriberto_carreon@kindermorgan.com">heriberto_carreon@kindermorgan.com</a>	
b	R. O. Address: 4711 S. Western, Amarillo, TX 79109		
2	Alternate Responsible Official (20.2.70.300.D.2 NMAC): Joe McLaughlin		Phone: (713) 369-9847
a	A. R.O. Title: Vice President - Operations	A. R.O. e-mail: <a href="mailto:joe_mclaughlin@kindermorgan.com">joe_mclaughlin@kindermorgan.com</a>	
b	A. R. O. Address: 1001 Louisiana, Houston, TX 77002		
3	Company's Corporate or Partnership Relationship to any other Air Quality Permittee (List the names of any companies that have operating (20.2.70 NMAC) permits and with whom the applicant for this permit has a corporate or partnership relationship): El Paso Natural Gas Company LLC		
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., Ste. 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, LLC. has no subsidiaries.		
6	Telephone numbers & names of the owners' agents and site contacts familiar with plant operations: Douglas Hamm (719) 329-5634.		

7	<p>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: <b>State:</b> Texas (~ 21 km)</p>
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## Section 1-I – Submittal Requirements

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

### Hard Copy Submittal Requirements:

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

### Electronic files sent by (check one):

CD/DVD attached to paper application

secure electronic transfer. Air Permit Contact Name \_\_\_\_\_

Email \_\_\_\_\_

Phone number \_\_\_\_\_

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

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

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

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

- 1) All required electronic documents shall be submitted as 2 separate CDs or submitted through the AQB secure file transfer service. Submit a single PDF document of the entire application as submitted and the individual documents comprising the application.
- 2) The documents should also be submitted in Microsoft Office compatible file format (Word, Excel, etc.) allowing us to access the text and formulas in the documents (copy & paste). Any documents that cannot be submitted in a Microsoft Office compatible

format shall be saved as a PDF file from within the electronic document that created the file. If you are unable to provide Microsoft office compatible electronic files or internally generated PDF files of files (items that were not created electronically: i.e. brochures, maps, graphics, etc.), submit these items in hard copy format. We must be able to review the formulas and inputs that calculated the emissions.

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

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**Table 2-A: Regulated Emission Sources**

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

Unit Number <sup>1</sup>	Source Description	Make	Model #	Serial #	Manufacturer's Rated Capacity <sup>3</sup> (Specify Units)	Requested Permitted Capacity <sup>3</sup> (Specify Units)	Date of Manufacture <sup>2</sup>	Controlled by Unit #	Source Classification Code (SCC)	For Each Piece of Equipment, Check One	RICE Ignition Type (CI, SI, 4SLB, 4SRB, 2SLB) <sup>4</sup>	Replacing Unit No.
							Date of Construction/Reconstruction <sup>2</sup>	Emissions vented to Stack #				
B-01	Natural Gas Turbine	Solar	Taurus	TC92783	6500 hp	6500 hp	1993	N/A	20200201	<input type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input checked="" type="checkbox"/> To Be Modified <input type="checkbox"/> To be Replaced	N/A	N/A
							10/23/1993	1				
C-01	Natural Gas Turbine	Solar	Taurus 60-7800S	TC08189	7137 hp	7137 hp	unknown	N/A	20200201	<input type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input checked="" type="checkbox"/> To Be Modified <input type="checkbox"/> To be Replaced	N/A	N/A
							12/22/2008	2				
C-02	Natural Gas Turbine	Solar	Taurus 60-7800S	TC08188	7137 hp	7137 hp	unknown	N/A	20200201	<input type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input checked="" type="checkbox"/> To Be Modified <input type="checkbox"/> To be Replaced	N/A	N/A
							12/22/2008	2				
C-03	Natural Gas Reciprocating Engine	Caterpillar	G3612	BKE00408	3785 hp	3785 hp	10/19/2007	N/A	20200201	<input type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input checked="" type="checkbox"/> To Be Modified <input type="checkbox"/> To be Replaced	4SLB	N/A
							8/30/2008	3				
SSM/M1	Startup, Shutdown, Maintenance, and Malfunction	N/A	N/A	N/A	N/A	N/A	N/A	N/A	31088811	<input type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input checked="" type="checkbox"/> To Be Modified <input type="checkbox"/> To be Replaced	N/A	N/A
							N/A	4				
AUX-C01	Emergency Generator	Waukesha	L36GL	C-17951/1	800 hp	800 hp	4/30/2008	N/A	20100202	<input type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input checked="" type="checkbox"/> To Be Modified <input type="checkbox"/> To be Replaced	4SLB	N/A
							2008	5				
FUG	Fugitives	N/A	N/A	N/A	N/A	N/A	N/A	N/A	31088811	<input type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input checked="" type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To Be Modified <input type="checkbox"/> To be Replaced	N/A	N/A
							N/A	N/A				
										<input type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To Be Modified <input type="checkbox"/> To be Replaced		
										<input type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To Be Modified <input type="checkbox"/> To be Replaced		
										<input type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To Be Modified <input type="checkbox"/> To be Replaced		
										<input type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To Be Modified <input type="checkbox"/> To be Replaced		
										<input type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To Be Modified <input type="checkbox"/> To be Replaced		
										<input type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To Be Modified <input type="checkbox"/> To be Replaced		
										<input type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To Be Modified <input type="checkbox"/> To be Replaced		

<sup>1</sup> 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.

<sup>2</sup> Specify dates required to determine regulatory applicability.

<sup>3</sup> 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.

<sup>4</sup> "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 Activities<sup>1</sup> (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 20.2.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](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/air-quality/air-quality-title-v-operating-permits-guidance-page/>. 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 <sup>2</sup>	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 <sup>2</sup>	
T-001	Used Oil Storage Tank (B Plant)	N/A	N/A	40	20.2.72.202.B.2	1993	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To Be Modified <input type="checkbox"/> To be Replaced
			N/A	bbl	IA List Item #5	1993	
TK-5301	Used Oil Storage Tank (C Plant)	Palmer	ST-22004	1650	20.2.72.202.B.2	2008	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To Be Modified <input type="checkbox"/> To be Replaced
			N/A	gal	IA List Item #5	2008	
TK-5302	Lube Oil Storage Tank	Palmer	AP-22000	1688	20.2.72.202.B.2	2008	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To Be Modified <input type="checkbox"/> To be Replaced
			N/A	gal	IA List Item #5	2008	
TK-5304	Propylene glycol (50%) Storage Tank	Palmer	AP-21999	1688	20.2.72.202.B.2	2008	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To Be Modified <input type="checkbox"/> To be Replaced
			N/A	gal	IA List Item #5	2008	
T-002	Used Oil UST	N/A	N/A	110	20.2.72.202.B.2	1993	<input type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input checked="" type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To Be Modified <input type="checkbox"/> To be Replaced
			N/A	gal	IA List Item #5	1993	
							<input type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To Be Modified <input type="checkbox"/> To be Replaced
							<input type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To Be Modified <input type="checkbox"/> To be Replaced
							<input type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To Be Modified <input type="checkbox"/> To be Replaced
							<input type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To Be Modified <input type="checkbox"/> To be Replaced
							<input type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To Be Modified <input type="checkbox"/> To be Replaced
							<input type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To Be Modified <input type="checkbox"/> To be Replaced
							<input type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To Be Modified <input type="checkbox"/> To be Replaced

<sup>1</sup> 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.

<sup>2</sup> Specify date(s) required to determine regulatory applicability.

### Table 2-C: Emissions Control Equipment

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

Control Equipment Unit No.	Control Equipment Description	Date Installed	Controlled Pollutant(s)	Controlling Emissions for Unit Number(s) <sup>1</sup>	Efficiency (% Control by Weight)	Method used to Estimate Efficiency
1	Oxidation Catalyst	2008	CO, VOC, HAPs	C-03	95% CO, 75% VOC/HAP	Mfg.

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

**Table 2-D: Maximum Emissions** (under normal operating conditions)

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

Maximum Emissions are the emissions at maximum capacity and prior to (in the absence of) pollution control, emission-reducing process equipment, or any other emission reduction. Calculate the hourly emissions using the worst case hourly emissions for each pollutant. For each pollutant, calculate the annual emissions as if the facility were operating at maximum plant capacity without pollution controls for 8760 hours per year, unless otherwise approved by the Department. List Hazardous Air Pollutants (HAP) & Toxic Air Pollutants (TAPs) in Table 2-I. 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 <sup>1</sup>		PM10 <sup>1</sup>		PM2.5 <sup>1</sup>		H <sub>2</sub> 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
B-01	19.00	83.20	6.00	26.30	1.10	4.80	0.81	3.60	0.31	1.37	0.31	1.37	0.31	1.37	-	-	-	-
C-01	5.79	25.36	7.05	30.88	0.21	0.90	0.91	4.00	0.38	1.67	0.38	1.67	0.38	1.67	-	-	-	-
C-02	5.79	25.36	7.05	30.88	0.21	0.90	0.91	4.00	0.38	1.67	0.38	1.67	0.38	1.67	-	-	-	-
C-03	8.34	36.55	16.69	73.10	8.34	36.55	0.38	1.70	0.25	1.11	0.25	1.11	0.25	1.11	-	-	-	-
AUX-C01	3.53	15.45	2.29	10.04	0.48	2.09	0.091	0.40	0.057	0.25	0.057	0.25	0.057	0.25	-	-	-	-
FUG	-	-	-	-	0.23	1.01	-	-	-	-	-	-	-	-	7.86E-05	3.44E-04	-	-
<b>Totals</b>	<b>42.45</b>	<b>185.92</b>	<b>39.08</b>	<b>171.20</b>	<b>10.56</b>	<b>46.24</b>	<b>3.11</b>	<b>13.69</b>	<b>1.39</b>	<b>6.08</b>	<b>1.39</b>	<b>6.08</b>	<b>1.39</b>	<b>6.08</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

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

\*\* Denotes that an hourly emissions rate is not requested.

-" Denotes that a pollutant is not emitted by an emission source.

**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<sup>-4</sup>).

Unit No.	NOx		CO		VOC		SOx		PM <sup>1</sup>		PM10 <sup>1</sup>		PM2.5 <sup>1</sup>		H <sub>2</sub> 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
B-01	19.00	83.20	6.00	26.30	1.10	4.80	0.81	3.60	0.31	1.37	0.31	1.37	0.31	1.37	-	-	-	-
C-01	5.79	25.36	7.05	30.88	0.21	0.90	0.91	4.00	0.38	1.67	0.38	1.67	0.38	1.67	-	-	-	-
C-02	5.79	25.36	7.05	30.88	0.21	0.90	0.91	4.00	0.38	1.67	0.38	1.67	0.38	1.67	-	-	-	-
C-03	8.30	36.50	2.10	9.10	8.30	36.50	0.38	1.70	0.25	1.11	0.25	1.11	0.25	1.11	-	-	-	-
AUX-C01	3.53	0.88	2.29	0.57	0.48	0.12	0.091	0.023	0.057	0.014	0.057	0.014	0.057	0.014	-	-	-	-
FUG	-	-	-	-	0.23	1.01	-	-	-	-	-	-	-	-	7.86E-05	3.44E-04	-	-
<b>Totals</b>	42.41	171.30	24.49	97.73	10.52	44.22	3.11	13.31	1.39	5.84	1.39	5.84	1.39	5.84	-	-	-	-

<sup>1</sup> **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).

"\*" Denotes that an hourly emissions rate is not requested.

"-" Denotes that a pollutant is not emitted by an emission source.

**Table 2-F: Additional Emissions during Startup, Shutdown, and Routine Maintenance (SSM)**

This table is intentionally left blank since all emissions at this facility due to routine or predictable startup, shutdown, or scheduled maintenance are no higher than those listed in Table 2-E and a malfunction emission limit is not already permitted or requested. If you are required to report GHG emissions as described in Section 6a, include any GHG emissions during Startup, Shutdown, and/or Scheduled Maintenance (SSM) in Table 2-P. Provide an explanations of SSM emissions in Section 6 and 6a.

All applications for facilities that have emissions during routine or predictable startup, shutdown or scheduled maintenance (SSM)<sup>1</sup>, 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](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).

Unit No.	NOx		CO		VOC		SOx		PM <sup>2</sup>		PM10 <sup>2</sup>		PM2.5 <sup>2</sup>		H <sub>2</sub> 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
SSM/M1	-	-	-	-	-	10.00	-	-	-	-	-	-	-	-	0.078	0.0020	-	-
<b>Totals</b>	-	-	-	-	-	10.00	-	-	-	-	-	-	-	-	0.078	0.0020	-	-

<sup>1</sup> For instance, if the short term steady-state Table 2-E emissions are 5 lb/hr and the SSM rate is 12 lb/hr, enter 7 lb/hr in this table. If the annual steady-state Table 2-E emissions are 21.9 TPY, and the number of scheduled SSM events result in annual emissions of 31.9 TPY, enter 10.0 TPY in the table below.

<sup>2</sup> **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).

**Table 2-G: Stack Exit and Fugitive Emission Rates for Special Stacks**

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.

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

Stack No.	Serving Unit Number(s) from Table 2-A	NOx		CO		VOC		SOx		PM		PM10		PM2.5		<input type="checkbox"/> H <sub>2</sub> S or <input type="checkbox"/> 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
<b>Totals:</b>																	

### 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:

Stack Number	Serving Unit Number(s) from Table 2-A	Orientation (H=Horizontal V=Vertical)	Rain Caps (Yes or No)	Height Above Ground (ft)	Temp. (F)	Flow Rate		Moisture by Volume (%)	Velocity (ft/sec)	Inside Diameter (ft)
						(acfs)	(dscfs)			
B-01	B-01	V	No	45	756	1633	1633	N/A	130	4.00
C-01	C-01	V	No	40	890	1848	1848	N/A	192	3.50
C-02	C-02	V	No	40	890	1848	1848	N/A	192	3.50
C-03	C-03	V	No	40	838	424	424	N/A	86.3	2.50
AUX-C01	AUX-C01	V	No	20	838	27	27	N/A	48.9	0.83



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

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

Stack No.	Unit No.(s)	Total HAPs		Acetaldehyde <input checked="" type="checkbox"/> HAP or <input type="checkbox"/> TAP		Formaldehyde <input checked="" type="checkbox"/> HAP or <input type="checkbox"/> TAP		lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	
		lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr													
B-01	B-01	0.60	2.61	0.25	1.09	0.24	1.06													
C-01	C-01	0.67	2.92	0.28	1.22	0.27	1.19													
C-02	C-02	0.67	2.92	0.28	1.22	0.27	1.19													
C-03	C-03	1.47	6.46	0.23	1.01	1.00	4.40													
AUX-C01	AUX-C01	0.42	0.10	0.049	0.012	0.31	0.077													
N/A	SSM/M1	*	0.031	-	-	-	-													
N/A	FUG	7.00E-04	0.0031	-	-	-	-													
<b>Totals:</b>		3.82	15.05	1.08	4.54	2.09	7.92													

**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
B-01	Pipeline Quality Natural Gas	Pipeline Quality Natural Gas	950 Btu/cf	56.97 Mcf	499.03 MMcf	5 gr S /100 scf	N/A
C-01	Pipeline Quality Natural Gas	Pipeline Quality Natural Gas	950 Btu/cf	63.78 Mcf	532.93 MMcf	5 gr S /100 scf	N/A
C-02	Pipeline Quality Natural Gas	Pipeline Quality Natural Gas	950 Btu/cf	63.78 Mcf	532.93 MMcf	5 gr S /100 scf	N/A
C-03	Pipeline Quality Natural Gas	Pipeline Quality Natural Gas	950 Btu/cf	26.8 Mcf	234.6 MMcf	5 gr S /100 scf	N/A
AUX-C01	Pipeline Quality Natural Gas	Pipeline Quality Natural Gas	950 Btu/cf	6.4 Mcf	56.07 MMcf	5 gr 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.

Tank No.	SCC Code	Material Name	Composition	Liquid Density (lb/gal)	Vapor Molecular Weight (lb/lb*mol)	Average Storage Conditions		Max Storage Conditions	
						Temperature (°F)	True Vapor Pressure (psia)	Temperature (°F)	True Vapor Pressure (psia)
N/A - There are no regulated tanks at this facility.									

**Table 2-L: Tank Data**

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

Tank No.	Date Installed	Materials Stored	Seal Type (refer to Table 2-LR below)	Roof Type (refer to Table 2-LR below)	Capacity		Diameter (M)	Vapor Space (M)	Color (from Table VI-C)		Paint Condition (from Table VI-C)	Annual Throughput (gal/yr)	Turn-overs (per year)
					(bbl)	(M <sup>3</sup> )			Roof	Shell			
N/A- There are no regulated tanks at this facility.													

**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 M<sup>3</sup> = 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- No material processed at the facility. This facility compresses natural gas for transportation via pipeline and doesn't process or produce any materials.							

**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.

Stack No.	Pollutant(s)	Manufacturer	Model No.	Serial No.	Sample Frequency	Averaging Time	Range	Sensitivity	Accuracy
N/A- There is no CEM equipment at the facility.									

**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 the 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 CO<sub>2</sub>e emissions are less than 75,000 tons per year.

