

August 17, 2020

New Mexico Environment Department
Air Quality Bureau, Permits Section
525 Camino de los Marquez, Ste. 1
Santa Fe, New Mexico 87505
(505) 476-4300

**RE: Application to Renew Title V Operating Permit No. P242-R2M1
West Eunice Compressor Station
Lea County, New Mexico
ETC Texas Pipeline, Ltd.**

Dear Sir/Madam:

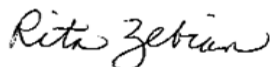
On behalf of ETC Texas Pipeline, Ltd. (ETC), Altamira, LLC is submitting the enclosed Application to Renew Title V Operating Permit No. P242-R2M1 for the West Eunice Compressor Station. The site is located in Lea County, New Mexico.

Based on recent guidance from Melinda Owens, we are enclosing one complete paper copy of the application, which includes the signed and notarized certification page.

Electronic copies of the application files will be transmitted via secure electronic transfer upon request.

If you have any questions or comments, please contact Carolyn Blackaller of ETC at (817) 302-9766 or Carolyn.Blackaller@energytransfer.com.

Sincerely,
Altamira-US, LLC



Rita Zebian
Senior Project Manager

Cc: Carolyn Blackaller, ETC
Larry Sexson, ETC

**APPLICATION TO RENEW
TITLE V OPERATING PERMIT NO. P242-R2M1
WEST EUNICE COMPRESSOR STATION
LEA COUNTY, NM**

AUGUST 2020

Submitted to:
New Mexico Environment Department
Air Quality Bureau, Permits Section
525 Camino de los Marquez, Suite 1
Santa Fe, NM 87505

Prepared for:
ETC Texas Pipeline, Ltd.
600 N. Marienfeld St., Suite 700
Midland, TX 79701
817-302-9766

Prepared by:
Altamira-US, LLC
2301 E. Lamar Blvd., Suite 200
Arlington, Texas 76006
817-617-2675

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Mail Application To: New Mexico Environment Department Air Quality Bureau Permits Section 525 Camino de los Marquez, Suite 1 Santa Fe, New Mexico, 87505 Phone: (505) 476-4300 Fax: (505) 476-4375 www.env.nm.gov/aqb		For Department use only: AIRS No.:
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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).

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

Section 1 – Facility Information

Section 1-A: Company Information		AI # if known (see 1 st 3 to 5 #s of permit IDEA ID No.):755	Updating Permit/NOI #: P242-R2, P242-R2M1
1	Facility Name: West Eunice Compressor Station	Plant primary SIC Code (4 digits): 4922 Plant NAIC code (6 digits): 486210	
a	Facility Street Address (If no facility street address, provide directions from a prominent landmark): 2.9 miles west of Eunice, NM		
2	Plant Operator Company Name: ETC Texas Pipeline, Ltd.	Phone/Fax: (713) 989-7447	
a	Plant Operator Address: 600 N. Marienfeld, Suite 700, Midland, Texas 79701		

b	Plant Operator's New Mexico Corporate ID or Tax ID: 85-60000565	
3	Plant Owner(s) name(s): ETC Texas Pipeline, Ltd.	Phone/Fax: (713) 989-7447
a	Plant Owner(s) Mailing Address(s): 600 N. Marienfeld, Suite 700, Midland, Texas 79701	
4	Bill To (Company): ETC Texas Pipeline, Ltd.	Phone/Fax: (817) 302-9766
a	Mailing Address: 600 N. Marienfeld, Suite 700, Midland, Texas 79701	E-mail: Carolyn.Blackaller@energytransfer.com
5	<input type="checkbox"/> Preparer: <input checked="" type="checkbox"/> Consultant: Rita Zebian, Altamira	Phone/Fax: (817) 617-2675 / (817) 617-2683
a	Mailing Address: 2301 E Lamar Blvd., Ste. 200, Arlington, TX 76006	E-mail: rita.zebian@altamira-us.com
6	Plant Operator Contact: Carolyn Blackaller	Phone/Fax: (817) 302-9766
a	Address: 600 N. Marienfeld, Suite 700, Midland, Texas 79701	E-mail: Carolyn.Blackaller@energytransfer.com
7	Air Permit Contact: Contact: Carolyn Blackaller	Title: Sr. Environmental Specialist EH&S
a	E-mail: Carolyn.Blackaller@energytransfer.com	Phone/Fax: (817) 302-9766
b	Mailing Address: 600 N. Marienfeld, Suite 700, Midland, Texas 79701	
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 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-242-R2
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:
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:
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: 2103-M6R1
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:

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: 2.5 MMscf	Daily: 60 MMscf	Annually: 21,960 MMscf
b	Proposed	Hourly: 2.5 MMscf	Daily: 60 MMscf	Annually: 21,960 MMscf
2	What is the facility's maximum production rate, specify units (reference here and list capacities in Section 20, if more room is required)			
a	Current	Hourly: 2.5 MMscf	Daily: 60 MMscf	Annually: 21,960 MMscf

b	Proposed	Hourly: 2.5 MMscf	Daily: 60 MMscf	Annually: 21,960 MMscf
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Section 1-D: Facility Location Information

1	Section: 1	Range: 36E	Township: 22S	County: Lea	Elevation (ft): 3476
2	UTM Zone: <input type="checkbox"/> 12 or <input checked="" type="checkbox"/> 13			Datum: <input checked="" type="checkbox"/> NAD 27 <input type="checkbox"/> NAD 83 <input type="checkbox"/> WGS 84	
a	UTM E (in meters, to nearest 10 meters): 668190			UTM N (in meters, to nearest 10 meters): 3589300	
b	AND Latitude (deg., min., sec.): 32°25'41.2123"			Longitude (deg., min., sec.): 103°12'40.1501"	
3	Name and zip code of nearest New Mexico town: Eunice, NM 88231				
4	Detailed Driving Instructions from nearest NM town (attach a road map if necessary): From Eunice, travel west on State Highway 8 for 1.6 miles. Bear left onto County Road 22 then travel 1.2 miles. Turn south and travel 1 mile. At the 4 way intersection turn east and travel a quarter mile to the facility which will be on the left.				
5	The facility is 3 (distance) miles SW (direction) of Eunice (nearest town).				
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: Eunice				
8	20.2.72 NMAC applications only : Will the property on which the facility is proposed to be constructed or operated be closer than 50 km (31 miles) to other states, Bernalillo County, or a Class I area (see www.env.nm.gov/aqb/modeling/classIareas.html)? <input type="checkbox"/> Yes <input type="checkbox"/> No (20.2.72.206.A.7 NMAC) If yes, list all with corresponding distances in kilometers:				
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): 112.5 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: 1400 m, occupied structure				
12	Method(s) used to delineate the Restricted Area: "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 maximum operating ($\frac{\text{hours}}{\text{day}}$): 24	($\frac{\text{days}}{\text{week}}$): 7	($\frac{\text{weeks}}{\text{year}}$): 52	($\frac{\text{hours}}{\text{year}}$): 8,760
2	Facility's maximum daily operating schedule (if less than 24 $\frac{\text{hours}}{\text{day}}$)? Start:		<input type="checkbox"/> AM <input type="checkbox"/> PM	End: <input type="checkbox"/> AM <input type="checkbox"/> PM
3	Month and year of anticipated start of construction: N/A			
4	Month and year of anticipated construction completion: N/A			
5	Month and year of anticipated startup of new or modified facility: N/A			
6	Will this facility operate at this site for more than one year? <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:	NOV Tracking No:	
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:	Date:	Requirement # (or page # and paragraph #):
d	Provide the required text to be inserted in this permit:		
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"/> ≥ 10 tpy of any single HAP OR <input type="checkbox"/> ≥ 25 tpy of any combination of HAPS) OR <input checked="" type="checkbox"/> Minor (<input type="checkbox"/> < 10 tpy of any single HAP AND <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): Mr. Clint Green		Phone: (713) 989-7447
a	R.O. Title: Vice President of Operations	R.O. e-mail: clint.green@energytransfer.com	
b	R. O. Address: 1300 Main Street, Houston, TX 77002		
2	Alternate Responsible Official (20.2.70.300.D.2 NMAC): Mr. Mike McCracken		Phone: (575) 347-6045
a	A. R.O. Title: Senior Director of Operations	A. R.O. e-mail: mike.mccracken@energytransfer.com	
b	A. R. O. Address: 6381 North Main, Roswell, NM 88201		
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): None		
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.): Regency Energy Partners		
a	Address of Parent Company: 8111 Westchester Drive, Suite 600, Dallas, TX 75225		
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.): None		
6	Telephone numbers & names of the owners' agents and site contacts familiar with plant operations: None		

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: Other States – Texas 13.7 km; Local Air Pollution Control Program – None; Indian Tribes and Pueblos - None</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 Rita Zebian

Email rita.zebian@altamira-us.com

Phone number 817-617-2675

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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Section 16:	Air Dispersion Modeling
Section 17:	Compliance Test History
Section 18:	Addendum for Streamline Applications (streamline applications only)
Section 19:	Requirements for the Title V (20.2.70 NMAC) Program (Title V applications only)
Section 20:	Other Relevant Information
Section 21:	Addendum for Landfill Applications
Section 22:	Certification Page

Table 2-A: Regulated Emission Sources

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

Unit Number ¹	Source Description	Make	Model #	Serial #	Manufacturer's Rated Capacity ³ (Specify Units)	Requested Permitted Capacity ³ (Specify Units)	Date of Manufacture ²	Controlled by Unit #	Source Classification Code (SCC)	For Each Piece of Equipment, Check One	RICE Ignition Type (CI, SI, 4SLB, 4SRB, 2SLB) ⁴	Replacing Unit No.
							Date of Construction/Reconstruction ²	Emissions vented to Stack #				
1	4SRB RICE	White Superior	8G-825	278359	800 hp	753 hp	Mar-79	1	31000203	<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	20.2.61 NMED MACT ZZZZ	
							8/15/2015	1				
2	4SLB RICE	Caterpillar	3516 ULB	TBD	1,380 hp	1,380 hp	TBD	2	31000203	<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	20.2.61 NMED MACT ZZZZ NSPS JJJJ	
							TBD	2				
3	4SLB RICE	Superior	2416 GTL	333489	3,200 hp	3,200 hp	1/1/1996	3	31000203	<input type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input checked="" type="checkbox"/> Replacement Unit <input type="checkbox"/> To Be Modified <input type="checkbox"/> To be Replaced	20.2.61 NMED MACT ZZZZ	
							11/15/2018	3				
4	4SLB RICE	Superior	2416 GTL	334729	3,200 hp	3,200 hp	1997	4	31000203	<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	20.2.61 NMED MACT ZZZZ	
							Aug-14	4				
5	4SLB RICE	Caterpillar	3516 ULB	TBD	1,380 hp	1,380 hp	TBD	5	31000203	<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	20.2.61 NMED MACT ZZZZ NSPS JJJJ	
							TBD	5				
6	4SLB RICE	Caterpillar	3516 LE	WPW01704	1,340 hp	1,340 hp	10/10/2007		31000203	<input type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input checked="" type="checkbox"/> Replacement Unit <input type="checkbox"/> To Be Modified <input type="checkbox"/> To be Replaced	20.2.61 NMED MACT ZZZZ	
							12/18/2015	6				
7	4SLB RICE	Caterpillar	3516 LE	WPW01693	1,340 hp	1,340 hp	10/1/2007		31000203	<input type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input checked="" type="checkbox"/> Replacement Unit <input type="checkbox"/> To Be Modified <input type="checkbox"/> To be Replaced	20.2.61 NMED MACT ZZZZ	
							2/14/2017	7				
TK-1	Scrubber Water Tank	N/A	N/A	N/A	500 bbl	500 bbl	2013		40400312	<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	NSPS OOOO	
							May-13	TK Vent				
Fugitives	Fugitive Emissions	N/A	N/A	N/A	N/A	N/A		Fugitives	30600801	<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		
L-1	Truck Loading	N/A	N/A	N/A	N/A	N/A		Fugitives	40600164	<input type="checkbox"/> Existing (unchanged) <input checked="" 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		
VRU	Vapor Recovery Unit	TBD	TBD	TBD	TBD	TBD	TBD		40400312	<input type="checkbox"/> Existing (unchanged) <input checked="" 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	NSPS OOOO	
							TBD	N/A				
TK-2	Scrubber Water Tank	N/A	N/A	N/A	500 bbl	500 bbl	2013		40400312	<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		
							May-13	TK Vent				
TK-1	Scrubber Oil Tank - Option 2	N/A	N/A	N/A	500 bbl	500 bbl	2013	VRU	40400312	<input type="checkbox"/> Existing (unchanged) <input checked="" 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	NSPS OOOO	
							May-13	TK Vent				
TK-2	Scrubber Water Tank - Option 2	N/A	N/A	N/A	500 bbl	500 bbl	2013	VRU	40400312	<input type="checkbox"/> Existing (unchanged) <input checked="" 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		
							May-13	TK Vent				

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

² Specify dates required to determine regulatory applicability.

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

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

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

All 20.2.70 NMAC (Title V) applications must list all Insignificant Activities in this table. All 20.2.72 NMAC applications must list Exempted Equipment in this table. If equipment listed on this table is exempt under 20.2.72.202.B.5, include emissions calculations and emissions totals for 202.B.5 "similar functions" units, operations, and activities in Section 6, Calculations. Equipment and activities exempted under 20.2.72.202 NMAC may not necessarily be Insignificant under 20.2.70 NMAC (and vice versa). Unit & stack numbering must be consistent throughout the application package. Per Exemptions Policy 02-012.00 (see http://www.env.nm.gov/aqb/permit/aqb_pol.html), 20.2.72.202.B NMAC Exemptions do not apply, but 20.2.72.202.A NMAC exemptions do apply to NOI facilities under 20.2.73 NMAC. List 20.2.72.301.D.4 NMAC Auxiliary Equipment for Streamline applications in Table 2-A. The List of Insignificant Activities (for TV) can be found online at <https://www.env.nm.gov/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 ²	For Each Piece of Equipment, Check One
			Serial No.	Capacity Units	Insignificant Activity citation (e.g. IA List Item #1.a)	Date of Installation /Construction ²	
TK-4	Lube Oil Tank	Unknown	N/A	40	20.2.72.202.B.2	Unknown	<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	bbbl	NMED "List of Insignificant Activities" 5	Unknown	
TK-5	Antifreeze Tank	Unknown	N/A	1200	20.2.72.202.B.2	Unknown	<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	bbbl	NMED "List of Insignificant Activities" 5	Unknown	
TK-6	Methanol Tank	Unknown	N/A	18	20.2.72.202.B.2	Unknown	<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	bbbl	NMED "List of Insignificant Activities" 5	Unknown	
TK-7	Corrosion Inhibitor Tank	Unknown	N/A	18	Not a source of regulated pollutants	Unknown	<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	bbbl	NMED "List of Insignificant Activities" 1a	Unknown	
TK-8, TK-9	Corrosion Inhibitor Tanks	Unknown	N/A	500	Not a source of regulated pollutants	Unknown	<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	NMED "List of Insignificant Activities" 1a	Unknown	
TK-10	Corrosion Inhibitor Tank	Unknown	N/A	300	Not a source of regulated pollutants	Unknown	<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	NMED "List of Insignificant Activities" 1a	Unknown	
TK-11	Pipeline Cleaner	Unknown	N/A	500	Not a source of regulated pollutants	Unknown	<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	NMED "List of Insignificant Activities" 1a	Unknown	
TK-12	Pipeline Cleaner	Unknown	N/A	300	Not a source of regulated pollutants	Unknown	<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	NMED "List of Insignificant Activities" 1a	Unknown	
TK-13, 14, 15, 16, 17, 18	Methanol Tanks	Unknown	N/A	1000	20.2.72.202.B.2	Unknown	<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	NMED "List of Insignificant Activities" 1a	Unknown	
TK-19	Used Oil	Unknown	N/A	500	20.2.72.202.B.2	Unknown	<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	NMED "List of Insignificant Activities" 5	Unknown	
TK-20	Antifreeze Tank	Unknown	N/A	N/A	20.2.72.202.B.2	Unknown	<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	N/A	NMED "List of Insignificant Activities" 5	Unknown	
WLOAD	Water Truck Loading	N/A	N/A	N/A	20.2.72.202.B.5	Unknown	<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	N/A	NMED "List of Insignificant Activities" 5	Unknown	
	Misc. maintenance activities	N/A	N/A	N/A	Not a source of regulated pollutants	N/A	<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	N/A	NMED "List of Trivial Activities" 1, 2	N/A	

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

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

Table 2-C: Emissions Control Equipment

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

Control Equipment Unit No.	Control Equipment Description	Date Installed	Controlled Pollutant(s)	Controlling Emissions for Unit Number(s) ¹	Efficiency (% Control by Weight)	Method used to Estimate Efficiency
1	AFRC and Catalytic Converter	1979	NOx and CO	1	2 g NOx, 3 g CO	Eng. Estimate
2	Oxidation Catalytic Converter	TBD	CO and HAPs	2	80% CO, 20% HAPS	Mfg. Data
3	Oxidation Catalytic Converter	1996	CO and HAPs	3	80% CO, 80% HAPS	Mfg. Data
4	Oxidation Catalytic Converter	1997	CO and HAPs	4	80% CO, 80% HAPS	Mfg. Data
5	Oxidation Catalytic Converter	TBD	CO and HAPs	5	80% CO, 20% HAPS	Mfg. Data

¹ 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 ¹		PM10 ¹		PM2.5 ¹		H ₂ S		Lead	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
1	21.68	95.00	16.59	72.67	0.66	2.91	0.10	0.42	0.12	0.54	0.12	0.54	0.12	0.54	-	-	-	-
2	3.04	13.31	8.78	38.48	1.12	4.93	0.16	0.72	0.10	0.46	0.10	0.46	0.10	0.46	-	-	-	-
3	10.58	46.35	18.34	80.34	3.53	15.45	0.33	1.43	0.22	0.95	0.22	0.95	0.22	0.95	-	-	-	-
4	10.58	46.35	18.34	80.34	3.53	15.45	0.33	1.43	0.22	0.95	0.22	0.95	0.22	0.95	-	-	-	-
5	3.04	13.31	8.78	38.48	1.12	4.93	0.16	0.72	0.10	0.46	0.10	0.46	0.10	0.46	-	-	-	-
6	4.43	19.41	5.61	24.58	1.36	5.95	0.14	0.63	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
7	4.43	19.41	5.61	24.58	1.36	5.95	0.14	0.63	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
Fugitives	-	-	-	-	1.80	7.80	-	-	-	-	-	-	-	-	0.07	0.32	-	-
TK-1 (prod water)	-	-	-	-	0.72	3.20	-	-	-	-	-	-	-	-	0.08	0.33	-	-
TK-2 (prod water)	-	-	-	-	0.72	3.20	-	-	-	-	-	-	-	-	0.08	0.30	-	-
Totals	57.78	253.14	82.05	359.47	15.92	69.77	1.36	5.98	0.96	4.24	0.96	4.24	0.96	4.24	0.23	0.95	-	-

¹Condensable 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).

Table 2-E: Requested Allowable Emissions

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

Unit No.	NOx		CO		VOC		SOx		PM ¹		PM10 ¹		PM2.5 ¹		H ₂ S		Lead	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
1	3.32	14.53	4.98	21.80	0.66	2.91	0.10	0.42	0.12	0.54	0.12	0.54	0.12	0.54	-	-	-	-
2	3.04	13.31	1.76	7.70	1.12	4.93	0.16	0.72	0.10	0.46	0.10	0.46	0.10	0.46	-	-	-	-
3	10.58	46.30	3.67	16.07	3.53	15.45	0.33	1.43	0.22	0.95	0.22	0.95	0.22	0.95	-	-	-	-
4	10.58	46.30	3.67	16.07	3.53	15.45	0.33	1.43	0.22	0.95	0.22	0.95	0.22	0.95	-	-	-	-
5	3.04	13.31	1.76	7.70	1.12	4.93	0.16	0.72	0.10	0.46	0.10	0.46	0.10	0.46	-	-	-	-
6	4.43	19.41	5.61	24.58	1.36	5.95	0.14	0.63	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
7	4.43	19.41	5.61	24.58	1.36	5.95	0.14	0.63	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
Fugitives	-	-	-	-	1.80	7.80	-	-	-	-	-	-	-	-	0.07	0.32	-	-
TK-1 (prod water)	-	-	-	-	0.72	3.20	-	-	-	-	-	-	-	-	0.08	0.33	-	-
TK-2 (prod water)	-	-	-	-	0.72	3.20	-	-	-	-	-	-	-	-	0.08	0.30	-	-
Totals	39.42	172.57	27.06	118.50	15.92	69.77	1.36	5.98	0.96	4.24	0.96	4.24	0.96	4.24	0.23	0.95	-	-

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

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

Unit No.	NOx		CO		VOC		SOx		PM ²		PM10 ²		PM2.5 ²		H ₂ S		Lead		
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	
SSM					65.74	17.00									5.3	1.4			
Unit 1-7	21.70	0.60	18.34	0.48	3.50	0.09													
SSM Initial Startup without catalyst.																			
Totals	-	0.60	-	0.48	-	17.09									5.3	1.4			

¹ 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.

