NMED AIR QUALITY
INITIAL NSR APPLICATION
PRONTO MIDSTREAM, LLC
MARLAN GAS PROCESSING PLANT

Facility Contact:
Kha Mach – Regulatory, Environmental and Regulatory Engineer

Pronto Midstream, LLC
5400 LBJ Freeway
Suite 1500
Dallas, TX 75240

Prepared By:

Jaimy Karacaoglu – Senior Consultant

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April 2026

Project 253201.0194

Trinity Consultants

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

April 14, 2026

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

RE: Initial NSR Application
Pronto Midstream, LLC – Marlan Gas Plant

Permit Programs Manager:

On behalf of Pronto Midstream LLC, we are submitting this application for an initial NSR for the existing Marlan Gas Plant. The facility is currently authorized under GCP-O&G No. 7426-M5 and is located approximately 23 miles northeast of Loving, New Mexico. With this application, Pronto is looking to install an additional treatment train (Train 3), as well as modifying existing equipment. This application is being submitted pursuant to 20.2.72.219.D.1.a NMAC.

The format and content of this application are consistent with the Bureau's current policy regarding NSR Significant Revision applications; it is a complete application package using the most current Universal Application forms. Enclosed is a hard copy of the application, including the application fee and the original certification page. Please feel free to contact either myself at (410) 903-0750 or by email at Jaimy.Karacaoglu@trinityconsultants.com if you have any questions regarding this application. Alternatively, you may contact Kha Mach, Environmental and Regulatory Engineer for Pronto Midstream, LLC, at (972) 371-5472 or by email at kha.mach@matadorresources.com.

Sincerely,

Jaimy Karacaoglu
Senior Consultant

CC: Jason Conway (EHS Manager, jason.conway@matadorresources.com)

Trinity Project File: 253201.0194

Air Permit Application
Compliance History Disclosure Form

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

Permittee/Applicant Company Name		**Expected Application Submittal Date**
Pronto Midstream LLC		April 3, 2026
Permittee/Company Contact	**Phone**	**Email**
Kha Mach	(972) 371-5472	kha.mach@matadorresources.com

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

Mail Application To:		**For Department use only:**
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		

Universal Air Quality Permit Application

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

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

This application is submitted as (check all that apply)**:** ☐ Request for a No Permit Required Determination (no fee)
☐ **Updating** an application currently under NMED review. Include this page and all pages that are being updated (no fee required).
Construction Status: ☐ Not Constructed ☒ Existing Permitted (or NOI) Facility ☐ Existing Non-permitted (or NOI) Facility
Minor Source: ☐ 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.: 663113 in the amount of $500

☒ I acknowledge the required submittal format for the hard copy application is printed double sided 'head-to-toe', 2-hole punched (except the Sect. 2 landscape tables is printed 'head-to-head'), numbered tab separators. Incl. a copy of the check on a separate page.

☒ I acknowledge there is an annual fee for permits in addition to the permit review fee: www.env.nm.gov/air-quality/permit-fees-2/.

☐ This facility qualifies for the small business fee reduction per 20.2.75.11.C. NMAC. The full $500.00 filing fee is included with this application and I understand the fee reduction will be calculated in the balance due invoice. The Small Business Certification Form has been previously submitted or is included with this application. (Small Business Environmental Assistance Program Information: www.env.nm.gov/air-quality/small-biz-eap-2/.)

Citation: Please provide the **low level citation** under which this application is being submitted: **20.2.72.200.A 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: 38004	Updating Permit/NOI #: 7426M5
1	Facility Name: Marlan Gas Plant	Plant primary SIC Code (4 digits): 1321	
		Plant NAIC code (6 digits): 211130	
a	Facility Street Address (If no facility street address, provide directions from a prominent landmark): From the intersection of HW 285 and HW 62 in Carlsbad, head NE on HW 62 for 27 mi. Turn left onto lease road and go 0.35 mi, then turn left. Go 4.2 mi then turn right and go 3 mi, then turn left. Go 0.5 mi then turn right and go 0.3 mi to the site on the left.		

2	Plant Operator Company Name: Pronto Midstream, LLC	Phone/Fax: 972-371-5200
a	Plant Operator Address: 5400 LBJ Freeway Ste 1500, Dallas, Texas, 75240	
b	Plant Operator's New Mexico Corporate ID or Tax ID: 32-0591911	
3	Plant Owner(s) name(s): Pronto Midstream, LLC	Phone/Fax: 972-371-5200
a	Plant Owner(s) Mailing Address(s): 5400 LBJ Freeway Ste 1500, Dallas, Texas, 75240	
4	Bill To (Company): Pronto Midstream, LLC	Phone/Fax: 972-371-5472
a	Mailing Address: 5400 LBJ Freeway Ste 1500, Dallas, Texas, 75240	E-mail: kha.mach@matadorresources.com
5	☒ Preparer: Jaimy Karacaoglu ☒ Consultant: Trinity Consultants Inc	Phone/Fax: 505-266-6611
a	Mailing Address: 1999 Broadway Ste 820, Denver, CO, 80202	E-mail: Jaimy.karacaoglu@trinityconsultants.com
6	Plant Operator Contact: Kha Mach	Phone/Fax: 972-371-5472
a	Address: 5400 LBJ Freeway Ste 1500, Dallas, Texas, 75240	E-mail: kha.mach@matadorresources.com
7	Air Permit Contact: Kha Mach	Title: Engineer
a	E-mail: kha.mach@matadorresources.com	Phone/Fax: 972-371-5472
b	Mailing Address: 5400 LBJ Freeway Ste 1500, Dallas, Texas, 75240	
c	The designated Air permit Contact will receive all official correspondence (i.e. letters, permits) from the Air Quality Bureau.	

Section 1-B: Current Facility Status

1.a	Has this facility already been constructed? ☒ Yes ☐ No	1.b If yes to question 1.a, is it currently operating in New Mexico? ☒ Yes ☐ No
2	If yes to question 1.a, was the existing facility subject to a Notice of Intent (NOI) (20.2.73 NMAC) before submittal of this application? ☐ Yes ☒ No	If yes to question 1.a, was the existing facility subject to a construction permit (20.2.72 NMAC) before submittal of this application? ☒ Yes ☐ No
3	Is the facility currently shut down? ☐ Yes ☒ No	If yes, give month and year of shut down (MM/YY): N/A
4	Was this facility constructed before 8/31/1972 and continuously operated since 1972? ☐ Yes ☒ No	
5	If Yes to question 3, has this facility been modified (see 20.2.72.7.P NMAC) or the capacity increased since 8/31/1972? ☐ Yes ☐ No ☒ N/A	
6	Does this facility have a Title V operating permit (20.2.70 NMAC)? ☐ Yes ☒ No	If yes, the permit No. is: P-
7	Has this facility been issued a No Permit Required (NPR)? ☐ Yes ☒ No	If yes, the NPR No. is:
8	Has this facility been issued a Notice of Intent (NOI)? ☐ Yes ☒ No	If yes, the NOI No. is:
9	Does this facility have a construction permit (20.2.72/20.2.74 NMAC)? ☒ Yes ☐ No	If yes, the permit No. is: GCP-O&G No. 7426M5
10	Is this facility registered under a General permit (GCP-1, GCP-2, etc.)? ☒ Yes ☐ No	If yes, the register No. is: GCP-O&G No. 7426M5