		CO <sub>2</sub> ton/yr	N <sub>2</sub> O ton/yr	CH <sub>4</sub> ton/yr	SF <sub>6</sub> ton/yr	PFC/HFC ton/yr <sup>2</sup>												Total GHG Mass Basis ton/yr <sup>4</sup>	Total CO <sub>2</sub> e ton/yr <sup>5</sup>
<b>Unit No.</b>	<b>GWPs<sup>1</sup></b>	<b>1</b>	<b>298</b>	<b>25</b>	<b>22,800</b>	<b>footnote 3</b>													
<b>B-01</b>	mass GHG	24269.19	0.046	0.46														24269.70	
	CO <sub>2</sub> e	24269.19	13.63	11.43															24294.26
<b>C-01</b>	mass GHG	29614.40	0.056	0.56														29615.01	
	CO <sub>2</sub> e	29614.40	16.63	13.95															29644.99
<b>C-02</b>	mass GHG	29614.40	0.056	0.56														29615.01	
	CO <sub>2</sub> e	29614.40	16.63	13.95															29644.99
<b>C-03</b>	mass GHG	13033.91	0.025	0.25														13034.19	
	CO <sub>2</sub> e	13033.91	7.32	6.14															13047.38
<b>AUX-C01</b>	mass GHG	167.96	0.00032	0.0032														167.96	
	CO <sub>2</sub> e	167.96	0.094	0.079															168.13
<b>SSM/M1</b>	mass GHG	1.86	-	645.45														647.31	
	CO <sub>2</sub> e	1.86	-	16136.32															16138.18
<b>FUG</b>	mass GHG	0.11	-	36.94														37.04	
	CO <sub>2</sub> e	0.11	-	923.44															923.55
	mass GHG																		
	CO <sub>2</sub> e																		
	mass GHG																		
	CO <sub>2</sub> e																		
	mass GHG																		
	CO <sub>2</sub> e																		
	mass GHG																		
	CO <sub>2</sub> e																		
<b>Total</b>	mass GHG	96701.83	0.182	684.21														97386.22	
	CO <sub>2</sub> e	96701.83	54.31	17105.32															113861.46

<sup>1</sup> 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.

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

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

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

<sup>5</sup> CO<sub>2</sub>e 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

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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](http://www.env.nm.gov/aqb/permit/app_form.html)) for more detailed instructions on SSM emissions.

---

El Paso Natural Gas Company, L.L.C. (EPNG), a Kinder Morgan company, is submitting this application for a renewal of Title V operating permit P-251-R1 for Eunice B & C Compressor Station (Eunice B & C). The facility is owned and operated by EPNG. This submittal is pursuant to 20.2.70.300.B.2 NMAC, which requires a Title V application to be submitted at least twelve months prior to the expiration of the current permit.

Eunice B & C is a natural gas compressor station. Natural gas is transported by pipeline through the facility using compressors driven by three natural gas-fired turbines (units C-01 through C-03) and one natural gas-fired reciprocating internal combustion engine (unit B-01). The only other regulated emission source (besides C-01 through C-03, and B-01) at the facility is startup, shutdown, and maintenance/malfunction emissions (SSM/M1). Also the facility has an emergency generator (AUX-C01). This emergency generator is subject to 40 CFR 60 Subpart JJJJ, but there are no applicable requirements to the unit. The insignificant activities at Eunice B & C include storage tanks that store liquids with vapor pressures less than 10 mm Hg.

This application also incorporates the following updates:

- Emissions from fugitive components at this facility (Unit FUG);
- Updated skid number for Unit C-02;
- Updated manufacture dates for Units C-01 to C-03 and AUX-C01;
- Adding an exempt UST used oil storage tank (Unit T-002);
- Updated SSM emissions with a new gas analysis; and
- Updated Compressor and Turbine emissions to include HAP emissions (Units B-01, C-01 to C-03, and AUX-C01).



# Section 4

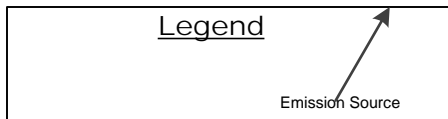
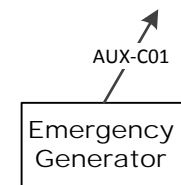
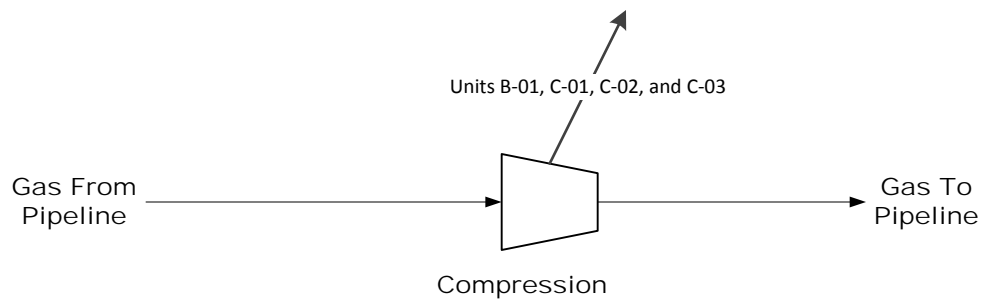
## Process Flow Sheet

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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.

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A process flow sheet is attached on the following page.



# Section 5

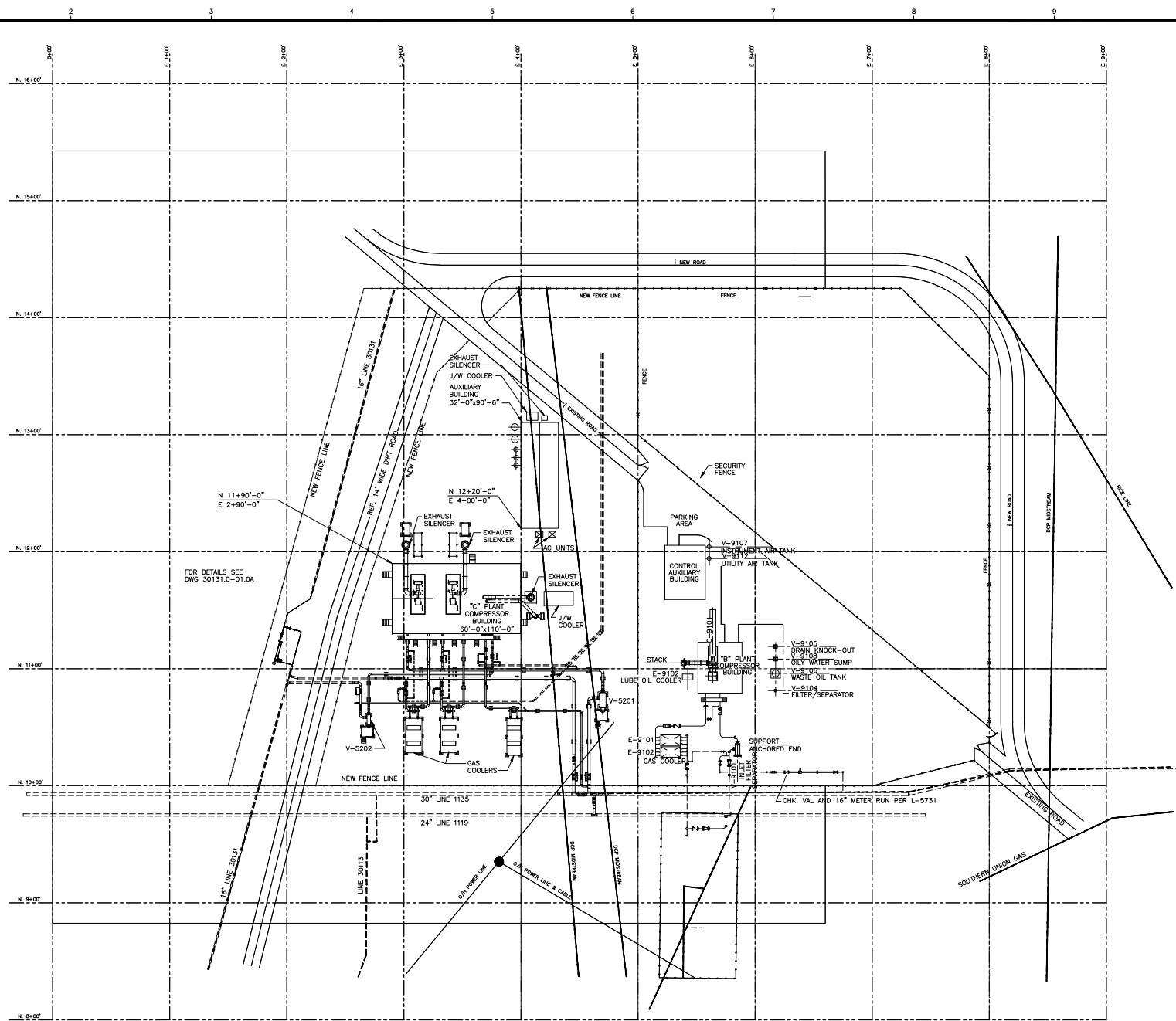
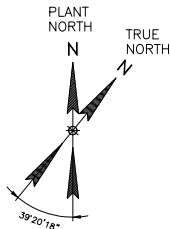
## Plot Plan Drawn To Scale

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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.

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A plot plan is attached on the following page.



REFERENCE DRAWINGS  
 30131.00-001.00 ALIGNMENT SHEET  
 30131-04-000-1 PIPELINE SCHEMATIC  
 30131.0-01.0A DETAIL PLAN - PIPING

- GENERAL NOTES
- "FW" DENOTES PRE-ASSIGNED FIELD WELDS. IF "SEE NOTE 1" IS SHOWN FABRICATION SHOP SHALL ADD 3 FEET OF PIPE FOR FIELD FIT UP.
  - FOR ALL GRADING INFORMATION AND DETAILS SEE DWG. TYP-G-E-297.
  - CONSTRUCTION CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS AND LOCATIONS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY PROJECT ENGINEER OR COMPANY REPRESENTATIVE IF ANY DEVIATIONS ARE REQUIRED.
  - MATERIALS AS SPECIFIED ON THE BILL OF MATERIALS WILL BE PROVIDED BY COMPANY. ALL OTHER MATERIALS WILL BE CONTRACTOR'S RESPONSIBILITY.
  - FOR MAIN LINE VALVES BLOW-OFF, CONTRACTOR WILL APPLY STATE APPROVED ABRASION RESISTANT EPOXY COATING TO THE I.D. OF ALL PIPE CLAMPS AND O.D. OF THE GAS PIPE TO WHICH THE CLAMP IS ATTACHED. COATING WILL BE MINIMUM 20-MIL THICKNESS ON EACH SURFACE AND SHALL BE APPLIED 2" PAST CLAMP CONTACT AREA.
  - FOR FENCING DETAILS REFER TO CONSTRUCTION SPECIFICATION LP-3 LOCATED IN LAND PIPELINE CONSTRUCTION MANUAL.
  - STATIONING IS BASED OFF OF GEOWEB FACILITY MAPS FROM GIVEN GPS LAT/LONG.
  - PRIOR TO INSTALLING MAIN LINE VALVE ASSEMBLIES, CONTRACTOR SHALL REFER TO THE OUTAGE DAY SCHEMATIC TO CONFIRM CROSSOVER ALIGNMENT.

DESIGN DATA  
 CODE: TITLE 49 PART 192CFR CLASS LOCATION: 1  
 DESIGN: PRESSURE: 1000 PSIG DESIGN FACTOR: .50  
 TEMPERATURE: 100° F.

NO.	DATE	BY	DESCRIPTION	PROJ. ID	APPROV.
2	6/5/09	DLG	AS-BUILT	121977	ROK
1	4/7/08	MIN	2008 PIP LINE 30131	107693	JJA

REVISIONS

**elpaso** Natural Gas

PLOT PLAN ENVIRONMENTAL

EUNICE C COMPRESSOR STATION

Division:	ALBUQUERQUE	Op. Area:	PLAINS
State:	NEW MEXICO	Co./Pac.:	LEA
Section:	5	Township:	215
Range:	36E	Project ID:	107693
Drafter:	DMW	Date:	07-24-2007
Scale:	1"=40'	Type:	ACAO
Appr:	WE	Date:	04-18-2008
File Name:	EC-02-00-000		
Sheet:	Rev:	1 of 1	

EC-02-1A



C-03

G-02

C-01

AUX-C01

B-01

Gen Rd

200 ft

Google Earth

©2020 Google





# Section 6

## All Calculations

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**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 rationale 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](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.

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## **Steady-state Turbine Calculations**

### **Unit B-01**

Emission rates of NO<sub>x</sub>, CO, and VOC were based on performance testing data. SO<sub>2</sub> emissions were calculated assuming 5 grains of elemental sulfur per 100 scf of fuel and 100% conversion of that sulfur to SO<sub>2</sub> when combusted. Particulate matter (PM<sub>2.5</sub>, PM<sub>10</sub>, and TSP) emission rates were calculated using emission factors from AP-42 Table 3.1-2a. HAP emissions were calculated using GRI-HAPCalc.

### **Units C-01 and C-02**

Emission rates of NO<sub>x</sub>, CO, and VOC were based on manufacturer data. SO<sub>2</sub> emissions were calculated assuming 5 grains of elemental sulfur per 100 scf of fuel and 100% conversion of that sulfur to SO<sub>2</sub> when combusted. Particulate matter (PM<sub>2.5</sub>, PM<sub>10</sub>, and TSP) emission rates were calculated using emission factors from AP-42 Table 3.1-2a. HAP emissions were calculated using GRI-HAPCalc.

## **Steady-state RICE Calculations**

### **Unit C-03**

Emission rates of NO<sub>x</sub>, CO, and VOC were based on manufacturer data. SO<sub>2</sub> emissions were calculated assuming 5 grains of elemental sulfur per 100 scf of fuel and 100% conversion of that sulfur to SO<sub>2</sub> when combusted. Particulate matter (PM<sub>2.5</sub>, PM<sub>10</sub>, and TSP) emission rates were calculated using emission factors from AP-42 Table 3.2-2. HAP emissions were calculated using GRI-HAPCalc.

## **Auxillary RICE Calculations**

### **Units AUX-C01**

Emission rates of NO<sub>x</sub>, CO, PM, and VOC were based on AP-42 Table 3.2-2. SO<sub>2</sub> emissions were calculated assuming 5 grains of elemental sulfur per 100 scf of fuel and 100% conversion of that sulfur to SO<sub>2</sub> when combusted. HAP emissions were calculated using GRI-HAPCalc.

## **SSM Calculations**

A description of potential SSM/M1 emissions are described below. The SSM/M1 events may include, but are not limited to, these events:

### **H2S Venting**

H2S venting for SSM/M1 emissions are based on 0.25 grains of H2S per 100 scf and the volume of the venting blowdown. There are H2S emissions associated with the turbine blowdowns (BD-Unit) and facility blowdown venting (Unit BD-ESD).

### **Engine/Turbine Exhaust Emissions during Startup/Shutdown**

Compressor units are shut down periodically for scheduled maintenance or because market demand or pipeline conditions indicate that the horsepower is not required. The combustion characteristics of the units during start-up or shutdown may be different than during normal operation, particularly during a cold start.

NMED's *Guidance for Including Emissions during Routine or Predictable Start-up, Shutdown, and Scheduled Maintenance in Permit Applications (6/7/2012)* recognizes that "it is difficult to obtain reliable data regarding emissions due to the short duration and dynamic nature of start-up and shutdown, the unavailability of manufacturer data, and the unavailability of EPA El Paso Natural Gas Company, L.L.C. Eunice B & C Compressor Station June 2015; Revision 0 Form-Section 6 last revised: 5/30/12 Section 6, Page 3 Printed: 6/5/2015 method tests for non-steady-state operation." Accordingly, turbine emissions during start-up and shutdown cannot be accurately estimated and EPNG provides the following discussion of start-up and shutdown emissions.

Potential emissions from start-up and shutdown events are brief based on the nature of the facility's equipment and the short duration of the actual start-up or shutdown event. As noted in the aforementioned NMED guidance, smaller units have shorter periods of start-up or shutdown and short spikes may not cause an exceedance of an allowable limit when considered over the designated averaging time. For example, a gas turbine may operate with a slightly rich mixture and emit CO and VOCs at a higher instantaneous rate (and NOx at a reduced rate) during its initial warmup period; however, the warmup period will be of limited duration (typically less than 15 minutes) and have a negligible effect on total emissions when averaged over an hour or more because any start-up emissions are more than compensated by the fact that no emissions occurred during the off-time.

For combustion sources, generation of criteria pollutants during shutdown ceases either immediately upon cessation of fuel supply, or shortly thereafter. As addressed in the turbines portion of NMED's guidance document (07/29/08), shutdown may last longer for turbines than for other combustion equipment, yet the amount of NOx formed will not exceed the unit's steady-state emissions. Sulfur and PM emissions are solely a function of fuel usage and will be unaffected by start-up or shutdown conditions.

The Caterpillar engine (unit C-03) is equipped with a catalytic converter for carbon monoxide (CO) control. Emissions during start-up may be higher while the catalytic converter reaches operating temperature. Since the allowable lb/hr emission rates in the permit include a 100% safety factor, these uncontrolled emissions are not likely to cause an exceedance of the allowable limits when included in the averaging time with controlled emissions.

### **Unit Blowdown**

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

### **B Plant Turbine Starting Gas**

Prior to start-up, the centrifugal compressor is purged with natural gas to evacuate any air present. The turbine is then started with a small turbine that uses natural gas (expansion gas). The purge and expansion gas is vented through the unit blowdown and expansion gas stack. The amount of starting gas varies widely based on the duration of the start-up sequence. As a very conservative estimate, we have assumed 150 Mscf of starting gas per start-up event. On this basis, the estimated VOC emissions per start-up event are 135 lb/event.

### **Station Blowdown**

No less than once per calendar year and not to exceed 15 months, the station Emergency Shutdown (ESD) system is tested as required by the Department of Transportation (DOT). During the ESD, the station is isolated and all natural gas in the piping must be purged for safety reasons. The natural gas in the station piping is vented through the station ESD stack. Because these planned events occur approximately once per year, annual emissions from this activity are less than 1 tpy.

### **Summary of Startup, Shutdown, Maintenance and Malfunction Calculations (Unit SSM/M1)**

The attached calculation shows the estimated emissions of VOC per unit SSM event, as well as the estimated annual blowdown emissions based on an estimated worst-case annual volume and a typical gas analysis. Please note, however, that the annual estimate includes both unit blowdowns and station blowdowns. This annual estimate is intended to show a typical annual emission rate and does not represent the facility's potential-to-emit (PTE). The annual SSM/M estimate is lower than 10 tpy of VOC emissions.

In accordance with NMED's SSM guidance (Implementation Guidance for Permitting SSM Emissions and Excess Emissions, June 7, 2012), paragraph 2(e), "Instead of permitting SSM and upset/malfunction be consolidated in the permit with a total limit of 10 tons per year per pollutant per facility". As the startup, shutdown, maintenance, and malfunction emissions requested are VOC-only, no modeling is required to demonstrate compliance with State and Federal ambient air quality standards.