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

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

x 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		☐ H ₂ S or ☐ 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
Totals:																	

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)			
1	1	V	No	22	1330	94	N/A	N/A	173.7	0.83
2	2	V	No	22	810	153	N/A	N/A	135.3	1.20
3	3	V	No	50	754	342	N/A	N/A	113.3	1.96
4	4	V	No	50	754	342	N/A	N/A	113.3	1.96
5	5	V	No	22	810	153	N/A	N/A	135.3	1.20
6	6	V	No	20	855	128	N/A	N/A	104.4	1.25
7	7	V	No	20	855	128	N/A	N/A	104.4	1.25
SSM STACK	SSM	V	No	35	200	37.5	N/A	N/A	763.5	0.25

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		Formaldehyde x HAP or □ TAP		Provide Pollutant Name Here □ HAP or □ TAP		Provide Pollutant Name Here □ HAP or □ TAP		Provide Pollutant Name Here □ HAP or □ TAP		Provide Pollutant Name Here □ HAP or □ TAP		Provide Pollutant Name Here □ HAP or □ TAP		Provide Pollutant Name Here □ HAP or □ TAP		Provide Pollutant Name Here □ HAP or □ TAP		
		lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr
1	1	0.25	1.10	0.16	0.70															
2	2	0.18	0.80	0.18	0.80															
3	3	0.25	1.47	0.25	1.10															
4	4	0.34	1.47	0.25	1.10															
5	5	0.18	0.80	0.18	0.80															
6	6	0.71	3.10	0.53	2.34															
7	7	0.71	3.10	0.53	2.34															
Fugitives	Fugitives	0.23	1.00	-	-															
TK-1	TK-1 (prod water)	0.01	0.05	-	-															
TK-2	TK-2 (prod water)	0.01	0.05	-	-															
SSM STACK	SSM	8.6	2.2	-	-															
Totals		11.5	15.2	2.1	9.2															

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
1	Pipeline quality natural gas	Pipeline quality natural gas	950 Btu/scf	6.73 Mcf/hr	58.99 MMcf/yr	N/A	N/A
2	Pipeline quality natural gas	Pipeline quality natural gas	950 Btu/scf	11.46 Mcf/hr	100.36 MMcf/yr	N/A	N/A
3	Pipeline quality natural gas	Pipeline quality natural gas	950 Btu/scf	22.91 Mcf/hr	200.65 MMcf/yr	N/A	N/A
4	Pipeline quality natural gas	Pipeline quality natural gas	950 Btu/scf	2.91 Mcf/hr	200.65 MMcf/yr	N/A	N/A
5	Pipeline quality natural gas	Pipeline quality natural gas	950 Btu/scf	11.46 Mcf/hr	100.36 MMcf/yr	N/A	N/A
6	Pipeline quality natural gas	Pipeline quality natural gas	950 Btu/scf	10.11 Mcf/hr	88.58 MMcf/yr	N/A	N/A
7	Pipeline quality natural gas	Pipeline quality natural gas	950 Btu/scf	10.11 Mcf/hr	88.58 MMcf/yr	N/A	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)
TK-1 (prod water)	40400312	Produced Water	Produced Water	7	70	76	8.8	93	10.5
TK-2 (prod water)	40400312	Produced Water	Produced Water	7	70	76	8.8	93	10.5

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 ³)			Roof	Shell			
TK-1 (prod water)	41395	Produced Water	N/A	FX	500	79.5	4.72	2.4	Tan	Tan	Good	383,250	18.25
TK-2 (prod water)	41395	Produced Water	N/A	FX	500	79.5	4.72	2.4	Tan	Tan	Good	383,250	18.25

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
	Mechanical Shoe Seal	Liquid-mounted resilient seal	Vapor-mounted resilient seal	Seal Type		
FX: Fixed Roof					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: $1.00 \text{ bbl} = 0.159 \text{ M}^3 = 42.0 \text{ gal}$

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)
Natural Gas	Mixed Hydrocarbon Gases	Gas	21,960 MMscf/yr	Pipeline Quality Natural Gas	Primary Methane	G	22,000 MMscf/yr
				Scrubber Oil	Natural Gas Liquids	L	6,570 bbl/yr

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
This table is not applicable. The facility is not equipped with any continuous monitoring devices.									

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
This table is not applicable. facility is not equipped with any para not equipped with any parametric emissions monitoring devices								

Table 2-P: Greenhouse Gas Emissions

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

		CO ₂ ton/yr	N ₂ O ton/yr	CH ₄ ton/yr	SF ₆ ton/yr	PFC/HFC ton/yr ²									Total GHG Mass Basis ton/yr ⁴	Total CO ₂ e ton/yr ⁵
Unit No.	GWPs¹	1	298	25	22,800	footnote 3										
1	mass GHG	3279.76	0.01	0.06	--	--									3279.4273	2978.0608
	CO ₂ e	2974.99	1.67	1.40	--	--										
2	mass GHG	4984.75	0.01	0.09	--	--									4984.8524	4526.7641
	CO ₂ e	4522.09	2.54	2.13	--	--										
3	mass GHG	11148.95	0.02	0.21	--	--									11149.18	10124.62
	CO ₂ e	10114.17	5.68	4.77	--	--										
4	mass GHG	11148.95	0.02	0.21	--	--									11149.18	10124.62
	CO ₂ e	10114.17	5.68	4.77	--	--										
5	mass GHG	4984.75	0.01	0.09	--	--									4984.85	4526.76
	CO ₂ e	4522.09	2.54	2.13	--	--										
6	mass GHG	5180.80	0.01	0.10	--	--									5180.91	4704.80
	CO ₂ e	4699.95	2.64	2.21	--	--										
7	mass GHG	5180.80	0.01	0.10	--	--									5180.91	4704.80
	CO ₂ e	4699.95	2.64	2.21	--	--										
FUG	mass GHG	0.01	--	392.27	--	--									392.28	355.87
	CO ₂ e	0.01	--	15.69	--	--										
SSM	mass GHG	0.02	--	52.69	--	--									1317.26	1195
	CO ₂ e	0.02	--	1194.99	--	--										
	mass GHG															
	CO ₂ e															
	mass GHG															
	CO ₂ e															
	mass GHG															
	CO ₂ e															
Total	mass GHG															
	CO ₂ e															

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

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

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

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

⁵ CO₂e means Carbon Dioxide Equivalent and is calculated by multiplying the TPY mass emissions of the green house gas by its GWP.

Section 3

Application Summary

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

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

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

This is an application for renewal of Operating Permit P242-R2M1 pursuant to 20.2.70.300.B.2. NMAC. Operating Permit P242-R1M2, issued to the West Eunice Compressor Station (West Eunice). Permit P242-R2M1 was last revised on August 19, 2016 and expires on August 19, 2021. A renewal application is due 12 months prior to permit expiration.

West Eunice Compressor Station is authorized under New Source Review (NSR) Permit No. 2103-M6 R1, which was last modified on February 9, 2016. There have been no Technical or Significant Revisions to NSR Permit No. 2103-M6R1 since that time.

West Eunice Compressor Station is a natural gas compressor station. Equipment at the site includes natural-gas fueled compressor engines, two water tanks, miscellaneous insignificant activities, and other equipment not considered to be sources of regulated air pollutants. Natural gas enters the facility into an inlet separator where natural gas liquids and produced water are removed from the gas stream. The natural gas liquids are injected into the discharge piping from the site and produced water is stored in the water tanks then trucked off-site. The natural gas stream is compressed and exits the facility by pipeline. Two options for handling liquids at the site were previously authorized and West Eunice implemented Option 1. Therefore, Option 2 has been removed from the permit.

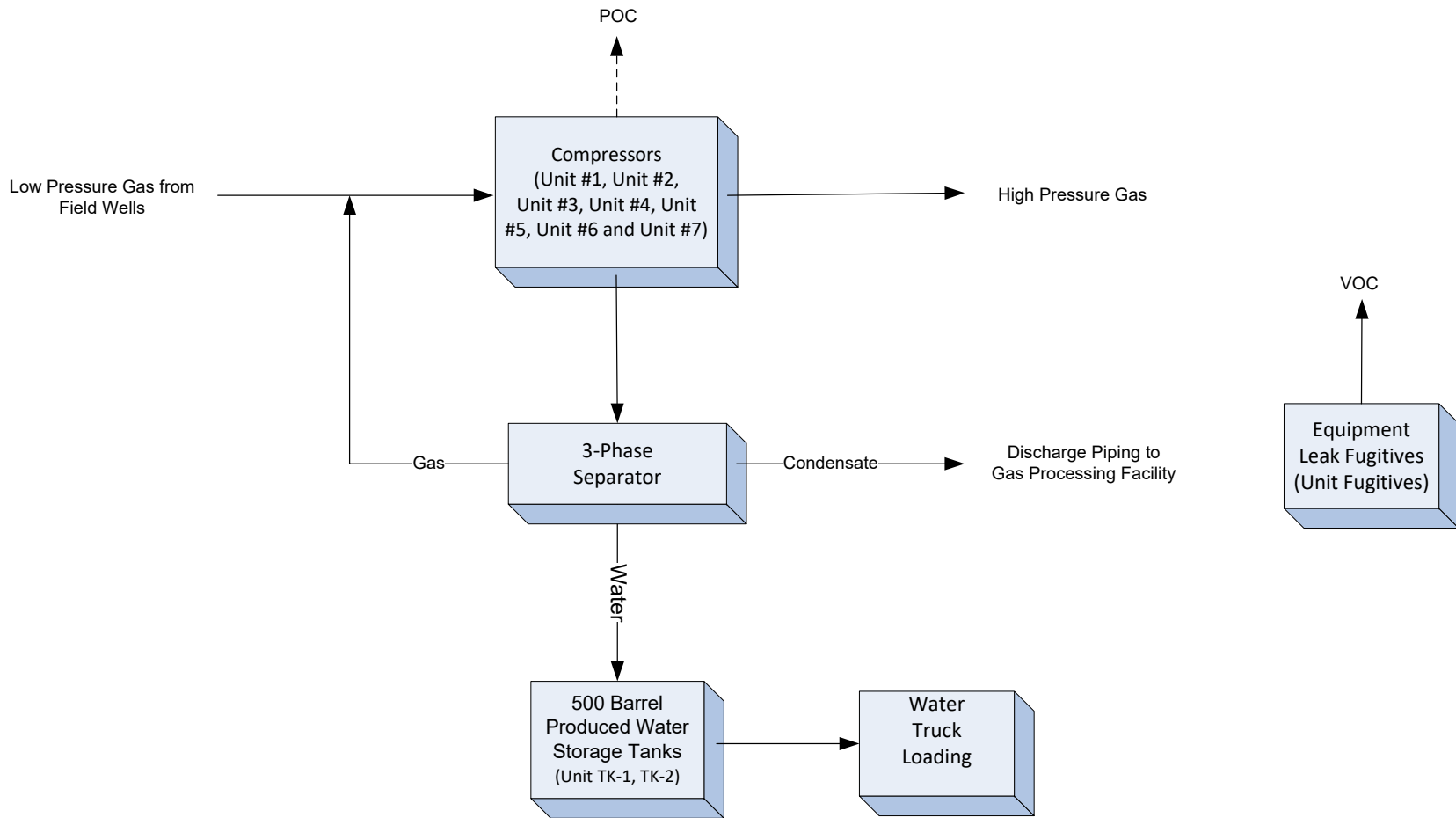
SSM calculations related to startup, shutdown and maintenance of the engines at West Eunice are included in this application.

Section 4

Process Flow Sheet

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

See attached.



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Suite 200
ARLINGTON, TX 76006

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FIGURE TITLE

PROCESS FLOW DIAGRAM

DOCUMENT TITLE

APPLICATION TO RENEW TITLE V OPERATING PERMIT NO. P242-R2M1

CLIENT

ETC TEXAS PIPELINE, LTD.

LOCATION

WEST EUNICE COMPRESSOR STATION
LEA COUNTY, NEW MEXICO

DATE 8/7/2020

SCALE NOT TO SCALE

DESIGNED BY SB

APPROVED BY RZ

DRAWN BY AD

PROJECT NUMBER

ETCANM2001

SECTION

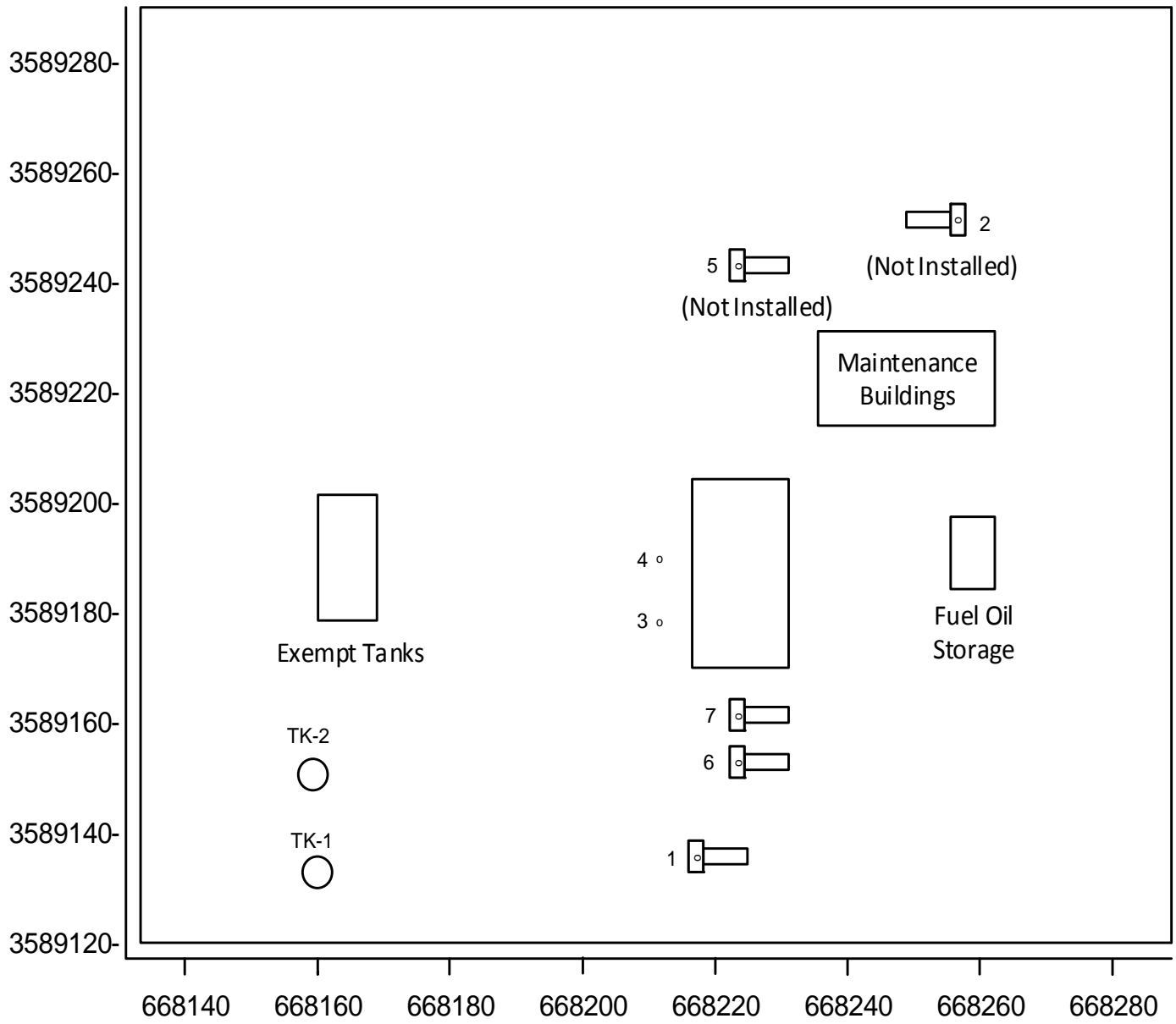
4

Section 5

Plot Plan Drawn To Scale

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

See attached.



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FIGURE TITLE
PLOT PLAN

DOCUMENT TITLE
 APPLICATION TO RENEW TITLE V OPERATING PERMIT NO. P242-R2M1

CLIENT
 ETC TEXAS PIPELINE, LTD.

LOCATION
 WEST EUNICE COMPRESSOR STATION
 LEA COUNTY, NEW MEXICO

DATE	8/7/2020
SCALE	AS SHOWN
DESIGNED BY	PH
APPROVED BY	RZ
DRAWN BY	AD
PROJECT NUMBER	ETCANM2001
SECTION	5

Section 6

All Calculations

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

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

SSM Calculations: It is the applicant's responsibility to provide an estimate of SSM emissions or to provide justification for not doing so. In this Section, provide emissions calculations for Startup, Shutdown, and Routine Maintenance (SSM) emissions listed in the Section 2 SSM and/or Section 22 GHG Tables and the 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) 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.

See attached.

**TABLE 6-1
WEST EUNICE COMPRESSOR STATION
EMISSION RATE SUMMARY**

Unit #	Description	Emission Rates															
		NO _x		CO		VOC*		PM/PM ₁₀		SO ₂		Total HAP		H ₂ S		Formaldehyde	
		(lb/hr)	(T/yr)	(lb/hr)	(T/yr)	(lb/hr)	(T/yr)	(lb/hr)	(T/yr)	(lb/hr)	(T/yr)	(lb/hr)	(T/yr)	(lb/hr)	(T/yr)	(lb/hr)	(T/yr)
1	White Superior 8G-825 Compressor Engine	3.3	14.5	5.0	21.8	0.66	2.9	0.12	0.54	0.10	0.42	0.25	1.10	--	--	0.16	0.70
2	Caterpillar G3516ULB Compressor Engine	3.0	13.3	1.8	7.7	1.1	4.9	0.10	0.46	0.16	0.72	0.18	0.80	--	--	0.18	0.80
3	Superior 2416 GTL Compressor Engine	10.6	46.3	3.7	16.1	3.5	15.4	0.22	1.0	0.33	1.4	0.25	1.47	--	--	0.23	1.1
4	Superior 2416 GTL Compressor Engine	10.6	46.3	3.7	16.1	3.5	15.4	0.22	1.0	0.33	1.4	0.34	1.47	--	--	0.23	1.1
5	Caterpillar G3516ULB Compressor Engine	3.0	13.3	1.8	7.7	1.1	4.9	0.10	0.46	0.16	0.72	0.18	0.80	--	--	0.18	0.80
6	Caterpillar G3516LE Compressor Engine	4.4	19.4	5.6	24.6	1.4	5.9	0.10	0.44	0.14	0.63	0.71	3.10	--	--	0.53	2.3
7	Caterpillar G3516LE Compressor Engine	4.4	19.4	5.6	24.6	1.4	5.9	0.10	0.44	0.14	0.63	0.71	3.10	--	--	0.53	2.3
FUG	Site Fugitives	--	--	--	--	1.8	7.8	--	--	--	--	0.23	1.00	0.07	0.3	--	--
TK-1	Water Storage Tank	--	--	--	--	0.7	3.2	--	--	--	--	0.01	0.05	0.08	0.3	--	--
TK-2	Water Storage Tank	--	--	--	--	0.7	3.2	--	--	--	--	0.01	0.05	0.08	0.3	--	--
	SSM	--	--	--	--	65.7	17.0	--	--	--	--	8.6	2.2	5.3	1.4	--	--
	Total:	39.4	172.6	27.0	118.4	15.9	69.6	1.0	4.2	1.4	6.0	2.9	12.9	0.2	1.0	2.1	9.2
	Total (with SSM):	39.4	172.6	27.0	118.4	81.6	86.6	1.0	4.2	1.4	6.0	11.5	15.2	5.6	2.4	2.1	9.2

* VOC emissions for the engines include formaldehyde.

**TABLE 6-2
WEST EUNICE COMPRESSOR STATION
ENGINE EMISSION RATES (Unit #1)**

Objective: Calculate the CO, NO_x, PM, SO₂, VOC and Formaldehyde emission rates for the White Superior 8G-825 engine.

Inputs and Assumptions:

Engine Model	White Superior 8G-825 (Unit #1)
Engine Horsepower (hp)	753
Hourly Fuel Consumption (scf/hr)	6700.00
Annual operating schedule (hours/year)	8760
Fuel Consumption (BTU/hp-hr)	8500
Design Firing Rate (MMBtu/hr)	6.40

Emission Factors

	<u>pre-control</u>	<u>post-control</u>	
CO	10	3	gram (g)/horsepower (hp)- hour (hr)
NO _x	21.68	2	g/hp-hr
PM	0.0194	0.0194	lb/MMBtu
SO ₂	5	5	grains S/100 scf
VOC	0.4	0.4	g/hp-hr

Emission Rate Calculations - Pre-Control:

Pollutant	Emission Rates	
	lb/hr	T/yr
CO	16.59	72.65
NO _x	35.96	157.50
PM	0.12	0.54
SO ₂	0.10	0.42
VOC	0.66	2.91
Formaldehyde	0.16	0.70

NSPS JJJJ Emission Limits

NOX	1.0 g/hp-hr
CO	2.0 g/hp-hr
VOC	0.7 g/hp-hr

Emission Rate Calculations - Post-Control:

Pollutant	Emission Rates	
	lb/hr	T/yr
CO	4.98	21.79
NO _x	3.32	14.53
PM	0.12	0.54
SO ₂	0.10	0.42
VOC	0.66	2.91
Formaldehyde	0.16	0.70

NSPS JJJJ Emission Limits

NOX	1.0 g/hp-hr
CO	2.0 g/hp-hr
VOC	0.7 g/hp-hr

Sample hourly calculation for CO ECO_h (lb/hr):

$$\begin{aligned}
 \text{ECO}_h &= \text{Engine Horsepower (hp)} \times \text{CO emission factor (g/hp-hr)} \times \text{g to lb conversion (1lb/454 g)} \\
 &= 753 \text{ hp} \times 3 \text{ g/hp-hr} \times 0.002203 \text{ lb/g} \\
 \text{ECO}_h &= \boxed{4.98 \text{ lb/hr}}
 \end{aligned}$$

Sample annual calculation for CO (T/yr):

$$\begin{aligned}
 \text{ECO}_A &= \text{Hourly CO emission rate (ECO}_h) \times \text{Annual operating Hours (hr/yr)} \times \text{lb/ton conversion (1 ton/2000 lb)} \\
 &= 4.98 \text{ lb/hr} \times 8760 \text{ hr/yr} \times 0.0005 \text{ T/lb} \\
 \text{ECO}_A &= \boxed{21.79 \text{ T/yr}}
 \end{aligned}$$

Hourly calculation for SO₂ ESO_{2h} (lb/hr):

$$\begin{aligned}
 \text{ESO}_{2h} &= \text{Hourly Fuel Consumption (scf/hr)} \times \text{SO}_2 \text{ emission factor (grains sulfur/100 scf fuel)} \times \text{sulfur to SO}_2 \text{ conversion (2 lb SO}_2\text{/lb S)} \\
 &\quad \times \text{grain to lb conversion (lb/7000 grains)} \\
 &= 6700.00 \text{ scf/hr} \times 5 \text{ grains S/100 scf} \times 0.000142857 \text{ lb/grain} \times 2 \text{ lb SO}_2\text{/lb S} \\
 \text{ESO}_{2h} &= \boxed{0.10 \text{ lb/hr}}
 \end{aligned}$$

Annual calculation for SO₂ (T/yr):

$$\begin{aligned}
 \text{ESO}_{2A} &= \text{Hourly CO emission rate (ECO}_h) \times \text{Annual operating Hours (hr/yr)} \times \text{lb/ton conversion (1 ton/2000 lb)} \\
 &= 0.10 \text{ lb/hr} \times 8760 \text{ hr/yr} \times 0.0005 \text{ T/lb} \\
 \text{ESO}_{2A} &= \boxed{0.42 \text{ T/yr}}
 \end{aligned}$$

**TABLE 6-3
WEST EUNICE COMPRESSOR STATION
ENGINE EMISSION RATES (Unit #2)**

Objective: Calculate the CO, NO_x, PM, SO₂, VOC and Formaldehyde emission rates for the Caterpillar G-3516 ULB engine.