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: 11.26 MMscf/hr	Daily: 270 MMscfd	Annually: 98,550 MMscf/yr
b	Proposed	Hourly: 23.75 MMscf/hr	Daily: 570 MMscfd	Annually: 208,050 MMscf/yr
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: 11.26 MMscf/hr	Daily: 270 MMscfd	Annually: 98,550 MMscf/yr

b	Proposed	Hourly: 23.75 MMscf/hr	Daily: 570 MMscfd	Annually: 208,050 MMscf/yr

Section 1-D: Facility Location Information

1	Latitude (decimal degrees): 32.533199	Longitude (decimal degrees): -103.828021	County: Eddy	Elevation (ft): 3560 ft
2	UTM Zone: ☐ 12 or ☒ 13	Datum: ☒ NAD 83 ☐ WGS 84		
a	UTM E (in meters, to nearest 10 meters): 610,057.53 m E	UTM N (in meters, to nearest 10 meters): 3,600,144.66 m N		
3	Name and zip code of nearest New Mexico town: Loving 88256			
4	Detailed Driving Instructions from nearest NM town (attach a road map if necessary): From the intersection of N 4th St and W Cedar St, head East towards 3rd St. Turn left onto 3rd St. and continue for 0.3 miles. Then, turn right onto GR Howard Rd. and continue for 1.6 miles, turning on to Hwy 387 and continuing for an additional 1.5 miles. Then, turn right onto NM-31 and continue for 19.3 miles. Turn right onto US-180 and drive for 8.6 miles. Turn left onto NM-243, the facility will be directly on the left.			
5	The facility is 23 miles NE of Loving, NM.			
6	Land Status of facility (check one): ☒ Private ☐ Indian/Pueblo ☐ Government ☐ BLM ☐ Forest Service ☐ Military			
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: Eddy County, Lea County			
8	**20.2.72** NMAC applications **only**: Will the property on which the facility is proposed to be constructed or operated be closer than 50 km (31 miles) to other states, Bernalillo County, or a Class I area (see www.env.nm.gov/air-quality/modeling-publications/)? ☐ Yes ☒ No (20.2.72.206.A.7 NMAC) If yes, list all with corresponding distances in kilometers: N/A			
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): 63.65 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: 77 meters			
12	Method(s) used to delineate the Restricted Area: Continuous Fencing "**Restricted Area**" is an area to which public entry is effectively precluded. Effective barriers include continuous fencing, continuous walls, or other continuous barriers approved by the Department, such as rugged physical terrain with steep grade that would require special equipment to traverse. If a large property is completely enclosed by fencing, a restricted area within the property may be identified with signage only. Public roads cannot be part of a Restricted Area.			
13	Does the owner/operator intend to operate this source as a portable stationary source as defined in 20.2.72.7.X NMAC? ☐ Yes ☒ No A portable stationary source is not a mobile source, such as an automobile, but a source that can be installed permanently at one location or that can be re-installed at various locations, such as a hot mix asphalt plant that is moved to different job sites.			
14	Will this facility operate in conjunction with other air regulated parties on the same property? ☒ No ☐ Yes If yes, what is the name and permit number (if known) of the other facility?			

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

1	Facility **maximum** operating ($\frac{\text{hours}}{\text{day}}$): 24	($\frac{\text{days}}{\text{week}}$): 7	($\frac{\text{weeks}}{\text{year}}$): 52	($\frac{\text{hours}}{\text{year}}$): 8760		
2	Facility's maximum daily operating schedule (if less than 24 $\frac{\text{hours}}{\text{day}}$)? Start: N/A		☐AM ☐PM	End: N/A	☐AM ☐PM	
3	Month and year of anticipated start of construction: Upon permit issuance, approximately August 2026.					
4	Month and year of anticipated construction completion: Upon permit issuance, approximately August 2026.					
5	Month and year of anticipated startup of new or modified facility: Upon permit issuance, approximately August 2026.					
6	Will this facility operate at this site for more than one year? ☒ Yes ☐ No					

Section 1-F: Other Facility Information

1	Are there any current Notice of Violations (NOV), compliance orders, or any other compliance or enforcement issues related to this facility? ☒ Yes ☐ No If yes, specify: PRO-38004-2501		
a	If yes, NOV date or description of issue: September 25, 2025		NOV Tracking No: PRO-38004-2501
b	Is this application in response to any issue listed in 1-F, 1 or 1a above? ☐ Yes ☒ No If Yes, provide the 1c & 1d info below:		
c	Document Title: N/A	Date: N/A	Requirement # (or page # and paragraph #): N/A
d	Provide the required text to be inserted in this permit: N/A		
2	Is air quality dispersion modeling or modeling waiver being submitted with this application? ☒ Yes ☐ No		
3	Does this facility require an "Air Toxics" permit under 20.2.72.400 NMAC & 20.2.72.502, Tables A and/or B? ☐ Yes ☒ No		
4	Will this facility be a source of federal Hazardous Air Pollutants (HAP)? ☒ Yes ☐ No		
a	If Yes, what type of source? ☐ **Major** (☐ ≥10 tpy of any single HAP **OR** ☐ ≥25 tpy of any combination of HAPS) **OR** ☐ **Minor** (☒ <10 tpy of any single HAP **AND** ☒ <25 tpy of any combination of HAPS)		
5	Is any unit exempt under 20.2.72.202.B.3 NMAC? ☐ Yes ☒ No		
a	If yes, include the name of company providing commercial electric power to the facility: ___N/A_____ Commercial power is purchased from a commercial utility company, which specifically does not include power generated on site for the sole purpose of the user.		

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

1	☐ I have filled out Section 18, "Addendum for Streamline Applications."	☒ N/A (This is not a Streamline application.)