## **Fugitive Calculations**

### **Unit FUG**

Fugitive emissions are calculated using average component counts from like-kind facilities and average gas composition data from 1/2020 to 4/2020. Emission factors were referenced from Table 2-4 of EPA Protocol for Equipment Leak Emission Estimates, 1995.

# Section 6.a

## Green House Gas Emissions

(Submitting under 20.2.70, 20.2.72 20.2.74 NMAC)

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**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 (CO<sub>2</sub>), nitrous oxide (N<sub>2</sub>O), methane (CH<sub>4</sub>), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF<sub>6</sub>).

### Calculating GHG Emissions:

1. Calculate the ton per year (tpy) GHG mass emissions and GHG CO<sub>2</sub>e 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 CO<sub>2</sub>e 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 CO<sub>2</sub>e 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 CO<sub>2</sub>e 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 CO<sub>2</sub>e 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 CO<sub>2</sub> over a specified time period.

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

### Metric to Short Ton Conversion:

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

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

**El Paso Natural Gas Company, L.L.C.- Eunice B & C Compressor Station**

**Title V Renewal Emissions Summary**

Emission Unit: All

Source Description: Eunice B & C Compressor Station - Emission Totals

**Uncontrolled Emission Totals**

Unit	NOx		CO		VOCs		SOx		PM		H <sub>2</sub> S		Total HAPs	
	lb/hr	tpy	lb/hr	tpy	lb/hr <sup>1</sup>	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
B-01	19.00	83.20	6.00	26.30	1.10	4.80	0.81	3.60	0.31	1.37	-	-	0.60	2.61
C-01	5.79	25.36	7.05	30.88	0.21	0.90	0.91	4.00	0.38	1.67	-	-	0.67	2.92
C-02	5.79	25.36	7.05	30.88	0.21	0.90	0.91	4.00	0.38	1.67	-	-	0.67	2.92
C-03	8.34	36.55	16.69	73.10	8.34	36.55	0.38	1.70	0.25	1.11	-	-	1.47	6.46
AUX-C01	3.53	15.45	2.29	10.04	0.48	2.09	0.09	0.40	0.06	0.25	-	-	0.42	1.84
SSM/M1	-	-	-	-	-	10.00	-	-	-	-	0.078	0.0020	*	0.03
FUG	-	-	-	-	0.23	1.01	-	-	-	-	0.0001	0.000	7.00E-04	0.0031
<b>Total</b>	<b>42.45</b>	<b>185.92</b>	<b>39.08</b>	<b>171.20</b>	<b>10.56</b>	<b>56.24</b>	<b>3.11</b>	<b>13.69</b>	<b>1.39</b>	<b>6.08</b>	<b>0.078</b>	<b>0.0023</b>	<b>3.82</b>	<b>16.78</b>

**Controlled Emission Totals**

Unit	NOx		CO		VOCs		SOx		PM		H <sub>2</sub> S		Total HAPs	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
B-01	19.00	83.20	6.00	26.30	1.10	4.80	0.81	3.60	0.31	1.37	-	-	0.60	2.61
C-01	5.79	25.36	7.05	30.88	0.21	0.90	0.91	4.00	0.38	1.67	-	-	0.67	2.92
C-02	5.79	25.36	7.05	30.88	0.21	0.90	0.91	4.00	0.38	1.67	-	-	0.67	2.92
C-03	8.30	36.50	2.10	9.10	8.30	36.50	0.38	1.70	0.25	1.11	-	-	1.47	6.46
AUX-C01	3.53	0.88	2.29	0.57	0.48	0.12	0.091	0.023	0.057	0.014	-	-	0.42	0.10
SSM/M1	-	-	-	-	-	10.00	-	-	-	-	0.078	0.0020	*	0.031
FUG	-	-	-	-	0.23	1.01	-	-	-	-	0.0001	0.000	7.00E-04	0.0031
<b>Total</b>	<b>42.41</b>	<b>171.30</b>	<b>24.49</b>	<b>97.73</b>	<b>10.52</b>	<b>54.22</b>	<b>3.11</b>	<b>13.31</b>	<b>1.39</b>	<b>5.84</b>	<b>0.078</b>	<b>0.002</b>	<b>3.82</b>	<b>15.05</b>

"\*" Denotes that an hourly emissions rate is not requested.

"-" Denotes that a pollutant is not emitted by an emission source.

## Solar Taurus T-6502

Unit: B-01  
 Source Description: Natural Gas Turbine  
 Manufacturer: Solar  
 Model: Taurus T-6502  
 Power: 5419 hp

### Fuel Consumption

Heat Input: 47.37 MMBtu/hr Mfg. Data  
 Heat Rate: 8741 Btu/hp-hr Mfg. Data  
 Fuel Heat Value: 897.2 Btu/cf Performance Testing  
 Fuel Flow Rate: 879.91 scfm Heat Input \* 1000000 Btu/MMBtu /Fuel Heat Value / 60 min/hr  
 Hourly Fuel Consumption: 52.79 Mcf/hr Fuel Flow Rate \* 60 min/hr /1000 cf/Mcf  
 Annual Fuel Consumption: 462.48 MMcf/yr 8760 hrs

### Emission Calculations

#### Uncontrolled Emissions

NO <sub>x</sub>	CO	VOC	SO <sub>2</sub> <sup>1</sup>	PM <sup>2</sup>	Total HAP <sup>3</sup>	Acetaldehyde <sup>3</sup>	HCHO <sup>3</sup>	2,2,4-TMP <sup>3</sup>	Xylenes <sup>3</sup>	Benzene <sup>3</sup>	Toluene <sup>3</sup>		
83.11	26.11	4.74	0.090									tpy	Performance Testing Data
			50									gr Total Sulfur/Mscf	Pipeline Specification
18.97	5.96	1.08	0.75	0.31	0.60	0.25	0.24	0.023	0.018	0.0077	0.0059	lb/hr	Hourly Emission Rate
83.1	26.1	4.74	3.30	1.37	2.61	1.09	1.06	0.10	0.078	0.034	0.026	tpy	Annual Emission Rate

#### Requested Permit Limits

NO <sub>x</sub>	CO	VOC	SO <sub>2</sub> <sup>1</sup>	PM <sup>2</sup>	Total HAP <sup>3</sup>	Acetaldehyde <sup>3</sup>	HCHO <sup>3</sup>	2,2,4-TMP <sup>3</sup>	Xylenes <sup>3</sup>	Benzene <sup>3</sup>	Toluene <sup>3</sup>	
19.00	6.00	1.10	0.81	0.31	0.60	0.25	0.24	0.023	0.018	0.0077	0.0059	lb/hr
83.20	26.30	4.80	3.60	1.37	2.61	1.09	1.06	0.10	0.078	0.034	0.026	tpy

<sup>1</sup> SO<sub>2</sub> calculation assumes 100% conversion of fuel elemental sulfur to SO<sub>2</sub>.

<sup>2</sup> PM=PM10=PM2.5; AP-42 Table 3.1-2a

<sup>3</sup> HAPS calculated using GRI-HAPCalc

#### Greenhouse Gas Emissions<sup>4</sup>

CO <sub>2</sub>	N <sub>2</sub> O	CH <sub>4</sub>	CO <sub>2</sub> e	
53.06	0.0001	0.001		kg/MMBtu
1	298	25		GWP <sup>5</sup>
5540.9	0.010443	0.104	5546.63	lb/hr <sup>6</sup>
24269.2	0.0457	0.457	24294.26	tpy

<sup>4</sup> Greenhouse gas emission factors are from 40 CFR 98 Subpart C

<sup>5</sup> 40 CFR 98 Subpart A, Table A-1

<sup>6</sup> CO<sub>2</sub>, N<sub>2</sub>O, CH<sub>4</sub> lb/hr = EF (kg/MMBtu) \* 2.20462lb/kg \* Fuel consumption (MMBtu/hr) \* Engine hp

CO<sub>2</sub>e lb/hr = CO<sub>2</sub> lb/hr + (CH<sub>4</sub> lb/hr \* GWP) + (N<sub>2</sub>O lb/hr \* GWP)

## Solar Taurus 60-7800S Turbine

Unit: C-01 & C-02  
 Source Description: Natural Gas Turbine  
 Manufacturer: Solar  
 Model: Taurus 60-7800S  
 Fuel: Natural Gas  
 Power: 7137 hp

### Fuel Consumption

Heat Input: 57.8 MMBtu/hr Mfg. Data  
 Heat Rate: 8098 Btu/hp-hr Mfg. Data  
 Fuel Heat Value: 950 Btu/cf Pipeline Specification  
 Fuel Flow Rate: 1014.04 scfm Heat Input \* 1000000 Btu/MMBtu /Fuel Heat Value / 60 min/hr  
 Hourly Fuel Consumption: 60.84 Mcf/hr Fuel Flow Rate \* 60 min/hr /1000 cf/Mcf  
 Annual Fuel Consumption: 532.98 MMcf/yr 8760 hrs

### Exhaust Parameters

Exhaust Temperature: 890 °F Mfg. Data at Reduced Load  
 Stack Diameter: 3.5 ft Design Values  
 Stack Height: 40 ft Design Values  
 Site Elevation: 3574 ft MSL  
 Standard Pressure: 29.92 in Hg  
 Pressure at Elevation: 26.23 in Hg Hess, Introducticon to Theoretical Meteorology, eqn 6.8  
 Exhaust Flow Rate: 163711 lb/hr Mfg Data  
 Molecular Weight of Exhaust Gas: 27.6 lb/lb-mole Assumes Stoichiometric Combustion  
 R: 21.8 Hg-cf/lb-m<sup>-3</sup> Ideal Gas Constant  
 Specific Volume: 1121.81 cf/lb-mol RT/P  
 Specific Volume/Molecular Weight: 40.65 cf/lb-mol  
 Exhaust Gas Density: 0.025 lb/cf  
 Exhaust Gas Flow Rate: 110901.22 acfm  
 Stack Velocity: 192.21 ft/s Flow/Area

### Fuel Sulfur Content (40 CFR 60 Subpart KKKK)

Heat Value: 950 Btu/scf  
 Assumed Sulfur Content: 50 grain/ Mscf  
 Sulfur Content: 0.0000071 lb/scf  
 Potential SO<sub>2</sub> Content: 0.006783 lb/MMBtu  
 0.013566 lb/MMBtu

### Emission Calculations

Uncontrolled Emissions@ 100% Load, 0 ft Elevation, 60% Relative Humidity, 59 °F

NO <sub>x</sub>	CO	VOC	SO <sub>2</sub> <sup>1</sup>	PM <sup>2</sup>	Total HAP <sup>3</sup>	Acetaldehyde <sup>3</sup>	HCHO <sup>3</sup>	2,2,4-TMP <sup>3</sup>	Xylenes <sup>3</sup>	Benzene <sup>3</sup>	Toluene <sup>3</sup>		
5.79	7.05	0.21										lb/hr	Mfg Data
			50									gr Total Sulfur/Mscf	Pipeline Specification
			5%									%	Safety Factor
5.79	7.05	0.21	0.91	0.38	0.67	0.28	0.27	0.026	0.020	0.0086	0.0066	lb/hr	Hourly Emission Rate
25.36	30.88	0.90	4.00	1.67	2.92	1.22	1.19	0.11	0.087	0.038	0.029	tpy	Annual Emission Rate

<sup>1</sup> SO<sub>2</sub> calculation assumes 100% conversion of fuel elemental sulfur to SO<sub>2</sub>.

<sup>2</sup> PM=PM10=PM2.5; AP-42 Table 3.1-2a

<sup>3</sup> HAPs calculated using GRI-HAPCalc

### Greenhouse Gas Emissions<sup>4</sup>

CO <sub>2</sub>	N <sub>2</sub> O	CH <sub>4</sub>	CO <sub>2</sub> e	
53.06	0.0001	0.001		kg/MMBtu
1	298	25		GWP <sup>5</sup>
6761.3	0.012743	0.127	6768.26	lb/hr <sup>6</sup>
29614.4	0.0558	0.558	29644.99	tpy

<sup>4</sup> Greenhouse gas emission factors are from 40 CFR 98 Subpart C

<sup>5</sup> 40 CFR 98 Subpart A, Table A-1

<sup>6</sup> CO<sub>2</sub>, N<sub>2</sub>O, CH<sub>4</sub> lb/hr = EF (kg/MMBtu) \* 2.20462lb/kg \* Fuel consumption (MMBtu/hr) \* Engine hp  
 CO<sub>2</sub>e lb/hr = CO<sub>2</sub> lb/hr + (CH<sub>4</sub> lb/hr \* GWP) + (N<sub>2</sub>O lb/hr \* GWP)

## Caterpillar G3612 Emissions

Unit: C-03  
 Source Description: Natural Gas RICE  
 Manufacturer: Caterpillar  
 Model: G3612  
 Aspiration: TA  
 Compression Ratio: 9:01

### Engine Horsepower and RPM

Engine Speed: 1000 rpm Mfg Data  
 Sea Level hp: 3785 hp Mfg Data  
 Elevation: 3574 msl NMED/AQB Policy 02.07-01  
 Derate: 0.00% 3% per 1000 ft over 4000 ft  
 Site hp: 3785 hp Sea Level hp\*(100-derate)

### Fuel Consumption

BSFC: 6721 Btu/hp-hr Mfg Data  
 Fuel Heat Value: 950 Btu/scf Pipeline Specification  
 Heat Input: 25.4 MMBtu/hr BSFC\*Site hp  
 Hourly Fuel Consumption: 26.8 Mscf/hr Heat Input / Fuel Heat Value  
 Annual Fuel Consumption: 234.6 MMScf/yr 8760 hrs/yr operation

### Exhaust Parameters

Exhaust Temp: 838 °F Mfg Data  
 Stack Height: 40 ft Design Values  
 Stack Diameter: 2.5 ft Design Value  
 Exhaust Flow: 25414 acfm Mfg Data  
 Exhaust Velocity: 86.3 ft/sec Exhaust Flow / Stack Area

### Emission Calculations

#### Uncontrolled Emissions

NO <sub>x</sub>	CO	VOC	SO <sub>2</sub> <sup>1</sup>	PM <sup>2</sup>	HCHO	Total HAP <sup>3</sup>	Acetaldehyde <sup>3</sup>	2,2,4-TMP <sup>3</sup>	Xylenes <sup>3</sup>	Benzene <sup>3</sup>	Toluene <sup>3</sup>	
0.7	2.5	0.6										Mfg Data
1.0	2.0	1.0			0.4							g/hp-hr g/hp-hr gr Total Sulfur/Mscf
<b>8.34</b>	<b>16.69</b>	<b>8.34</b>	<b>0.38</b>	<b>0.25</b>	<b>3.34</b>	<b>3.87</b>	<b>0.23</b>	<b>0.0069</b>	<b>0.0051</b>	<b>0.012</b>	<b>0.011</b>	With Safety Factor Added Pipeline Specification
<b>36.55</b>	<b>73.10</b>	<b>36.55</b>	<b>1.67</b>	<b>1.11</b>	<b>14.62</b>	<b>16.96</b>	<b>1.01</b>	<b>0.030</b>	<b>0.022</b>	<b>0.053</b>	<b>0.049</b>	Hourly Emission Rate Annual Emission Rate
												lb/hr tpy

#### Controlled Emissions

NO <sub>x</sub>	CO	VOC	SO <sub>2</sub> <sup>1</sup>	PM <sup>2</sup>	HCHO	Total HAP <sup>3</sup>	Acetaldehyde <sup>3</sup>	2,2,4-TMP <sup>3</sup>	Xylenes <sup>3</sup>	Benzene <sup>3</sup>	Toluene <sup>3</sup>	
0.7	2.5	0.6			0.4							g/hp-hr
0.0%	95.0%	0.0%	0.0%		75.0%							% Control Efficiency
	0.125				0.1							g/hp-hr
												gr Total Sulfur/Mscf
<b>5.84</b>	<b>1.04</b>	<b>8.34</b>	<b>0.38</b>	<b>0.25</b>	<b>0.83</b>	<b>1.37</b>	<b>0.23</b>	<b>0.0069</b>	<b>0.0051</b>	<b>0.012</b>	<b>0.011</b>	Uncontrolled Emission Factor from Mfg Data
<b>25.58</b>	<b>4.57</b>	<b>36.55</b>	<b>1.67</b>	<b>1.11</b>	<b>3.65</b>	<b>5.99</b>	<b>1.01</b>	<b>0.030</b>	<b>0.022</b>	<b>0.053</b>	<b>0.049</b>	Mfg Data
												lb/hr tpy

<sup>1</sup> SO<sub>2</sub> calculation assumes 100% conversion of fuel elemental sulfur to SO<sub>2</sub>.