Inputs and Assumptions:

Engine Model	Caterpillar G-3516ULB (Unit #2)
Engine Horsepower (hp)	1380
Hourly Fuel Consumption (scf/hr)	11457.14
Annual operating schedule (hours/year)	8760

Emission Factors	%			
	pre-control	Control	post-control	
CO	2.89	80	0.578	gram (g)/horsepower (hp)- hour (hr)
NO _x	1	0	1	g/hp-hr
PM	0.0344	0	0.0344	g/hp-hr
SO ₂	5	0	5	grains S/100 scf
VOC	0.37	0	0.37	g/hp-hr
Formaldehyde	0.4	85	0.06	g/hp-hr

Emission Rate Calculations:

Pollutant	Emission Rates	
	lb/hr	T/yr
CO	1.76	7.70
NO _x	3.04	13.31
PM	0.10	0.46
SO ₂	0.16	0.72
VOC	1.12	4.93
Formaldehyde	0.18	0.80

NSPS JJJJ Emission Limits

NOX	1.0 g/hp-hr
CO	2.0 g/hp-hr
VOC	0.7 g/hp-hr

Sample hourly calculation for CO ECO_H (lb/hr):

$$\begin{aligned}
 \text{ECO}_H &= \text{Engine Horsepower (hp)} \times \text{CO emission factor (g/hp-hr)} \times \text{g to lb conversion (1lb/454 g)} \\
 &= 1380 \text{ hp} \times 0.578 \text{ g/hp-hr} \times 0.0022 \text{ lb/g} \\
 \text{ECO}_H &= 1.75 \text{ lb/hr}
 \end{aligned}$$

Sample annual calculation for CO (T/yr):

$$\begin{aligned}
 \text{ECO}_A &= \text{Hourly CO emission rate (ECO}_H) \times \text{Annual operating Hours (hr/yr)} \times \text{lb/ton conversion (1 ton/2000 lb)} \\
 &= 1.75 \text{ lb/hr} \times 8760 \text{ hr/yr} \times 0.0005 \text{ T/lb} \\
 \text{ECO}_A &= 7.69 \text{ T/yr}
 \end{aligned}$$

Hourly calculation for SO₂ ESO_{2H} (lb/hr):

$$\begin{aligned}
 \text{ESO}_{2H} &= \text{Hourly Fuel Consumption (scf/hr)} \times \text{SO}_2 \text{ emission factor (grains sulfur/100 scf fuel)} \times \text{sulfur to SO}_2 \text{ conversion (2 lb SO}_2\text{/lb S)} \\
 &\quad \times \text{grain to lb conversion (lb/7000 grains)} \\
 &= 11457.14 \text{ scf/hr} \times 5 \text{ grains S/100 scf} \times 2 \text{ lb SO}_2\text{/lb S} \\
 &\quad \times 0.000142857 \text{ lb/grain} \\
 \text{ESO}_{2H} &= 0.16 \text{ lb/hr}
 \end{aligned}$$

Annual calculation for SO₂ (T/yr):

$$\begin{aligned}
 \text{ESO}_{2A} &= \text{Hourly CO emission rate (ECO}_H) \times \text{Annual operating Hours (hr/yr)} \times \text{lb/ton conversion (1 ton/2000 lb)} \\
 &= 0.16 \text{ lb/hr} \times 8760 \text{ hr/yr} \times 0.0005 \text{ T/lb} \\
 \text{ESO}_{2A} &= 0.72 \text{ T/yr}
 \end{aligned}$$

**TABLE 6-4
WEST EUNICE COMPRESSOR STATION
ENGINE EMISSION RATES (Unit #3)**

Objective: Calculate the CO, NO_x, PM, SO₂, VOC and Formaldehyde emission rates for the Superior 2416 GTL engine.

Inputs and Assumptions:

Engine Model	Superior 2416 GTL (Unit #3)
Engine Horsepower (hp)	3200
Hourly Fuel Consumption (scf/hr)	22900.00
Annual operating schedule (hours/year)	8760
Fuel Consumption (BTU/hp-hr)	6800
Design Firing Rate (MMBtu/hr)	21.76

Emission Factors

	<u>pre-control</u>	<u>post-control</u>	
CO	2.6	0.52	gram (g)/horsepower (hp)- hour (hr)
NO _x	1.5	1.5	g/hp-hr
PM	0.009987	0.009987	lb/MMBtu
SO ₂	5	5	grains S/100 scf
VOC	0.5	0.5	g/hp-hr
Formaldehyde	0.0528	0.01056	lb/MMBtu

Emission Rate Calculations - Pre-Control:

Pollutant	Emission Rates	
	lb/hr	T/yr
CO	18.33	80.27
NO _x	10.57	46.31
PM	0.22	0.95
SO ₂	0.33	1.43
VOC	3.52	15.44
Formaldehyde	1.15	5.03

NSPS IIII Emission Limits

NOX	1.0 g/hp-hr
CO	2.0 g/hp-hr
VOC	0.7 g/hp-hr

Emission Rate Calculations - Post-Control:

Pollutant	Emission Rates	
	lb/hr	T/yr
CO	3.67	16.05
NO _x	10.57	46.31
PM	0.22	0.95
SO ₂	0.33	1.43
VOC	3.52	15.44
Formaldehyde	0.23	1.10

NSPS IIII Emission Limits

NOX	1.0 g/hp-hr
CO	2.0 g/hp-hr
VOC	0.7 g/hp-hr

Sample hourly calculation for CO ECO_h (lb/hr):

$$\begin{aligned}
 \text{ECO}_h &= \text{Engine Horsepower (hp)} \times \text{CO emission factor (g/hp-hr)} \times \text{g to lb conversion (1lb/454 g)} \\
 &= 3200 \text{ hp} \times 0.52 \text{ g/hp-hr} \times 0.002203 \text{ lb/g} \\
 \text{ECO}_h &= \boxed{3.67 \text{ lb/hr}}
 \end{aligned}$$

Sample annual calculation for CO (T/yr):

$$\begin{aligned}
 \text{ECO}_A &= \text{Hourly CO emission rate (ECO}_h) \times \text{Annual operating Hours (hr/yr)} \times \text{lb/ton conversion (1 ton/2000 lb)} \\
 &= 3.67 \text{ lb/hr} \times 8760 \text{ hr/yr} \times 0.0005 \text{ T/lb} \\
 \text{ECO}_A &= \boxed{16.05 \text{ T/yr}}
 \end{aligned}$$

Hourly calculation for SO₂ ESO_{2h} (lb/hr):

$$\begin{aligned}
 \text{ESO}_{2h} &= \text{Hourly Fuel Consumption (scf/hr)} \times \text{SO}_2 \text{ emission factor (grains sulfur/100 scf fuel)} \times \text{sulfur to SO}_2 \text{ conversion (2 lb SO}_2\text{/lb S)} \\
 &\quad \times \text{grain to lb conversion (lb/7000 grains)} \\
 &= 22900.00 \text{ scf/hr} \times 5 \text{ grains S/100 scf} \times 2 \text{ lb SO}_2\text{/lb S} \\
 &\quad \times 0.000142857 \text{ lb/grain} \\
 \text{ESO}_{2h} &= \boxed{0.33 \text{ lb/hr}}
 \end{aligned}$$

Annual calculation for SO₂ (T/yr):

$$\begin{aligned}
 \text{ESO}_{2A} &= \text{Hourly CO emission rate (ECO}_h) \times \text{Annual operating Hours (hr/yr)} \times \text{lb/ton conversion (1 ton/2000 lb)} \\
 &= 0.33 \text{ lb/hr} \times 8760 \text{ hr/yr} \times 0.0005 \text{ T/lb} \\
 \text{ESO}_{2A} &= \boxed{1.43 \text{ T/yr}}
 \end{aligned}$$

**TABLE 6-5
WEST EUNICE COMPRESSOR STATION
ENGINE EMISSION RATES (Unit #4)**

Objective: Calculate the CO, NO_x, PM, SO₂, VOC and Formaldehyde emission rates for the Superior 2416 GTL engine.

Inputs and Assumptions:

Engine Model	Superior 2416 GTL (Unit #4)
Engine Horsepower (hp)	3200
Hourly Fuel Consumption (scf/hr)	22900.00
Annual operating schedule (hours/year)	8760
Fuel Consumption (BTU/hp-hr)	6800
Design Firing Rate (MMBtu/hr)	21.76

Emission Factors

	<u>pre-control</u>	<u>post-control</u>	
CO	2.6	0.52	gram (g)/horsepower (hp)- hour (hr)
NO _x	1.5	1.5	g/hp-hr
PM	0.009987	0.009987	lb/MMBtu
SO ₂	5	5	grains S/100 scf
VOC	0.5	0.5	g/hp-hr
Formaldehyde	0.0528	0.01056	lb/MMBtu

Emission Rate Calculations - Pre-Control:

Pollutant	Emission Rates	
	lb/hr	T/yr
CO	18.33	80.27
NO _x	10.57	46.31
PM	0.22	0.95
SO ₂	0.33	1.43
VOC	3.52	15.44
Formaldehyde	1.15	5.03

NSPS JJJ Emission Limits

NOX	1.0 g/hp-hr
CO	2.0 g/hp-hr
VOC	0.7 g/hp-hr

Emission Rate Calculations - Post-Control:

Pollutant	Emission Rates	
	lb/hr	T/yr
CO	3.67	16.05
NO _x	10.57	46.31
PM	0.22	0.95
SO ₂	0.33	1.43
VOC	3.52	15.44
Formaldehyde	0.23	1.10

NSPS JJJ Emission Limits

NOX	1.0 g/hp-hr
CO	2.0 g/hp-hr
VOC	0.7 g/hp-hr

Sample hourly calculation for CO ECO_h (lb/hr):

$$\begin{aligned}
 \text{ECO}_h &= \text{Engine Horsepower (hp)} \times \text{CO emission factor (g/hp-hr)} \times \text{g to lb conversion (1lb/454 g)} \\
 &= 3200 \text{ hp} \times 0.52 \text{ g/hp-hr} \times 0.002203 \text{ lb/g} \\
 \text{ECO}_h &= \boxed{3.67 \text{ lb/hr}}
 \end{aligned}$$

Sample annual calculation for CO (T/yr):

$$\begin{aligned}
 \text{ECO}_A &= \text{Hourly CO emission rate (ECO}_h\text{)} \times \text{Annual operating Hours (hr/yr)} \times \text{lb/ton conversion (1 ton/2000 lb)} \\
 &= 3.67 \text{ lb/hr} \times 8760 \text{ hr/yr} \times 0.0005 \text{ T/lb} \\
 \text{ECO}_A &= \boxed{16.05 \text{ T/yr}}
 \end{aligned}$$

Hourly calculation for SO₂ ESO_{2h} (lb/hr):

$$\begin{aligned}
 \text{ESO}_{2h} &= \text{Hourly Fuel Consumption (scf/hr)} \times \text{SO}_2 \text{ emission factor (grains sulfur/100 scf fuel)} \times \text{sulfur to SO}_2 \text{ conversion (2 lb SO}_2\text{/lb S)} \\
 &\quad \times \text{grain to lb conversion (lb/7000 grains)} \\
 &= 22900.00 \text{ scf/hr} \times 5 \text{ grains S/100 scf} \times 2 \text{ lb SO}_2\text{/lb S} \\
 &\quad \times 0.000142857 \text{ lb/grain} \\
 \text{ESO}_{2h} &= \boxed{0.33 \text{ lb/hr}}
 \end{aligned}$$

Annual calculation for SO₂ (T/yr):

$$\begin{aligned}
 \text{ESO}_{2A} &= \text{Hourly CO emission rate (ECO}_h\text{)} \times \text{Annual operating Hours (hr/yr)} \times \text{lb/ton conversion (1 ton/2000 lb)} \\
 &= 0.33 \text{ lb/hr} \times 8760 \text{ hr/yr} \times 0.0005 \text{ T/lb} \\
 \text{ESO}_{2A} &= \boxed{1.43 \text{ T/yr}}
 \end{aligned}$$

**TABLE 6-6
WEST EUNICE COMPRESSOR STATION
ENGINE EMISSION RATES (Unit #5)**

Objective: Calculate the CO, NO_x, PM, SO₂, VOC and Formaldehyde emission rates for the Caterpillar G-3516 ULB engine.

Inputs and Assumptions:

Engine Model	Caterpillar G-3516ULB (Unit #5)
Engine Horsepower (hp)	1380
Hourly Fuel Consumption (scf/hr)	11457.14
Annual operating schedule (hours/year)	8760

Emission Factors	%			
	pre-control	Control	post-control	
CO	2.89	80	0.578	gram (g)/horsepower (hp)- hour (hr)
NO _x	1	0	1	g/hp-hr
PM	0.0344	0	0.0344	g/hp-hr
SO ₂	5	0	5	grains S/100scf
VOC	0.37	0	0.37	g/hp-hr
Formaldehyde	0.4	85	0.06	g/hp-hr

Emission Rate Calculations:

Pollutant	Emission Rates	
	lb/hr	T/yr
CO	1.76	7.70
NO _x	3.04	13.31
PM	0.10	0.46
SO ₂	0.16	0.72
VOC	1.12	4.93
Formaldehyde	0.18	0.80

NSPS JJJJ Emission Limits

NOX	1.0 g/hp-hr
CO	2.0 g/hp-hr
VOC	0.7 g/hp-hr

Sample hourly calculation for CO ECO_H (lb/hr):

$$\begin{aligned}
 \text{ECO}_H &= \text{Engine Horsepower (hp)} \times \text{CO emission factor (g/hp-hr)} \times \text{g to lb conversion (1lb/454 g)} \\
 &= 1380 \text{ hp} \times 0.578 \text{ g/hp-hr} \times 0.0022 \text{ lb/g} \\
 \text{ECO}_H &= 1.75 \text{ lb/hr}
 \end{aligned}$$

Sample annual calculation for CO (T/yr):

$$\begin{aligned}
 \text{ECO}_A &= \text{Hourly CO emission rate (ECO}_H) \times \text{Annual operating Hours (hr/yr)} \times \text{lb/ton conversion (1 ton/2000 lb)} \\
 &= 1.75 \text{ lb/hr} \times 8760 \text{ hr/yr} \times 0.0005 \text{ T/lb} \\
 \text{ECO}_A &= 7.69 \text{ T/yr}
 \end{aligned}$$

Hourly calculation for SO₂ ESO_{2H} (lb/hr):

$$\begin{aligned}
 \text{ESO}_{2H} &= \text{Hourly Fuel Consumption (scf/hr)} \times \text{SO}_2 \text{ emission factor (grains sulfur/100 scf fuel)} \times \text{sulfur to SO}_2 \text{ conversion (2 lb SO}_2\text{/lb S)} \\
 &\quad \times \text{grain to lb conversion (lb/7000 grains)} \\
 &= 11457.14 \text{ scf/hr} \times 5 \text{ grains S/100 scf} \times 2 \text{ lb SO}_2\text{/lb S} \\
 &\quad \times 0.000142857 \text{ lb/grain} \\
 \text{ESO}_{2H} &= 0.16 \text{ lb/hr}
 \end{aligned}$$

Annual calculation for SO₂ (T/yr):

$$\begin{aligned}
 \text{ESO}_{2A} &= \text{Hourly CO emission rate (ECO}_H) \times \text{Annual operating Hours (hr/yr)} \times \text{lb/ton conversion (1 ton/2000 lb)} \\
 &= 0.16 \text{ lb/hr} \times 8760 \text{ hr/yr} \times 0.0005 \text{ T/lb} \\
 \text{ESO}_{2A} &= 0.72 \text{ T/yr}
 \end{aligned}$$

**TABLE 6-7
WEST EUNICE COMPRESSOR STATION
ENGINE EMISSION RATES (Unit #6)**

Objective: Calculate the CO, NO_x, PM, SO₂, VOC and Formaldehyde emission rates for the Caterpillar G3516 TA engine.

Inputs and Assumptions:

Engine Model	Caterpillar G3516 TA (Unit #6)
Engine Horsepower (hp)	1340
Hourly Fuel Consumption (scf/hr)	10100.00
Annual operating schedule (hours/year)	8760
Fuel Consumption (BTU/hp-hr)	7546
Design Firing Rate (MMBtu/hr)	10.11

Emission Factors

	<u>pre-control</u>	
CO	1.9	gram (g)/horsepower (hp)- hour (hr)
NO _x	1.5	g/hp-hr
PM	0.009987	lb/MMBtu
SO ₂	5	grains S/100 scf
VOC	0.46	g/hp-hr
Formaldehyde	0.0528	lb/MMBtu

Emission Rate Calculations - Pre-Control:

Pollutant	Emission Rates	
	lb/hr	T/yr
CO	5.61	24.56
NO _x	4.43	19.39
PM	0.10	0.44
SO ₂	0.14	0.63
VOC	1.36	5.95
Formaldehyde	0.53	2.34

NSPS JJJJ Emission Limits

NOX	1.0 g/hp-hr
CO	2.0 g/hp-hr
VOC	0.7 g/hp-hr

Sample hourly calculation for CO ECO_H (lb/hr):

$$\begin{aligned}
 \text{ECO}_H &= \text{Engine Horsepower (hp)} \times \text{CO emission factor (g/hp-hr)} \times \text{g to lb conversion (1lb/454 g)} \\
 &= 1340 \text{ hp} \times 1.9 \text{ g/hp-hr} \times 0.002203 \text{ lb/g} \\
 \text{ECO}_H &= \boxed{5.61 \text{ lb/hr}}
 \end{aligned}$$

Sample annual calculation for CO (T/yr):

$$\begin{aligned}
 \text{ECO}_A &= \text{Hourly CO emission rate (ECO}_H) \times \text{Annual operating Hours (hr/yr)} \times \text{lb/ton conversion (1 ton/2000 lb)} \\
 &= 5.61 \text{ lb/hr} \times 8760 \text{ hr/yr} \times 0.0005 \text{ T/lb} \\
 \text{ECO}_A &= \boxed{24.56 \text{ T/yr}}
 \end{aligned}$$

Hourly calculation for SO₂ ESO_{2H} (lb/hr):

$$\begin{aligned}
 \text{ESO}_{2H} &= \text{Hourly Fuel Consumption (scf/hr)} \times \text{SO}_2 \text{ emission factor (grains sulfur/100 scf fuel)} \times \text{sulfur to SO}_2 \text{ conversion (2 lb SO}_2\text{/lb S)} \\
 &\quad \times \text{grain to lb conversion (lb/7000 grains)} \\
 &= 10100.00 \text{ scf/hr} \times 5 \text{ grains S/100 scf} \times 2 \text{ lb SO}_2\text{/lb S} \\
 &\quad \times 0.000142857 \text{ lb/grain} \\
 \text{ESO}_{2H} &= \boxed{0.14 \text{ lb/hr}}
 \end{aligned}$$

Annual calculation for SO₂ (T/yr):

$$\begin{aligned}
 \text{ESO}_{2A} &= \text{Hourly CO emission rate (ECO}_H) \times \text{Annual operating Hours (hr/yr)} \times \text{lb/ton conversion (1 ton/2000 lb)} \\
 &= 0.14 \text{ lb/hr} \times 8760 \text{ hr/yr} \times 0.0005 \text{ T/lb} \\
 \text{ESO}_{2A} &= \boxed{0.63 \text{ T/yr}}
 \end{aligned}$$

**TABLE 6-8
WEST EUNICE COMPRESSOR STATION
ENGINE EMISSION RATES (Unit #7)**

Objective: Calculate the CO, NO_x, PM, SO₂, VOC and Formaldehyde emission rates for the Caterpillar G3516 TA engine.

Inputs and Assumptions:

Engine Model	Caterpillar G3516 TA (Unit #7)
Engine Horsepower (hp)	1340
Hourly Fuel Consumption (scf/hr)	10100.00
Annual operating schedule (hours/year)	8760
Fuel Consumption (BTU/hp-hr)	7546
Design Firing Rate (MMBtu/hr)	10.11

Emission Factors

	<u>pre-control</u>	
CO	1.9	gram (g)/horsepower (hp)- hour (hr)
NO _x	1.5	g/hp-hr
PM	0.009987	lb/MMBtu
SO ₂	5	grains S/100 scf
VOC	0.46	g/hp-hr
Formaldehyde	0.0528	lb/MMBtu

Emission Rate Calculations - Pre-Control:

Pollutant	Emission Rates	
	lb/hr	T/yr
CO	5.61	24.56
NO _x	4.43	19.39
PM	0.10	0.44
SO ₂	0.14	0.63
VOC	1.36	5.95
Formaldehyde	0.53	2.34

NSPS JJJJ Emission Limits

NOX	1.0 g/hp-hr
CO	2.0 g/hp-hr
VOC	0.7 g/hp-hr

Sample hourly calculation for CO ECO_H (lb/hr):

$$\begin{aligned}
 \text{ECO}_H &= \text{Engine Horsepower (hp)} \times \text{CO emission factor (g/hp-hr)} \times \text{g to lb conversion (1lb/454 g)} \\
 &= 1340 \text{ hp} \times 1.9 \text{ g/hp-hr} \times 0.002203 \text{ lb/g} \\
 \text{ECO}_H &= \boxed{5.61 \text{ lb/hr}}
 \end{aligned}$$

Sample annual calculation for CO (T/yr):

$$\begin{aligned}
 \text{ECO}_A &= \text{Hourly CO emission rate (ECO}_H) \times \text{Annual operating Hours (hr/yr)} \times \text{lb/ton conversion (1 ton/2000 lb)} \\
 &= 5.61 \text{ lb/hr} \times 8760 \text{ hr/yr} \times 0.0005 \text{ T/lb} \\
 \text{ECO}_A &= \boxed{24.56 \text{ T/yr}}
 \end{aligned}$$

Hourly calculation for SO₂ ESO_{2H} (lb/hr):

$$\begin{aligned}
 \text{ESO}_{2H} &= \text{Hourly Fuel Consumption (scf/hr)} \times \text{SO}_2 \text{ emission factor (grains sulfur/100 scf fuel)} \times \text{sulfur to SO}_2 \text{ conversion (2 lb SO}_2\text{/lb S)} \\
 &\quad \times \text{grain to lb conversion (lb/7000 grains)} \\
 &= 10100.00 \text{ scf/hr} \times 5 \text{ grains S/100 scf} \times 2 \text{ lb SO}_2\text{/lb S} \\
 &\quad \times 0.000142857 \text{ lb/grain} \\
 \text{ESO}_{2H} &= \boxed{0.14 \text{ lb/hr}}
 \end{aligned}$$

Annual calculation for SO₂ (T/yr):

$$\begin{aligned}
 \text{ESO}_{2A} &= \text{Hourly CO emission rate (ECO}_H) \times \text{Annual operating Hours (hr/yr)} \times \text{lb/ton conversion (1 ton/2000 lb)} \\
 &= 0.14 \text{ lb/hr} \times 8760 \text{ hr/yr} \times 0.0005 \text{ T/lb} \\
 \text{ESO}_{2A} &= \boxed{0.63 \text{ T/yr}}
 \end{aligned}$$

**TABLE 6-9
WEST EUNICE COMPRESSOR STATION
ESTIMATED EMISSIONS FROM STORAGE TANKS**

Identification - Vertical Fixed Roof Tanks			
Tank ID	Tank 1 & Tank 2 - Water		
Description	500 BBL Tanks		
Throughput (BPD)	25		
Volume (gal)	21,000		
Turnovers	18.25		
Net Throughput (gal/yr)	383,250		
Tank Emissions	VOC	HAP	H2S
Standing Losses (T/yr) ^a	0.36	0.00078	0.024
Working Losses (T/yr) ^a	0.098	0.00021	0.0066
Flash Losses (T/yr) ^a	2.70	0.045	0.30
Total Standing & Working (lb/hr) ^b	0.10	0.00023	0.0070
Flash Losses (lb/hr) ^c	0.62	0.010	0.069
Total Losses (T/yr) ^d	3.15	0.046	0.33
Total Losses (lb/hr) ^e	0.72	0.011	0.076

^a Emissions estimated using Promax. The Promax run assumes all of the product that flows through the tank is condensate. Although the water is expected to contain about 1% condensate, emissions are conservatively estimated based on the water containing up to 5% condensate. Therefore, the Promax calculated VOC and HAP emissions were multiplied by 5%. The H2S emissions assume all of the H2S, rather than 5%, is emitted.