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. Casey Snow		Phone: (972) 371-5439
a	R.O. Title: Senior Vice President of EHS	R.O. e-mail: csnow@matadorresources.com	
b	R. O. Address: 5400 LBJ Freeway, Suite 1500, Dallas, Texas 75240		
2	Alternate Responsible Official (20.2.70.300.D.2 NMAC): Mr. Sean O'Grady		Phone: 972-371-5284
a	A. R.O. Title: Senior Vice President & Chief Operating Officer	A. R.O. e-mail: sogrady@sanmateomidstream.com	
b	A. R. O. Address: 5400 LBJ Freeway, Suite 1500, Dallas, Texas 75240		
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): N/A		
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.): Pronto Midstream, LLC		
a	Address of Parent Company: 5400 LBJ Freeway Ste 1500, Dallas, Texas, 75240		
5	Names of Subsidiary Companies ("Subsidiary Companies" means organizations, branches, divisions or subsidiaries, which are owned, wholly or in part, by the company to be permitted.): N/A		
6	Telephone numbers & names of the owners' agents and site contacts familiar with plant operations: Jason Conway, VP of EHS; (972) 619-1607		

7	Affected Programs to include Other States, local air pollution control programs (i.e. Bernalillo) and Indian tribes: Will the property on which the facility is proposed to be constructed or operated be closer than 80 km (50 miles) from other states, local pollution control programs, and Indian tribes and pueblos (20.2.70.402.A.2 and 20.2.70.7.B)? If yes, state which ones and provide the distances in kilometers: 70 km from Texas

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-to 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 Jaimy Karacaoglu, Email Jaimy.karacaoglu@trinityconsultants.com Phone number (410) 903-0750

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

4) Optionally, the applicant may submit the files with the application on compact disk (CD) or digital versatile disc (DVD) following the instructions above and the instructions in 5 for applications subject to PSD review.

5) If **air dispersion modeling** is required by the application type, include the **NMED Modeling Waiver** and/or electronic air dispersion modeling report, input, and output files. The dispersion modeling ***summary report only*** should be submitted as hard copy(ies) unless otherwise indicated by the Bureau.

6) If the applicant submits the electronic files on CD and the application is subject to PSD review under 20.2.74 NMAC (PSD) or NNSR under 20.2.79 NMC include,
   a. one additional CD copy for US EPA,
   b. one additional CD copy for each federal land manager affected (NPS, USFS, FWS, USDI) and,
   c. one additional CD copy for each affected regulatory agency other than the Air Quality Bureau.

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

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

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

2) The documents should also be submitted in Microsoft Office compatible file format (Word, Excel, etc.) allowing us to access the text and formulas in the documents (copy & paste). Any documents that cannot be submitted in a Microsoft Office compatible format shall be saved as a PDF file from within the electronic document that created the file. If you are unable to provide Microsoft office compatible electronic files or internally generated PDF files of files (items that were not created electronically: i.e. brochures, maps, graphics, etc,), submit these items in hard copy format. We must be able to review the formulas and inputs that calculated the emissions.

3) It is preferred that this application form be submitted as 4 electronic files (3 MSWord docs: Universal Application section 1 [UA1], Universal Application section 3-19 [UA3], and Universal Application 4, the modeling report [UA4]) and 1 Excel file of the tables (Universal Application section 2 [UA2]). Please include as many of the 3-19 Sections as practical in a single MS Word electronic document. Create separate electronic file(s) if a single file becomes too large or if portions must be saved in a file format other than MS Word.

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

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Table 2-A: Regulated Emission Sources

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

Unit Number[1]	Source Description	Make	Model #	Serial #	Manufacturer's Rated Capacity[3] (Specify Units)	Requested Permitted Capacity[3] (Specify Units)	Date of Manufacture[2] / Date of Construction/ Reconstruction[2]	Controlled by Unit # / Emissions vented to Stack #	Source Classification Code (SCC)	For Each Piece of Equipment, Check One	RICE Ignition Type (CI, SI, 4SLB, 4SRB, 2SLB)[4]	Replacing Unit No.
CE-01	Compressor Engine	Caterpillar	G3606 A3	3XF00328	1775 hp	1775 hp	4-Oct-22 6-Oct-22	CAT-1 CE-01	20200254	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	4SLB	N/A
CE-02	Compressor Engine	Caterpillar	G3606 A3	3XF00092	1775 hp	1775 hp	7-Jan-22 22-Aug-23	CAT-2 CE-02	20200254	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	4SLB	N/A
CE-03	Compressor Engine	Caterpillar	G3606 A3	4ZS01394	1775 hp	1775 hp	1-Jan-10 1-Nov-18	CAT-3 CE-03	20200254	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	4SLB	N/A
AMINE-01	Amine Treating Unit	Reset Energy	Custom	212	72 MMSCFD	72 MMSCFD	2018 1-Nov-18	TO-1 & FLARE-01 TO-1 & FLARE-01	31000305	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	N/A	N/A
HT-01	Train 1 Amine Hot Oil Heater	Fulton Thermal Corporation	600S-LF-LN	8677C	39.4 MMBTU/hr	39.4 MMBTU/hr	2017 2017	N/A HT-01	31000404	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	N/A	N/A
HT-02	Train 1 Cryo Hot Oil Heater	Optimized Process Furnaces, Inc.	H-1610	J171186	6.8 MMBTU/hr	6.8 MMBTU/hr	1-Jan-17 1-Jan-17	N/A HT-02	31000404	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	N/A	N/A
HT-03	Train 1 Amine Regenerator Gas Heater	Heatec	HCL-5010-40-G	HI17-196	7.5 MMBTU/hr	7.5 MMBTU/hr	Jun-18 Jun-18	N/A HT-03	31000404	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	N/A	N/A
OILTANK-01 - 02	Train 1 Reject Condensate Storage Tanks	Permian Tank Manufacturing Co.	12F	F60434 & F60438	400 bbl	400 bbl	Mar-18 2018	ECD-1 ECD-1	40400311	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	N/A	N/A
PWTANK-01 - 04	Train 1 Produced Water Storage Tanks	Permian Tank Manufacturing Co.	12F	F60435, F60437, F60433, & F60436	400 bbl	400 bbl	Mar-18 2018	ECD-01 ECD-01	40400315	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	N/A	N/A
ECD-01	Train 1 Enclosed Combustion Device	Cimarron Energy	48 HVECD	5904076	2.74 MMBtu/hr	2.74 MMBtu/hr	1-Mar-18 1-Nov-18	N/A ECD-01	31000205	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	N/A	N/A
TO-01	Train 1 Thermal Oxidizer	Zeeco, Inc.	TO-1526	32985	14.26 MMBtu/hr	14.26 MMBtu/hr	2017 1-Nov-18	N/A TO-01	31000205	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	N/A	N/A
FLARE-01	Train 1 Flare	Zeeco, Inc.	UFAA-24-195	32564-001	470.05 MMBtu/hr	470.05 MMBtu/hr	1-Jan-17 1-Nov-18	N/A FLARE-01	31000205	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	N/A	N/A
OILLOAD-01	Reject Condensate Loading	Permian Tank Manufacturing Co.	12F	F60434 & F60438	148639 bbl/yr	148639 bbl/yr	43160 2018	ECD-1 ECD-1	40600132	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	N/A	N/A
PWLOAD-01	Produced Water Loading	Permian Tank Manufacturing Co.	12F	F60435, F60437, F60433, & F60436	235736 bbl/yr	235736 bbl/yr	43160 2018	ECD-1 ECD-1	40600132	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	N/A	N/A