<sup>2</sup> PM=PM10=PM2.5; AP-42 Table 3.1-2a

<sup>3</sup> HAPS calculated using GRI-HAPCalc

#### Requested Permit Limits

NO <sub>x</sub>	CO	VOC	SO <sub>2</sub>	PM	HCHO	Total HAP	Acetaldehyde	2,2,4-TMP	Xylenes	Benzene	Toluene	
<b>8.30</b>	<b>2.10</b>	<b>8.30</b>	<b>0.38</b>	<b>0.25</b>	<b>1.00</b>	<b>1.47</b>	<b>0.23</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>	lb/hr
<b>36.50</b>	<b>9.10</b>	<b>36.50</b>	<b>1.70</b>	<b>1.11</b>	<b>4.40</b>	<b>6.46</b>	<b>1.01</b>	<b>0.03</b>	<b>0.02</b>	<b>0.05</b>	<b>0.05</b>	tpy

#### Greenhouse Gas Emissions<sup>4</sup>

CO <sub>2</sub>	N <sub>2</sub> O	CH <sub>4</sub>	CO <sub>2</sub> e	
53.06	0.0001	0.001		kg/MMBtu
<b>1</b>	<b>298</b>	<b>25</b>		GWP <sup>5</sup>
2975.8	0.005608	0.056	2978.85	lb/hr <sup>6</sup>
13033.9	0.0246	0.246	13047.38	tpy

<sup>4</sup> Greenhouse gas emission factors are from 40 CFR 98 Subpart C

<sup>5</sup> 40 CFR 98 Subpart A, Table A-1

<sup>6</sup> CO<sub>2</sub>, N<sub>2</sub>O, CH<sub>4</sub> lb/hr = EF (kg/MMBtu) \* 2.20462lb/kg \* Fuel consumption (MMBtu/hr) \* Engine hp

CO<sub>2</sub>e lb/hr = CO<sub>2</sub> lb/hr + (CH<sub>4</sub> lb/hr \* GWP) + (N<sub>2</sub>O lb/hr \* GWP)



## Waukesha L36 GL

Unit: AUX-C01  
 Source Description: Natural Gas RICE  
 Manufacturer: Waukesha  
 Model: L36 GL  
 Power: 800 hp

### Fuel Consumption

Heat Input: 5.74 MMBtu/hr Mfg. Data  
 Heat Rate: 7179 Btu/hp-hr Mfg. Data  
 Fuel Heat Value: 897.2 Btu/cf Performance Testing  
 Fuel Flow Rate: 106.69 scfm Heat Input \* 1000000 Btu/MMBtu / Fuel Heat Value / 60 min/hr  
 Hourly Fuel Consumption: 6.40 Mcf/hr Fuel Flow Rate \* 60 min/hr / 1000 cf/Mcf  
 Annual Fuel Consumption (PTE): 56.07 MMcf/yr 8760 hrs  
 Annual Fuel Consumption (Requested): 3.20 MMcf/yr 500 hrs

### Emission Calculations

#### Uncontrolled Emissions

NO <sub>x</sub>	CO	VOC	SO <sub>2</sub> <sup>1</sup>	PM <sup>2</sup>	Total HAP <sup>3</sup>	Acetaldehyde <sup>3</sup>	HCHO <sup>4</sup>	2,2,4-TMP <sup>4</sup>	Xylenes <sup>4</sup>	Benzene <sup>4</sup>	Toluene <sup>4</sup>	
2.0	1.3	0.27		0.010								g/hp-hr
			50									lb/MMBtu
												gr Total Sulfur/Mscf
3.53	2.29	0.48	0.091	0.057	0.42	0.049	0.31	0.0015	0.0011	0.0026	0.0024	lb/hr
15.4	10.0	2.1	0.40	0.25	1.84	0.21	1.34	0.0064	0.0047	0.011	0.010	tpy - PTE (8760 hrs)
0.88	0.57	0.12	0.023	0.014	0.10	0.012	0.077	3.65E-04	2.68E-04	6.39E-04	5.94E-04	tpy - Requested (500 hrs)
												Annual Emission Rate

<sup>1</sup> SO<sub>2</sub> calculation assumes 100% conversion of fuel elemental sulfur to SO<sub>2</sub>.

<sup>2</sup> PM=PM10=PM2.5; AP-42 Table 3.1-2a

<sup>3</sup> HAPS calculated using GRI-HAPCalc

### Greenhouse Gas Emissions<sup>4</sup>

CO <sub>2</sub>	N <sub>2</sub> O	CH <sub>4</sub>	CO <sub>2</sub> e	
53.06	0.0001	0.001		kg/MMBtu
1	298	25		GWP <sup>5</sup>
671.82	0.0013	0.013	672.52	lb/hr <sup>6</sup>
167.96	0.0003	0.003	168.13	tpy

<sup>4</sup> Greenhouse gas emission factors are from 40 CFR 98 Subpart C

<sup>5</sup> 40 CFR 98 Subpart A, Table A-1

<sup>6</sup> CO<sub>2</sub>, N<sub>2</sub>O, CH<sub>4</sub> lb/hr = EF (kg/MMBtu) \* 2.20462lb/kg \* Fuel consumption (MMBtu/hr) \* Engine hp

CO<sub>2</sub>e lb/hr = CO<sub>2</sub> lb/hr + (CH<sub>4</sub> lb/hr \* GWP) + (N<sub>2</sub>O lb/hr \* GWP)

## SSM/M1 Emissions

Unit: SSM/M1  
 Description: Facility-wide SSM emissions

### Gas Analysis (Typical)

VOC weight %:	1.29%	Gas Quality Analysis (1/2020 to 4/2020)
HAP weight %:	0.0040%	Hexanes+ from Gas Quality Analysis (1/2020 to 4/2020)
CO2 weight %:	0.24%	Gas Quality Analysis (1/2020 to 4/2020)
CH4 weight %:	83.51%	Gas Quality Analysis (1/2020 to 4/2020)
Molecular weight:	17.40 lb/lb-mol	Gas Quality Analysis (1/2020 to 4/2020)
Molar volume:	378.61 scf/lb-mol	Constant
Density:	0.0460 lb/scf	Gas MW / Molar volume

### Turbine Starting Gas (BD-Unit)

#### SSM Emission Rates, Per Event

Event Description: **Normal Startup**

Volume per event:	82.8 Mscf/event	Estimated (varies)
VOC Emissions:	49 lb/event	lb/scf * scf/event * VOC wt %

#### SSM Emission Rates, Annual

Annual volume:	10819.5 Mscf/yr	Expected blowdown volume
VOC Emissions:	3.2 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:	217.3 Mscf/event	Estimated (varies)
VOC Emissions:	129 lb/event	lb/scf * scf/event * VOC wt %

#### SSM Emission Rates, Annual

Annual volume:	217.34125 Mscf/yr	Assumes 1 event per year
VOC Emissions:	0.065 tons/yr	lb/event * event/year * ton/2000lb

### Facility Blowdown Total

VOC Emissions:	10.0 tons/yr	Conservative Request
HAP emissions:	0.031 tons/yr	Assumes same HAP/VOC ratio as fugitives
CO2 Emissions:	1.86 tons/yr	VOC Emissions / %VOC * %CO2
CH4 Emissions:	645.45 tons/yr	VOC Emissions / %VOC * %CH4
CO2e Emissions:	16138.18 tons/yr	

### Facility-Wide SSM/M Total

<b>VOC</b>	<b>HAP</b>	<b>CO2</b>	<b>CH4</b>	<b>CO2e</b>	
10.00	0.069	1.86	645.45	16138.18	tons/yr

## H<sub>2</sub>S SSM/M1 Emissions

Unit: SSM/M1  
 Description: Facility-wide startup, shutdown, maintenance and malfunction emissions

### Gas Analysis (Typical)

H <sub>2</sub> S	0.25	gr H <sub>2</sub> S	Nominal (Max amount allowed in pipeline quality natural gas)
	100	scf	

### Turbine Blowdown Venting (BD-Unit)

#### SSM Emission Rates, Per Event

Event Description: [Planned Maintenance and Normal Shutdown](#)  
 Volume per event: 82.8 Mscf/event Estimated (varies)  
 H<sub>2</sub>S Emissions: 0.030 lb/event gr/scf \* scf/event \* 1lb/7000gr

#### SSM Emission Rates, Annual

Annual volume: 10819.5 Mscf/yr Expected blowdown volume  
 H<sub>2</sub>S Emissions: 0.0019 tons/yr gr/scf \* scf/event \* 1lb/7000gr \* ton/2000 lb

### Facility Blowdown Venting (BD-ESD)

#### SSM Emission Rates, Per Event

Event Description: [Station ESD](#)  
 Volume per event: 217 Mscf/event Estimated (varies)  
 H<sub>2</sub>S Emissions: 0.078 lb/event gr/scf \* scf/event \* 1lb/7000gr

#### SSM Emission Rates, Annual

Annual volume: 217.34125 Mscf/yr Expected blowdown volume  
 H<sub>2</sub>S Emissions: 3.88E-05 tons/yr gr/scf \* scf/event \* 1lb/7000gr \* ton/2000 lb

**Facility H<sub>2</sub>S Total:** 0.000039 tons/yr

### Facility Blowdown Total

H<sub>2</sub>S Emissions: 0.000039 tons/yr

### Facility-Wide SSM/M Total

H <sub>2</sub> S	
0.0020	tons/yr

## Fugitive Emissions

Unit: FUG  
 Description: Facility-wide fugitives  
 Hours of Operation: 8,760 hr/yr

Emission Source:	Number**	Emission Factor***		Product:
		(kg/hr/source)	(lb/hr/source)	
Valves:	751	0.0045	0.00992	7.450
Relief Valves	15	0.0088	0.01940	0.291
Open-Ended Lines:	34	0.0020	0.00441	0.150
Compressor Seals:	18	0.0088	0.01940	0.349
Pump Seals (Liq. Service):	0	0.0630	0.13889	0.000
Flanges & Connections:	1608	0.00039	0.00086	1.38
Total # of Components:	2,426	Total Organic Compounds:		9.62 (lb/hr)

Total Fugitive Emissions Factor: 9.62 lb/hr  
 Wt. fraction of non-methane, non-ethane HC / THC: 2.38% Gas Quality Analysis (1/2020 to 4/2020)\* 1.75 Safety Factor  
 Wt. fraction of HAP (hexanes+) / THC: 0.0073% Gas Quality Analysis (1/2020 to 4/2020)\* 1.75 Safety Factor  
 Wt. fraction of CH4 / THC: 87.64% Gas Quality Analysis (1/2020 to 4/2020)  
 Wt. fraction of H2S / THC: 0.001% Assumed 0.25 gr H<sub>2</sub>S/100 scf  
 Wt. fraction of CO2: 0.24% Gas Quality Analysis (1/2020 to 4/2020)

**Fugitive VOCs: 0.23 lb/hr**  
**1.01 tpy**  
**Fugitive HAPs: 7.00E-04 lb/hr**  
**0.0031 tpy**  
**Fugitive CO2: 0.024 lb/hr**  
**0.11 tpy**  
**Fugitive CH4: 8.43 lb/hr**  
**36.94 tpy**  
**Fugitive H<sub>2</sub>S: 7.86E-05 lb/hr**  
**3.44E-04 tpy**

**Fugitive VOC Calculation:**

9.62 LB/HR THC X 0.0136 wt. fraction NMNEHC/THC = 0.13 LB/HR fugitive VOCs

0.13 LB/HR X 8760 HRS/YR / 2000 LB/TON = 0.57 TPY

\*\*number based on a representative component count per process unit multiplied by the number of process units

\*\*\* based on EPA-453/R-95-017 (Table 2-4: Oil and Gas Production Operations Average Emission Factors - Total Organic Compounds, TOC)

**FACILITY EQUIPMENT:**

REFERENCE COMPONENTS (EL PASO STATION)	per turbine:	per engine:	per aux. unit:	per scrubber:	per CT bay:	
Valves (per unit):	212	25	6	14	8	
Relief Valves (per unit):	4	2	1	0	1	
Open-Ended Lines (per unit):	6	1	3	2	1	
Compressor Seals (per unit, See Below):	2	See Below	0	0	0	
Pump Seals (Liq. Service) (per unit):	0	0	0	0	0	
Flanges & Connections (per unit):	403	143	28	38	16	

FACILITY INPUT=>	# turbines:	# engines:	# aux. units:	# 2	# CT bays:	TOTAL:
	3	1	1	6	0	
Valves:	636	25	6	84	0	751
Relief Valves	12	2	1	0	0	15
Open-Ended Lines:	18	1	3	12	0	34
Compressor Seals:	6	12	0	0	0	18
Pump Seals (Liq. Service):	0	0	0	0	0	0
Flanges & Connections:	1,209	143	28	228	0	1,608

ENGINE Compressor Seals ESTIMATION=>	# engines w/ 1 CYL:	# engines w/ 2 CYL:	# engines w/ 3 CYL:	# engines w/ 4 CYL:	# engines w/ 5 CYL:	TOTAL # Engine Compressor Seals:
	0	0	0	3	0	12

# Section 7

## Information Used To Determine Emissions

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**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.
- 

- **Unit B-01**
  - Performance Test Data
  - AP-42 Table 3.1-2a
  - GRI-HAPCalc Output
- **Units C-01 and C-02**
  - Performance Test Data
  - AP-42 Table 3.1-2a
  - GRI-HAPCalc Output
- **Unit C-03**
  - Manufacturer Data
  - AP-42 Table 3.2-2
  - GRI-HAPCalc Output
- **Unit AUX-C01**
  - AP-42 Table 3.2-2
  - Manufacturer Information
  - GRI-HAPCalc Output
- **Unit FUG**
  - Table 2-4 of EPA Protocol for Equipment Leak Emission Estimates, 1995.
  - Average gas composition from 1/2020 to 4/2020

FILE: 5000  
(AIR)  
5039



P. O. BOX 1492  
EL PASO, TEXAS 79978  
PHONE 915-541-2600

April 10, 1992

Mr. Richard Enzeanyim  
New Source Review Unit  
Technical Analysis & Permits Section  
Air Quality Bureau  
New Mexico Environment Department  
1190 St. Francis Drive, P. O. Box 26110  
Santa Fe, New Mexico 87502

Re: Revision Request Permit Application No. 1009; Eunice B Compressor Station

Dear Mr. Enzeanyim:

Please revise the CO emission rates submitted in the permit application submitted on October 17, 1991. The CO emission rates in the original application are too low and may not be achievable.

Mr. Napierala of Solar in San Diego recommends that we use approximately 50 ppmvd at 15% oxygen. Since the EPA AP-42 emission factor gives approximately 51 ppmvd at 15% oxygen, please change the CO emission rate from 1.84 lbs/hr to 5.96 lbs/hr. I have enclosed a revised emission calculation sheet.

It is my understanding from our conversation yesterday that re-modelling is not necessary for the following reasons. The simple terrain 1-hour maximum concentration of 4.91  $\mu\text{g}/\text{m}^3$  of CO increases to approximately 15.9  $\mu\text{g}/\text{m}^3$  which remains well below the significance level of 2000  $\mu\text{g}/\text{m}^3$ . Also the complex terrain 8-hour maximum concentration of 2.05  $\mu\text{g}/\text{m}^3$  of CO increases to approximately 6.7  $\mu\text{g}/\text{m}^3$  which remains well below the 500  $\mu\text{g}/\text{m}^3$  significance level.

If you have any questions or need further information please feel free to give me a call at 915/541-5341.

Sincerely yours,

Loren E. Gearhart, P.E.  
Principal Environmental Engineer  
Environmental Affairs Department

:leg  
Attachment

cc: B. C. Burdorf, Trinity Consultants, Dallas  
R. S. Briggs  
H. Van  
File: 5000(air)

EL PASO NATURAL GAS COMPANY - EUNICE B  
DOCUMENTATION FOR SOLAR TAURUS TURBINE

HEAT RATE @ 40F      LHV      FUEL  
(BTU/HP-HR \* HP)/(BTU/SCF) = SCFH      2356.8 <= LBS/HR OF FUEL  
( 8741 \* 5419)/( 897.2) = 52800.1      16.94 <= MOL WT OF FUEL

	LBS/FT3 FUEL	* SCFH =	LBS/HR	TPY
CO2	0.115810	52800.1	6114.8	26,783
N2	2.097699	52800.1	110758.6	485,123
O2	0.466527	52800.1	24632.6	107,891
H2O	0.092991	52800.1	4909.9	21,505
SUB TOT	2.773027		146416.0	

	FT3/FT3 FUEL	* SCFH =	FT3/HR	CONC %V
CO2	0.99750	52800.1	52668.1	2.7057%
N2	28.37976	52800.1	1498452.9	76.9785%
O2	5.52757	52800.1	291856.0	14.9932%
H2O	1.95770	52800.1	103366.7	5.3101%
SUB TOT	36.86253		1946343.6	99.9875%

	LBS/HR	* FT3/LB =	FT3/HR	TPY	
NOX	18.975	8.24821	156.507	83.11	0.0080%
CO	5.961	13.54844	80.761	26.11	0.0041%
VOC	1.082	5.25980	5.692	4.74	0.0003%
SO2	0.022	5.92423	0.128	0.09	0.0000%
SUB TOT	26.03942		243.088		0.0125%

TOT #/HR=> 146,442 FT3/HR=> 1946586.7      100.0000%

LBS/HR NOX @ 40 F =  $\frac{\text{PPMV} * (\text{MOL WT NOX}) * (\text{LBS/HR STACK GAS})}{(\text{MOL WT STACK GAS}) * (1,000,000)}$

19.0 =  $\frac{80.40 * (46.01) * (146,442)}{(28.51) * (1,000,000)}$

LBS/HR CO @ 40 F =  $\frac{\text{PPMV} * (\text{MOL WT CO}) * (\text{LBS/HR STACK GAS})}{(\text{MOL WT STACK GAS}) * (1,000,000)}$

6.0 =  $\frac{41.49 * (28.01) * (146,442)}{(28.51) * (1,000,000)}$

98.9 PPMVD =  $\frac{5.9 * [ 80.40 \text{ PPMV} / (1 - 5.3101\% \text{ H2O}) ]}{20.9 - [ 14.99\% \text{ O2} / (1 - 5.3101\% \text{ H2O}) ]}$

NOX @ 15% O2

Table 3.1-2a. EMISSION FACTORS FOR CRITERIA POLLUTANTS AND GREENHOUSE GASES FROM STATIONARY GAS TURBINES

Emission Factors <sup>a</sup> - Uncontrolled				
Pollutant	Natural Gas-Fired Turbines <sup>b</sup>		Distillate Oil-Fired Turbines <sup>d</sup>	
	(lb/MMBtu) <sup>c</sup> (Fuel Input)	Emission Factor Rating	(lb/MMBtu) <sup>c</sup> (Fuel Input)	Emission Factor Rating
CO <sub>2</sub> <sup>f</sup>	110	A	157	A
N <sub>2</sub> O	0.003 <sup>g</sup>	E	ND	NA
Lead	ND	NA	1.4 E-05	C
SO <sub>2</sub>	0.94S <sup>h</sup>	B	1.01S <sup>h</sup>	B
Methane	8.6 E-03	C	ND	NA
VOC	2.1 E-03	D	4.1 E-04 <sup>j</sup>	E
TOC <sup>k</sup>	1.1 E-02	B	4.0 E-03 <sup>l</sup>	C
PM (condensible)	4.7 E-03 <sup>l</sup>	C	7.2 E-03 <sup>l</sup>	C
PM (filterable)	1.9 E-03 <sup>l</sup>	C	4.3 E-03 <sup>l</sup>	C
PM (total)	6.6 E-03 <sup>l</sup>	C	1.2 E-02 <sup>l</sup>	C

<sup>a</sup> Factors are derived from units operating at high loads ( $\geq 80$  percent load) only. For information on units operating at other loads, consult the background report for this chapter (Reference 16), available at “www.epa.gov/ttn/chief”. ND = No Data, NA = Not Applicable.