^b Total Standing & Working (lb/hr) = (Standing Loss (T/yr) + Working Loss (T/yr)) x 2000 lb/T x 1 yr/8760 hr

^c Total Flash Losses (lb/hr) = (Flash Losses (T/yr) x 2000 lb/T x 1 yr/8760 hr

^d Total Losses (T/yr) = Standing Losses (T/yr) + Working Losses (T/yr) + Flash Losses (T/yr)

^e Total Losses (lb/hr) = Standing + Working Losses (lb/hr) + Flash Losses (lb/hr)

**TABLE 6-10
WEST EUNICE COMPRESSOR STATION
Fuel Gas Data (3516)**

Formula	Name	Mole %	(A) Mole Fraction	(B) Molecular Weight (lb/lb-mol)	(C) HHV (Btu/scf)	(D) LHV (Btu/scf)	(A) x (B) lb/lb-mol	(A) x (C) Btu (HHV) per scf	(A) x (D) Btu (LHV) per scf	wt%
CH ₄	Methane	88.9126	0.8891	16.04	1012	911	14.26	899.80	809.99	80.00
C ₂ H ₆	Ethane	6.6838	0.0668	30.07	1773	1622	2.01	118.50	108.41	11.27
C ₃ H ₈	Propane	1.3336	0.0133	44.09	2524	2322	0.59	33.66	30.97	3.30
C ₄ H ₁₀	n-Butane	0.1373	0.0014	58.12	3271	3018	0.08	4.49	4.14	0.45
C ₅ H ₁₂	Ipentane	0.0291	0.0003	72.15	4011	3708	0.02	1.17	1.08	0.12
C ₅ H ₁₂	Isobutane	0.0661	0.0007	58.12	3261	3009	0.04	2.16	1.99	0.22
C ₅ H ₁₂	Norpentane	0.0261	0.0003	72.15	4020	3717	0.02	1.05	0.97	0.11
C ₆ H ₁₄	n-Hexane	0.0331	0.0003	86.17	4768	4415	0.03	1.58	1.46	0.16
H ₂ S	Hydrogen Sulfide	0.00	0.0000	34.08	646	595	0	0	0	0.00
H ₂ O	Water	0.00	0.0000	18.02	0	0	0	0	0	0.00
H ₂	Hydrogen	0.00	0.0000	2.02	325	275	0	0	0	0.00
O ₂	Oxygen	0.00	0.0000	32	0	0	0	0	0	0.00
N ₂	Nitrogen	2.7663	0.0277	28.01	0	0	0.77	0	0	4.35
CO	Carbon Monoxide	0.00	0.0000	28.01	321	321	0	0	0	0.00
CO ₂	Carbon Dioxide	0.012	0.0001	44.01	0	0	0.01	0	0	0.03
Total		100.0	1	1250			17.83	1062.40	959.01	100.00

Fuel Flow Rate Calculation

Engine Horsepower (hp) 1380
 Engine Fuel Consumption (Btu/hp-hr) 7962
 Fuel Gas Molecular Weight (lb/lb-mol) 17.83
 Lower Heating Value (LHV) of Fuel Gas (Btu/scf) 959.01
 H2S 0 ppm

Fuel Flow (lb/hr) = Engine Horsepower (hp) x Engine Fuel Consumption (Btu/hp-hr) / LHV of fuel gas (Btu/scf) x 1 lb-mol/379 scf fuel x MW fuel gas (lb/lb-mol)

$$= \frac{1380 \text{ hp} \times 7962 \text{ Btu/hp-hr}}{959.01 \text{ Btu/scf} \times 0.002639} \times 17.83 \text{ lb/lb-mol}$$

$$= 538.88 \text{ lb fuel/hr}$$

Fuel Flow (lb-mol/hr) = Fuel Flow (lb/hr) x 1/MW fuel gas (lb/lb-mol)

$$= \frac{538.88 \text{ lb fuel/hr}}{0.05609761 \text{ lb-mol/lb}}$$

$$= 30.23 \text{ lb-mol/hr}$$

Fuel Flow (lb-mol/hr) = Fuel Flow (lb/hr) x 1/MW fuel gas (lb/lb-mol)

$$= \frac{538.88 \text{ lb fuel/hr}}{0.05609761 \text{ lb-mol/lb}} \times 379 \text{ scf/lb-mol}$$

$$= 11457.14 \text{ scf/hr}$$

TABLE 6-11
WEST EUNICE COMPRESSOR STATION
Produced Gas Data

Formula	Name	Mole %	(A) Mole Fraction	(B) Molecular Weight (lb/lb-mol)	(C) HHV (Btu/scf)	(D) LHV (Btu/scf)	(A) x (B) lb/lb-mol	(A) x (C) Btu (HHV) per scf	(A) x (D) Btu (LHV) per scf	wt%
CH ₄	Methane	74.16	0.7416	16.04	1012	911	11.90	750.50	675.60	52.98
C ₂ H ₆	Ethane	8.87	0.0887	30.07	1773	1622	2.67	157.27	143.87	11.88
C ₃ H ₈	Propane	4.87	0.0487	44.09	2524	2322	2.15	122.92	113.08	9.56
C ₄ H ₁₀	n-Butane	1.57	0.0157	58.12	3271	3018	0.91	51.35	47.38	4.06
C ₅ H ₁₂	Ipentane	0.41	0.0041	72.15	4011	3708	0.30	16.45	15.20	1.32
C ₅ H ₁₂	Isobutane	0.64	0.0064	58.12	3261	3009	0.37	20.87	19.26	1.66
C ₅ H ₁₂	Norpentane	0.4	0.0040	72.15	4020	3717	0.29	16.08	14.87	1.29
C ₆ H ₁₄	n-Hexane	0.7	0.0070	86.17	4768	4415	0.60	33.38	30.91	2.69
H ₂ S	Hydrogen Sulfide	1.10	0.0110	34.08	646	595	0.37488	7.106	6.545	1.67
H ₂ O	Water	0.54	0.0054	18.02	0	0	0.097308	0	0	0.43
H ₂	Hydrogen	0.00	0.0000	2.02	325	275	0	0	0	0.00
O ₂	Oxygen	0.00	0.0000	32	0	0	0	0	0	0.00
N ₂	Nitrogen	1.04	0.0104	28.01	0	0	0.29	0	0	1.30
CO	Carbon Monoxide	0.00	0.0000	28.01	321	321	0	0	0	0.00
CO ₂	Carbon Dioxide	5.7	0.0570	44.01	0	0	2.51	0	0	11.17
Total		100.0	1	1250			22.45	1175.92	1066.71	100.00
VOC										20.57

Note: from Regency Energy Partners analysis, sampled 4/23/2015.

**TABLE 6-12
WEST EUNICE COMPRESSOR STATION
FUGITIVE EMISSIONS**

Equipment Type	Estimated Equipment At Site	Emission Factor lb/hr/component ^a	% VOC ^b	VOC Emissions		H2S Emissions			HAP Emissions		
				(lb/hr)	(tons/yr)	% H2S ^b	(lb/hr)	(tons/yr)	% HAP ^c	(lb/hr)	(tons/yr)
Connectors Gas	737	0.00046	20.57%	0.070	0.31	1.67%	0.0057	0.025	2.69%	0.0091	0.040
Flanges Gas	120	0.00086	20.57%	0.021	0.09	1.67%	0.0017	0.0075	2.69%	0.0028	0.012
Light Oil	244	0.00024	100.00%	0.059	0.26	0.027%	0.000016	0.000070	12.60%	0.0075	0.033
Open-ended Lines Gas	174	0.00441	20.57%	0.16	0.69	1.67%	0.013	0.056	2.69%	0.021	0.090
Light Oil	20	0.00309	100.00%	0.062	0.27	0.027%	0.000017	0.000073	12.60%	0.0078	0.034
Valves Gas	257	0.00992	20.57%	0.52	2.30	1.67%	0.043	0.19	2.69%	0.068	0.30
Light Oil	117	0.0055	100.00%	0.64	2.82	0.027%	0.00017	0.00076	12.60%	0.081	0.36
Pump Seals Light Oil	4	0.02866	100.00%	0.11	0.50	0.027%	0.000031	0.00014	12.60%	0.014	0.063
Other Relief Valves Gas	30	0.0194	20.57%	0.12	0.52	1.67%	0.010	0.043	2.69%	0.016	0.068
TOTAL VOC				1.77	7.76	TOTAL H2S	0.073	0.32	TOTAL HAP	0.23	1.00

^a Factors taken from EPA document EPA-453/R-95-017, November 1995.

^b % VOC and % H₂S for components in gas service based on Regency Energy Partners gas analysis, sampled 4/23/2015. % VOC and % H₂S for components in liquid service based on Mobile Analytical Labs liquid analysis, sampled 6/9/201

^c For components in gas service it is conservatively assumed that all Hexanes+ from Regency Energy partners gas analysis, sampled 4/23/2015 are HAPs. For components in liquid service, % HAP is based on Mobile Analytical Labs liquid analysis, sampled 6/9/20

TABLE 6-13
WEST EUNICE COMPRESSOR STATION
POTENTIAL EMISSIONS FROM SSM ACTIVITIES

SSM ACTIVITIES RATES							
Rates and Gas Composition							
Volume of Gas (MCF/Hr)		5.4					
Volume of Gas (MCF/Yr)		2800					
	Mole %	MCF/Hr	Cu Ft/ #	lbs/hr	MCF/Yr	Cu Ft/ #	lbs/yr
N2	1.0400%	0.056	13.5460	4.1	29.120	13.5460	2149.7
CO2	5.7000%	0.308	8.6229	35.7	159.600	8.6229	18508.9
H2S	1.1000%	0.05940	11.1351	5.3	30.8000	11.1351	2766.0
C1	74.1600%	4.005	23.6540	169.3	2076.480	23.6540	87785.6
C2	8.8700%	0.479	12.6200	38.0	248.360	12.6200	19679.9
C3	4.8700%	0.263	8.6059	30.6	136.360	8.6059	15844.9
IC4	0.6400%	0.035	6.5291	5.3	17.920	6.5291	2744.6
NC4	1.5700%	0.085	6.5291	13.0	43.960	6.5291	6732.9
IC5	0.4100%	0.022	5.2596	4.2	11.480	5.2596	2182.7
NC5	0.4000%	0.022	5.2596	4.1	11.200	5.2596	2129.4
C6+	0.7000%	0.038	4.4035	8.6	19.600	4.4035	4451.0
H2O	0.5400%	0.029	0.0160	1822.5	15.120	0.0160	945000.0
Total	100.00%	5.400		2140.7	2800.000		1109975.7
Total VOC (lbs)				65.74	Total VOC (T/yr)		34085.63
							17.04

Notes:

1. It is estimated that up to 5400 cubic feet of gas could be vented to atmosphere per hour.
2. It is estimated that up to 2800 MCF of gas could be released per year from SSM activities.
3. It is conservatively assumed that all C6+ are HAPs.
4. The volume of gas vented per hour is based on a review of historical records. The volume of gas vented during an SSM event is metered and recorded.
5. The volume of gas vented during a blowdown event can vary. Therefore, the calculations shown on this table are based on the maximum amount of gas that could be vented per hour and per year rather than the number of blowdowns. All engines will blowdown through a common stack, which makes tracking the total gas volume vented more accurate.

Section 6.a

Green House Gas Emissions

(Submitting under 20.2.70, 20.2.72 20.2.74 NMAC)

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

Calculating GHG Emissions:

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

Sources for Calculating GHG Emissions:

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

Global Warming Potentials (GWP):

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

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

Metric to Short Ton Conversion:

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

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

TABLE 6.a-1

ESTIMATION OF POTENTIAL GHG EMISSIONS
WEST EUNICE COMPRESSOR STATION

Facility-wide Summary

GHG Emission Source	Total GHG Emissions	
	(m.t. CO ₂ e)	(tons CO ₂ e)
Natural Gas Combustion	41,690.42	45,939.74
Fugitives	355.87	392.28
SSM	1,195.00	1,317.26
Total Facility Emissions:	42,046.29	46,332.01

Conversion Factors		Global Warming Potential	
1.10231	ton/m.t.	CO ₂	1
0.001	m.t./kg	CH ₄	25
8,760	Hrs/yr	N ₂ O	298
379.3	scf/lbmole gas		
2204.62	lb/tonne		

CO ₂ (mol %)	CH ₄ (mol %)	C ₂ H ₆ O (mol %)	C ₂ H ₆ (mol %)	C ₂ H ₁₀ (mol %)	Potential Gas Processed (MMscf/day)
0.0001	0.8891	0.0668	0.0133	0.0020	60

Notes:

Carbon Dioxide Equivalent (CO₂e) emissions are calculated in the tables below by multiplying emissions by global warming potentials for each pollutant. Emissions estimates converted to short tons in the tables below using conversion factor from 40 CFR 98 Subpart A. Global Warming Potentials obtained from 40 CFR 98 Subpart A, Table A-1. Mol % values obtained from a fuel gas analysis.

Combustion Sources

Source ID Number	Description	Maximum Hours of Operation	Rated HP	Rated Capacity (MMBtu/hr)	Emission Factors			Emissions						Total Emissions				
					CO ₂ (kg/MMBtu)	CH ₄ (kg/MMBtu)	N ₂ O (kg/MMBtu)	CO ₂ (m.t.)	CH ₄ (m.t.)	N ₂ O (m.t.)	CO ₂ (tons)	CH ₄ (tons)	N ₂ O (tons)	CO ₂ (m.t. CO ₂ e)	CH ₄ (m.t. CO ₂ e)	N ₂ O (m.t. CO ₂ e)	(m.t. CO ₂ e)	(tons CO ₂ e)
1	White Superior 8G-825 Comp Engine	8,760	753	6.4	53.06	0.001	0.0001	2,974.99	0.06	0.01	3279.36	0.06	0.01	2,974.99	1.40	1.67	2,978.06	3,282.75
2	Caterpillar G3516ULB Comp Engine	8,760	1,380	9.7	53.06	0.001	0.0001	4,522.09	0.09	0.01	4984.75	0.09	0.01	4,522.09	2.13	2.54	4,526.76	5,012.74
3	Superior 2416 GTL Comp Engine	8,760	3,200	21.8	53.06	0.001	0.0001	10,114.17	0.19	0.02	11148.95	0.21	0.02	10,114.17	4.77	5.68	10,124.62	11,148.95
4	Superior 2416 GTL Comp Engine	8,760	3,200	21.8	53.06	0.001	0.0001	10,114.17	0.19	0.02	11148.95	0.21	0.02	10,114.17	4.77	5.68	10,124.62	11,148.95
5	Caterpillar G3516ULB Comp Engine	8,760	1,380	9.7	53.06	0.001	0.0001	4,522.09	0.09	0.01	4984.75	0.09	0.01	4,522.09	2.13	2.54	4,526.76	4,984.75
6	Caterpillar G3516LE Comp Engine	8,760	1,340	10.1	53.06	0.001	0.0001	4,699.95	0.09	0.01	5180.80	0.10	0.01	4,699.95	2.21	2.64	4,704.80	5,180.80
7	Caterpillar G3516LE Com Engine	8,760	1,340	10.1	53.06	0.001	0.0001	4,699.95	0.09	0.01	5180.80	0.10	0.01	4,699.95	2.21	2.64	4,704.80	5,180.80

Note - Emissions estimated using 40 CFR Part 98, Subpart C Tier 1 Methodology

Fugitive Sources

Source Type/Service	Number of Sources	Maximum Hours of Operation	Emission Factor CH ₄ (m.t./hr/component)	Emissions			Emissions						Total Emissions			
				CO ₂ (m.t.)	CH ₄ (m.t.)	N ₂ O (m.t.)	CO ₂ (m.t. CO ₂ e)	CH ₄ (m.t. CO ₂ e)	N ₂ O (m.t. CO ₂ e)	CO ₂ (tons)	CH ₄ (tons)	N ₂ O (tons)	CO ₂ (m.t. CO ₂ e)	CH ₄ (m.t. CO ₂ e)	(m.t. CO ₂ e)	(tons CO ₂ e)
Valves - Gas	257	8,760	4.50E-06	0.003	9.01	--	0.003	225.19	--	0.004	9.93	--	225.20	248.24		
Flanges - Gas	120	8,760	3.90E-07	0.0001	0.36	--	0.0001	9.11	--	0.0001	0.40	--	9.11	10.05		
Open-Ended Lines - Gas	174	8,760	2.00E-06	0.001	2.71	--	0.001	67.76	--	0.001	2.99	--	67.76	74.70		
Valves - Lt.Oil	117	8,760	9.80E-08	0.00003	0.09	--	0.00003	2.23	--	0.00004	0.10	--	2.23	2.46		
Pump Seals - Lt.Oil	4	8,760	2.40E-08	0.0000003	0.001	--	0.0000003	0.02	--	0.0000003	0.001	--	0.02	0.02		
Flanges - Lt.Oil	244	8,760	2.90E-09	0.000002	0.01	--	0.000002	0.14	--	0.000002	0.01	--	0.14	0.15		
Other - Gas	30	8,760	8.80E-06	0.001	2.06	--	0.001	51.41	--	0.001	2.27	--	51.41	56.67		

Emission estimated using API Compendium, Section 6.0, Tables 6-12 and 6-21.

SSM Emissions

Source ID Number	Description	Annual SSM Activities Volume (Mcf/yr)	Volumetric Emissions (Eq. W-35)		Mass Emissions (Eq. W-36)		Emissions				Total Emissions	
			CO ₂ (CF)	CH ₄ (CF)	CO ₂ (m.t.)	CH ₄ (m.t.)	CO ₂ (m.t. CO ₂ e)	CH ₄ (m.t. CO ₂ e)	CO ₂ (tons)	CH ₄ (tons)	CO ₂ (m.t. CO ₂ e)	CH ₄ (m.t. CO ₂ e)
--	SSM Activities	2,800	336.0	2,489,552.8	0.02	47.80	0.02	1194.99	0.02	52.69	1,195.00	1,317.26

Note - Emissions estimated using blowdown method outlined in §98.233(i)(3).

Section 7

Information Used To Determine Emissions

Information Used to Determine Emissions shall include the following:

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

See attached.

Analysis Summary by Meter - Daily

September 1, 2020 - September 1, 2020

Meter #: 10240
Name: W EUNICE HP COMP FUEL

Mole Percent

Meter Number	Relative Density	Heating Value	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	NeoC5	C6	C7	C8	C9	C10	H2S	H2O	Other
09/01																				
10240	0.5942	993.24 D	1.4135	2.8411	93.1750	2.3699	0.1269	0.0151	0.0302	0.0091	0.0101		0.0091					0.0000		0.0000

*** End of Report***

Information Used To Determine Emissions

Emission Unit TK-1

&

Emission Unit TK-2

MANLEY GAS TESTING, INC.
120 DOCK ROAD - ODESSA, TEXAS-432-367-3024

CHARGE.....	124 - 0	DATE SAMPLED.....	02-06-15
TEST NUMBER..	11359	DATE RUN	02-09-15
		DATE EFFECTIVE....	02-01-15
METER I.D.	XXXXX	SAMPLE TYPE	SPOT
A SAMPLE OF	WEST EUNICE SUCTION SCRUBBER		
RECEIVED FROM	SOUTHERN UNION GAS SERVICES		
COMPOSITE DATES	= 00-00-15 TO 00-00-15		
PRESSURE	PSIG	TEMPERATURE	F

FRACTIONAL ANALYSIS
CALCULATED @ 14.696 PSIA AND 60F

	<u>MOLE%</u>	<u>LIQUID%</u>	<u>WEIGHT%</u>	
				*TOT REAL GAS SP.GR... 3.361
NITROGEN.....	0.0000	0.0000	0.0000	
CARBON DIOXIDE.	0.5155	0.2137	0.2513	TOTAL LIQUID SP.GR... 0.694
METHANE.....	2.3290	0.9588	0.4138	
ETHANE.....	2.9778	1.9338	0.9917	TOTAL VAPOR PRESS. 169.480
PROPANE.....	6.6148	4.4253	3.2305	
ISO-BUTANE.....	3.2168	2.5560	2.0707	TOTAL MOLECULAR WT. 90.291
NOR-BUTANE.....	8.7361	6.6876	5.6235	
ISO-PENTANE....	5.6092	4.9812	4.4821	TOTAL CF/GALLON..... 24.390
NOR-PENTANE....	8.6301	7.5963	6.8960	
HEXANES.....	11.6881	10.6212	10.8152	TOTAL LB/GALLON..... 5.792
HEPTANES.....	14.2472	14.4657	15.4849	
OCTANES.....	13.8348	15.7762	17.1395	*TOTAL REAL BTU/CF... 5247.
NONANES.....	8.1635	10.3852	11.3909	
DECANES+.....	13.4371	19.3990	21.2099	
	<u>100.0000</u>	<u>100.0000</u>	<u>100.0000</u>	* DRY BASIS

... CAPILLARY EXTENDED PENTANES+ CHARACTERIZATION ...