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] / Date of Construction/ Reconstruction[2]	Controlled by Unit # / Emissions vented to Stack #	Source Classification Code (SCC)	For Each Piece of Equipment, Check One	RICE Ignition Type (CI, SI, 4SLB, 4SRB, 2SLB)[4]	Replacing Unit No.
FUG-01	Train 1 Fugitives	N/A	N/A	N/A	N/A	N/A	2017 2017	N/A FUG-01	31088811	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	N/A	N/A
MSS-01	Controlled SSM Activities	N/A	N/A	N/A	N/A	N/A	2017 2017	FLARE-01 FLARE-01	31088811	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	N/A	N/A
AMINE-02	Train 2 Amine Unit	Pama Fabrication, Inc.	Custom	5274	200 MMSCFD	200 MMSCFD	10/21/2024 2025	TO-2 & FLARE-02 TO-2 & FLARE-02	31000305	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	N/A	N/A
DEHY-01	Train 2 Glycol Dehydrator	Pama Fabrication, Inc.	Custom	3852	200 MMSCFD	200 MMSCFD	2024 2025	TO-2 & FLARE-02 TO-2 & FLARE-02	31000227	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	N/A	N/A
REB-01	Train 2 TEG Dehy Reboiler	Pama Fabrication, Inc.	Custom	3854	3.75 MMBTU/hr	3.75 MMBTU/hr	2024 2025	N/A REB-01	31000228	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	N/A	N/A
HT-04	Train 2 Amine/Cryo Hot Oil Heater	Devco Process Heaters	H-1400	31737-001	55 MMBTU/hr	55 MMBTU/hr	3/1/2021 2024	N/A HT-04	31000404	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	N/A	N/A
HT-05	Train 2 Trim Reboiler	Heatec	H-0720	HI22-008-151	17.62 MMBTU/hr	17.62 MMBTU/hr	Aug-22 Jul-25	N/A HT-05	31000404	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	N/A	N/A
HT-06	Train 2 Mol Sieve Heater	Heatec	H-3530	HI22-007-151	17.95 MMBTU/hr	17.95 MMBTU/hr	Aug-22 Jul-25	N/A HT-06	31000404	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	N/A	N/A
HT-07	Train 2 Hot Oil Heater	TBD	TBD	TBD	38 MMBTU/hr	38 MMBTU/hr	TBD TBD	N/A HT-07	31000404	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	N/A	N/A
OILTANK-03 - 06	Train 2 Condensate Storage Tanks	KBK	AP12F	3076580011 3076580021 3076580031 TBD	750 bbl	750 bbl	Jan-25 Jul-25	ECD-02 ECD-02	40400311	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	N/A	N/A
ECD-02	Train 2 Enclosed Combustion Device	Zeeco, Inc.	VCU-13-50	11888207930	1.87 MMBtu/hr	1.87 MMBtu/hr	2024 2025	N/A ECD-02	31000205	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	N/A	N/A
TO-02	Train 2 Thermal Oxidizer	Zeeco, Inc.	Custom	68003	12 MMBtu/hr	12 MMBtu/hr	2024 2025	FLARE-02 TO-02 FLARE-02	31000205	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	N/A	N/A
TO-02a	Train 2 Thermal Oxidizer	TBD	TBD	TBD	12 MMBtu/hr	12 MMBtu/hr	TBD TBD	FLARE-02 TO-02a FLARE-02	31000205	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
FLARE-02a	Facility SSM Flare	TBD	TBD	TBD	3675.22 MMBtu/hr	3675.22 MMBtu/hr	TBD TBD	N/A FLARE-02a	31000205	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	N/A	N/A

Unit Number[1]	Source Description	Make	Model #	Serial #	Manufact-urer's Rated Capacity[3] (Specify Units)	Requested Permitted Capacity[3] (Specify Units)	Date of Manufacture[2] / Date of Construction/ Reconstruction[2]	Controlled by Unit # / Emissions vented to Stack #	Source Classi-fication Code (SCC)	For Each Piece of Equipment, Check One	RICE Ignition Type (CI, SI, 4SLB, 4SRB, 2SLB)[4]	Replacing Unit No.
FLARE-02b	Train 2 Facility Flare	Zeeco, Inc.	Custom	69657	19.02 MMBtu/hr	19.02 MMBtu/hr	2024 2025	N/A FLARE-02b	31000205	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	N/A	N/A
OILLOAD-02	Train 2 Condensate Loading	KBK	AP12F	3076580011 3076580021 3076580031 TBD	1576800 bbl/yr	1576800 bbl/yr	Jan-25 Jul-25	ECD-02 ECD-02	40600132	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	N/A	N/A
NRU-01	Train 2 Nitrogen Rejection Unit	BCCK	Custom	V-011-24	200 MMSCFD	200 MMSCFD	2024 2025	N/A NRU-01	31088811	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	N/A	N/A
FUG-02	Train 2 Fugitives	N/A	N/A	N/A	N/A	N/A	2025 2025	N/A FUG-02	31088811	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	N/A	N/A
MSS-02	Controlled SSM Activities	N/A	N/A	N/A	N/A	N/A	2025 2025	FLARE-02 FLARE-02	31088811	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	N/A	N/A
AMINE-03	Train 3 Amine Unit	TBD	TBD	TBD	301 MMSCFD	301 MMSCFD	TBD TBD	TO-03 & FL-04 TO-03 & FL-04	31000305	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
DEHY-02	Train 2 Glycol Dehydrator	TBD	TBD	TBD	301 MMSCFD	301 MMSCFD	TBD TBD	ECD-03& FL-03 ECD-03& FL-03	31000227	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
HT-08	Train 3 Stabilizer Hot Oil Heater	TBD	TBD	TBD	61.27 MMBTU/hr	61.27 MMBTU/hr	TBD TBD	N/A HT-08	31000404	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
HT-09	Train 3 Amine Hot Oil Heater	TBD	TBD	TBD	86 MMBTU/hr	86 MMBTU/hr	TBD TBD	N/A HT-09	31000404	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
HT-10	Train 3 Amine Hot Oil Heater	TBD	TBD	TBD	86 MMBTU/hr	86 MMBTU/hr	TBD TBD	N/A HT-10	31000404	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
HT-11	Train 3 Molecular Sieve Regenerator Heater	TBD	TBD	TBD	15.92 MMBTU/hr	15.92 MMBTU/hr	TBD TBD	N/A HT-11	31000404	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
HT-12	Train 3 Cryo HMO Heater	TBD	TBD	TBD	36.39 MMBTU/hr	36.39 MMBTU/hr	TBD TBD	N/A HT-12	31000404	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
REB-02	Train 3 Dehydration Reboiler	TBD	TBD	TBD	5 MMBTU/hr	5 MMBTU/hr	TBD TBD	N/A REB-02	31000404	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
ECD-03	Train 3 Enclosed Combustion Device	TBD	TBD	TBD	4.33 MMBtu/hr	4.33 MMBtu/hr	TBD TBD	N/A ECD-03	31000205	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
FLARE-03	Train 3 Facility Flare	TBD	TBD	TBD	13.02 MMBtu/hr	13.02 MMBtu/hr	TBD TBD	N/A FLARE-03	31000205	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A