<sup>b</sup> SCCs for natural gas-fired turbines include 2-01-002-01, 2-02-002-01 & 03, and 2-03-002-02 & 03.

<sup>c</sup> Emission factors based on an average natural gas heating value (HHV) of 1020 Btu/scf at 60°F. To convert from (lb/MMBtu) to (lb/10<sup>6</sup> scf), multiply by 1020. Similarly, these emission factors can be converted to other natural gas heating values.

<sup>d</sup> SCCs for distillate oil-fired turbines are 2-01-001-01, 2-02-001-01, 2-02-001-03, and 2-03-001-02.

<sup>e</sup> Emission factors based on an average distillate oil heating value of 139 MMBtu/10<sup>3</sup> gallons. To convert from (lb/MMBtu) to (lb/10<sup>3</sup> gallons), multiply by 139.

<sup>f</sup> Based on 99.5% conversion of fuel carbon to CO<sub>2</sub> for natural gas and 99% conversion of fuel carbon to CO<sub>2</sub> for distillate oil. CO<sub>2</sub> (Natural Gas) [lb/MMBtu] = (0.0036 scf/Btu)(%CON)(C)(D), where %CON = weight percent conversion of fuel carbon to CO<sub>2</sub>, C = carbon content of fuel by weight, and D = density of fuel. For natural gas, C is assumed at 75%, and D is assumed at 4.1 E+04 lb/10<sup>6</sup>scf. For distillate oil, CO<sub>2</sub> (Distillate Oil) [lb/MMBtu] = (26.4 gal/MMBtu) (%CON)(C)(D), where C is assumed at 87%, and the D is assumed at 6.9 lb/gallon.

<sup>g</sup> Emission factor is carried over from the previous revision to AP-42 (Supplement B, October 1996) and is based on limited source tests on a single turbine with water-steam injection (Reference 5).

<sup>h</sup> All sulfur in the fuel is assumed to be converted to SO<sub>2</sub>. S = percent sulfur in fuel. Example, if sulfur content in the fuel is 3.4 percent, then S = 3.4. If S is not available, use 3.4 E-03 lb/MMBtu for natural gas turbines, and 3.3 E-02 lb/MMBtu for distillate oil turbines (the equations are more accurate).

<sup>j</sup> VOC emissions are assumed equal to the sum of organic emissions.

<sup>k</sup> Pollutant referenced as THC in the gathered emission tests. It is assumed as TOC, because it is based on EPA Test Method 25A.

<sup>l</sup> Emission factors are based on combustion turbines using water-steam injection.



**GRI-HAPCalc® 3.01**

**Turbine Report**

<b>Facility ID:</b>	<b>EPNG EUNICE C</b>	<b>Notes:</b>
<b>Operation Type:</b>	<b>GAS PLANT</b>	
<b>Facility Name:</b>	<b>EUNICE C</b>	
<b>User Name:</b>		
<b>Units of Measure:</b>	<b>U.S. STANDARD</b>	

*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: SOLAR 6500

Hours of Operation: 8,760 Yearly  
 Rate Power: 6500 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>
<b><u>HAPs</u></b>			
PAHs	0.0006	0.00000970 g/bhp-hr	EPA
Formaldehyde	1.0621	0.01693680 g/bhp-hr	GRI Field
Acetaldehyde	1.0871	0.01733570 g/bhp-hr	GRI Field
1,3-Butadiene	0.0039	0.00006160 g/bhp-hr	GRI Field
Acrolein	0.0163	0.00026000 g/bhp-hr	GRI Field
Propional	0.0542	0.00086500 g/bhp-hr	GRI Field
Propylene Oxide	0.0080	0.00012730 g/bhp-hr	EPA
Benzene	0.0338	0.00053840 g/bhp-hr	GRI Field
Toluene	0.0258	0.00041100 g/bhp-hr	GRI Field
Ethylbenzene	0.0088	0.00014050 g/bhp-hr	EPA
Xylenes(m,p,o)	0.0780	0.00124410 g/bhp-hr	GRI Field
2,2,4-Trimethylpentane	0.1007	0.00160530 g/bhp-hr	GRI Field
n-Hexane	0.0944	0.00150580 g/bhp-hr	GRI Field
Phenol	0.0069	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	0.0207	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	0.0041	0.00006520 g/bhp-hr	GRI Field
Chromium	0.0005	0.00000820 g/bhp-hr	GRI Field
Manganese	0.0011	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** 2.6086

**Criteria Pollutants**

PM	1.8168	0.02897200	g/bhp-hr	EPA
CO	132.2089	2.10828420	g/bhp-hr	GRI Field
NMHC	12.1579	0.19387800	g/bhp-hr	GRI Field
NMEHC	0.5781	0.00921840	g/bhp-hr	EPA
NOx	78.5222	1.25216290	g/bhp-hr	GRI Field
SO2	0.0644	0.00102720	g/bhp-hr	GRI Field

**Other Pollutants**

Methane	61.9061	0.98719230	g/bhp-hr	GRI Field
Acetylene	0.4493	0.00716540	g/bhp-hr	GRI Field
Ethylene	0.8751	0.01395450	g/bhp-hr	GRI Field
Ethane	9.4116	0.15008370	g/bhp-hr	GRI Field
Propane	1.0033	0.01600000	g/bhp-hr	GRI Field
Isobutane	0.3010	0.00480000	g/bhp-hr	GRI Field
Butane	0.3261	0.00520000	g/bhp-hr	GRI Field
Cyclopentane	0.1035	0.00165110	g/bhp-hr	GRI Field
Butyrald/Isobutyraldehyde	0.0840	0.00134000	g/bhp-hr	GRI Field
n-Pentane	5.0889	0.08115000	g/bhp-hr	GRI Field
Cyclohexane	0.3840	0.00612400	g/bhp-hr	GRI Field
Methylcyclohexane	0.5538	0.00883120	g/bhp-hr	GRI Field
n-Octane	0.2000	0.00318890	g/bhp-hr	GRI Field
1,3,5-Trimethylbenzene	0.1881	0.00300000	g/bhp-hr	GRI Field
n-Nonane	0.0334	0.00053260	g/bhp-hr	GRI Field
CO2	30,280.1701	482.86607780	g/bhp-hr	EPA
Vanadium	0.0000	0.00000070	g/bhp-hr	GRI Field
Copper	0.0013	0.00002050	g/bhp-hr	GRI Field
Molybdenum	0.0013	0.00002030	g/bhp-hr	GRI Field
Barium	0.0014	0.00002290	g/bhp-hr	GRI Field

Unit Name: SOLAR 7277

Hours of Operation: 8,760 Yearly  
 Rate Power: 7277 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>
<b><u>HAPs</u></b>			
PAHs	0.0007	0.00000970	g/bhp-hr EPA
Formaldehyde	1.1891	0.01693680	g/bhp-hr GRI Field
Acetaldehyde	1.2171	0.01733570	g/bhp-hr GRI Field
1,3-Butadiene	0.0043	0.00006160	g/bhp-hr GRI Field
Acrolein	0.0183	0.00026000	g/bhp-hr GRI Field

Propional	0.0607	0.00086500 g/bhp-hr	GRI Field
Propylene Oxide	0.0089	0.00012730 g/bhp-hr	EPA
Benzene	0.0378	0.00053840 g/bhp-hr	GRI Field
Toluene	0.0289	0.00041100 g/bhp-hr	GRI Field
Ethylbenzene	0.0099	0.00014050 g/bhp-hr	EPA
Xylenes(m,p,o)	0.0873	0.00124410 g/bhp-hr	GRI Field
2,2,4-Trimethylpentane	0.1127	0.00160530 g/bhp-hr	GRI Field
n-Hexane	0.1057	0.00150580 g/bhp-hr	GRI Field
Phenol	0.0077	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	0.0232	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	0.0046	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
<b>Total</b>	<b>2.9203</b>		

### Criteria Pollutants

PM	2.0340	0.02897200 g/bhp-hr	EPA
CO	148.0130	2.10828420 g/bhp-hr	GRI Field
NMHC	13.6113	0.19387800 g/bhp-hr	GRI Field
NMEHC	0.6472	0.00921840 g/bhp-hr	EPA
NOx	87.9086	1.25216290 g/bhp-hr	GRI Field
SO2	0.0721	0.00102720 g/bhp-hr	GRI Field

### Other Pollutants

Methane	69.3062	0.98719230 g/bhp-hr	GRI Field
Acetylene	0.5030	0.00716540 g/bhp-hr	GRI Field
Ethylene	0.9797	0.01395450 g/bhp-hr	GRI Field
Ethane	10.5367	0.15008370 g/bhp-hr	GRI Field
Propane	1.1233	0.01600000 g/bhp-hr	GRI Field
Isobutane	0.3370	0.00480000 g/bhp-hr	GRI Field
Butane	0.3651	0.00520000 g/bhp-hr	GRI Field
Cyclopentane	0.1159	0.00165110 g/bhp-hr	GRI Field
Butyrald/Isobutyraldehyde	0.0941	0.00134000 g/bhp-hr	GRI Field
n-Pentane	5.6972	0.08115000 g/bhp-hr	GRI Field
Cyclohexane	0.4299	0.00612400 g/bhp-hr	GRI Field
Methylcyclohexane	0.6200	0.00883120 g/bhp-hr	GRI Field
n-Octane	0.2239	0.00318890 g/bhp-hr	GRI Field
1,3,5-Trimethylbenzene	0.2106	0.00300000 g/bhp-hr	GRI Field
n-Nonane	0.0374	0.00053260 g/bhp-hr	GRI Field
CO2	33,899.8151	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

SOLAR TURBINES INCORPORATED  
ENGINE PERFORMANCE CODE REV. 3.40  
CUSTOMER: El Paso Natural Gas  
JOB ID: HP07-0006

DATE RUN: 5-Apr-07  
RUN BY: William L Richards

TAURUS 60-7800S  
CS/MD  
59F MATCH  
GAS  
TTE-2S REV. 0.7  
ES-2092  
ES-2092

DATA FOR MINIMUM PERFORMANCE

Fuel Type	SD NATURAL GAS	
Elevation	feet	0
Inlet Loss	in H2O	0
Exhaust Loss	in H2O	0
Accessory on GP Shaft	HP	14.0
Engine Inlet Temp.	deg F	59.0
Relative Humidity	%	60.0
Inlet Loss	HP	0
Exhaust Loss	HP	0
Driven Equipment Speed	RPM	13951
Optimum Equipment Speed	RPM	13951
Gas Generator Speed	RPM	14984
Specified Load	HP	FULL
Net Output Power	HP	7453
Fuel Flow	mmBtu/hr	61.19
Heat Rate	Btu/HP-hr	8210
Therm Eff	%	30.993
Inlet Air Flow	lbm/hr	169164
Engine Exhaust Flow	lbm/hr	171692
PCD	psiG	163.3
Compensated PTIT	deg F	1400
Exhaust Temperature	deg F	950

FUEL GAS COMPOSITION (VOLUME PERCENT)

LHV (Btu/Scf) = 939.2 SG = 0.5970 W.I. @60F (Btu/Scf) = 1215.6

Methane (CH4)	=	92.7899
Ethane (C2H6)	=	4.1600
Propane (C3H8)	=	0.8400
N-Butane (C4H10)	=	0.1800
N-Pentane (C5H12)	=	0.0400
Hexane (C6H14)	=	0.0400
Carbon Dioxide (CO2)	=	0.4400
Hydrogen Sulfide (H2S)	=	0.0001
Nitrogen (N2)	=	1.5100

This performance was calculated with a basic inlet and exhaust system.  
Special equipment such as low noise silencers, special filters, heat

recovery systems or cooling devices will affect engine performance.  
Performance shown is "Expected" performance at the pressure drops  
stated, not guaranteed.

SOLAR TURBINES INCORPORATED  
 ENGINE PERFORMANCE CODE REV. 3.40  
 CUSTOMER: El Paso Natural Gas  
 JOB ID: HP07-0006

DATE RUN: 5-Apr-07  
 RUN BY: William L Richards

NEW EQUIPMENT PREDICTED EMISSION PERFORMANCE  
 DATA FOR POINT NUMBER 1

Fuel: SD NATURAL GAS                      Customer: El Paso Natural Gas  
 Water Injection: NO                        Inquiry Number:  
 Number of Engines Tested: 0  
 Model: TAURUS 60-7800S    CS/MD    59F MATCH    GAS  
 Emissions Data: REV. 0.1

The following predicted emissions performance is based on the following specific single point: (see attached)

Hp= 7137, %Full Load= 100.0, Elev= 3581 ft, %RH= 60.0, Temperature= 0 F

NOX		CO		UHC	
NOM	MAX	NOM	MAX	NOM	MAX
*	25.00	*	50.00	*	25.00 PPMvd at 15% O2
*	25.37	*	30.89	*	8.85 ton/yr
*	0.100	*	0.122	*	0.035 lbm/MMBtu (Fuel LHV)
*	1.09	*	1.33	*	0.38 lbm/(MW-hr) (gas turbine shaft pwr)
*	5.79	*	7.05	*	2.02 lbm/hr

\* NOMINAL EMISSIONS DATA UNAVAILABLE FOR THIS ENGINE  
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IMPORTANT NOTES

- For short-term emission limits such as lbs/hr., Solar recommends using "worst case" anticipated operating conditions specific to the application and the site conditions. Worst case for one pollutant is not necessarily the same for another. The emission values on this form are only predicted emissions at the specific operating conditions listed.
- Solar's typical SoLoNOx warranty is for greater than 0 deg F, and between 50% and 100% load for gas fuel, and between 80% and 100% load for liquid fuel. An emission warranty for non-SoLoNOx equipment is for greater than 0 deg F and between 80% and 100% load.
- Fuel must meet Solar standard fuel specification ES 9-98. Predicted emissions are based on the attached fuel composition, or, San Diego natural gas or equivalent.
- If needed, Solar can provide generic documents to address turbine operation outside typical warranty ranges, as well as non-warranted emissions of SO2, PM10/2.5, VOC, and formaldehyde.
- Solar can optionally provide factory testing in San Diego to ensure the actual unit(s) meet the above values within the tolerances quoted. Pricing and schedule impact will be provided upon request.

# G3612

## GAS ENGINE TECHNICAL DATA



Industrial/Petroleum

07/01

ENGINE SPEED (rpm): 1000  
 COMPRESSION RATIO: 9:1  
 AFTERCOOLER WATER (°F): 90  
 JACKET WATER OUTLET (°F): 190  
 IGNITION SYSTEM: DST  
 EXHAUST MANIFOLD: DRY

FUEL TYPE: Nat Gas  
 MIN. FUEL PRESSURE (PSIG): 43  
 MIN. RATED METHANE NUMBER: 60  
 RATED ALTITUDE @ 77°F (ft): 5000  
 FUEL LHV (BTU/SCF): 905

RATING	NOTES	LOAD	100%	75%	50%
ENGINE POWER	(1) (2)	bhp	3785	2839	1892
ENGINE EFFICIENCY (ISO 3046/1)	(1)	%	38.8	37.3	34.3
ENGINE EFFICIENCY (NOMINAL)	(1)	%	37.9	36.4	33.5

ENGINE DATA						
FUEL CONSUMPTION (ISO 3046/1)	(1)	BTU/bhp-hr	6562	6830	7416	
FUEL CONSUMPTION (NOMINAL)	(1)	BTU/bhp-hr	6721	6996	7596	
AIR FLOW (@ 77°F, 13.9 psia)		ft <sup>3</sup> /min	10,230	7,843	5,343	
AIR MASS FLOW		lb/hr	42,890	32,883	22,403	
COMPRESSOR OUTLET PRESSURE		psi (abs)	37	28.8	20.7	
COMPRESSOR OUTLET TEMPERATURE		°F	295	239	151	
INLET MANIFOLD PRESSURE		psi (abs)	35.7	27.7	18.7	
INLET MANIFOLD TEMPERATURE		°F	120	118	109	
LAMBDA			2.07	2.04	1.92	
TIMING		°BTDC	18.3	17.6	16.2	
EXHAUST STACK TEMPERATURE		°F	838	867	914	
EXHAUST GAS FLOW (@ stack temp, 14.5 psia)		ft <sup>3</sup> /min	25,414	19,917	14,047	
EXHAUST GAS MASS FLOW		lb/hr	44,193	33,882	23,083	

EMISSIONS					
NO <sub>x</sub> (as NO)	(3)	g/bhp-hr	0.7	0.7	0.7
CO	(3)	g/bhp-hr	2.5	2.5	2.5
THC (molecular weight of 15.84)	(3)	g/bhp-hr	5.6	6.11	6.4
NMHC (molecular weight of 15.84)	(3)	g/bhp-hr	0.84	0.92	0.96
EXHAUST OXYGEN		%	12.3	11.9	10.8

ENERGY BALANCE DATA						
FUEL INPUT ENERGY (LHV) (NOMINAL)	(1)	BTU/min	423,920	330,951	239,559	
WORK ENERGY (NOMINAL)	(2)	BTU/min	160,510	120,383	80,255	
HEAT REJ. TO JACKET WATER (NOMINAL)	(4)	BTU/min	38,578	33,789	31,508	
HEAT REJ. TO ATMOSPHERE (NOMINAL)	(5)	BTU/min	14,837	13,900	13,176	
HEAT REJ. TO LUBE OIL (NOMINAL)	(6)	BTU/min	19,076	18,202	17,967	
HEAT REJ. TO EXH. (LHV to 77°F) (NOMINAL)	(4)	BTU/min	158,978	127,083	91,956	
HEAT REJ. TO EXH. (LHV to 350°F) (NOMINAL)	(4)	BTU/min	95,201	77,492	57,900	
HEAT REJ. TO AFTERCOOLER (NOMINAL)	(7) (8)	BTU/min	31,940	17,593	4,697	