SP. GRAVITY C5+ .. 0.7298	VAPOR PRESS C5+.. 4.679	CF/GAL C5+ .. 22.171
MOLECULAR WT C5+. 104.393	REAL BTU/CF C5+.. 6201.9	LB/GAL C5+ .. 6.084

... CAPILLARY EXTENDED HEXANES+ CHARACTERIZATION ...

TOT. MOLE% C6+.. 61.3707	TOT. LIQ% C6+... 70.6473	TOT. WT% C6+. 76.0404
SP. GRAVITY C6+ .. 0.7478	VAPOR PRESS C6+.. 1.705	CF/GAL C6+ .. 21.212
MOLECULAR WT C6+. 111.874	REAL BTU/CF C6+.. 7311.2	LB/GAL C6+ .. 6.235

ANALYSIS BASED ON GPA STANDARDS 2177-13 & 2186-14
DISTRIBUTION / REMARKS :

Molecular Wt. C-10+ = 145.2
Sp. Gravity C-10+ = 0.799
Total API Gravity = 72.16

JOHN SAVOIE

LIQUID VOL% C1/C2 RATIO = 49.58

RUN BY K.CASWELL

APPROVED *KC*

MANLEY GAS TESTING INC.
 120 DOCK ROAD - ODESSA, TEXAS-432-367-3024

A SAMPLE OF WEST EUNICE SUCTION SCRUBBER

TEST NO. 11359

=====

CAPILLARY EXTENDED
 C-6+ ANALYSIS
 (NORMALIZED TO 100%)

=====

PAGE NO. 1

COMPONENT -----	MOL% ----	LIQ% ----	WT% ----
NEOHEXANE	0.353	0.311	0.272
2,3DMC4+CYC5	2.681	1.926	1.797
2MPENTANE	2.555	2.233	1.968
3MPENTANE	1.784	1.536	1.374
N-HEXANE	4.760	4.115	3.666
2,2 DMPENTANE	0.056	0.055	0.050
MCYCLOPENTANE	2.961	2.207	2.227
2,4 DMPENTANE	0.000	0.000	0.000
2,2,3 TMBUTANE	0.009	0.008	0.008
BENZENE	0.990	0.583	0.691
3,3 DMPENTANE	0.047	0.045	0.042
CYCLOHEXANE	2.961	2.123	2.228
2MHEXANE	1.636	1.602	1.466
2,3 DMPENTANE	1.008	0.962	0.903
3MHEXANE	2.507	2.424	2.246
DIMCYCPENTANES (GROUPED)	3.431	2.981	3.011
N-HEPTANE	4.941	4.799	4.425
MCYCLOHEXANE	5.975	5.058	5.244
2,2DMHEXANE	1.542	1.678	1.574
2,3,3TMPENTANE	0.000	0.000	0.000
TOLUENE	3.605	2.542	2.969
2,3DMHEXANE	0.528	0.561	0.539
2M3EPENTANE	0.000	0.000	0.000
2MHEPTANE	4.355	4.720	4.446
4MHEPTANE	0.123	0.132	0.126
3,4DMHEXANE	0.000	0.000	0.000
3MHEPTANE	2.362	2.532	2.412
TRIMCYCPENTANES (GROUPED)	0.305	0.295	0.307
DIMCYCHEXANES (GROUPED)	2.959	2.876	2.968
N-OCTANE	3.362	3.624	3.433
2,3,5TRIMHEXANE	0.235	0.277	0.270
2,2,4TRIMHEXANE	0.059	0.069	0.067
2,2DIMHEPTANE	0.078	0.092	0.089
2,2,3TRIMHEXANE	0.040	0.047	0.046
2,5DIMHEPTANE	0.000	0.000	0.000
I-NONANE	0.000	0.000	0.000
2,4DIMHEPTANE	0.000	0.000	0.000
E-CYCHEXANE	1.622	1.532	1.626
3,3DIMHEPTANE	0.635	0.744	0.728
2,6DIMHEPTANE	0.342	0.401	0.392
E-BENZENE	0.451	0.367	0.428
2,3DIMHEPTANE	0.000	0.000	0.000
M-XYLENE	3.132	2.553	2.972
P-XYLENE	1.112	0.909	1.055
3,4DIMHEPTANE	0.807	0.937	0.925
3EHEPTANE	0.000	0.000	0.000

MANLEY GAS TESTING INC.
 120 DOCK ROAD - ODESSA, TEXAS-432-367-3024

A SAMPLE OF WEST EUNICE SUCTION SCRUBBER

TEST NO. 11359

=====

CAPILLARY EXTENDED
 C-6+ ANALYSIS
 (NORMALIZED TO 100%)

=====

PAGE NO. 2

4MOCTANE	1.198	1.432	1.373
3MOCTANE	0.798	0.945	0.915
O-XYLENE	0.690	0.552	0.654
IC4CYCPENTANE	0.324	0.348	0.366
N-NONANE	2.862	3.392	3.281
I-DECANE	0.000	0.000	0.000
1E1MCYC6	0.328	0.346	0.370
IC3BENZENE	0.868	0.804	0.933
2,3DMOCTANE	3.361	4.293	4.274
3EOCTANE	7.797	9.943	9.916
NC4CYCC6	0.000	0.000	0.000
NC3BENZENE	0.636	0.589	0.683
M+P E-TOLUENE	0.727	0.659	0.781
O-E-TOLUENE	0.818	0.741	0.879
2,2DMOCTANE	2.236	2.910	2.844
TERTBUTYLBENZENE	0.895	0.938	1.074
1,3,5TMBENZENE	0.545	0.503	0.586
3,6DMOCTANE	1.118	1.426	1.422
IC4BENZENE	2.849	2.973	3.417
N-DECANE	2.375	3.070	3.021
UNKNOWN C-6'S	0.000	0.000	0.000
UNKNOWN C-7'S	0.000	0.000	0.000
UNKNOWN C-8'S	0.000	0.000	0.000
UNKNOWN C-9'S	2.002	2.374	2.296
UNK C10'S THRU C14'S	1.264	1.906	1.925
UNK C15'S THRU C16'S	0.000	0.000	0.000
UNK C17'S THRU C20'S	0.000	0.000	0.000

TOTAL	100.000	100.000	100.000
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COMPONENT GROUPINGS (PARAFFINS-NAPTHENES-AROMATICS)

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	MOL%	LIQ%	WT%	
				MOL% 6+ AROMATICS= 17.318
TOTAL C-6'S	19.045	15.034	14.223	SP. GRAV. C6+ = 0.7478
TOTAL C-7'S	23.215	20.476	20.364	MOL. WT. C6+ = 111.874
TOTAL C-8'S	22.543	22.331	22.540	GAL/LB. C6+ = 17.982
TOTAL C-9'S	13.302	14.700	14.980	CF/GAL. C6+ = 21.212
TOTAL C-10'S	20.631	25.553	25.968	LB/GAL. C6+ = 6.235
TOTAL C-11 THRU C-14	1.264	1.906	1.925	
TOTAL C-15 THRU C-16	0.000	0.000	0.000	*IDEAL BTU/CF C6+ = 5968.9
TOTAL C-17 THRU C-20	0.000	0.000	0.000	
				*REAL BTU/CF C6+ = 7311.2
TOTAL	100.000	100.000	100.000	

*DRY BASIS [Z C6+ = 0.8164]

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MOBILE ANALYTICAL LABS, INC.

P.O. BOX 69210
 ODESSA, TEXAS 79769

SPECIAL LIQUID EXTENDED ANALYSIS

6/17/2015

LAB # 28016

ENERGY TRANSFER PARTNERS
 WEST EUNICE
 COMPRESSOR STATION

	MOL %	LV %	WT %
HYDROGEN SULFIDE	0.0913	0.0243	0.0257
METHANE	1.1529	0.3861	0.1527
CARBON DIOXIDE	0.1236	0.0417	0.0449
ETHANE	0.7412	0.3917	0.1840
PROPANE	1.3924	0.7580	0.5069
ISO-BUTANE	0.4166	0.2694	0.1999
N-BUTANE	1.6292	1.0150	0.7818
ISO-PENTANE	1.1119	0.8035	0.6623
N-PENTANE	1.5279	1.0944	0.9101
CYCLOPENTANE	0.3452	0.2567	0.2227
2-METHYLPENTANE	1.0543	0.8647	0.7501
3-METHYLPENTANE	0.7930	0.6396	0.5642
N-HEXANE	1.8785	1.5265	1.3365
METHYLCYCLOPENTANE	1.2809	0.8958	0.8900
BENZENE	0.3946	0.2182	0.2545
CYCLOHEXANE	1.4837	0.9979	1.0309
2-METHYLHEXANE	0.9689	0.8899	0.8015
3-METHYLHEXANE	1.6858	1.5292	1.3946
DIMETHYLCYCLOPENTANES	1.6291	1.3457	1.3206
2,2,4 TRIMETHYLPENTANE ***	0.6213	0.8062	0.7398
N-HEPTANE	3.2960	3.0049	2.7267
METHYLCYCLOHEXANE	4.4858	3.5633	3.6364
TRIMETHYLCYCLOPENTANES	0.4382	0.4036	0.4060
TOLUENE	2.2731	1.5042	1.7292
2-METHYLHEPTANE	5.0571	5.1514	4.7693
3-METHYLHEPTANE	1.5301	1.5413	1.4430
DIMETHYLCYCLOHEXANES	4.1846	3.7583	3.8770
N-OCTANE	4.6885	4.7464	4.4216
ETHYL BENZENE	2.8050	2.1393	2.4587
M&P-XYLENES	5.6203	4.2795	4.9264
O-XYLENE	1.3217	1.0064	1.1585
C9 NAPHTHENES	11.6427	11.7047	12.1345
C9 PARAFFINS	9.7385	10.7776	10.3122
N-NONANE	5.0110	5.5721	5.3060
DECANE PLUS	17.5851	26.0925	27.9208
TOTALS	100.0000	100.0000	100.0000

SPECIFIC GRAVITY	0.758
SP.GR. C6+	0.769
SP.GR. C7+	0.773
SP.GR C10+	0.812
TOTAL MOL. WT.	121.120
MOL. WT. C6+	127.344
MOL. WT. C7+	131.000
MOL. WT. C10+	192.290
TOTAL CU.FT./GAL	19.862
CU.FT./GAL C6+	19.166
POUNDS/GALLON	6.320
POUNDS/GALLON C5+	6.386
VAPOR PRESSURE (psia)	70.523

NOTES:
 SAMPLED 06/09/15 BY: SR
 30 PSIG @ 85 °F
 AMBIENT PRESSURE: 12.99 PSIA
 AMBIENT TEMPERATURE: 85 °F
 REID VAPOR PRESSURE 3.8 PSI

DISTRIBUTION:
 MR. JOHNNIE BRADFORD

NOTE: CU.FT./GAL @ 14.65 PSIA

*** ALSO CONTAINS 1,t2-DIMETHYLCYCLOPENTANE

WEST EUNICE COMPRESSOR STATION WATER TANK

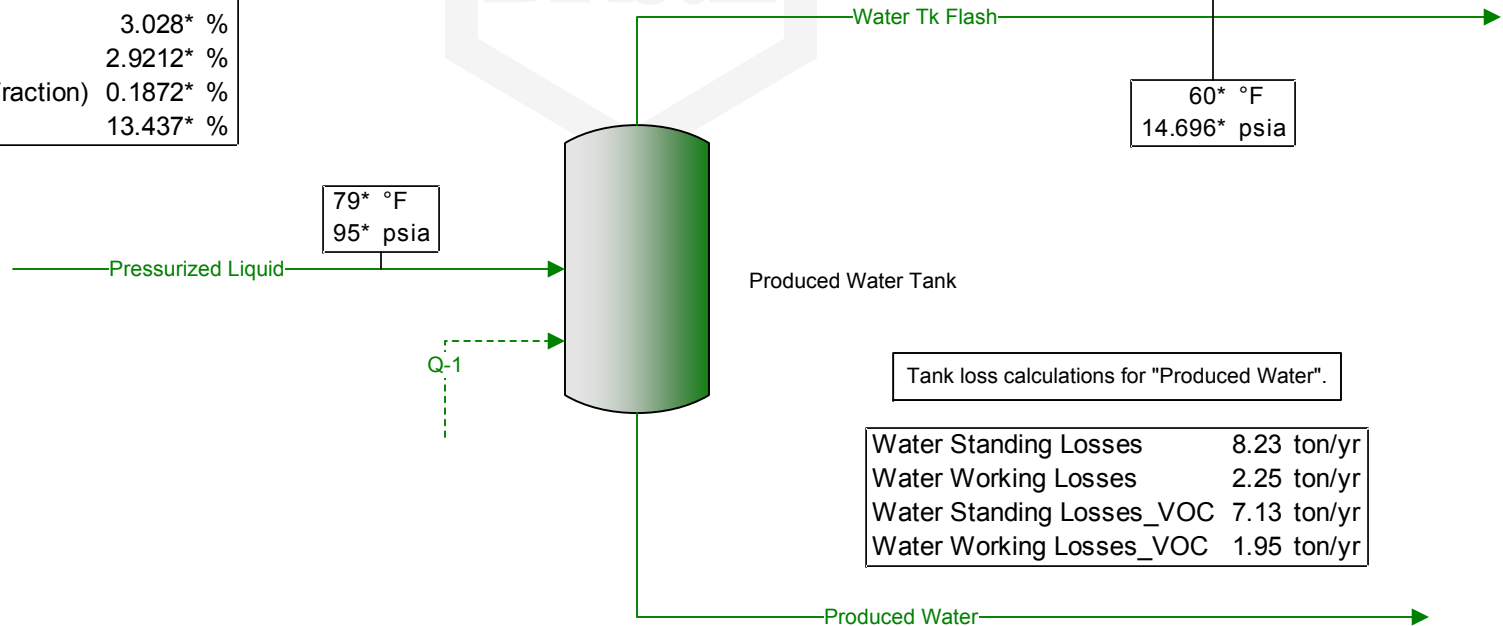
Hydrogen Sulfide(Mole Fraction)	0.0913* %
O2(Mole Fraction)	0* %
Carbon Dioxide(Mole Fraction)	0.5155* %
N2(Mole Fraction)	0* %
Methane(Mole Fraction)	2.2377* %
Ethane(Mole Fraction)	2.9778* %
Propane(Mole Fraction)	6.6148* %
Isobutane(Mole Fraction)	3.2168* %
n-Butane(Mole Fraction)	8.7361* %
Isopentane(Mole Fraction)	5.6092* %
n-Pentane(Mole Fraction)	8.6301* %
Cyclopentane(Mole Fraction)	0* %
Cyclohexane(Mole Fraction)	8.1593* %
n-Heptane(Mole Fraction)	12.035* %
n-Octane(Mole Fraction)	10.343* %
C9(Mole Fraction)	8.1635* %
Benzene(Mole Fraction)	0.6076* %
Toluene(Mole Fraction)	2.2124* %
Ethylbenzene(Mole Fraction)	0.2768* %
o-Xylene(Mole Fraction)	3.028* %
n-Hexane(Mole Fraction)	2.9212* %
2,2,4-Trimethylpentane(Mole Fraction)	0.1872* %
C10+(Mole Fraction)	13.437* %

Names	Units	Pressurized Liquid	Water Tk Flash	Produced Water
Std Liquid Volumetric Flow	bbl/d	27.21	2.2104	25
Std Vapor Volumetric Flow	MMSCFD	0.0276	0.0034382	0.024162
Specific Gravity			1.484	0.72044
API Gravity				64.908
True Vapor Pressure	psia	124.38	751.92	23.986
Reid Vapor Pressure	psi	17.442	23.079	14.81

Stream Water Tk Flash C3+ Mass Flow =53.95 ton/yr

Hydrogen Sulfide(Mass Flow)	0.3011 ton/yr
n-Hexane(Mass Flow)	0.623 ton/yr
Benzene(Mass Flow)	0.109 ton/yr
Toluene(Mass Flow)	0.127 ton/yr
Ethylbenzene(Mass Flow)	0.00552 ton/yr
o-Xylene(Mass Flow)	0.0441 ton/yr

C10_MW 145.2* lb/lbmol
C10_SG 0.799*



Tank loss calculations for "Produced Water".

Water Standing Losses	8.23 ton/yr
Water Working Losses	2.25 ton/yr
Water Standing Losses_VOC	7.13 ton/yr
Water Working Losses_VOC	1.95 ton/yr

Promax AP-42 Emissions Report
Annual Emissions
Vertical Cylinder - Water Tank

Components	Working Losses (ton/yr)	Breathing Losses (ton/yr)	Total Losses (ton/yr)
Mixture	2.253	8.226	10.48
Hydrogen Sulfide	0.00658	0.02402	0.0306
O2	0	0	0
Carbon Dioxide	0.03751	0.1369	0.1745
N2	0	0	0
Methane	0.006212	0.02268	0.02889
Ethane	0.2497	0.9114	1.161
Propane	0.68	2.483	3.163
Isobutane	0.2601	0.9496	1.21
n-Butane	0.5456	1.992	2.537
Isopentane	0.1884	0.6876	0.876
n-Pentane	0.2196	0.8015	1.021
Cyclopentane	0	0	0
Cyclohexane	0.004246	0.0155	0.01975
n-Heptane	0.03679	0.1343	0.1711
n-Octane	0.01062	0.03876	0.04938
C9	0.002768	0.0101	0.01287
Benzene	0.0002878	0.001051	0.001338
Toluene	0.000729	0.002661	0.00339
Ethylbenzene	6.54E-05	0.0002388	0.0003042
o-Xylene	0.0005965	0.002178	0.002774
n-Hexane	0.001884	0.006878	0.008762
2,2,4-Trimethylpentane	0.0007184	0.002623	0.003341
C10+	0.001014	0.003701	0.004715
Total VOC	1.953	7.132	9.085

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**Information Used To Determine Emissions
Emission Unit 1**

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Naturally Aspirated Engines

Superior naturally aspirated engines deliver exceptionally dependable performance. Simplicity of the design and advanced engineering refinements assure reliability, long service life, minimal maintenance and excellent operating economy from engines that operate on field gas, commercial natural gas or propane.

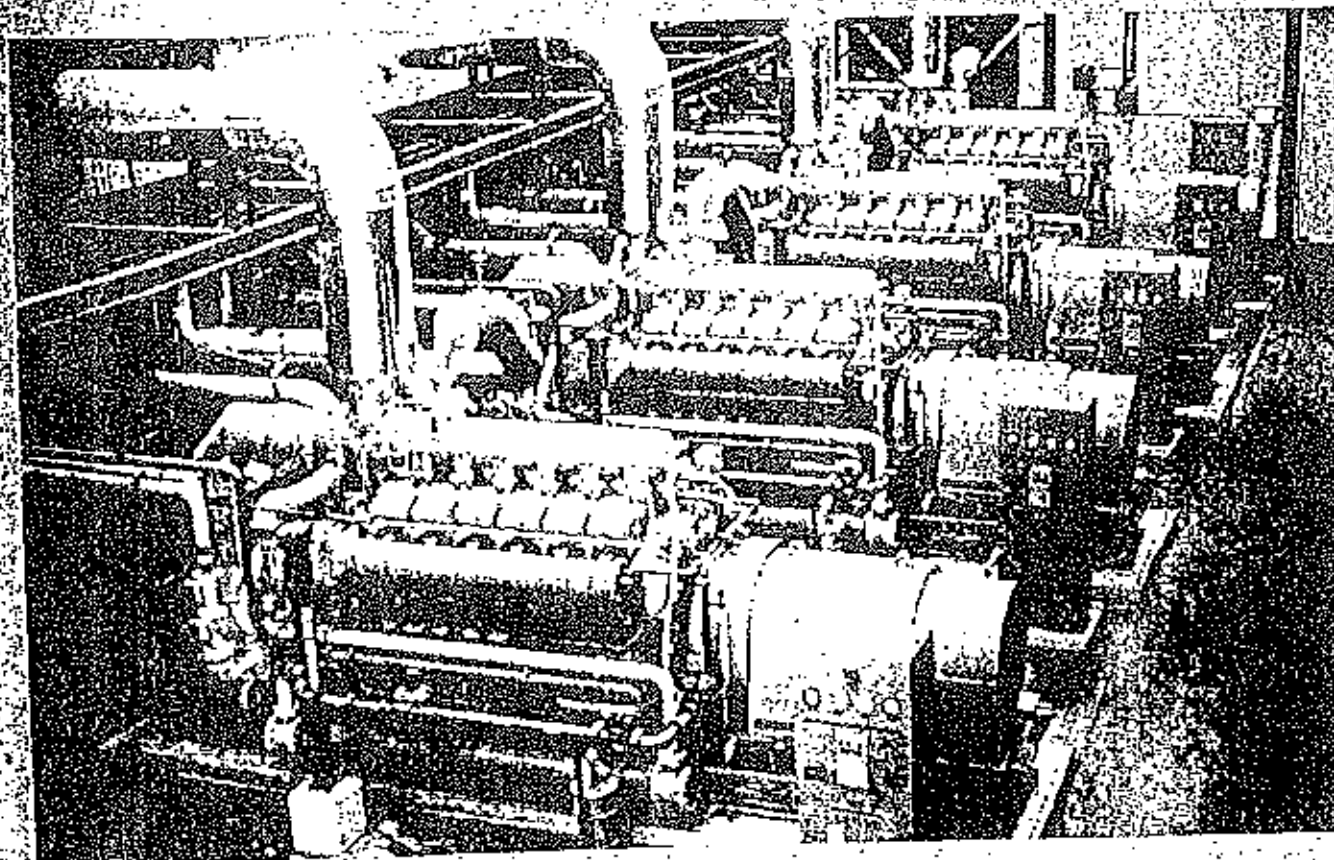
Fuel gas and air are completely mixed for ideal combustion in the carburetor. A 10:1 compression ratio is standard, with 8.20:1 or 7:1 ratios available for rich fuel gases. The ram-type manifold directs and packs a full charge in each cylinder by using the lowest practical flow restrictions and inertia effects of high-velocity air columns. Two-valve cylinder heads are designed with simple open chambers, high valve lift for deep breathing and streamlined parts.