Unit Number[1]	Source Description	Make	Model #	Serial #	Manufact-urer's Rated Capacity[3] (Specify Units)	Requested Permitted Capacity[3] (Specify Units)	Date of Manufacture[2] / Date of Construction/ Reconstruction[2]	Controlled by Unit # / Emissions vented to Stack #	Source Classi-fication Code (SCC)	For Each Piece of Equipment, Check One	RICE Ignition Type (CI, SI, 4SLB, 4SRB, 2SLB)[4]	Replacing Unit No.
FLARE-04	Train 3 Acid Gas Flare	TBD	TBD	TBD	2.8 MMBtu/hr	2.8 MMBtu/hr	TBD TBD	N/A FLARE-04	31000205	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
TO-03	Train 3 Thermal Oxidizer	TBD	TBD	TBD	50 MMBtu/hr	50 MMBtu/hr	TBD TBD	FLARE-04 TO-03 FLARE-04	31000205	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
FUG-03	Train 3 Fugitives	N/A	N/A	N/A	N/A	N/A	TBD TBD	N/A FUG-03	31088811	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
NRU-02	Train 3 Nitrogen Rejection Unit	TBD	TBD	TBD	TBD	TBD	TBD TBD	N/A NRU-02	31088811	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
SSM-03	Controlled SSM Activities	N/A	N/A	N/A	N/A	N/A	TBD TBD	FLARE-03 FLARE-03	31088811	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
ROAD-01	Unpaved Haul Road Train 1	N/A	N/A	N/A	N/A	N/A	2017 2017	N/A N/A	31088811	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
ROAD-2	Unpaved Haul Road Train 2	N/A	N/A	N/A	N/A	N/A	2025 2025	N/A N/A	31088811	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A

[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 Activities[1] (20.2.70 NMAC) OR Exempted Equipment (20.2.72 NMAC)

All 20.2.70 NMAC (Title V) applications must list all Insignificant Activities in this table. All 20.2.72 NMAC applications must list Exempted Equipment in this table. If equipment listed on this table is exempt under 20.2.72.202.B.5, include emissions calculations and emissions totals for 202.B.5 "similar functions" units, operations, and activities in Section 6, Calculations. Equipment and activities exempted under 20.2.72.202 NMAC may not necessarily be Insignificant under 20.2.70 NMAC (and vice versa). Unit & stack numbering must be consistent throughout the application package. Per Exemptions Policy 02-012.00 (see http://www.env.nm.gov/aqb/permit/aqb_pol.html), 20.2.72.202.B NMAC Exemptions do not apply, but 20.2.72.202.A NMAC exemptions do apply to NOI facilities under 20.2.73 NMAC. List 20.2.72.301.D.4 NMAC Auxiliary Equipment for Streamline applications in Table 2-A. The List of Insignificant Activities (for TV) can be found online at https://www.env.nm.gov/wp-content/uploads/sites/2/2017/10/InsignificantListTitleV.pdf. TV sources may elect to enter both TV Insignificant Activities and Part 72 Exemptions on this form.

Unit Number	Source Description	Manufacturer	Model No. / Serial No.	Max Capacity / Capacity Units	List Specific 20.2.72.202 NMAC Exemption (e.g. 20.2.72.202.B.5) / Insignificant Activity citation (e.g. IA List Item #1.a)	Date of Manufacture /Reconstruction[2] / Date of Installation /Construction[2]	For Each Piece of Equipment, Check One
PWLOAD-01	Produced Water Loading	ARIEL	N/A N/A	235736 bbls/yr	20.2.72.202.B(5) NMAC	N/A N/A	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced
COMP-1	Train 2 Residue Compressor 1	ARIEL	KBZ/4 F70677	N/A[3]	Not a source of emissions.	2024 2025	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
COMP-2	Train 2 Residue Compressor 2	ARIEL	KBZ/4 F70633	N/A[3]	Not a source of emissions.	2024 2025	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
COMP-3	Train 2 Residue Compressor 3	ARIEL	KBZ/4 F70570	N/A[3]	Not a source of emissions.	2024 2025	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
COMP-4	Train 2 Residue Compressor 4	ARIEL	KBZ/4 F70532	N/A[3]	Not a source of emissions.	2024 2025	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
COMP-5	Train 2 NRU Compressor 1	ARIEL	KBC/6 F70648	N/A[3]	Not a source of emissions.	2024 2025	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
COMP-6	Train 2 NRU Compressor 2	ARIEL	KBC/6 F70591	N/A[3]	Not a source of emissions.	2024 2025	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
COMP-7	Train 1 Residue Compressor	ARIEL	JGD-4 F22987	N/A[3]	Not a source of emissions.	2010 2018	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
COMP-8	Train 1 Residue Compressor	ARIEL	JGD-4 F28882	N/A[3]	Not a source of emissions.	2008 2018	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
COMP-9	Train 1 Residue Compressor	ARIEL	JGD-4 F33978	N/A[3]	Not a source of emissions.	2010 2018	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
COMP-10	Train 1 Overhead Comp New 1	ARIEL	KBK/2 F70753	N/A[3]	Not a source of emissions.	2024 2024	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
COMP-11	Train 1 Overhead Comp New 2	ARIEL	KBK/2 F70780	N/A[3]	Not a source of emissions.	2024 2024	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced

Unit Number	Source Description	Manufacturer	Model No. / Serial No.	Max Capacity / Capacity Units	List Specific 20.2.72.202 NMAC Exemption (e.g. 20.2.72.202.B.5) / Insignificant Activity citation (e.g. IA List Item #1.a)	Date of Manufacture /Reconstruction[2] / Date of Installation /Construction[2]	For Each Piece of Equipment, Check One
COMP-12	Train 1 Overhead Comp Old 1	ARIEL	JGR/2 F55187	N/A[3]	Not a source of emissions.	2017 2018	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
COMP-13	Train 1 Overhead Comp Old 2	ARIEL	JGR/2 F71246	N/A[3]	Not a source of emissions.	2024 2024	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
COMP-14	Train 2 Regen Gas Compressor	Sundyne	LMC 311P C2504702-01	N/A[3]	Not a source of emissions.	2017 2025	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
COMP-15	Train 1 Regen Gas Compressor	Sundyne	LMC 311P C2722072-01	N/A[3]	Not a source of emissions.	2015 2018	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
COMP-16	Train 2 Refrigerant Compressor	GEA	1770 GL XE0180	N/A[3]	Not a source of emissions.	2015 2025	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
COMP-17	Train 2 Refrigerant Compressor	GEA	1770 GL XE0181	N/A[3]	Not a source of emissions.	2015 2025	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
COMP-18	Train 2 Refrigerant Compressor	GEA	1770 GL XE0182	N/A[3]	Not a source of emissions.	2015 2025	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
COMP-19	Train 1 Refrigerant Compressor 1	GEA	Grasso Z-675GLE Z0867	N/A[3]	Not a source of emissions.	2016 2018	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
COMP-20	Train 1 Refrigerant Compressor 2	GEA	Grasso Z-675GLE Z0868	N/A[3]	Not a source of emissions.	2016 2018	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
COMP-21	Train 3 Compressor	TBD	TBD TBD	N/A[3]	Not a source of emissions.	TBD TBD	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
COMP-22	Train 3 Compressor	TBD	TBD TBD	N/A[3]	Not a source of emissions.	TBD TBD	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
COMP-23	Train 3 Compressor	TBD	TBD TBD	N/A[3]	Not a source of emissions.	TBD TBD	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
COMP-24	Train 3 Compressor	TBD	TBD TBD	N/A[3]	Not a source of emissions.	TBD TBD	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
COMP-25	Train 3 Compressor	TBD	TBD TBD	N/A[3]	Not a source of emissions.	TBD TBD	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
COMP-26	Train 3 Compressor	TBD	TBD TBD	N/A[3]	Not a source of emissions.	TBD TBD	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced

Unit Number	Source Description	Manufacturer	Model No. Serial No.	Max Capacity Capacity Units	List Specific 20.2.72.202 NMAC Exemption (e.g. 20.2.72.202.B.5) Insignificant Activity citation (e.g. IA List Item #1.a)	Date of Manufacture /Reconstruction[2] Date of Installation /Construction[2]	For Each Piece of Equipment, Check One
COMP-27	Train 3 Compressor	TBD	TBD TBD	N/A[3]	Not a source of emissions.	TBD TBD	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
COMP-28	Train 3 Compressor	TBD	TBD TBD	N/A[3]	Not a source of emissions.	TBD TBD	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
COMP-29	Train 3 Compressor	TBD	TBD TBD	N/A[3]	Not a source of emissions.	TBD TBD	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
COMP-30	Train 3 Compressor	TBD	TBD TBD	N/A[3]	Not a source of emissions.	TBD TBD	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
COMP-31	Train 3 Compressor	TBD	TBD TBD	N/A[3]	Not a source of emissions.	TBD TBD	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
COMP-32	Train 3 Compressor	TBD	TBD TBD	N/A[3]	Not a source of emissions.	TBD TBD	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
COMP-33	Train 3 Compressor	TBD	TBD TBD	N/A[3]	Not a source of emissions.	TBD TBD	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
COMP-34	Train 3 Compressor	TBD	TBD TBD	N/A[3]	Not a source of emissions.	TBD TBD	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
COMP-35	Train 3 Compressor	TBD	TBD TBD	N/A[3]	Not a source of emissions.	TBD TBD	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
COMP-36	Marlan NGPP Inlet	ARIEL	TBD TBD	1450 HP	Not a source of emissions.	TBD TBD	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced

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

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

[3] Unit does not have a stamped capacity. Capacity is a function of the associated engine or driver.

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
FLARE-01	Train 1 Flare	Jan-17	VOC, H_2S, HAPs	TO-01 (Downtime), SSM-01	98%	Manufacturer Spec.
ECD-01	Train 1 Enclosed Combustion Device	Mar-18	VOC, H_2S, HAPs	OILTANK-01 through OILTANK-02, PWTANK-1 through PWTANK-4, OILLOAD-1, PWLOAD-1	98%	Manufacturer Spec.
TO-01	Train 1 Thermal Oxidizer	2017	VOC, H_2S, HAPs	AMINE-01	98%	Manufacturer Spec.
ECD-02	Train 2 Enclosed Combustion Device	2024	VOC, H_2S, HAPs	OILTANK-03 through OILTANK-06, OILLOAD-02	98%	Manufacturer Spec.
TO-02	Train 2 Thermal Oxidizer	2024	VOC, H_2S, HAPs	AMINE-02, DEHY-01	98%	Manufacturer Spec.
TO-02a	Train 2 Thermal Oxidizer	TBD	VOC, H_2S, HAPs	AMINE-02	98%	Manufacturer Spec.
FLARE-02a	Train 2 Facility Flare	TBD	VOC, H_2S, HAPs	SSM-02	98%	Manufacturer Spec.
FLARE-02b	Train 2 SSM Flare	2024	VOC, H_2S, HAPs	TO-O2 and TO-O2a Downtime	98%	Manufacturer Spec.
ECD-03	Train 3 Enclosed Combustion Device	TBD	VOC, H_2S, HAPs	DEHY-02	98%	Manufacturer Spec.
FLARE-03	Train 3 Facility Flare	TBD	VOC, H_2S, HAPs	AMINE-03, SSM-03	98%	Manufacturer Spec.
FLARE-04	Train 3 Acid Gas Flare	TBD	VOC, H_2S, HAPs	AMINE-03 (During TO-03 Downtime)	98%	Manufacturer Spec.
TO-03	Train 3 Thermal Oxidizer	TBD	VOC, H_2S, HAPs	AMINE-03	98%	Manufacturer Spec.
CAT-1	Oxidation Catalyst	6-Oct-22	CO, VOC, HCHO	CE-01	93.09% CO, 65.69% VOC, 92.50% HCHO	Manufacturer Spec.
CAT-2	Oxidation Catalyst	22-Aug-23	CO, VOC, HCHO	CE-02	93.09% CO, 65.69% VOC, 92.50% HCHO	Manufacturer Spec.
CAT-3	Oxidation Catalyst	1-Nov-18	CO, VOC, HCHO	CE-03	93.09% CO, 65.69% VOC, 92.50% HCHO	Manufacturer Spec.