**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.

**NOTES**

- 1) FUEL CONSUMPTION TOLERANCE. ISO 3046/1 IS 0, + 5% OF FULL LOAD DATA. NOMINAL IS ± 2.5 % OF FULL LOAD DATA.
- 2) ENGINE POWER AND WORK ENERGY INCLUDE 2 ENGINE DRIVEN WATER PUMPS.
- 3) EMISSION DATA SHOWN ARE DRY AND NOT TO EXCEED VALUES.
- 4) HEAT REJECTION TO JACKET AND EXHAUST TOLERANCE IS ± 10% OF FULL LOAD DATA. (heat rate based on treated water)
- 5) HEAT REJECTION TO ATMOSPHERE TOLERANCE IS ± 50% OF FULL LOAD DATA. (heat rate based on treated water)
- 6) HEAT REJECTION TO LUBE OIL TOLERANCE IS ± 20% OF FULL LOAD DATA. (heat rate based on treated water)
- 7) HEAT REJECTION TO AFTERCOOLER TOLERANCE IS ± 5% OF FULL LOAD DATA. (heat rate based on treated water)
- 8) TOTAL AFTERCOOLER HEAT = AFTERCOOLER HEAT x ACHRF (heat rate based on treated water)



**FUEL USAGE GUIDE**

DERATE FACTOR vs CATERPILLAR METHANE NUMBER									
Methane Number	30	35	40	45	50	55	60	65	70>=100
Rating Factor	0.69	0.74	0.79	0.85	0.90	0.95	1.00	1.00	1.00

Minimum Methane Number for Full Rating = 59.7  
 Fuel System Limit (minimum Wobbe Index) = 1189 BTU/SCF

**TOTAL DERATION FACTORS - ALTITUDE & COOLING**

	130	ALTITUDE (FEET ABOVE SEA LEVEL)												
		0	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000	12000
AIR TO TURBO	130	1.00	1.00	1.00	0.96	0.92	0.88	0.84	0.80	0.77	0.73	0.70	0.66	0.63
	120	1.00	1.00	1.00	1.00	0.96	0.93	0.89	0.85	0.81	0.78	0.74	0.70	0.67
	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
TURBO	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
	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
	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
(*F)	70	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	0.99	0.95	0.92	0.88	0.85	0.81	0.78	
	50	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.94	0.90	0.86	0.83	0.79	

**AFTERCOOLER HEAT REJECTION FACTORS**

	130	ALTITUDE (FEET ABOVE SEA LEVEL)												
		0	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000	12000
AIR TO TURBO	130	1.37	1.43	1.49	1.55	1.61	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67
	120	1.30	1.35	1.41	1.47	1.53	1.59	1.59	1.59	1.59	1.59	1.59	1.59	1.59
	110	1.22	1.28	1.33	1.39	1.45	1.51	1.51	1.51	1.51	1.51	1.51	1.51	1.51
TURBO	100	1.15	1.20	1.26	1.31	1.37	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43
	90	1.07	1.13	1.18	1.23	1.29	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35
	80	1.00	1.05	1.10	1.16	1.21	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27
(*F)	70	1.00	1.00	1.02	1.08	1.13	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19
	60	1.00	1.00	1.00	1.00	1.05	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
	50	1.00	1.00	1.00	1.00	1.00	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03

**MINIMUM SPEED CAPABILITY AT MAX SITE TORQUE (RPM)**

	130	ALTITUDE (FEET ABOVE SEA LEVEL)												
		0	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000	12000
AIR TO TURBO	130	750	750	780	850	850	850	850	850	850	850	850	850	850
	120	750	750	760	850	850	850	850	850	850	850	850	850	850
	110	750	750	750	790	850	850	850	850	850	850	850	850	850
TURBO	100	750	750	750	770	850	850	850	850	850	850	850	850	850
	90	750	750	750	750	790	850	850	850	850	850	850	850	850
	80	750	750	750	750	770	850	850	850	850	850	850	850	850
(*F)	70	750	750	750	750	750	790	850	850	850	850	850	850	850
	60	750	750	750	750	750	770	850	850	850	850	850	850	850
	50	750	750	750	750	750	750	790	850	850	850	850	850	850

**ALLOWABLE INERTS IN THE FUEL:**

The maximum amount of free inerts in the fuel is limited to 5%.

**FUEL SYSTEM LIMIT:**

Fuels with a Wobbe index lower than the limit, require a custom fuel system and engine control system mapping from the factory. The Wobbe index is determined using the Caterpillar Methane Number Calculation program.

**FUEL USAGE GUIDE:**

This table shows the derate factor required for a given fuel. Note that deration occurs as the methane number decreases. Methane number is a scale to measure detonation characteristics of various fuels. The methane number of a fuel is determined by using the Caterpillar Methane Number Calculation program.

**TOTAL DERATION FACTORS:**

This table shows the deration required for various air inlet temperatures and altitudes. Use this information along with the fuel usage guide chart to help determine actual engine power for your site. The total deration factor includes deration due to altitude and ambient temperature, and air inlet manifold temperature deration.

**ACTUAL ENGINE RATING:**

It is important to note that the Altitude/Temperature deration and the Fuel Usage Guide deration are not cumulative. They are not to be added together. To determine the actual power available, take the lowest rating between the Altitude/Temperature Deration and the Fuel Usage Guide Deration.

**AFTERCOOLER HEAT REJECTION FACTORS:**

Aftercooler heat rejection is given for standard conditions of 77°F and 500 ft altitude. To maintain a constant air inlet manifold temperature, as the air to turbo 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 shutdown or fail.

**MINIMUM SPEED CAPABILITY AT MAX SITE TORQUE**

This table shows the minimum allowable engine operating speed for site-specific ratings as determined by the Total Deration Factor chart. The minimum allowable engine operating speed cannot be lowered even if the actual engine power falls below the site-specific rating allowed by the Total Deration Factor chart. Turbocharger compressor surge or damage will result if the engine is operated lower than the minimum allowable speed.

## Emissions Control Equipment Specification Summary

### APPLICATION

Project Name: Eunice 3020 – 3060 El Paso  
 # of Engines: 1  
 Engine Operation: Gas Compression  
 Fuel: Natural Gas  
 Lubrication Oil: 0.6 wt% sulfated ash or less

#### **Engine Data:**

Engine: Caterpillar 3612  
 Power Output: 3550 bhp @ 1000 rpm  
 Design Exhaust Temp: 858°F  
 Design Exhaust Flow Rate: 574,596 scfh  
 Back Pressure Limit: 7.5 inches Water Column

#### **Catalytic Converter System Data:**

Catalytic Converter Model: **SP-RCSIGA-66S2424x41-28-L4**  
 Inlet / Outlet Pipe Size: 28 inches  
 Inlet Height: TBD  
 Overall Height: TBD  
 Diameter: 66 inches  
 Weight: 7,500 lbs.  
 Converter Pressure Loss: 7.5" (Housing + Catalyst: Flange to Flange)  
 Sound Attenuation: 25 – 30dBa @ 3 feet from exhaust exit  
 Wind Loading: 90mph

Catalyst Section Internals: Carbon Steel  
 Shell / Body Construction: Carbon Steel\*  
 Inlet / Outlet Connection: Standard 125# ANSI Bolt Pattern Flanges – FF  
 Instrumentation Ports: Standard 2" NPT – (2) Pre-Catalyst, (2) Post-Catalyst,  
 (1) Outlet (Outlet Port only on Units with Exhaust Stack)  
 Temperature Limits: 550 – 1250°F at Inlet/ 1350°F at Outlet

### EMISSION REQUIREMENTS

Exhaust Gases	Engine Outputs (g/bhp-hr)	Reduction (%)	Converter Output (g/bhp-hr)	Area Limits
NO <sub>x</sub>	0.7	0	0.7	N/A
CO	2.5	95	0.125	95%
NMNEHC	0.6	0	0.6	N/A
CH <sub>2</sub> O	0.4	75	0.1	N/A
O <sub>2</sub>	12.5%			

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**GRI-HAPCalc® 3.01**  
**Engines Report**

Facility ID:	EPNG EUNICE C	Notes:
Operation Type:	GAS PLANT	
Facility Name:	EUNICE C	
User Name:		
Units of Measure:	U.S. STANDARD	

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

**Engine Unit**

Unit Name: G3612

Hours of Operation: 8,760 Yearly  
Rate Power: 3,785 hp  
Fuel Type: NATURAL GAS  
Engine Type: 4-Stroke, Lean Burn  
Emission Factor Set: EPA > FIELD > 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>
<b>HAPs</b>			
Tetrachloroethane	0.0003	0.00000820 g/bhp-hr	EPA
Formaldehyde	6.3632	0.17425810 g/bhp-hr	EPA
Methanol	0.3013	0.00825090 g/bhp-hr	EPA
Acetaldehyde	1.0075	0.02759090 g/bhp-hr	EPA
1,3-Butadiene	0.0322	0.00088120 g/bhp-hr	EPA
Acrolein	0.6195	0.01696380 g/bhp-hr	EPA
Benzene	0.0530	0.00145220 g/bhp-hr	EPA
Toluene	0.0492	0.00134650 g/bhp-hr	EPA
Ethylbenzene	0.0048	0.00013100 g/bhp-hr	EPA
Xylenes(m,p,o)	0.0222	0.00060730 g/bhp-hr	EPA
2,2,4-Trimethylpentane	0.0301	0.00082510 g/bhp-hr	EPA
n-Hexane	0.1338	0.00366340 g/bhp-hr	EPA
Phenol	0.0029	0.00007920 g/bhp-hr	EPA
Styrene	0.0028	0.00007790 g/bhp-hr	EPA
Naphthalene	0.0090	0.00024550 g/bhp-hr	EPA
2-Methylnaphthalene	0.0040	0.00010960 g/bhp-hr	EPA
Acenaphthylene	0.0007	0.00001830 g/bhp-hr	EPA
Biphenyl	0.0256	0.00069970 g/bhp-hr	EPA
Acenaphthene	0.0001	0.00000410 g/bhp-hr	EPA
Fluorene	0.0007	0.00001870 g/bhp-hr	EPA
Phenanthrene	0.0013	0.00003430 g/bhp-hr	EPA
Ethylene Dibromide	0.0053	0.00014620 g/bhp-hr	EPA
Fluoranthene	0.0001	0.00000370 g/bhp-hr	EPA

Pyrene	0.0002	0.00000450	g/bhp-hr	EPA
Chrysene	0.0001	0.00000230	g/bhp-hr	EPA
Benzo(b)fluoranthene	0.0000	0.00000050	g/bhp-hr	EPA
Benzo(e)pyrene	0.0001	0.00000140	g/bhp-hr	EPA
Benzo(g,h,i)perylene	0.0001	0.00000140	g/bhp-hr	EPA
Vinyl Chloride	0.0018	0.00004920	g/bhp-hr	EPA
Methylene Chloride	0.0024	0.00006600	g/bhp-hr	EPA
1,1-Dichloroethane	0.0028	0.00007790	g/bhp-hr	EPA
1,3-Dichloropropene	0.0032	0.00008710	g/bhp-hr	EPA
Chlorobenzene	0.0037	0.00010030	g/bhp-hr	EPA
Chloroform	0.0034	0.00009410	g/bhp-hr	EPA
1,1,2-Trichloroethane	0.0038	0.00010500	g/bhp-hr	EPA
1,1,2,2-Tetrachloroethane	0.0048	0.00013200	g/bhp-hr	EPA
Carbon Tetrachloride	0.0044	0.00012110	g/bhp-hr	EPA

**Total**

8.7004

**Criteria Pollutants**

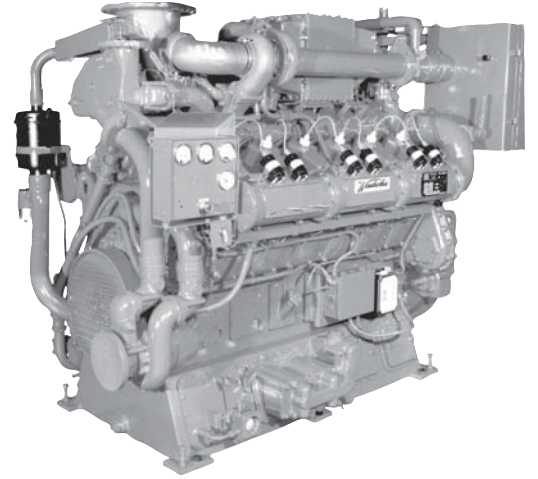
PM	1.2036	0.03296090	g/bhp-hr	EPA
CO	38.2034	1.04620860	g/bhp-hr	EPA
NMEHC	14.2208	0.38944040	g/bhp-hr	EPA
NOx	491.7035	13.46539810	g/bhp-hr	EPA
SO2	0.0709	0.00194060	g/bhp-hr	EPA

**Other Pollutants**

Butryaldehyde	0.0122	0.00033330	g/bhp-hr	EPA
Chloroethane	0.0002	0.00000620	g/bhp-hr	EPA
Methane	150.6445	4.12542830	g/bhp-hr	EPA
Ethane	12.6541	0.34653600	g/bhp-hr	EPA
Propane	5.0496	0.13828440	g/bhp-hr	EPA
Butane	0.0652	0.00178550	g/bhp-hr	EPA
Cyclopentane	0.0274	0.00074920	g/bhp-hr	EPA
n-Pentane	0.3133	0.00858090	g/bhp-hr	EPA
Methylcyclohexane	0.1482	0.00405940	g/bhp-hr	EPA
1,2-Dichloroethane	0.0028	0.00007790	g/bhp-hr	EPA
1,2-Dichloropropane	0.0032	0.00008880	g/bhp-hr	EPA
n-Octane	0.0423	0.00115840	g/bhp-hr	EPA
1,2,3-Trimethylbenzene	0.0028	0.00007590	g/bhp-hr	EPA
1,2,4-Trimethylbenzene	0.0017	0.00004720	g/bhp-hr	EPA
1,3,5-Trimethylbenzene	0.0041	0.00011160	g/bhp-hr	EPA
n-Nonane	0.0133	0.00036300	g/bhp-hr	EPA
CO2	13,256.7132	363.03769350	g/bhp-hr	EPA

Table 3.2-2. UNCONTROLLED EMISSION FACTORS FOR 4-STROKE LEAN-BURN ENGINES<sup>a</sup>  
(SCC 2-02-002-54)

Pollutant	Emission Factor (lb/MMBtu) <sup>b</sup> (fuel input)	Emission Factor Rating
Criteria Pollutants and Greenhouse Gases		
NO <sub>x</sub> <sup>c</sup> 90 - 105% Load	4.08 E+00	B
NO <sub>x</sub> <sup>c</sup> <90% Load	8.47 E-01	B
CO <sup>c</sup> 90 - 105% Load	3.17 E-01	C
CO <sup>c</sup> <90% Load	5.57 E-01	B
CO <sub>2</sub> <sup>d</sup>	1.10 E+02	A
SO <sub>2</sub> <sup>e</sup>	5.88 E-04	A
TOC <sup>f</sup>	1.47 E+00	A
Methane <sup>g</sup>	1.25 E+00	C
VOC <sup>h</sup>	1.18 E-01	C
PM10 (filterable) <sup>i</sup>	7.71 E-05	D
PM2.5 (filterable) <sup>i</sup>	7.71 E-05	D
PM Condensable <sup>j</sup>	9.91 E-03	D
Trace Organic Compounds		
1,1,2,2-Tetrachloroethane <sup>k</sup>	<4.00 E-05	E
1,1,2-Trichloroethane <sup>k</sup>	<3.18 E-05	E
1,1-Dichloroethane	<2.36 E-05	E
1,2,3-Trimethylbenzene	2.30 E-05	D
1,2,4-Trimethylbenzene	1.43 E-05	C
1,2-Dichloroethane	<2.36 E-05	E
1,2-Dichloropropane	<2.69 E-05	E
1,3,5-Trimethylbenzene	3.38 E-05	D
1,3-Butadiene <sup>k</sup>	2.67E-04	D
1,3-Dichloropropene <sup>k</sup>	<2.64 E-05	E
2-Methylnaphthalene <sup>k</sup>	3.32 E-05	C
2,2,4-Trimethylpentane <sup>k</sup>	2.50 E-04	C
Acenaphthene <sup>k</sup>	1.25 E-06	C



# Waukesha\* gas engines VGF\* L36GL

620 - 880 BHP (460 - 660 kWb)

The VGF series of high-speed engines are built with the durability expected from a medium-speed engine. This series of engines is designed for a wide range of stationary, spark-ignited, gaseous fuel applications and has a high power-to-weight ratio operating up to 1800 RPM.

The VGF Series simplifies maintenance procedures. The engine design allows easy access to the oil pump, main bearings and rod bearings—without the need to lower the oil pan. Commonality of parts between VGF models reduces the amount of inventory needed for servicing a fleet. Standard design features, such as independent heads, simplify maintenance work.