Specifications

	140-825	120-825	80-825
Model	140-825	120-825	80-825
hp (kW)	1500 (1100)	1200 (880)	800 (600)
Surge speed (rpm)	1200 (3.5 25.445 7)	1000 (3 21.445 2)	1000 (3 25.445 2)
No. of cylinders	15	12	8
rpm	900	900	900
Displacement (in. ³ (liters))	13,195 (215)	9058 (148)	6597 (108)
BMEP (psi (bar))	107 (7.4)	107 (7.4)	107 (7.4)
Piston speed (ft/min)	1575 (48)	1575 (48)	1575 (48)
Boeing (in. (cm))			
Manifold	4 (20.3)	8 (20.3)	8 (15.2)
Crank pin dia.	6.375 (16.2)	6.375 (16.2)	5.75 (14.6)
Piston pin dia.	3.5 (8.9)	3.5 (8.9)	3.5 (8.9)
Camshaft dia.	2.75 (7.0)	2.75 (7.0)	2.50 (6.4)
Valve pin dia. (in. (cm))			
Inlet	3.375 (9.3)	3.375 (9.3)	3.375 (9.3)
Exhaust	3.25 (8.3)	3.25 (8.3)	3.25 (8.3)
Lube oil system (gal (liter))	220 (83.5)	166 (62.5)	80 (30.5)
Cooling water system (gal (liter))	110 (41.7)	148 (56.0)	62 (23.5)
Lube oil flow (gal (liter/hr))	90 (34.1)	67 (25.4)	43 (16.1)
Water pump (gal (liter/min))	750 (284)	600 (227)	275 (104)
Fuel gas pressure (psi (bar))	5-10 (3-7)	5-10 (3-7)	5-10 (3-7)
Starting air pressure (psi (bar))	110 (7.5)	150 (10.3)	150 (10.3)
Stroke (in. (cm))	290 (7.4)	200 (5.1)	130 (5.7)
Armature (in. (mm))	210 (53)	168 (43)	105 (26)
Exhaust flow (lb/min (kg/min))	1350 (72)	1240 (67)	1330 (72)
Exhaust temp. (°F (°C))	75 (19)	75 (19)	75 (19)
Air intake pressure drop (in. H ₂ O (cm H ₂ O)) Max.	15 (38.1)	15 (38.1)	15 (38.1)
Exhaust back pressure (in. H ₂ O (cm H ₂ O)) Max.	51,000 (20,100)	43,000 (19,100)	20,000 (13,000)
Weight (lb (kg))	230 (100)	220 (100)	220 (100)
Height (in. (cm))			
Dimensions (in. (cm))			
Length	13' (4.3)	13' (4.3)	12' (3.8)
Width (without glider)	9' (2.8)	9' (2.8)	7' (2.1)
Height	8' (2.4)	8' (2.4)	6' (1.8)

* Minimum permissible operating speed is 450 rpm for naturally aspirated models. Corresponding hp and kW ratings are available within these speed ranges.

* Dimensions are approximate; not to be used for construction purposes.



ECONOMY AND EMISSIONS CONTROL

SUPERIOR NATURALLY ASPIRATED ENGINES

6G825, 8G825, 12G825, 16G825

Data at 900 rpm and rated load.

<u>CONFIGURATION</u>	<u>FUEL RATE (BTU/BHP-HR.)</u>	<u>EXHAUST EMISSIONS (GM/BHP-HR.)</u>		
		<u>NOX</u>	<u>CO</u>	<u>NMHC</u>
Typical Production	7750	15.0	1.8	0.2
Control I	8000	10.0 ⁽¹⁾	10.0 ⁽¹⁾	0.4
<u>W/Converter System</u>	<u>8000</u>	1.0	1.0 - 5.0 ⁽²⁾	0.3
W/Converter System	8000 - 8500 ⁽³⁾	0.75	1.0 - 5.0 ⁽²⁾	0.3

Qualifying Conditions:

1. Required operating parameters can be set manually, but for continuous operation at these levels, a feedback control system is recommended.
2. Amount of CO reduction is dependent on selection and complexity of converter system.
3. Exact bsfc depends on station conditions and the converter system selected to attain 0.75 gm/b-h of NOx.

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

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

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**Information Used To Determine Emissions
Emission Units 2 & 5**

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Fuel Gas Data (3516)

Formula	Name	Mole %	(A) Mole Fraction	(B)			(A) x (B) lb/lb-mol	(A) x (C) Btu (HHV) per scf	(A) x (D) Btu (LHV) per scf	wt%
				Molecular Weight (lb/lb-mol)	(C) HHV (Btu/scf)	(D) LHV (Btu/scf)				
CH ₄	Methane	88.9126	0.8891	16.04	1012	911	14.26	899.80	809.99	80.00
C ₂ H ₆	Ethane	6.6838	0.0668	30.07	1773	1622	2.01	118.50	108.41	11.27
C ₃ H ₈	Propane	1.3336	0.0133	44.09	2524	2322	0.59	33.66	30.97	3.30
C ₄ H ₁₀	n-Butane	0.1373	0.0014	58.12	3271	3018	0.08	4.49	4.14	0.45
C ₅ H ₁₂	Ipentane	0.0291	0.0003	72.15	4011	3708	0.02	1.17	1.08	0.12
C ₅ H ₁₂	Isobutane	0.0661	0.0007	58.12	3261	3009	0.04	2.16	1.99	0.22
C ₅ H ₁₂	Norpentane	0.0261	0.0003	72.15	4020	3717	0.02	1.05	0.97	0.11
C ₆ H ₁₄	n-Hexane	0.0331	0.0003	86.17	4768	4415	0.03	1.58	1.46	0.16
H ₂ S	Hydrogen Sulfide	0.00	0.0000	34.08	646	595	0	0	0	0.00
H ₂ O	Water	0.00	0.0000	18.02	0	0	0	0	0	0.00
H ₂	Hydrogen	0.00	0.0000	2.02	325	275	0	0	0	0.00
O ₂	Oxygen	0.00	0.0000	32	0	0	0	0	0	0.00
N ₂	Nitrogen	2.7663	0.0277	28.01	0	0	0.77	0	0	4.35
CO	Carbon Monoxide	0.00	0.0000	28.01	321	321	0	0	0	0.00
CO ₂	Carbon Dioxide	0.012	0.0001	44.01	0	0	0.01	0	0	0.03
Total		100.0	1	1250			17.83	1062.40	959.01	100.00

Fuel Flow Rate Calculation

Engine Horsepower (hp) 1380
 Engine Fuel Consumption (Btu/hp-hr) 7962
 Fuel Gas Molecular Weight (lb/lb-mol) 17.83
 Lower Heating Value (LHV) of Fuel Gas (Btu/scf) 959.01

H2S 0 ppm

Fuel Flow (lb/hr) = Engine Horsepower (hp) x Engine Fuel Consumption (Btu/hp-hr) / LHV of fuel gas (Btu/scf) x 1 lb-mol/379 scf fuel x MW fuel gas (lb/lb-mol)

$$= \frac{1380 \text{ hp} \times 7962 \text{ Btu/hp-hr}}{959.01 \text{ Btu/scf} \times 0.002639 \times 17.83 \text{ lb/lb-mol}}$$

$$= 538.88 \text{ lb fuel/hr}$$

Fuel Flow (lb-mol/hr) = Fuel Flow (lb/hr) x 1/MW fuel gas (lb/lb-mol)

$$= \frac{538.88 \text{ lb fuel/hr} \times 0.056097611 \text{ lb-mol/lb}}$$

$$= 30.23 \text{ lb-mol/hr}$$

Fuel Flow (lb-mol/hr) = Fuel Flow (lb/hr) x 1/MW fuel gas (lb/lb-mol)

$$= \frac{538.88 \text{ lb fuel/hr} \times 0.056097611 \text{ lb-mol/lb} \times 379 \text{ scf/lb-mol}}$$

$$= 11457.14 \text{ scf/hr}$$

**Information Used To Determine Emissions
Emission Units 3 & 4**

Fuel Consumption Tables

▼ 2416GTL – English (Btu/bhph)

Fuel Consumption @ 1.0 g/bhph NO _x				
% Rated Load	Engine Speed – RPM			
	1,200	1,100	1,000	900
100	6,900	6,800	6,720	6,670
75	7,220	7,120	7,040	6,980
50	7,710	7,600	7,510	7,450

Fuel Consumption @ 1.5 g/bhph NO _x				
% Rated Load	Engine Speed – RPM			
	1,200	1,100	1,000	900
100	6,800	6,700	6,620	6,570
75	7,120	7,010	6,930	6,880
50	7,590	7,480	7,400	7,340

Fuel Consumption @ .75 g/bhph NO _x				
% Rated Load	Engine Speed – RPM			
	1,200	1,100	1,000	900
100	7,000	6,900	6,820	6,770
75	7,330	7,230	7,140	7,090
50	7,820	7,710	7,620	7,560

Fuel consumption levels are based on ±3% factory tolerance, pipeline quality natural gas and the LHV of the gas.

Exhaust Emissions Tables

▼ Model 2416GTL – Expected Emissions at Standard Settings

Engine Speed (rpm)	Percent Rated Load	1.0 NOx Standard Setting g/bhp-hr (tons/year)					1.3 NOx Standard Setting g/bkWh (mg/nm ³ @ 5% O ₂)				
		BHP	NOx	CO	NMHC	VOC	kW	NOx	CO	NMHC	VOC
1200	100	3200	1.0	2.1	0.7	0.4	2366	1.3	2.8	1.0	0.6
			(30.9)	(64.9)	(23.0)	(13.4)		(436)	(916)	(323)	(183)
1200	50	1600	1.0	2.1	0.9	0.5	1193	1.3	2.8	1.2	0.6
			(15.4)	(32.4)	(13.9)	(7.4)		(390)	(820)	(352)	(183)
1100	100	2933	1.0	2.1	0.8	0.4	2187	1.3	2.8	1.0	0.6
			(28.3)	(59.5)	(21.5)	(12.4)		(443)	(929)	(336)	(194)
1100	50	1467	1.0	2.1	0.9	0.5	1094	1.3	2.8	1.2	0.6
			(14.2)	(29.7)	(12.9)	(6.8)		(396)	(832)	(353)	(191)
1000	100	2387	1.0	2.1	0.8	0.4	1929	1.3	2.8	1.0	0.6
			(25.7)	(54.1)	(20.0)	(11.4)		(443)	(940)	(348)	(199)
1000	50	1333	1.0	2.1	0.9	0.5	994	1.3	2.8	1.2	0.6
			(12.9)	(27.0)	(11.6)	(6.2)		(401)	(842)	(362)	(193)

Only full load and speed emissions levels are valid for altitudes up to 5,000 feet (1,524 meters). Part load and speed emissions may not be achievable at altitudes approaching 5,000 feet (1,524 meters) due to turbocharger limitations. Part load and speed emissions are given as reference levels, and are not to be used as guaranteed levels without written approval from Ajax-Supracat.

NMHC denotes non-methane hydrocarbons, including aldehydes (contact the factory for specific data).
VOC denotes non-methane, non-ethane hydrocarbons, including aldehydes (contact the factory for specific data).

THC denotes total hydrocarbons

NMHC is based on typical PLQNG with: NMHC/THC mass ratio = 0.106

VOC is based on typical PLQNG with: NMHC/THC mass ratio = 0.032

Qualifying Conditions:

140° F (60° C) air manifold temperature

Elevation ≤ 5,000 ft. (1,524 m)

Ambient temperature ≤ 100° F (38° C)

180° F (82° C) jacket water outlet temperature

See page 9-12 for a more detailed description of exhaust emissions qualifying conditions.

Not Used - for Information Only

Exhaust Emissions Tables (cont.)

▼ Model 2416GTL – Expected Emissions at Optional Settings

Engine Speed (rpm)	Percent Rated Load	Optional 1.5 NO _x Setting g/bhp (tons/year)					Optional 2.0 NO _x Setting g/bkWh (mg/nm ³ @ 5% O ₂)				
		BHP	NO _x	CO	NMHC	VOC	kW	NO _x	CO	NMHC	VOC
1200	100	3200	1.5	1.5	0.7	0.4	2326	2.0	2.0	0.9	0.6
			(46.3)	(46.3)	(20.0)	(12.7)		(705)	(705)	(316)	(194)
1200	50	1600	1.5	1.5	0.8	0.4	1133	2.0	2.0	1.1	0.6
			(23.2)	(23.2)	(12.5)	(7.0)		(631)	(631)	(340)	(190)
1100	100	2933	1.5	1.5	0.7	0.4	2187	2.0	2.0	0.9	0.6
			(43.5)	(42.5)	(19.4)	(11.8)		(716)	(716)	(327)	(198)
1100	50	1467	1.5	1.5	0.8	0.4	1094	2.0	2.0	1.1	0.6
			(21.2)	(21.2)	(11.4)	(6.4)		(640)	(640)	(343)	(193)
1000	100	2667	1.5	1.5	0.7	0.4	1909	2.0	2.0	0.9	0.6
			(38.6)	(38.6)	(18.0)	(10.8)		(724)	(724)	(339)	(203)
1000	50	1333	1.5	1.5	0.8	0.4	994	2.0	2.0	1.1	0.6
			(19.3)	(19.3)	(10.4)	(5.8)		(648)	(648)	(349)	(196)

Only full load and speed emissions levels are valid for altitudes up to 6,300 feet (1,920 meters). Part load and speed emissions may not be achievable at altitudes approaching 6,300 feet (1,920 meters) due to turbocharger limitations. Part load and speed emissions are given as reference levels, and are not to be used as guaranteed levels without written approval from Ajax-Superior.

*Contact Ajax-Superior for approval to quote the optional NO_x levels given above. BSFC will decrease ≈ 2.9% at the 1.5 gram NO_x setting.

NMHC denotes non-methane hydrocarbons, including aldehydes (contact the factory for specific data).
VOC denotes non-methane, non-ethane hydrocarbons, including aldehydes (contact the factory for specific data).

THC denotes total hydrocarbons

NMHC is based on typical PLQG with: NMHC/THC mass ratio = 0.106

VOC is based on typical PLQG with: NMHC/THC mass ratio = 0.032

Qualifying Conditions:

140° F (60° C) air manifold temperature

Elevation ≤ 6,300 ft. (1,920 m)

Ambient temperature ≤ 100° F (38° C)

180° F (82° C) jacket water outlet temperature

See page 9-12 for a more detailed description of exhaust emissions qualifying conditions.

Exhaust Emissions Tables (cont.)

▼ Model 2416GTL – Expected Emissions at Optional Settings

Engine Speed (rpm)	Percent Rated Load	*Optional 0.75 NO _x Setting g/bhp (tons/year)					*Optional 1.0 NO _x Setting g/bkWh (mg/nm ³ @ 5% O ₂)				
		BHP	NO _x	CO	NMHC	VOC	kW	NO _x	CO	NMHC	VOC
1200	100	3200	0.75	2.6	0.9	0.5	2363	1.0	3.5	1.2	0.6
			(23.3)	(80.3)	(26.5)	(14.5)		(337)	(1065)	(352)	(182)
1200	50	1600	0.75	2.6	1.1	0.5	1193	1.0	3.5	1.4	0.7
			(11.6)	(40.2)	(16.3)	(3.1)		(275)	(954)	(387)	(193)
1100	100	2933	0.75	2.6	0.9	0.5	2197	1.0	3.5	1.2	0.6
			(21.2)	(73.6)	(24.9)	(13.4)		(312)	(1021)	(365)	(187)
1100	50	1467	0.75	2.6	1.1	0.5	1354	1.0	3.5	1.4	0.7
			(10.6)	(36.8)	(14.9)	(7.5)		(279)	(958)	(393)	(196)
1000	100	2667	0.75	2.6	0.9	0.5	1969	1.0	3.5	1.2	0.6
			(19.3)	(66.9)	(23.2)	(12.4)		(316)	(1094)	(376)	(202)
1000	50	1333	0.75	2.6	1.1	0.5	994	1.0	3.5	1.4	0.7
			(9.7)	(30.5)	(11.6)	(6.8)		(252)	(979)	(397)	(138)

Only full load and speed emissions levels are valid for altitudes up to 3,900 feet (1,189 meters). Part load and speed emissions may not be achievable at altitudes approaching 3,900 feet (1,189 meters) due to turbocharger limitations. Part load and speed emissions are given as reference levels, and are not to be used as guaranteed levels without written approval from Ajax-Superior.

*Contact Ajax-Superior for approval to quote the optional NO_x levels given above. BSFC will increase ≈ 2.2% at the 0.75 NO_x setting.

NMHC denotes non-methane hydrocarbons, including aldehydes (contact the factory for specific data).
VOC denotes non-methane, non-ethane hydrocarbons, including aldehydes (contact the factory for specific data).

THC denotes total hydrocarbons

NMHC is based on typical PLONG with: NMHC/THC mass ratio = 0.106

VOC is based on typical PLONG with: NMHC/THC mass ratio = 0.032

Qualifying Conditions:

130° F (60° C) air manifold temperature

Elevation ≤ 3,900 ft. (1,189 m)

Ambient temperature ≤ 100° F (38° C)

160° F (82° C) jacket water outlet temperature

See page 9-12 for a more detailed description of exhaust emissions qualifying conditions.

Operating Data and Heat Rejection At Optional 1.5 g/bhph NO_x

▼ Superior 2416GTL - English

	% Rated Load	BMEP (psi)	Engine Speed - rpm			
			1,200	1,100	1,000	900
Intake Air Flow Requirements (scfm)	110	202	7,720	6,970	6,270	5,600
	100	184	7,130	6,410	5,780	5,170
	75	138	5,600	5,060	4,540	4,060
	50	92	3,980	3,600	3,230	2,890
Exhaust Flow (lbs/min)	110	202	610	531	495	442
	100	184	563	508	457	408
	75	138	442	399	359	320
	50	92	314	284	255	228
Exhaust Outlet Temperature (±50° F)	110	202	738	746	733	703
	100	184	754	759	747	718
	75	138	785	791	781	753
	50	92	816	823	815	789
Jacket Water Heat Rejection (Btu/min)	110	202	77,930	71,430	64,940	58,450
	100	184	72,010	66,010	60,010	54,010
	75	138	59,630	54,660	49,690	44,720
	50	92	46,760	42,870	38,970	35,070
Lube Oil and Intercooler Heat Rejection @ 1.5 g/bhph NO _x (Btu/min)	110	202	61,100	54,450	48,120	42,120
	100	184	54,290	48,390	42,780	37,450
	75	138	38,730	34,590	30,610	26,810
	50	92	24,850	22,270	19,770	17,350

Notes:

- Heat rejection data is based on nominal 180° F jacket water outlet temperature. Consult the factory for heat rejection rates and design limits for applications above 180° F jacket water outlet temperature.
- Heat rejection data is averaged and will vary with operating conditions and ambient temperature. Add 5% reserve factor to 110% rated load values for sizing cooling systems. Subtract 10% reserve factor to compute recoverable heat.
- Intercooler heat rejection based on nominal 300 ft. altitude.
- Lube oil cooler and intercooler are in a common circuit requiring 138° F maximum to intercooler for rated engine performance.
- All accessory equipment should be sized to allow for a 5% reserve factor at 110% rated load.