[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_2S		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
CE-01	1.96	8.57	10.76	47.13	4.17	18.26	0.01	0.03	0.13	0.59	0.13	0.59	0.13	0.59	-	-	-	-
CE-02	1.96	8.57	10.76	47.13	4.17	18.26	0.01	0.03	0.13	0.59	0.13	0.59	0.13	0.59	-	-	-	-
CE-03	1.96	8.57	10.76	47.13	4.17	18.26	0.01	0.03	0.13	0.59	0.13	0.59	0.13	0.59	-	-	-	-
AMINE-01	-	-	-	-	20.30	88.91	-	-	-	-	-	-	-	-	1.04	4.56	-	-
HT-01	1.93	4.23	1.62	3.55	0.21	0.47	0.02	0.05	0.29	0.64	0.29	0.64	0.29	0.64	2.38E-04	5.20E-04	-	-
HT-02	0.33	1.46	0.56	2.45	0.04	0.16	0.00	0.02	0.05	0.22	0.05	0.22	0.05	0.22	4.10E-05	1.80E-04	-	-
HT-03	0.37	1.61	0.62	2.71	0.04	0.18	0.00	0.02	0.06	0.24	0.06	0.24	0.06	0.24	4.52E-05	1.98E-04	-	-
OILTANK-01 - 02	-	-	-	-	12.36	10.74	-	-	-	-	-	-	-	-	4.60E-06	4.00E-06	-	-
PWTANK-01 - 04	-	-	-	-	0.93	4.08	-	-	-	-	-	-	-	-	4.13E-03	1.81E-02	-	-
ECD-01	0.25	1.08	0.21	0.91	0.01	0.06	0.00	0.01	0.02	0.08	0.02	0.08	0.02	0.08	1.52E-05	6.65E-05	-	-
TO-01	0.28	1.22	0.22	0.98	0.02	0.07	0.00	0.01	0.02	0.09	0.02	0.09	0.02	0.09	1.68E-05	7.35E-05	-	-
FLARE-01	0.01	0.05	0.05	0.23	0.11	0.50	0.00	0.00	-	-	-	-	-	-	1.04E-06	4.55E-06	-	-
FLARE-01 SSM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OILLOAD-01	-	-	-	-	32.42	1.34	-	-	-	-	-	-	-	-	1.19E-05	4.83E-07	-	-
ROAD-01	-	-	-	-	-	-	-	-	0.45	1.59	0.11	0.40	0.01	0.04	-	-	-	-
FUG-01	-	-	-	-	3.09	13.53	-	-	-	-	-	-	-	-	2.98E-05	1.31E-04	-	-
MSS-01	-	-	-	-	5621.75	240.81	-	-	-	-	-	-	-	-	6.42E-03	2.70E-04	-	-
AMINE-02	-	-	-	-	127.38	557.92	-	-	-	-	-	-	-	-	3.13	13.70	-	-
DEHY-01	-	-	-	-	89.46	391.84	-	-	-	-	-	-	-	-	3.05E-06	1.33E-05	-	-
REB-01	0.37	1.61	0.31	1.35	0.02	0.09	0.00	0.01	0.03	0.12	0.03	0.12	0.03	0.12	2.26E-05	9.90E-05	-	-
HT-04	2.70	11.81	2.78	12.19	0.30	1.30	0.03	0.13	0.41	1.79	0.41	1.79	0.41	1.79	3.32E-04	1.45E-03	-	-
HT-05	0.86	1.89	1.45	3.18	0.10	0.21	0.01	0.02	0.13	0.29	0.13	0.29	0.13	0.29	1.06E-04	2.33E-04	-	-
HT-06	0.88	3.85	1.48	6.47	0.10	0.42	0.01	0.04	0.13	0.59	0.13	0.59	0.13	0.59	1.08E-04	4.74E-04	-	-
HT-07	1.86	8.16	3.13	13.71	0.20	0.90	0.02	0.09	0.28	1.24	0.28	1.24	0.28	1.24	2.29E-04	1.00E-03	-	-
OILTANK-03 - 06	-	-	-	-	70.56	309.05	-	-	-	-	-	-	-	-	2.35E-05	1.03E-04	-	-
ECD-02	1.23E-02	5.41E-02	1.04E-02	4.54E-02	6.79E-04	2.97E-03	7.00E-05	3.07E-04	9.38E-04	4.11E-03	9.38E-04	4.11E-03	9.38E-04	4.11E-03	7.59E-07	3.32E-06	-	-
TO-02	0.96	4.22	0.77	3.38	0.05	0.23	0.01	0.02	0.07	0.31	0.07	0.31	0.07	0.31	5.81E-05	2.55E-04	-	-
TO-02a	1.03	4.53	0.83	3.62	0.06	0.24	0.01	0.03	0.08	0.34	0.08	0.34	0.08	0.34	6.23E-05	2.73E-04	-	-
FLARE-02b	0.08	0.33	0.35	1.52	0.74	3.23	0.00	0.00	-	-	-	-	-	-	5.39E-06	2.36E-05	-	-
FLARE-02b SSM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FLARE-02a	0.02	0.08	0.04	0.17	0.09	0.40	0.00	0.00	-	-	-	-	-	-	7.59E-07	3.32E-06	-	-
FLARE-02a SSM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OILLOAD-02	-	-	-	-	11.07	48.47	-	-	-	-	-	-	-	-	3.41E-06	1.49E-05	-	-
ROAD-02	-	-	-	-	-	-	-	-	0.31	1.11	0.08	0.28	0.01	0.03	-	-	-	-
NRU-01	-	-	-	-	0.48	2.10	-	-	-	-	-	-	-	-	-	-	-	-

Unit No.	NOx		CO		VOC		SOx		PM[1]		PM10[1]		PM2.5[1]		H_2S		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
FUG-02	-	-	-	-	3.25	14.24	-	-	-	-	-	-	-	-	2.73E-05	1.20E-04	-	-
MSS-02	-	-	-	-	49877.37	300.26	-	-	-	-	-	-	-	-	1.07	0.01	-	-
AMINE-03	-	-	-	-	140.39	614.93	-	-	-	-	-	-	-	-	3.46	15.15	-	-
DEHY-02	-	-	-	-	233.11	1021.03	-	-	-	-	-	-	-	-	9.26E-03	4.05E-02	-	-
HT-08 (H-3780)	1.79	7.82	2.51	11.00	0.33	1.45	0.03	0.15	0.46	2.00	0.46	2.00	0.46	2.00	3.69E-04	1.62E-03	-	-
HT-09 (H-3710)	2.51	10.97	3.53	15.44	0.46	2.03	0.05	0.21	0.64	2.81	0.64	2.81	0.64	2.81	5.18E-04	2.27E-03	-	-
HT-10 (H-3711)	2.51	10.97	3.53	15.44	0.46	2.03	0.05	0.21	0.64	2.81	0.64	2.81	0.64	2.81	5.18E-04	2.27E-03	-	-
HT-11 (H-3720)	0.78	3.42	0.65	2.86	0.09	0.38	0.01	0.04	0.12	0.52	0.12	0.52	0.12	0.52	9.60E-05	4.20E-04	-	-
HT-12 (H-3730)	1.06	2.32	1.49	3.27	0.20	0.43	0.02	0.04	0.27	0.59	0.27	0.59	0.27	0.59	2.19E-04	4.80E-04	-	-
REB-02	0.49	2.15	0.41	1.80	0.03	0.12	0.00	0.01	0.04	0.16	0.04	0.16	0.04	0.16	3.01E-05	1.32E-04	-	-
ECD-03	0.25	1.08	0.21	0.91	0.01	0.06	0.00	0.00	0.02	0.08	0.02	0.08	0.02	0.08	1.43E-05	6.26E-05	-	-
FLARE-03	0.02	0.07	0.08	0.33	0.16	0.71	3.76	16.49	-	-	-	-	-	-	-	-	-	-
FLARE-03 SSM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FLARE-04	0.01	0.04	0.04	0.19	0.09	1.57E-04	2.90E-06	1.27E-05	-	-	-	-	-	-	7.86E-07	3.44E-06	-	-
FLARE-04 SSM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TO-03	4.64	20.33	3.90	17.08	0.26	1.12	1.25E-04	5.48E-04	1.34E-04	5.88E-04	1.34E-04	5.88E-04	0.35	1.55	0.35	1.55	-	-
FUG-03	-	-	-	-	2.75	12.06	-	-	-	-	-	-	-	-	2.05E-05	8.99E-05	-	-
NRU-02	-	-	-	-	0.74	3.24	-	-	-	-	-	-	-	-	-	-	-	-
SSM-03	-	-	-	-	65654.45	394.76	-	-	-	-	-	-	-	-	-	-	-	-
Totals	31.85	131.08	63.06	266.19	121918.54	4100.88	4.07	17.70	4.92	19.41	4.36	17.40	4.54	18.33	9.07	35.03	-	-