## technical data

Cylinders	V12	
Piston displacement	2193 cu. in. (36 L)	
Compression ratio	LCR 8.7:1 HCR 11:1	
Bore & stroke	5.98" x 6.5" (152 x 165 mm)	
Jacket water system capacity	44 gal. (166 L)	
Lube oil capacity	86 gal. (326 L)	
Fuel Pressure Range	25 - 50 psi (172 - 345 kPa)	
Starting system	150 psi max. air/gas 24V DC electric	
Cooling Water Flow at	<b>1500 rpm</b>	<b>1800 rpm</b>
Jacket Water gpm (l/m)	184(697)	218(825)
Aux. Water gpm (l/m)	52 (197)	62 (235)

### Dimensions l x w x h inch (mm)

88 (2235) x 61.97 (1574) x 73.11 (1857)

### Weights lb (kg)

11,200 (5171)



# performance data

Intercooler Water Temperature 130°F (54°C)

1800 RPM

1500 RPM

	Power bhp (kWb)	800 (600)	670 (500)
	BSFC (LHV) Btu/bhp-hr (kJ/kWh)	7114 (10008)	6902 (9760)
	Fuel Consumption Btu/hr x 1000 (kW)	5691 (1668)	4624 (1356)
Emissions	NOx g/bhp-hr (mg/Nm <sup>3</sup> @ 5% O <sub>2</sub> )	2.00 (820)	2.4 (982)
	CO g/bhp-hr (mg/Nm <sup>3</sup> @ 5% O <sub>2</sub> )	1.30 (535)	1.4 (562)
	NMHC g/bhp-hr (mg/Nm <sup>3</sup> @ 5% O <sub>2</sub> )	0.27 (108)	0.31 (125)
	THC g/bhp-hr (mg/Nm <sup>3</sup> @ 5% O <sub>2</sub> )	1.7 (683)	2.1 (835)
Heat Balance	Heat to Jacket Water Btu/hr x 1000 (kW)	1476 (433)	1253 (367)
	Heat to Lube Oil Btu/hr x 1000 (kW)	190 (56)	136 (40)
	Heat to Intercooler Btu/hr x 1000 (kW)	339 (99)	227 (67)
	Heat to Radiation Btu/hr x 1000 (kW)	118 (35)	111 (33)
	Total Exhaust Heat Btu/hr x 1000 (kW)	1642 (481)	1282 (376)
Intake/ Exhaust System	Induction Air Flow scfm (Nm <sup>3</sup> /hr)	1717 (2639)	1395 (2145)
	Exhaust Flow lb/hr (kg/hr)	7486 (3395)	6084 (2759)
	Exhaust Temperature °F (°C)	838 (448)	809 (431)

All data according to full load and subject to technical development and modification.

Consult your local GE Energy's representative for system application assistance. The manufacturer reserves the right to change or modify without notice, the design or equipment specifications as herein set forth without incurring any obligation either with respect to equipment previously sold or in the process of construction except where otherwise specifically guaranteed by the manufacturer.



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7077 1211 GEA-19034

**GRI-HAPCalc® 3.01**  
**Engines Report**

**Facility ID:** EUNICE B&C  
**Operation Type:** COMPRESSOR STATION  
**Facility Name:** EUNICE B&C  
**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".*

**Engine Unit**

Unit Name: AUX-C01

Hours of Operation: 8,760 Yearly  
Rate Power: 800 hp  
Fuel Type: NATURAL GAS  
Engine Type: 4-Stroke, Lean Burn  
Emission Factor Set: EPA > FIELD > 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>
<b>HAPs</b>			
Tetrachloroethane	0.0001	0.00000820 g/bhp-hr	EPA
Formaldehyde	1.3449	0.17425810 g/bhp-hr	EPA
Methanol	0.0637	0.00825090 g/bhp-hr	EPA
Acetaldehyde	0.2129	0.02759090 g/bhp-hr	EPA
1,3-Butadiene	0.0068	0.00088120 g/bhp-hr	EPA
Acrolein	0.1309	0.01696380 g/bhp-hr	EPA
Benzene	0.0112	0.00145220 g/bhp-hr	EPA
Toluene	0.0104	0.00134650 g/bhp-hr	EPA
Ethylbenzene	0.0010	0.00013100 g/bhp-hr	EPA
Xylenes(m,p,o)	0.0047	0.00060730 g/bhp-hr	EPA
2,2,4-Trimethylpentane	0.0064	0.00082510 g/bhp-hr	EPA
n-Hexane	0.0283	0.00366340 g/bhp-hr	EPA
Phenol	0.0006	0.00007920 g/bhp-hr	EPA
Styrene	0.0006	0.00007790 g/bhp-hr	EPA
Naphthalene	0.0019	0.00024550 g/bhp-hr	EPA
2-Methylnaphthalene	0.0008	0.00010960 g/bhp-hr	EPA
Acenaphthylene	0.0001	0.00001830 g/bhp-hr	EPA
Biphenyl	0.0054	0.00069970 g/bhp-hr	EPA
Acenaphthene	0.0000	0.00000410 g/bhp-hr	EPA
Fluorene	0.0001	0.00001870 g/bhp-hr	EPA
Phenanthrene	0.0003	0.00003430 g/bhp-hr	EPA
Ethylene Dibromide	0.0011	0.00014620 g/bhp-hr	EPA
Fluoranthene	0.0000	0.00000370 g/bhp-hr	EPA
Pyrene	0.0000	0.00000450 g/bhp-hr	EPA
Chrysene	0.0000	0.00000230 g/bhp-hr	EPA



Benzo(b)fluoranthene	0.0000	0.00000050	g/bhp-hr	EPA
Benzo(e)pyrene	0.0000	0.00000140	g/bhp-hr	EPA
Benzo(g,h,i)perylene	0.0000	0.00000140	g/bhp-hr	EPA
Vinyl Chloride	0.0004	0.00004920	g/bhp-hr	EPA
Methylene Chloride	0.0005	0.00006600	g/bhp-hr	EPA
1,1-Dichloroethane	0.0006	0.00007790	g/bhp-hr	EPA
1,3-Dichloropropene	0.0007	0.00008710	g/bhp-hr	EPA
Chlorobenzene	0.0008	0.00010030	g/bhp-hr	EPA
Chloroform	0.0007	0.00009410	g/bhp-hr	EPA
1,1,2-Trichloroethane	0.0008	0.00010500	g/bhp-hr	EPA
1,1,2,2-Tetrachloroethane	0.0010	0.00013200	g/bhp-hr	EPA
Carbon Tetrachloride	0.0009	0.00012110	g/bhp-hr	EPA
<b>Total</b>	<b>1.8386</b>			

### Criteria Pollutants

PM	0.2544	0.03296090	g/bhp-hr	EPA
CO	8.0747	1.04620860	g/bhp-hr	EPA
NMEHC	3.0057	0.38944040	g/bhp-hr	EPA
NOx	103.9268	13.46539810	g/bhp-hr	EPA
SO2	0.0150	0.00194060	g/bhp-hr	EPA

### Other Pollutants

Butryaldehyde	0.0026	0.00033330	g/bhp-hr	EPA
Chloroethane	0.0000	0.00000620	g/bhp-hr	EPA
Methane	31.8403	4.12542830	g/bhp-hr	EPA
Ethane	2.6746	0.34653600	g/bhp-hr	EPA
Propane	1.0673	0.13828440	g/bhp-hr	EPA
Butane	0.0138	0.00178550	g/bhp-hr	EPA
Cyclopentane	0.0058	0.00074920	g/bhp-hr	EPA
n-Pentane	0.0662	0.00858090	g/bhp-hr	EPA
Methylcyclohexane	0.0313	0.00405940	g/bhp-hr	EPA
1,2-Dichloroethane	0.0006	0.00007790	g/bhp-hr	EPA
1,2-Dichloropropane	0.0007	0.00008880	g/bhp-hr	EPA
n-Octane	0.0089	0.00115840	g/bhp-hr	EPA
1,2,3-Trimethylbenzene	0.0006	0.00007590	g/bhp-hr	EPA
1,2,4-Trimethylbenzene	0.0004	0.00004720	g/bhp-hr	EPA
1,3,5-Trimethylbenzene	0.0009	0.00011160	g/bhp-hr	EPA
n-Nonane	0.0028	0.00036300	g/bhp-hr	EPA
CO2	2,801.9473	363.03769350	g/bhp-hr	EPA

## Gas Quality - Eunice Compressor Station

Component	MW	Mol%	MW * Mol %	Wt %
Nitrogen	28.01	2.776%	0.778	4.47%
Oxygen	31.99	0.000%	0.000	0.00%
CO <sub>2</sub>	44.01	0.095%	0.042	0.24%
Methane	16.04	90.561%	14.529	83.51%
Ethane	30.07	6.068%	1.825	10.49%
Propane	44.10	0.473%	0.208	1.20%
I-Butane	58.12	0.009%	0.005	0.030%
N-Butane	58.12	0.016%	0.009	0.053%
I-Pentane	72.15	0.001%	0.001	0.0054%
N-Pentane	72.15	0.001%	0.001	0.0033%
Hexanes +	86.18	0.001%	0.001	0.0040%
Total		100.00%	17.40	100%

} VOC components

VOC wt %:	1.29%	<input type="checkbox"/> %propane through %hexanes
VOC wt % / TOC wt %:	1.36%	<input type="checkbox"/> %propane through %hexanes / <input type="checkbox"/> %methane through %hexanes
Gas molecular weight:	17.40 lb/lb-mol	<input type="checkbox"/> MW * mol%
Gas molar volume:	378.61 scf/lb-mol	Constant
Gas density:	0.0460 lb/scf	Gas MW / Molar volume

Average analytical from 1/1/20120 to 4/1/2020

Source: PIN 301468 - EPNG Plains PLT Suction (From Eunice)

# Section 8

## Map(s)

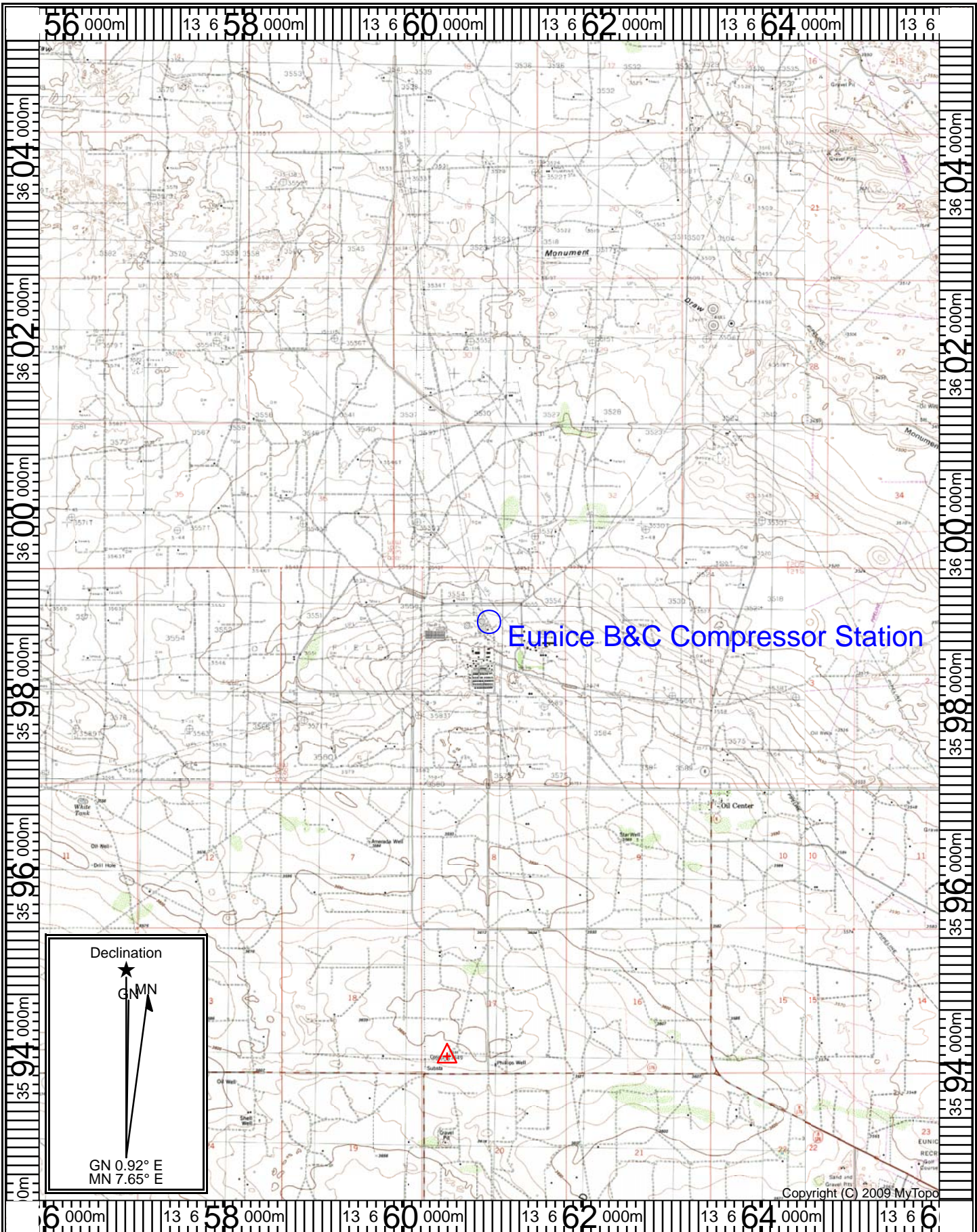
---

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

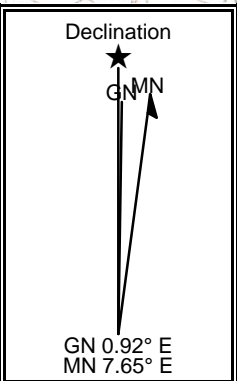
The UTM or Longitudinal coordinate system on both axes	An indicator showing which direction is north
A minimum radius around the plant of 0.8km (0.5 miles)	Access and haul roads
Topographic features of the area	Facility property boundaries
The name of the map	The area which will be restricted to public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

---

A topographical map is attached on the following page.



Eunice B&C Compressor Station



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Map Name: MONUMENT SOUTH  
Print Date: 05/26/15

Scale: 1 inch = 4,761 ft.  
Map Center: 13 0660853 E 3598844 N

Horizontal Datum: NAD27

# 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 – Public notice is not required for applications 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.

---

Eunice B & C Compressor Station is natural gas compressor station that compresses natural gas and delivers the compressed gas to a pipeline for mainline transportation. The facility consists primarily of three Solar Taurus Turbines (units B-01, C-01, and C-02) and one Caterpillar G3612 RICE (unit C-03). The turbines and engine power the facility's compressors. There is also an emergency generator (unit AUX-C01) at the facility.





# 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):**

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/>

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**Table for Applicable STATE REGULATIONS:**

<u>STATE REGULATIONS</u> CITATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	<b>JUSTIFICATION:</b>  (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	20.2.1 NMAC is a regulation that applies for existing Title V application and facility.
20.2.3 NMAC	Ambient Air Quality Standards NMAAQs	Yes	N/A	20.2.3 NMAC is a SIP approved regulation that limits the maximum allowable concentration of Total Suspended Particulates, Sulfur Compounds, Carbon Monoxide and Nitrogen Dioxide. The facility meets maximum allowable concentrations of TSP, SO <sub>2</sub> , H <sub>2</sub> S, NO <sub>x</sub> , and CO 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.
20.2.23 NMAC	Fugitive Dust Control	No	N/A	This regulation does not apply as this facility is an existing Title V operating facility.
20.2.33 NMAC	Gas Burning Equipment - Nitrogen Dioxide	No	N/A	This facility does not have gas burning equipment (external combustion emission sources, such as gas fired boilers and heaters) having a heat input of greater than 1,000,000 million British Thermal Units per year per unit. The facility is not subject to this regulation and does not have emission sources that meet the applicability requirements under 20.2.33.108 NMAC.
20.2.34 NMAC	Oil Burning Equipment: NO <sub>2</sub>	No	N/A	This facility does not have oil burning equipment (external combustion emission sources, such as oil fired boilers and heaters) having a heat input of greater than 1,000,000 million British Thermal Units per year per unit. The facility is not subject to this regulation and does not have emission sources that meet the applicability requirements under 20.2.34.108 NMAC.
20.2.35 NMAC	Natural Gas Processing Plant – Sulfur	No	N/A	This regulation establishes sulfur emission standards for natural gas processing plants. This regulation does not apply to this facility.
20.2.37 and 20.2.36 NMAC	Petroleum Processing Facilities and Petroleum Refineries	No	N/A	This purpose of this regulation is to minimize emissions from petroleum or natural gas processing facilities. Eunice B & C Compressor Station is not a petroleum or natural gas processing facility. This regulation does not apply.
<a href="#">20.2.38</a> NMAC	Hydrocarbon Storage Facility	No	N/A	This regulation is not applicable as the facility does not have petroleum storage tanks with a capacity greater than 20,000 gallons. In addition this plant does not contain a “tank battery” or a “hydrocarbon storage facility” as these terms are understood.
<a href="#">20.2.39</a> NMAC	Sulfur Recovery Plant - Sulfur	No	N/A	The objective of this part is to establish emission standards for sulfur recovery plants which are not part of petroleum or natural gas processing facilities. This facility is a natural gas processing facility so this regulation is not applicable.
20.2.61.109 NMAC	Smoke & Visible Emissions	Yes	B-01, C-01, C-02, C-03, AUX-C01	This regulation deals with smoke and visible emissions from combustions units. The engine and turbines at this facility are subject to this regulation. The applicable units comply with this regulation by the sole use of pipeline quality natural gas fuel.
20.2.70 NMAC	Operating Permits	Yes	Facility	The facility is a major source and has been issued operating permit #P-251-R1.
20.2.71 NMAC	Operating Permit Fees	Yes	Facility	Yes, this facility is subject to 20.2.70 NMAC and is in turn subject to 20.2.71 NMAC.
20.2.72 NMAC	Construction Permits	Yes	Facility	This facility is subject to 20.2.72 NMAC and NSR Permit number 1009-M2R3.