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

Pollutant	Emission Factor (lb/MMBtu) ^b (fuel input)	Emission Factor Rating
Criteria Pollutants and Greenhouse Gases		
NO _x ^c 90 - 105% Load	4.08 E+00	B
NO _x ^c <90% Load	3.47 E-01	B
CO ^e 90 - 105% Load	3.17 E-01	C
CO ^e <90% Load	5.57 E-01	B
CO ₂ ^d	1.10 E+02	A
SO ₂ ^c	5.88 E-04	A
TOC ^f	1.47 E+00	A
Methane ^g	1.25 E+00	C
VOC ^h	1.18 E-01	C
PM10 (filterable) ⁱ	7.71 E-05	D
PM2.5 (filterable) ^j	7.71 E-05	D
PM Condensable ^j	9.91 E-03	D
Trace Organic Compounds		
1,1,2,2-Tetrachloroethane ^k	<4.00 E-05	E
1,1,2-Trichloroethane ^k	<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 ^k	2.67E-04	D
1,3-Dichloropropene ^k	<2.64 E-05	E
2-Methylnaphthalene ^k	3.32 E-05	C
2,2,4-Trimethylpentane ^k	2.50 E-04	C
Acenaphthene ^k	1.25 E-06	C

**Information Used To Determine Emissions
Emission Units 6 & 7**

Engine Speed (rpm)	1400	Fuel	NAT GAS
Compression Ratio	8:1	LHV of Fuel (Btu/SCF)	920
Aftercooler Inlet Temperature (°F)	130	Fuel System	HPG IMPCO
Jacket Water Outlet Temperature (°F)	210	Air Fuel Ratio Control Required	
Ignition System	EIS	Minimum Fuel Pressure (psig)	35
Exhaust Manifold	WATER COOLED	Methane Number at Conditions Shown	80
Combustion System Type	LOW EMISSION	Rated Altitude (ft)	5000

at 77°F Design Temperature

Engine Rating Data	% Load	100%	75%	50%
Engine Power (w/o fan)	bhp	1340	1005	670

Engine Data

Specific Fuel Consumption (BSFC) (1)	Btu/bhp-hr	7546	7807	8286
Air Flow (Wet, @ 77°F, 28.8 in Hg)	SCFM	2885	2232	1413
Air Mass Flow (Wet)	lb/hr	12796	9897	6264
Compressor Out Pressure	in. HG (abs)	79.9	76.2	57.3
Compressor Out Temperature	°F	334	306	228
Inlet Manifold Pressure	in. HG (abs)	69.9	55	39.1
Inlet Manifold Temperature (10)	°F	139	137	136
Timing (11)	°BTDC	33	33	33
Exhaust Stack Temperature	°F	855	840	842
Exhaust Gas Flow (Wet, @ stack temperature, 29.7 in Hg)	CFM	7685	6880	3743
Exhaust Gas Mass Flow (Wet)	lb/hr	13292	10283	6536

Engine Emissions Data

Nitrous Oxides (NOx as NO ₂) (9)	g/bhp-hr	1.5	1.5	1.5
	(Corr. 15% O ₂) ppm	110	104	107
Carbon Monoxide (CO) (9)	g/bhp-hr	1.9	2.0	1.9
	(Corr. 15% O ₂) ppm	226	224	225
Total Hydrocarbons (THC) (9)	g/bhp-hr	3.1	3.4	3.6
	(Corr. 15% O ₂) ppm	643	677	747
Non-Methane Hydrocarbons (NMHC) (9)	g/bhp-hr	0.46	0.51	0.54
	(Corr. 15% O ₂) ppm	46	47	51

Exhaust Oxygen (9)	%	8.3	8.1	7.8
Lambda		1.59	1.58	1.42

Engine Heat Balance Data

Input Energy LHV (1)	Btu/min	168467	130723	92500
Work Output	Btu/min	56839	42629	28420
Heat Rejection to Jacket (2) (6)	Btu/min	47848	39982	34394
Heat Rejection to Atmosphere (Radiated) (4)	Btu/min	5313	4428	3543
Heat Rejection to Lube Oil (5)	Btu/min	0	0	0
Total Heat Rejection to Exhaust (to 77°F) (2)	Btu/min	48087	3664	23652
Heat Rejection to Exhaust (LHV to 350°F) (2)	Btu/min	30032	22558	14490
Heat Rejection to Aftercooler (3) (7) (8)	Btu/min	10380	7019	2491

Engine Noise Data - at 100% load

Noise - Mechanical @ 1 m	100 dB(A)
Noise - Exhaust @ 1.5 m	111 dB(A)

Fuel Usage Guide

Derate Factor / Engine Timing vs Methane Number

	Derate Factor / Engine Timing vs Methane Number											
	<30	30	35	40	45	50	55	60	65	70	75	80 to 100
0/-	0.90/19	0.90/21	0.90/22	1.0/23	1.0/24	1.0/25	1.0/26	1.0/27	1.0/28	1.0/30	1.0/31	1.0/33

Altitude Deration Factors

AIR INLET TEMP. (°F)	ALTITUDE (FEET ABOVE SEA LEVEL)												
	0	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000	12000
130	1.00	1.00	1.00	0.98	0.94	0.91	0.88	0.84	0.81	0.78	0.75	0.72	0.70
120	1.00	1.00	1.00	1.00	0.96	0.93	0.89	0.86	0.83	0.80	0.77	0.74	0.71
110	1.00	1.00	1.00	1.00	0.98	0.94	0.91	0.87	0.84	0.81	0.78	0.75	0.72
100	1.00	1.00	1.00	1.00	1.00	0.96	0.92	0.89	0.86	0.82	0.79	0.76	0.73
90	1.00	1.00	1.00	1.00	1.00	0.98	0.94	0.91	0.87	0.84	0.81	0.78	0.75
80	1.00	1.00	1.00	1.00	1.00	0.99	0.96	0.92	0.89	0.85	0.82	0.79	0.76
70	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.94	0.90	0.87	0.84	0.81	0.77
60	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.96	0.92	0.89	0.85	0.82	0.79
50	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.94	0.90	0.87	0.84	0.80

Aftercooler Heat Rejection Factors

AIR INLET TEMP. (°F)	ALTITUDE (FEET ABOVE SEA LEVEL)												
	0	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000	12000
130	1.29	1.35	1.41	1.46	1.52	1.58	1.58	1.58	1.58	1.58	1.58	1.58	1.58
120	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
110	1.15	1.21	1.26	1.32	1.37	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43
100	1.00	1.13	1.19	1.24	1.30	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35
90	1.01	1.06	1.11	1.17	1.22	1.28	1.28	1.28	1.28	1.28	1.28	1.28	1.28
80	1.00	1.00	1.04	1.09	1.15	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
70	1.00	1.00	1.00	1.02	1.07	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
60	1.00	1.00	1.00	1.00	1.00	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
50	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

DM5155-00 Data is intended to be used with Gas Engine Performance Book Parameters - DM5900-00 on page 8

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

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

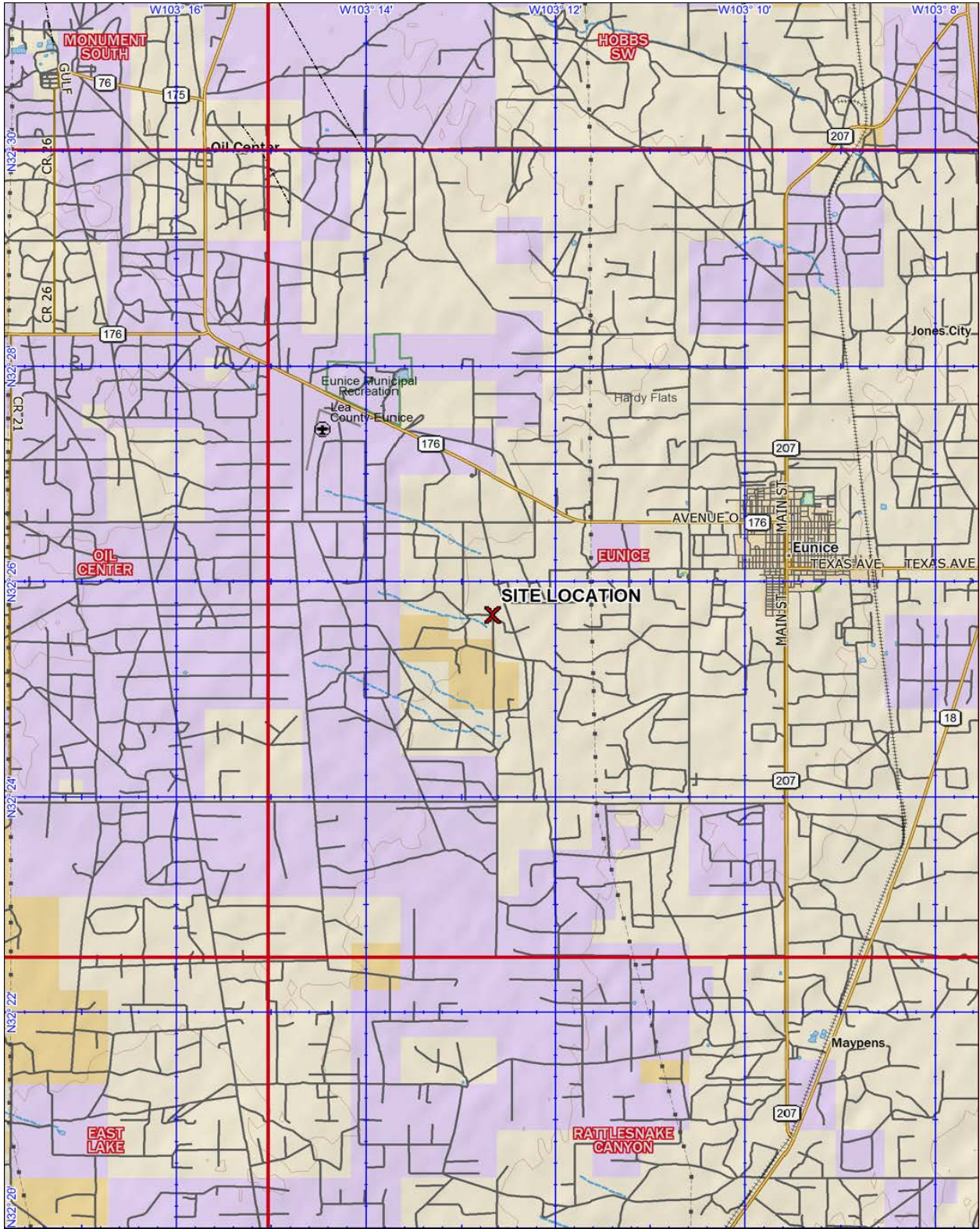
Section 8

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	

See attached.



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FIGURE TITLE

AREA MAP

DOCUMENT TITLE

APPLICATION TO RENEW
TITLE V OPERATING PERMIT NO. P242-R1M1

CLIENT

ETC TEXAS PIPELINE, LTD.

LOCATION

WEST EUNICE COMPRESSOR STATION
LEA COUNTY, NEW MEXICO

DATE 8/7/2020

SCALE AS SHOWN

DESIGNED BY PH

APPROVED BY RZ

DRAWN BY PH

PROJECT NUMBER

ETCANM2001

SECTION

8

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.
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This section is not applicable to applications 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.

Routine operations at the West Eunice Compressor Station include the removal of liquids (condensate and water) and the compression of natural gas. Natural gas enters the facility into an inlet separator where natural gas liquids and produced water are removed from the gas stream. The natural gas liquids are injected into the discharge piping from the site and produced water is stored in the water tanks then trucked off-site. The natural gas stream is compressed and exits the facility by pipeline.

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):

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)

This section is not applicable to applications 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/>

Example of a Table for STATE REGULATIONS:

<u>STATE REGU- LATIONS CITATION</u>	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION: (You may delete instructions or statements that do not apply in the justification column to shorten the document.)
20.2.1 NMAC	General Provisions	Yes	Facility	General Provisions apply to Notice of Intent, Construction, and Title V permit applications.
20.2.3 NMAC	Ambient Air Quality Standards NMAAQS	No	Facility	If subject, this would normally apply to the entire facility. 20.2.3 NMAC is a State Implementation Plan (SIP) approved regulation that limits the maximum allowable concentration of, Sulfur Compounds, Carbon Monoxide and Nitrogen Dioxide. Title V applications, see exemption at 20.2.3.9 NMAC The TSP NM ambient air quality standard was repealed by the EIB effective November 30, 2018.
20.2.7 NMAC	Excess Emissions	Yes	Facility	All Title V major sources are subject to Air Quality Control Regulations, as defined in 20.2.7 NMAC, and are thus subject to the requirements of this regulation. Also listed as applicable in NSR Permit 2103M6R1.
20.2.23 NMAC	Fugitive Dust Control	No	Facility	<p>This regulation may apply if, this is an application for a notice of intent (NOI) per 20.2.73 NMAC, if the activity or facility is a fugitive dust source listed at 20.2.23.108.A NMAC, and if the activity or facility is located in an area subject to a mitigation plan pursuant to 40 CFR 51.930. http://164.64.110.134/parts/title20/20.002.0023.html</p> <p>As of January 2019, the only areas of the State subject to a mitigation plan per 40 CFR 51.930 are in Doña Ana and Luna Counties.</p> <p>Sources exempt from 20.2.23 NMAC are activities and facilities subject to a permit issued pursuant to the NM Air Quality Control Act, the Mining Act, or the Surface Mining Act (20.2.23.108.B NMAC).</p> <p>20.2.23.108 APPLICABILITY: A. This part shall apply to persons owning or operating the following fugitive dust sources in areas requiring a mitigation plan in accordance with 40 CFR Part 51.930: (1) disturbed surface areas or inactive disturbed surface areas, or a combination thereof, encompassing an area equal to or greater than one acre; (2) any commercial or industrial bulk material processing, handling, transport or storage operations. B. The following fugitive dust sources are exempt from this part: (1) agricultural facilities, as defined in this part; (2) roadways, as defined in this part; (3) operations issued permits pursuant to the state of New Mexico Air Quality Control Act, Mining Act or Surface Mining Act; and (4) lands used for state or federal military activities. [20.2.23.108 NMAC - N, 01/01/2019]</p> <p>This facility does not meet the applicability requirement of this regulation.</p>
20.2.33 NMAC	Gas Burning Equipment - Nitrogen Dioxide	No		<p>This regulation does not apply to internal combustion equipment such as engines. It only applies to external combustion equipment such as heaters or boilers.</p> <p>Choose all that apply:</p> <p>This facility has new 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</p> <p>This facility has existing gas burning equipment having a heat input of greater than 1,000,000 million British Thermal Units per year per unit</p> <p>Note: "New gas burning equipment" means gas burning equipment, the construction or modification of which is commenced after February 17, 1972.</p> <p>Not applicable because the facility does not contain gas burning equipment having a</p>

<u>STATE REGU- LATIONS CITATION</u>	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION: (You may delete instructions or statements that do not apply in the justification column to shorten the document.)
				heat input greater than 1,000,000 million BTU per year per unit.
20.2.34 NMAC	Oil Burning Equipment: NO ₂	No		This regulation does not apply to internal combustion equipment such as engines. It only applies to external combustion equipment such as heaters or boilers. This facility has 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. Not applicable because this facility does not contain oil burning equipment having a heat input greater than 1,000,000 million BTU per year per unit.
20.2.35 NMAC	Natural Gas Processing Plant – Sulfur	No		This regulation could apply to existing (prior to July 1, 1974) or new (on or after July 1, 1974) natural gas processing plants that use a Sulfur Recovery Unit to reduce sulfur emissions. See ‘Guidance and Clarification Regarding Applicability of 20.2.35 NMAC’ located with the Air Quality Bureau’s Permit Section website guidance documents. Not applicable because West Eunice Compressor Station is not a natural gas processing plant
20.2.37 and 20.2.36 NMAC	Petroleum Processing Facilities and Petroleum Refineries	N/A	N/A	These regulations were repealed by the Environmental Improvement Board. If you had equipment subject to 20.2.37 NMAC before the repeal, your combustion emission sources are now subject to 20.2.61 NMAC.
<u>20.2.38</u> NMAC	Hydrocarbon Storage Facility	No		This regulation could apply to storage tanks at petroleum production facilities, processing facilities, tanks batteries, or hydrocarbon storage facilities. Not applicable because the West Eunice Compressor Station is not a petroleum processing facility or petroleum production facility and does not contain a tank battery or a hydrocarbon storage facility associated with a petroleum processing facility.
<u>20.2.39</u> NMAC	Sulfur Recovery Plant - Sulfur	No		This regulation could apply to sulfur recovery plants that are not part of petroleum or natural gas processing facilities. Not applicable because the West Eunice Compressor Station does not contain a sulfur recovery unit.
20.2.61.109 NMAC	Smoke & Visible Emissions	Yes	1-7	This regulation that limits opacity to 20% applies to Stationary Combustion Equipment, such as engines, boilers, heaters, and flares unless your equipment is subject to another state regulation that limits particulate matter such as 20.2.19 NMAC (see 20.2.61.109 NMAC). If equipment at your facility was subject to the repealed regulation 20.2.37 NMAC it is now subject to 20.2.61 NMAC. All engines at the site will comply with this regulation by using pipeline quality natural gas.
20.2.70 NMAC	Operating Permits	Yes	Facility	If subject, this would normally apply to the entire facility. Applies if your facility’s potential to emit (PTE) is 100 tpy or more of any regulated air pollutant other than HAPs; and/or a HAPs PTE of 10 tpy or more for a single HAP or 25 or more tpy for combined HAPs; is subject to a 20.2.79 NMAC nonattainment permit; or is a facility subject to a federal regulation that requires you to obtain a Title V permit such as landfills or air curtain incinerators. Include both stack and fugitive emissions to determine the HAP’s PTE regardless of the facility type. If your facility is one of those listed at 20.2.70.7(2)(a) through (aa) state which source type your facility is and count both fugitive and stack emissions to determine your PTE. If your facility is not in this (a) through (aa) list, count only stack emissions to determine your PTE. Landfills and Air Curtain Incinerators are not Title V Major Sources, but it would

STATE REGULATIONS CITATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION: (You may delete instructions or statements that do not apply in the justification column to shorten the document.)
				apply pursuant to 20.2.70.200.B NMAC. The West Eunice Compressor Station has been issued Title V Permit No. P242-R2M1 and is major for NOx and CO.
20.2.71 NMAC	Operating Permit Fees	Yes	Facility	If subject to 20.2.70 NMAC and your permit includes numerical ton per year emission limits, you are subject to 20.2.71 NMAC and normally applies to the entire facility. 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	If subject, this would normally apply to the entire facility. Could apply if your facility's potential emission rate (PER) is greater than 10 pph or greater than 25 tpy for any pollutant subject to a state or federal ambient air quality standard (does not include VOCs or HAPs); if the PER of lead is 5 tpy or more; if your facility is subject to 20.2.72.400 NMAC; or if you have equipment subject to 40 CFR 60 Subparts I and OOO, 40 CFR 61 Subparts C and D. Include both stack and fugitive emissions to determine PER. This facility is subject to 20.2.72 NMAC and NSR Permit No. 2103-M6
20.2.73 NMAC	NOI & Emissions Inventory Requirements	Yes	Facility	If subject, this would normally apply to the entire facility. A Notice of Intent application 20.2.73.200 NMAC could apply if your facility's PER of <u>any</u> regulated air pollutant, including VOCs and HAPs, is 10 tpy or more or if you have lead emissions of 1 tpy or more. Include both fugitive and stack emissions to determine your PER. You could be required to submit Emissions Inventory Reporting per 20.2.73.300 NMAC if your facility is subject to 20.2.73.200, 20.2.72, or emits more than 1 ton of lead or 10 tons of PM10, PM2.5, SOx, NOx CO, or VOCs in any calendar year. All facilities that are a Title V Major Source as defined at 20.2.70.7.R NMAC, are subject to Emissions Inventory Reporting. ETC will respond as required per 20.2.73.300(B)(4) and will abide by the reporting requirements of 20.2.73(B)(5, 6, and 7)
20.2.74 NMAC	Permits – Prevention of Significant Deterioration (PSD)	No	Facility	If subject, this would normally apply to the entire facility. If you are an existing PSD major source you are subject to the applicability determination requirements at 20.2.74.200 NMAC to determine if you are subject to a PSD permit, before commencing actual construction of any modifications at your facility. Complete the applicability determination in Section 12 of the application. If you are constructing a new PSD major source or are proposing a major modification to an existing PSD major source, you must obtain a PSD permit. Minor NSR Exemptions at 20.2.72.200 NMAC nor Title V Insignificant Activities do not apply to the PSD permit regulation. Choose which applies and delete the rest. See NMACS 20.2.74.7.AE and AG Major Modification and Major Stationary Source, 20.2.74.200 Applicability, and 20.2.74.201 Exemptions. 20.2.74.7.AG(1) A stationary source listed in Table 1 of this Part (20.2.74.501 NMAC) which emits, or has the potential to emit, emissions equal to or greater than one hundred (100) tons per year of any stack and fugitive emissions (as defined) of any regulated air pollutant; or 20.2.74.7.AG(2) A stationary source not listed in Table 1 of this Part (20.2.74.501 NMAC) and which emits or has the potential to emit stack emissions of two hundred fifty (250) tons per year or more of any regulated pollutant; or 20.2.74.7.AG(3) A physical change that would occur at a stationary source not otherwise qualifying under paragraphs (1) or (2) of subsection if the change would constitute a major stationary source by itself (e.g. an increase of 250 tpy or more); or 20.2.74.300.D a source or modification that becomes a major stationary source or major modification solely due to a relaxation in any enforceable limitation established after August 7, 1980, on the capacity of the source or modification

<u>STATE REGU- LATIONS CITATION</u>	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION: (You may delete instructions or statements that do not apply in the justification column to shorten the document.)
				<p>otherwise to emit a pollutant, such as a restriction on hours of operation, then this part shall apply to the source or modification as through construction had not yet commenced.</p> <p>20.2.74.200.7.AG(5) The fugitive emissions of a stationary source shall not be included in determining for any of the purposes of this section whether it is a major stationary source, unless the source belongs to one of the stationary source categories found in Table 1 of this Part (20.2.74.501 NMAC) or any other stationary source category which, as of August 7, 1980, is being regulated under section 111 or 112 of the Act.</p> <p>Not applicable because this facility does not meet the applicability requirements stated in 20.2.74.200 NMAC.</p>
20.2.75 NMAC	Construction Permit Fees	No	Facility	<p>If subject, this would apply to the entire facility. It is not necessary to include each low level regulatory citation for this regulation. This regulation applies if you are submitting an application pursuant to 20.2.72, 20.2.73, 20.2.74, and/or 20.2.79 NMAC.</p> <p>If this is a 20.2.73 NMAC application it is subject to the filing fee at 20.2.75.10 NMAC. If this is a 20.2.72, 20.2.74, and/or 20.2.79 NMAC application it is subject to 20.2.75.10, 11 permit fee, and 11.E annual fees. You are not subject to the 75.11.E annual fees if you are subject to 20.2.71 NMAC.</p> <p>In accordance with 20.2.75.11.E an annual NSR enforcement and compliance fee shall not apply to sources subject to 20.2.71 NMAC.</p>
20.2.77 NMAC	New Source Performance	Yes	2, 5, 6, 7, TK-1	Units 2, 5, 6, 7, & TK-1 are subject to the requirements of 40 CFR Part 60. See discussion below.
20.2.78 NMAC	Emission Standards for HAPS	No	Units Subject to 40 CFR 61	This facility does not emit hazardous air pollutants which are subject to the requirements of 40 CFR Part 61.
20.2.79 NMAC	Permits – Nonattainment Areas	No	Facility	<p>If subject, this would normally apply to the entire facility.</p> <p>If you are an existing nonattainment major source pursuant to 20.2.79.7.V NMAC you are subject to the applicability determination requirements at 20.2.79.109 NMAC to determine if you are subject to a nonattainment permit, before commencing actual construction of any modifications at your facility.</p> <p>If you are constructing a new nonattainment major source or are proposing a major modification to an existing nonattainment major source, you must obtain a nonattainment permit.</p> <p>Minor NSR Exemptions at 20.2.72.200 NMAC nor Title V Insignificant Activities do not apply to the nonattainment permit regulation.</p> <p>Choose which applies and delete the rest. See NMACS 20.2.79.7.U Major Modification and 7.V Major Stationary Source.</p> <p>20.2.79.109.A(1) A major stationary source or major modification that will be located within a nonattainment area so designated pursuant to Section 107 of the Federal Act and will emit a pollutant subject to a National Ambient Air Quality Standard for which it is major and which the area is designated nonattainment; or</p> <p>20.2.79.109.A(2) A major stationary source or major modification that will be located within an area designated attainment or unclassifiable pursuant to Section 107 of the Federal Act and will emit a regulated pollutant subject to a National Ambient Air Quality Standard for which it is major and the ambient impact of such pollutant would exceed any of the significance levels in 20.2.79.119.A NMAC at any location that does not meet any national ambient air quality standard for the same pollutant.</p> <p>This regulation does not apply because the facility is not located in, nor does it affect, a nonattainment area.</p>

<u>STATE REGU- LATIONS CITATION</u>	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION: (You may delete instructions or statements that do not apply in the justification column to shorten the document.)
20.2.80 NMAC	Stack Heights	No		Usually not applicable for TV This regulation does not apply because this is a Title V renewal application and no stacks at the site exceed good engineering practice (GEP)
20.2.82 NMAC	MACT Standards for source categories of HAPS	Yes	1-7	This regulation applies to all sources emitting hazardous air pollutants, which are subject to the requirements of 40 CFR Part 63. This regulation applies to all sources emitting hazardous air pollutants, which are subject to the requirements of 40 CFR Part 63, as amended through August 29, 2013. Facility is an area source of HAPs with one applicable MACT (ZZZZ). See discussion for 40 CFR 63 ZZZZ below.

Example of a Table for Applicable FEDERAL REGULATIONS (Note: This is not an exhaustive list):

<u>FEDERAL REGU- LATIONS CITATION</u>	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
40 CFR 50	NAAQS	Yes	Facility	If subject, this would normally apply to the entire facility. This applies if you are subject to 20.2.70, 20.2.72, 20.2.74, and/or 20.2.79 NMAC. This regulation is applicable under 20.2.70.7.E.11.
NSPS 40 CFR 60, Subpart A	General Provisions	Yes	2, 5, TK-1	Applies if any other Subpart in 40 CFR 60 applies. See Subparts JJJJ and OOOO discussions below.
NSPS 40 CFR60.40a, Subpart Da	Subpart Da, Performance Standards for Electric Utility Steam Generating Units	No		Establishes PM, SO ₂ and NO _x emission limits/standards of performance for Unit XXX . The duct burner (unit # XXX) has a XXXX MMBtu/hr heat input, which exceeds the 250 MMBtu/hr threshold. Construction commenced XXXX , after the 9/18/1978 applicability date. There are no steam generating units at the site.
NSPS 40 CFR60.40b Subpart Db	Electric Utility Steam Generating Units	No		(a) The affected facility to which this subpart applies is each steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity from fuels combusted in the steam generating unit of greater than 29 MW (100 million Btu/hour). Establishes NO _x emission limit for Unit XXX . The boiler (unit XXX) has a XXX MMBtu/hr heat input, which exceeds the 100 MMBtu/hr threshold. Construction commenced 1980 and the boiler was modified in XXXX , after the 6/19/1984 applicability date. There are no steam generating units at the site.
40 CFR 60.40c, Subpart Dc	Standards of Performance for Small Industrial- Commercial- Institutional Steam Generating Units	No		Applicability: facility has steam generating units for which construction, modification or reconstruction is commenced after June 9, 1989 and that have a maximum design heat input capacity of 29 MW (100 MMBtu/hr) or less, but greater than or equal to 2.9 MW (10 MMBtu/hr). This regulation applies to units XXX, X, XX, and XXX . There are no steam generating units at the site.

<u>FEDERAL REGU- LATIONS CITATION</u>	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
NSPS 40 CFR 60, Subpart Ka	Standards of Performance for Storage Vessels for Petroleum Liquids for which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984	No		Tanks XXX have a storage capacity greater than 151,416 liters (40,000 gallons) that are used to store petroleum liquids for which construction is commenced after May 18, 1978. Note: Exception below Each petroleum liquid storage vessel with a capacity of less than 1,589,873 liters (420,000 gallons) used for petroleum or condensate stored, processed, or treated prior to custody transfer is not an affected facility and, therefore, is exempt from the requirements of this subpart No tanks at the site exceed 40,000 gallons in storage capacity.
NSPS 40 CFR 60, Subpart Kb	Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984	No		This facility has storage vessels, emission units XXX with a capacity greater than or equal to 75 cubic meters (m ³) that is used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification is commenced after July 23, 1984. Note: This regulation has several exceptions. See link 40 CFR 60 Subpart Kb Except for TK-1, all tank capacities are below the applicable capacity of this Subpart. TK-1 meets the exemption under 60.110b (d)(4).
NSPS 40 CFR 60.330 Subpart GG	Stationary Gas Turbines	No		Units x,y,z have a heat input = x Btu/hour which is greater than the 10 MMBtu/hour threshold. These units were installed on x which is before/after the October 3, 1977 applicability date. (For information on equipment manufactured before but installed at facility after see EPA Guidance document # 0300006) There are no stationary gas turbines at the site.
NSPS 40 CFR 60, Subpart KKK	Leaks of VOC from Onshore Gas Plants	No		Affected Facility with Leaks of VOC from Onshore Gas Plants. Any affected facility under paragraph (a) of this section that commences construction, reconstruction, or modification after January 20, 1984, is subject to the requirements of this subpart. The group of all equipment (each pump, pressure relief device, open-ended valve or line, valve, compressor, and flange or other connector that is in VOC service or in wet gas service, and any device or system required by this subpart) except compressors (defined in § 60.631) within a process unit is an affected facility. A compressor station, dehydration unit, sweetening unit, underground storage tank, field gas gathering system, or liquefied natural gas unit is covered by this subpart if it is located at an onshore natural gas processing plant. If the unit is not located at the plant site, then it is exempt from the provisions of this subpart. The West Eunice Compressor Station is not a gas processing plant.
NSPS 40 CFR Part 60 Subpart LLL	Standards of Performance for Onshore Natural Gas Processing: SO₂ Emissions	No		The facility is a natural gas processing plant, including a sweetening unit followed by a sulfur recovery unit, constructed after January XX, XXXX , and meets the applicability criteria of 40 CFR 60.640 The West Eunice Compressor Station is not a gas processing plant.
NSPS 40 CFR Part 60 Subpart OOOO	Standards of Performance for Crude Oil and Natural Gas Production, Transmission, and Distribution for which construction, modification or reconstruction	Yes	TK-1	EPA Guidance Page: https://www3.epa.gov/airquality/oilandgas/ 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. If there is a standard or other requirement, then the facility is an “affected

<u>FEDERAL REGU- LATIONS CITATION</u>	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
	commenced after August 23, 2011 and before September 18, 2015			<p>facility.” Currently there are standards for: gas wells (60.5375); centrifugal compressors (60.5380); reciprocating compressors (60.5385); controllers (60.5390); storage vessels (60.5395); equipment leaks (60.5400); sweetening units (60.5405).</p> <p>If standards apply, list the unit number(s) and regulatory citation of the standard that applies to that unit (e.g. Centrifugal Compressors 1a-3a are subject to the standards at 60.5380(a)(1) and (2) since we use a control device to reduce emissions)</p> <p>TK-1 is an affected facility under NSPS Subpart OOOO under 60.5365 (e)(2). It is exempt from the control requirements under 60.5395 (d) (2) but subject to the recordkeeping requirements.</p>
NSPS 40 CFR Part 60 Subpart OOOa	Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015	No		<p>See 60.536 EPA Guidance Page: https://www3.epa.gov/airquality/oilandgas/0a</p> <p>There are no sources that commenced construction, modification, or reconstruction after September 18, 2015.</p>
NSPS 40 CFR 60 Subpart IIII	Standards of performance for Stationary Compression Ignition Internal Combustion Engines	No		<p>See 60.4200 and EPA Region 1’s Reciprocating Internal Combustion Guidance website. There are no CI engines at the site.</p>
NSPS 40 CFR Part 60 Subpart JJJJ	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines	Yes	2, 5	<p>Unit No. 2: The actual unit to be installed has not yet been selected. A determination of NSPS Subpart JJJJ applicability will be made when the actual engine is selected.</p> <p>Unit No. 5: The actual unit to be installed has not yet been selected. A determination of NSPS Subpart JJJJ applicability will be made when the actual engine is selected.</p>
NSPS 40 CFR 60 Subpart TTTT	Standards of Performance for Greenhouse Gas Emissions for Electric Generating Units	No		<p>See 60.5508 There are no electric generating units at the site.</p>
NSPS 40 CFR 60 Subpart UUUU	Emissions Guidelines for Greenhouse Gas Emissions and Compliance Times for Electric Utility Generating Units	No		<p>See 60.5700 The facility is not an electric utility.</p>
NSPS 40 CFR 60, Subparts WWW, XXX, Cc, and Cf	Standards of performance for Municipal Solid Waste (MSW) Landfills	No		<p>See 60.30c, 60.30f, 60.750, and/or 60.760 The facility is not a municipal solid waste landfill.</p>
NESHAP	General Provisions	No	Units	Applies if any other Subpart in 40 CFR 61 applies.

<u>FEDERAL REGU- LATIONS CITATION</u>	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
40 CFR 61 Subpart A			Subject to 40 CFR 61	No subparts in 40 CFR 61 are applicable.
NESHAP 40 CFR 61 Subpart E	National Emission Standards for Mercury	No		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 The facility does not engage in any of the activities regulated by the subpart.
NESHAP 40 CFR 61 Subpart V	National Emission Standards for Equipment Leaks (Fugitive Emission Sources)	No		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. VHAP service means a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least 10 percent by weight of VHAP. VHAP means a substance regulated under this subpart for which a standard for equipment leaks of the substance has been promulgated. Benzene is a VHAP (See 40 CFR 61 Subpart J). Link to 40 CFR 61 Subpart V Note: If 40 CFR 60 also applies source only needs to comply with this part. No equipment is in VHAP service.
MACT 40 CFR 63, Subpart A	General Provisions	Yes	1, 2, 3, 4, 5, 6, 7	Applies if any other Subpart in 40 CFR 63 applies. All engines are subject to MACT Subpart ZZZZ
MACT 40 CFR 63.760 Subpart HH	Oil and Natural Gas Production Facilities	No		Choose all that apply: This facility is Subject to the requirements of 40 CFR 63 Subpart HH Dehydrators X, X have no control requirements because { }.- however, they are subject to HH recordkeeping and reporting. Facility was major for HAPS in Permit PXXX issued June X, 200X . Once in always in. The West Eunice Compressor Station does not operate a dehydrator and is a minor source of HAPs.
MACT 40 CFR 63 Subpart HHH		No		This subpart applies to owners and operators of natural gas transmission and storage facilities that transport or store natural gas prior to entering the pipeline to a local distribution company or to a final end user (if there is no local distribution company), and that are major sources of hazardous air pollutants (HAP) emissions as defined in §63.1271. See link below 40 CFR 63 Subpart HHH The West Eunice Compressor Station is a minor source for formaldehyde and total HAPs.
MACT 40 CFR 63 Subpart DDDDD	National Emission Standards for Hazardous Air Pollutants for Major Industrial, Commercial, and Institutional Boilers & Process Heaters	No		See 63.7480 EPA Guidance Page: https://www.epa.gov/boilers The facility does not operate any sources that are regulated by the subpart.
MACT 40 CFR 63 Subpart UUUUU	National Emission Standards for Hazardous Air Pollutants Coal & Oil Fire Electric Utility Steam Generating Unit	No		See 63.9980 (known as the MATs rule) EPA Guidance Page: https://www.epa.gov/boilers The facility does not operate any sources that are regulated by the subpart.

<u>FEDERAL REGU- LATIONS CITATION</u>	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
MACT 40 CFR 63 Subpart ZZZZ	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE MACT)	Yes	1-7	<p>See 63.6580 and EPA Region 1’s Reciprocating Internal Combustion Guidance website. All engines are subject to MACT Subpart ZZZZ</p> <p>Unit No. 1: 63.6590(a)(1)(iii) - Engine commenced construction prior to June 12, 2006, and has not been reconstructed since that date. It is an existing remote stationary RICE at an area HAP source. 63.6603(a) and (f) Table 2d #11 a, b, & c. Table 2b is not applicable.</p> <p>Unit No. 2: The actual unit to be installed has not yet been selected. A determination of MACT Subpart ZZZZ applicability will be made when the actual engine is selected.</p> <p>Unit No. 3: 63.6590(a)(1)(iii) - Engine commenced construction prior to June 12, 2006, and has not been reconstructed since that date. It is an existing remote stationary RICE at an area HAP source. 63.6603(a) and (f) Table 2d #8 a, b, & c. Table 2b is not applicable.</p> <p>Unit No. 4: 63.6590(a)(1)(iii) - Engine commenced construction prior to June 12, 2006, and has not been reconstructed since that date. 63.6603(a) and (f) Table 2d #8 a, b, & c. Table 2b is not applicable.</p> <p>Unit No. 5: The actual unit to be installed has not yet been selected. A determination of MACT Subpart ZZZZ applicability will be made when the actual engine is selected.</p> <p>Unit No. 6: 63.6590(a)(2)(iii) - Engine commenced construction in October 2007 and has not been reconstructed since that date. It is a new remote stationary RICE at an area HAP source. 63.6590(c)(i) The engine must comply with applicable NSPS Subpart JJJJ requirements. However, there are no requirements for this unit under NSPS JJJJ as the unit was manufactured before the 2008 applicability date for 4SLB engines with a horsepower between 500 and 1350. Therefore, no further requirements apply under MACT Subpart ZZZZ.</p> <p>Unit No. 7: 63.6590(a)(2)(iii) - Engine commenced construction in December 2007 and has not been reconstructed since that date. It is a new remote stationary RICE at an area HAP source. 63.6590(c)(i) The engine must comply with applicable NSPS Subpart JJJJ requirements. However, there are no requirements for this unit under NSPS JJJJ as the unit was manufactured before the 2008 applicability date for 4SLB engines with a horsepower between 500 and 1350. Therefore, no further requirements apply under MACT Subpart ZZZZ.</p>

<u>FEDERAL REGU- LATIONS CITATION</u>	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
40 CFR 64	Compliance Assurance Monitoring	No		<p>Applies only to Title V Major Sources Emissions for Unit XX are major in and of itself (XXXX TPY SO₂). OR SRU is actually exempt because of 40 CFR64.2 (b) (vI) (b) Exemptions—(1) Exempt emission limitations or standards. The requirements of this part shall not apply to any of the following emission limitations or standards: (vi) Emission limitations or standards for which a part 70 or 71 permit specifies a continuous compliance determination method, as defined in §64.1. The exemption provided in this paragraph (b)(1)(vi) shall not apply if the applicable compliance method includes an assumed control device emission reduction factor that could be affected by the actual operation and maintenance of the control device (such as a surface coating line controlled by an incinerator for which continuous compliance is determined by calculating emissions on the basis of coating records and an assumed control device efficiency factor based on an initial performance test; in this example, this part would apply to the control device and capture system, but not to the remaining elements of the coating line, such as raw material usage). Not applicable because no emission units at the West Eunice site are controlled major sources.</p>
40 CFR 68	Chemical Accident Prevention	No		<p>If subject, this would normally apply to the entire facility. An owner or operator of a stationary source that has more than a threshold quantity of a regulated substance in a process, as determined under §68.115, See 40 CFR 68 Facility is regulated under DOT Office of Pipeline Safety Regulations (49 CFR 192, 193, and 195) and is therefore not subject to this regulation.</p>
Title IV – Acid Rain 40 CFR 72	Acid Rain	No		<p>See 40 CFR 72.6. This may apply if your facility generates commercial electric power or electric power for sale. The facility does not generate commercial electric power or power for sale.</p>
Title IV – Acid Rain 40 CFR 73	Sulfur Dioxide Allowance Emissions	No		<p>See 40 CFR 73.2. This may apply if your facility generates commercial electric power or electric power for sale. The facility does not generate commercial electric power or power for sale.</p>
Title IV-Acid Rain 40 CFR 75	Continuous Emissions Monitoring	No		<p>See 40 CFR 75.2. This may apply if your facility generates commercial electric power or electric power for sale. The facility does not generate commercial electric power or power for sale.</p>
Title IV – Acid Rain 40 CFR 76	Acid Rain Nitrogen Oxides Emission Reduction Program	No		<p>See 40 CFR 76.1. This may apply if your facility generates commercial electric power or electric power for sale. The facility does not generate commercial electric power or power for sale.</p>
Title VI – 40 CFR 82	Protection of Stratospheric Ozone	No	N/A	<p>EPA Guidance Page for 40 CFR 82: https://www.epa.gov/section608 40 CFR 82 may apply if you: (40 CFR 82.1 and 82.100) produce, transform, destroy, import or export a controlled substance or import or export a controlled product; (40 CFR 82.30) if you perform service on a motor vehicle for consideration when this service involves the refrigerant in the motor vehicle air conditioner; (40 CFR 82.80) if you are a department, agency, and instrumentality of the United States subject to Federal procurement requirements; (82.150) if you service, maintain, or repair appliances, dispose of appliances, refrigerant reclaimers, if you are an owner or operator of an appliance, if you are a manufacturer of appliances or of recycling and recovery equipment, if you are an approved recycling and recovery equipment testing organization, and/or if</p>

FEDERAL REGU- LATIONS CITATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
				<p>you sell or offer for sell or purchase class I or class I refrigerants.</p> <p>Note: Owners and operators of appliances subject to 40 CFR 82.150 Recycling and Emissions Reduction have recordkeeping and reporting requirements even if the owner/operator is not performing the actual work.</p> <p>Note: Disposal definition in 82.152: Disposal means the process leading to and including: (1) The discharge, deposit, dumping or placing of any discarded appliance into or on any land or water; (2) The disassembly of any 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. "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> <p>The facility does not engage in any of the activities regulated by the subpart.</p>

Section 14

Operational Plan to Mitigate Emissions

(Submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

- Title V Sources** (20.2.70 NMAC): By checking this box and certifying this application the permittee certifies that it has developed an **Operational Plan to Mitigate Emissions During Startups, Shutdowns, and Emergencies** defining the measures to be taken to mitigate source emissions during startups, shutdowns, and emergencies as required by 20.2.70.300.D.5(f) and (g) NMAC. This plan shall be kept on site to be made available to the Department upon request. This plan should not be submitted with this application.
- NSR** (20.2.72 NMAC), **PSD** (20.2.74 NMAC) & **Nonattainment** (20.2.79 NMAC) **Sources:** By checking this box and certifying this application the permittee certifies that it has developed an **Operational Plan to Mitigate Source Emissions During Malfunction, Startup, or Shutdown** defining the measures to be taken to mitigate source emissions during malfunction, startup, or shutdown as required by 20.2.72.203.A.5 NMAC. This plan shall be kept on site to be made available to the Department upon request. This plan should not be submitted with this application.
- Title V** (20.2.70 NMAC), **NSR** (20.2.72 NMAC), **PSD** (20.2.74 NMAC) & **Nonattainment** (20.2.79 NMAC) **Sources:** By checking this box and certifying this application the permittee certifies that it has established and implemented a Plan to Minimize Emissions During Routine or Predictable Startup, Shutdown, and Scheduled Maintenance through work practice standards and good air pollution control practices as required by 20.2.7.14.A and B NMAC. This plan shall be kept on site or at the nearest field office to be made available to the Department upon request. This plan should not be submitted with this application.
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Section 15

Alternative Operating Scenarios

(Submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

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

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

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

There are no alternative operating scenarios for this facility.

Section 16

Air Dispersion Modeling

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

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

Check each box that applies:

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

Air quality dispersion modeling was last submitted in February 2008 in an application for NSR Permit No. 2103-M3 and in December 2015 in an application for NSR Permit No. 2103-M6.

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.

To save paper and to standardize the application format, delete this sentence and the samples in the Compliance Test History Table, and begin your submittal for this attachment on this page.

Compliance Test History Table **(Modify this sample table to suit your facility)**

Unit No.	Test Description	Test Date
1	Tested in accordance with EPA test methods for CO and NO _x as required by Title V Permit P242.	Engine exchange Initial test 12/22/09. Last quarterly test conducted on 7/8/20.
2	Not Installed.	N/A
3	Tested in accordance with EPA test methods for CO and NO _x as required by Title V Permit P242.	Engine exchange Initial test 7/7/11 Last quarterly test conducted on 10/4/19.
4	Tested in accordance with EPA test methods for CO and NO _x as required by NSR Permit 2103-M4.	Compliance Testing 12/18/2014. Last quarterly test conducted on 7/9/20.
5	Not installed.	N/A
6	Tested in accordance with the procedures specified in 60.4244 to meet compliance requirements for 40 CFR 60, Subpart JJJJ and Permit No. P242-R1 condition A 201 A.(a).	Compliance Testing 6/27/18
7	Tested in accordance with EPA test methods for CO and NO _x as required by NSR Permit 2103-M6 condition A 201 A.1.	Periodic Testing 4/10/19.

Section 19

Requirements for Title V Program

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

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.

No sources at this facility meet the applicability requirements of 40 CFR 64 and therefore are not subject to this subpart.

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.

All sources at this facility are currently operating in compliance with all applicable requirements.

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

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

ETC will continue to be in compliance with the requirements for which the facility is currently in compliance. ETC will comply with other applicable requirements in a timely manner as they come into effect during the permit term.

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.

ETC will submit an annual certification of compliance within 30 days following the end of every 12-month reporting period. The 12-month reporting period starts on January 1st of each year.

19.5 - Stratospheric Ozone and Climate Protection

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

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

There are no operations at this facility that trigger the applicability of these requirements.

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**.

ETC is currently operating in compliance with all applicable requirements. Therefore, a Compliance Plan is not required.

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

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

N/A. There are no sources at the facility subject to Section 112(r) of the Clean Air Act.

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

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

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

Other States: Texas, 13.7 km

Indian Tribes: None

Bernalillo County: >80 km

19.9 - Responsible Official

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

The Responsible Official is Mr. Clint Green, Vice President of Operations, who has designated Mr. Mike McCracken, Senior Director of Operations, as the alternate responsible official.

Section 20

Other Relevant Information

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

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

No other relevant information is being submitted with this application.

Section 22: Certification

Company Name: ETC Texas Pipeline, Ltd.

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

Signed this 13th day of August, 2020, upon my oath or affirmation, before a notary of the State of

Texas

[Signature]
*Signature

8.13.2020
Date

JOHN M MCCRACKEN
Printed Name

SR. DIRECTOR - OPS
Title

Scribed and sworn before me on this 13th day of August, 2020.

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

10th day of November, 2020.

[Signature]
Notary's Signature

8.13.2020
Date

Dona J. Meadows
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.



August 18, 2020

Dear Customer,

The following is the proof-of-delivery for tracking number: 771276791771

Delivery Information:

Status:	Delivered	Delivered To:	Receptionist/Front Desk
Signed for by:	L.LORIW	Delivery Location:	
Service type:	FedEx Priority Overnight		SANTA FE, NM,
Special Handling:	Deliver Weekday	Delivery date:	Aug 18, 2020 10:06

Shipping Information:

Tracking number:	771276791771	Ship Date:	Aug 17, 2020
		Weight:	1.0 LB/0.45 KG
Recipient:		Shipper:	
SANTA FE, NM, US,		Arlington, TX, US,	

Reference ETCANM2001 WES001

Signature image is available. In order to view image and detailed information, the shipper or payor account number of the shipment must be provided.

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