<u>STATE REGU- LATIONS CITATION</u>	<b>Title</b>	<b>Applies? Enter Yes or No</b>	<b>Unit(s) or Facility</b>	<b>JUSTIFICATION:  (You may delete instructions or statements that do not apply in the justification column to shorten the document.)</b>
20.2.73 NMAC	NOI & Emissions Inventory Requirements	Yes	Facility	Emissions Inventory Reporting: 20.2.73.300 NMAC applies. All Title V major sources meet the applicability requirements of 20.2.73.300.B(1) NMAC. This facility is subject to this regulation as it is a Title V major source. EPNG has and will continue to submit an annual emissions report for Eunice B & C Compressor Station
20.2.74 NMAC	Permits – Prevention of Significant Deterioration (PSD)	No	N/A	This facility is not a PSD major source as defined in 20.2.74 NMAC.
20.2.75 NMAC	Construction Permit Fees	Yes	Facility	This facility is subject to 20.2.72 NMAC and is in turn subject to 20.2.75 NMAC. This facility is exempt from annual fees under this part (20.2.75.11.E NMAC) as it is subject to fees pursuant to 20.2.71 NMAC (Title V).
20.2.77 NMAC	New Source Performance	Yes	B-01, C-01, C-02, C-03, AUX- C01	This is a stationary source which is subject to the requirements of 40 CFR Part 60, as amended through January 15, 2017. Unit B-01 is subject to 40 CFR 60 Subpart GG. Units C-01 and C-02 are subject to 40 CFR 60 Subpart KKKK. Unit C-03 and AUXC01 are subject to 40 CFR 60 Subpart JJJJ. There are no applicable requirements for AUX-C01 under NSPS JJJJ.
20.2.78 NMAC	Emission Standards for HAPS	Yes	N/A	This facility emits hazardous air pollutants which are subject to the requirements of 40 CFR Part 61, as amended through January 15, 2017. Subpart M of 40 CFR 61 would be applicable only in the case of asbestos demolition
20.2.79 NMAC	Permits – Nonattainment Areas	No	N/A	This regulation establishes the requirements for obtaining a nonattainment area permit. The facility is not be 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. This regulation does not apply as all stacks at the facility will follow good engineering practices.
20.2.82 NMAC	MACT Standards for source categories of HAPS	Yes	C-03 & AUX- C01	This regulation applies to all sources emitting hazardous air pollutants, which are subject to the requirements of 40 CFR Part 63, as amended through January 15, 2017. Units C-03 and AUXC01 are subject to 40 CFR 63 Subpart ZZZZ. There are no applicable requirements for the engine under MACT ZZZZ.

**Table for Applicable FEDERAL REGULATIONS (Note: This is not an exhaustive list):**

<u>FEDERAL REGULATIONS CITATION</u>	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. The facility meets all applicable national ambient air quality standards for NOx, CO, SO2, H2S, PM10, and PM2.5 under this regulation.
NSPS 40 CFR 60, Subpart A	General Provisions	Yes	B-01, C-01, C-02, C-03, AUX-C01	This regulation applies because 40 CFR 60 Subparts GG, JJJJ, and KKKK apply.
NSPS 40 CFR60.40a, Subpart Da	Subpart Da, Performance Standards for <b>Electric Utility Steam Generating Units</b>	No	N/A	This regulation establishes standards of performance for electric utility steam generating units. This regulation does not apply because the facility does not operate any electric utility steam generating units.
NSPS 40 CFR60.40b Subpart Db	<b>Electric Utility Steam Generating Units</b>	No	N/A	This regulation establishes standards of performance for industrial-commercial-institutional steam generating units. This regulation does not apply because the facility does not operate any industrial-commercial-institutional steam generating units.
40 CFR 60.40c, Subpart Dc	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units	No	N/A	This regulation establishes standards of performance for industrial-commercial-institutional steam generating units. This regulation does not apply because the facility does not operate any industrial-commercial-institutional steam generating units.
NSPS 40 CFR 60, Subpart Ka	Standards of Performance for <b>Storage Vessels for Petroleum Liquids</b> for which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and <b>Prior</b> 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 tanks at this facility are below the applicable capacity thresholds.



<u>FEDERAL REGULATIONS CITATION</u>	<b>Title</b>	<b>Applies? Enter Yes or No</b>	<b>Unit(s) or Facility</b>	<b>JUSTIFICATION:</b>
NSPS 40 CFR 60, Subpart Kb	Standards of Performance for <b>Volatile Organic Liquid Storage Vessels</b> (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced <b>After</b> July 23, 1984	No	N/A	This regulation establishes performance standards for volatile organic liquid storage vessels (including petroleum liquid storage vessels) for which construction, reconstruction, or modification commenced after July 23, 1984. The tanks at this facility are below the applicable capacity thresholds.
NSPS 40 CFR 60.330 Subpart GG	<b>Stationary Gas Turbines</b>	Yes	B-01	This regulation establishes standards of performance for stationary gas turbines with a heat input at a peak load equal to or greater than 10 MMBtu/hr based on the lower heating value of the fuel fired and have commenced construction, modification, or reconstruction after October 3, 1977. Unit B- 01 has a heat input >10 MMBtu/hour and was installed after October 3, 1977 applicability date. EPNG will comply all applicable requirements in this subpart.
NSPS 40 CFR 60, Subpart KKK	Leaks of VOC from <b>Onshore Gas Plants</b>	No	N/A	This regulation establishes standards of performance for equipment leaks from onshore gas plants. This facility is not an onshore natural gas processing plant. Accordingly, this regulation does not apply.
NSPS 40 CFR Part 60 Subpart LLL	Standards of Performance for <b>Onshore Natural Gas Processing: SO<sub>2</sub> Emissions</b>	No	N/A	This regulation establishes standards of performance for SO <sub>2</sub> emissions from onshore gas plants. This facility is not an onshore natural gas processing plant so 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	The rule applies to “affected” facilities that are constructed, modified, or reconstructed after Aug 23, 2011 (40 CFR 60.5365): gas wells, including fractured and hydraulically refractured wells, centrifugal compressors, reciprocating compressors, pneumatic controllers, certain equipment at natural gas processing plants, sweetening units at natural gas processing plants, and storage vessels. This facility has no affected facility that was constructed, modified, or reconstructed after Aug 23, 2011 therefore this regulation does not apply.
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	The rule applies to “affected” facilities that are constructed, modified, or reconstructed after September 18, 2015 (40 CFR 60.5365): gas wells, including fractured and hydraulically refractured wells, centrifugal compressors, reciprocating compressors, pneumatic controllers, certain equipment at natural gas processing plants, sweetening units at natural gas processing plants, and storage vessels. No units at the facility are subject to this regulation.

<u>FEDERAL REGU- LATIONS CITATION</u>	<b>Title</b>	<b>Applies? Enter Yes or No</b>	<b>Unit(s) or Facility</b>	<b>JUSTIFICATION:</b>
NSPS 40 CFR 60 Subpart IIII	Standards of performance for Stationary Compression Ignition Internal Combustion Engines	No	N/A	This regulation does not apply as there are no stationary compression engines at the facility.
NSPS 40 CFR Part 60 Subpart JJJJ	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines	Yes	C-03 & AUX- C01	This regulation establishes standards of performance for stationary spark ignition internal combustion engines. Unit C-03 is a stationary spark ignition internal combustion engine that was manufactured after October 19, 2007 and is therefore subject to this regulation. EPNG will comply all applicable requirements in this subpart. Unit AUX-C01 is subject to NSPS JJJJ with no applicable requirements because of the date of construction and manufacture.
NSPS 40 CFR Part 60 Subpart KKKK	Standards of Performance for Stationary Combustion Turbines	Yes	C-01 & C-02	Stationary combustion turbines at this facility (Units C-01 and C-02) were constructed after February 18, 2005, and have a peak load heat input greater than 10 MMBtu/hr. Therefore, pursuant to 40 CFR 40.4305, these units are subject to NSPS KKKK. Unit B-01 was constructed prior to February 18, 2005, and is therefor not subject to this regulation.
NSPS 40 CFR 60 Subpart TTTT	Standards of Performance for Greenhouse Gas Emissions for Electric Generating Units	No	N/A	This regulation does not apply as none of the units at the facility are electric generating units.
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 does not apply as none of the units at the facility are electric generating units.
NSPS 40 CFR 60, Subparts WWW, XXX, Cc, and Cf	Standards of performance for Municipal Solid Waste (MSW) Landfills	No	N/A	This regulation does not apply as this facility is not a landfill.
NESHAP 40 CFR 61 Subpart A	General Provisions	No	N/A	No units at this facility are subject to and subparts of 40 CFR 61, this regulation does not apply.
NESHAP 40 CFR 61 Subpart E	National Emission Standards for <b>Mercury</b>	No	N/A	The provisions of this subpart are applicable to those stationary sources which process mercury ore to recover mercury, use mercury chlor-alkali cells to produce chlorine gas and alkali metal hydroxide, and incinerate or dry wastewater treatment plant sludge. This facility is not subject to this regulation as it does not process mercury ore, use mercury chlor-alkali cells, or incinerate or dry wastewater treatment plant sludge.
NESHAP 40 CFR 61 Subpart V	National Emission Standards for <b>Equipment Leaks</b> (Fugitive Emission Sources)	No	N/A	The provisions of this subpart apply to each of the following sources that are intended to operate in volatile hazardous air pollutant (VHAP) service: pumps, compressors, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, surge control vessels, bottoms receivers, and control devices or systems required by this subpart. Not applicable as the facility equipment does not operate in VHAP service that is at least 10 percent by weight of VHAP.
MACT 40 CFR 63, Subpart A	General Provisions	Yes	C-03 & AUX- C01	Applies if any other subpart applies. This facility is subject to 40 CFR 63 Subpart ZZZZ; therefore Subpart A of 40 CFR 63 is also applicable.

<b><u>FEDERAL REGU- LATIONS CITATION</u></b>	<b>Title</b>	<b>Applies? Enter Yes or No</b>	<b>Unit(s) or Facility</b>	<b>JUSTIFICATION:</b>
MACT 40 CFR 63.760 Subpart HH	<b>Oil and Natural Gas Production Facilities</b>	No	N/A	This regulation establishes national emission standards for hazardous air pollutants from oil and natural gas production facilities. Not applicable because the facility is not an "Oil and Natural Gas Production Facility."
MACT 40 CFR 63 Subpart HHH		No	N/A	This regulation establishes national emission standards for hazardous air pollutants from natural gas transmission and storage facilities. This regulation only applies to major sources of HAP emissions per §63.1270(a). This facility is not a major source of HAP emissions. Accordingly, this regulation does not apply.
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 does not apply as the facility does not have any industrial grade boilers and heaters.
MACT 40 CFR 63 Subpart UUUUU	National Emission Standards for Hazardous Air Pollutants Coal & Oil Fire Electric Utility Steam Generating Unit	No	N/A	This regulation does not apply as this facility does not have coal or oil fired steam generating units.
MACT 40 CFR 63 Subpart ZZZZ	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines ( <b>RICE MACT</b> )	Yes	C-03 & AUX- C01	This regulation defines national emission standards for HAPs emitted from stationary reciprocating internal combustion engines. Facilities are subject to this subpart if they own or operate a stationary RICE, except if the stationary RICE is being tested at a stationary RICE test cell/stand. Units C-03 and AUX C-01 are subject to this regulation. There are no applicable requirements for this unit under MACT ZZZZ.
40 CFR 64	<b>Compliance Assurance Monitoring</b>	No	N/A	<p>Not applicable as the facility has no units meeting the criteria of this part; specifically, no emission units are controlled major sources.</p> <p>In general terms, a CAM-affected unit must:</p> <ul style="list-style-type: none"> <li>• Be at a major source that is required to obtain a part 70 or 71 permit.</li> <li>• Be subject to an emission limit for a pollutant.</li> <li>• Use a control device to achieve compliance with that limit; and</li> <li>• Have a pre-control potential to emit for that pollutant greater than major source level.</li> </ul> <p>Although Eunice B &amp; C Compressor Station is a Title V major source with a part 70 permit, none of the units at this facility use a control device (as defined by the CAM rule) to achieve compliance with emission limits.</p>

<u>FEDERAL REGULATIONS CITATION</u>	<b>Title</b>	<b>Applies? Enter Yes or No</b>	<b>Unit(s) or Facility</b>	<b>JUSTIFICATION:</b>
40 CFR 68	<b>Chemical Accident Prevention</b>	No	N/A	<p>This facility is regulated under DOT Office of Pipeline Safety Regulations (49 CFR 192, 193, and 195); therefore, it is not subject to this regulation.</p> <p>This regulation arises from section 112(r) of the Clean Air Act and establishes thresholds based on inventoried quantities of specific substances in process.</p> <p>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 provisions of this part, provided that such transportation is regulated under 49 CFR parts 192, 193, or 195 (DOT Office of Pipeline Safety Regulations).</p>
Title IV – Acid Rain 40 CFR 72	<b>Acid Rain</b>	No	N/A	Not applicable as this facility is not an acid rain source.
Title IV – Acid Rain 40 CFR 73	<b>Sulfur Dioxide Allowance Emissions</b>	No	N/A	Not applicable as this facility is not an acid rain source.
Title IV-Acid Rain 40 CFR 75	<b>Continuous Emissions Monitoring</b>	No	N/A	Not applicable as this facility is not an acid rain source.
Title IV – Acid Rain 40 CFR 76	<b>Acid Rain Nitrogen Oxides Emission Reduction Program</b>	No	N/A	Not applicable as this facility is not an acid rain source.
Title VI – 40 CFR 82	<b>Protection of Stratospheric Ozone</b>	No	N/A	<p>EPNG owns appliances containing CFC’s and is therefore technically subject to this requirement. EPNG uses only certified technicians for the maintenance, service, repair, and disposal of appliances and maintains the appropriate records for this requirement.</p> <p>Note: Disposal definition in 82.152: Disposal means the process leading to and including: (1) The discharge, deposit, dumping, or placing any discarded appliance into or on any land or water; (2) The disassembly of an appliance for discharge, deposit, dumping, or placing of its discarded component parts into or on any land or water; or (3) The disassembly of any appliance for reuse of its component parts.</p> <p>“Major maintenance, service, or repair means” any maintenance, service, or repair that involves the removal of any or all of the following appliance components: compressor, condenser, evaporator, or auxiliary heat exchange coil; or any maintenance, service or repair that involves uncovering an opening of more than four (4) square inches of “flow area” for more than 15 minutes</p>

# Section 14

## Operational Plan to Mitigate Emissions

(Submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

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- 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 keeps an operational plan to mitigate emissions from startup, shutdown, maintenance, and malfunction from Eunice B & C and it is available upon request.



# Section 15

## Alternative Operating Scenarios

(Submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

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

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

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

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The facility does not have alternative operating scenarios.





# 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](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. <b>Note:</b> 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.

Modeling is not being submitted with the application pursuant to 20.2.70 NMAC. Air dispersion modeling for this facility was last submitted with the revision application of NSR permit No. 1009 submitted in August 2007.



# Section 17

## Compliance Test History

(Submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

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

**Compliance Test History Table**

Unit No.	Test Description	Test Date
B-01	Tested annually in accordance with EPA test methods for NOx and CO as required (NSPS GG).	3/05/2014 2/24/2015 1/5/16 1/3/17 1/18/2018
C-01	Tested annually in accordance with EPA test methods for NOx and CO as required (NSPS KKKK).	3/04/2014 2/24/2015 1/7/16 1/3/17 1/17/18
C-02	Tested annually in accordance with EPA test methods for NOx and CO as required (NSPS KKKK).	3/05/2014 2/23/2015 1/7/16 1/3/17 1/17/18
C-03	Tested annually in accordance with EPA test methods for NOx and CO as required (NSPS JJJJ) and tested quarterly pursuant to NOx and CO permit limits (State).	3/04/2014 5/19/2014 8/28/2014 11/20/2014 2/25/2015 5/21/15 (State) 8/28/15 (State) 11/27/15 (State) 1/6/16 (JJJJ) 4/6/16 (State) 7/11/16 (State) 10/3/16 (State) 1/4/17 (JJJJ) 6/21/17 (State) 9/14/17 (State) 12/15/17 (State) 1/18/18 (JJJJ) 5/14/18 (State) 8/23/18 (State) 11/20/18 (State) 1/15/19 (JJJJ) 5/14/19 (State) 8/22/19 (State) 11/12/19 (State) 1/17/20 (JJJJ) 4/27/20 (State)



# Section 19

## Requirements for Title V Program

Do not print this section unless this is a Title V application.

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### Who Must Use this Attachment:

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

### **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.

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Based on EPNG's analysis, no sources at Eunice B & C are controlled major sources of regulated pollutants, and compliance assurance monitoring requirements are not applicable. EPNG will submit the necessary statement should the facility or requirements change such that this requirement becomes applicable.

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### **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 is compliant with all applicable state and federal requirements at Eunice B & C stated in Section 13 of this application.

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**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.

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EPNG will continue to operate Eunice B & C in compliance with all applicable requirements.

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**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.

EPNG requests the following reporting schedule:

- The first reporting period will run from June 1 through November 30. Report submittal will be due by 45 days after November 30.
- The second reporting period will run from December 1 through the last day in May 31. Report submittal will be due 45 days after May 31.

Similarly, the annual compliance certification period will be from June 1 through May 31. The report will be submitted no later than June 30.

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**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.) None
- 

EPNG owns appliances containing CFC's and is therefore technically subject to this requirement. EPNG uses only certified technicians for the maintenance, service, repair, and disposal of appliances and maintains the appropriate records for this requirement.

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## 19.6 - Compliance Plan and Schedule

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

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

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

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

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

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

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

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

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

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

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

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

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EPNG is in compliance with all applicable requirements for Eunice B & C.

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## 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.

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Eunice B & C is not subject to 40 CFR 68 and is therefore not required to provide an RMP.

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## 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)?

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The facility is operated within 13 miles of the state of Texas.

**19.9 - Responsible Official**

Provide the Responsible Official as defined in 20.2.70.7.AD NMAC:

RO:	Heriberto (Eddie) Carreon
Title:	Operations Director
Phone:	(806) 354-3108 x225
Email:	<a href="mailto:heriberto_carreon@kindermorgan.com">heriberto_carreon@kindermorgan.com</a>
Address:	4711 S. Western, Amarillo, TX 79109



# Section 20

## Other Relevant Information

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**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.

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No other relevant information is being submitted with this application.



# Section 22: Certification

Company Name: El Paso Natural Gas Company

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

Signed this 5<sup>th</sup> day of October, 2020, upon my oath or affirmation, before a notary of the State of

Texas.

[Signature]  
\*Signature

10/5/2020  
Date

Heriberto Carreon  
Printed Name

Operations Director  
Title

Scribed and sworn before me on this 5 day of October, 2020.

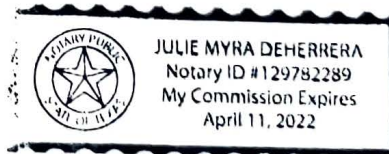
My authorization as a notary of the State of Texas expires on the

11 day of April, 2022.

[Signature]  
Notary's Signature

10-5-20  
Date

Julie Myra DeHerrera  
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.