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

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_2S		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
CE-01	1.96	8.57	0.74	3.26	1.43	6.27	0.01	0.03	0.13	0.59	0.13	0.59	0.13	0.59	-	-	-	-
CE-02	1.96	8.57	0.74	3.26	1.43	6.27	0.01	0.03	0.13	0.59	0.13	0.59	0.13	0.59	-	-	-	-
CE-03	1.96	8.57	0.74	3.26	1.43	6.27	0.01	0.03	0.13	0.59	0.13	0.59	0.13	0.59	-	-	-	-
AMINE-01	-	-	-	-	0.00	0.00	-	-	-	-	-	-	-	-	0.00	0.00	-	-
HT-01	1.93	4.23	1.62	3.55	0.21	0.47	0.02	0.05	0.29	0.64	0.29	0.64	0.29	0.64	2.38E-04	5.20E-04	-	-
HT-02	0.33	1.46	0.56	2.45	0.04	0.16	0.00	0.02	0.05	0.22	0.05	0.22	0.05	0.22	4.10E-05	1.80E-04	-	-
HT-03	0.37	1.61	0.62	2.71	0.04	0.18	0.00	0.02	0.06	0.24	0.06	0.24	0.06	0.24	4.52E-05	1.98E-04	-	-
OILTANK-01 - 02	-	-	-	-	12.36	2.69	-	-	-	-	-	-	-	-	4.60E-06	9.99E-07	-	-
PWTANK-01 - 04	-	-	-	-	0.93	1.02	-	-	-	-	-	-	-	-	4.13E-03	4.52E-03	-	-
ECD-01	0.27	1.18	0.23	0.99	0.73	3.21	0.01	0.04	0.02	0.09	0.02	0.09	0.02	0.09	1.03E-04	4.52E-04	-	-
TO-01	1.43	6.25	1.14	5.00	2.55	11.15	1.92	8.40	0.11	0.47	0.11	0.47	0.11	0.47	2.08E-02	9.11E-02	-	-
FLARE-01	0.01	0.05	0.05	0.23	0.11	0.50	0.00	0.00	-	-	-	-	-	-	1.04E-06	4.55E-06	-	-
OILLOAD-01	-	-	-	-	32.42	0.33	-	-	-	-	-	-	-	-	-	-	-	-
ROAD-01	-	-	-	-	-	-	-	-	0.45	1.59	0.11	0.40	0.01	0.04	-	-	-	-
FUG-01	-	-	-	-	3.09	13.53	-	-	-	-	-	-	-	-	2.98E-05	1.31E-04	-	-
AMINE-02	-	-	-	-	0.00	0.00	-	-	-	-	-	-	-	-	0.00	0.00	-	-
DEHY-01	-	-	-	-	0.00	0.00	-	-	-	-	-	-	-	-	0.00	0.00	-	-
REB-01	0.37	1.61	0.31	1.35	0.02	0.09	0.00	0.01	0.03	0.12	0.03	0.12	0.03	0.12	2.26E-05	9.90E-05	-	-
HT-04	2.70	11.81	2.78	12.19	0.30	1.30	0.03	0.13	0.41	1.79	0.41	1.79	0.41	1.79	3.32E-04	1.45E-03	-	-
HT-05	0.86	1.89	1.45	3.18	0.10	0.21	0.01	0.02	0.13	0.29	0.13	0.29	0.13	0.29	1.06E-04	2.33E-04	-	-
HT-06	0.88	3.85	1.48	6.47	0.10	0.42	0.01	0.04	0.13	0.59	0.13	0.59	0.13	0.59	1.08E-04	4.74E-04	-	-
HT-07	1.86	8.16	3.13	13.71	0.20	0.90	0.02	0.09	0.28	1.24	0.28	1.24	0.28	1.24	2.29E-04	1.00E-03	-	-
OILTANK-03 - 06	-	-	-	-	70.56	29.11	-	-	-	-	-	-	-	-	-	-	-	-
ECD-02	0.18	0.80	0.15	0.68	1.57	6.86	0.00	0.00	0.01	0.06	0.01	0.06	0.01	0.06	1.28E-06	5.59E-06	-	-
TO-02	1.20	5.26	0.96	4.20	2.22	9.72	2.89	12.66	0.02	0.08	0.02	0.08	0.02	0.08	0.03	0.14	-	-
TO-02a	1.20	5.26	0.96	4.20	0.43	1.90	2.89	12.66	0.01	0.05	0.01	0.05	0.01	0.05	0.03	0.14	-	-
FLARE-02b	0.08	0.33	0.35	1.52	0.74	3.23	0.00	0.00	-	-	-	-	-	-	5.39E-06	2.36E-05	-	-
FLARE-02a	0.02	0.08	0.04	0.17	0.09	0.40	0.00	0.00	-	-	-	-	-	-	7.59E-07	3.32E-06	-	-

Unit No.	NOx		CO		VOC		SOx		PM[1]		PM10[1]		PM2.5[1]		H_2S		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
OILLOAD-02	-	-	-	-	14.39	19.11	-	-	-	-	-	-	-	.	4.43E-06	5.88E-06	-	-
ROAD-02	-	-	-	-	-	-	-	-	0.31	1.11	0.08	0.28	0.01	0.03	-	-	-	-
NRU-01	-	-	-	-	0.48	2.10	-	-	-	-	-	-	-	-	-	-	-	-
FUG-02	-	-	-	-	3.25	14.24	-	-	-	-	-	-	-	-	2.73E-05	1.20E-04	-	-
AMINE-03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DEHY-02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HT-08 (H-3780)	1.79	7.82	2.51	11.00	0.33	1.45	0.03	0.15	0.46	2.00	0.46	2.00	0.46	2.00	3.69E-04	1.62E-03	-	-
HT-09 (H-3710)	2.51	10.97	3.53	15.44	0.46	2.03	0.05	0.21	0.64	2.81	0.64	2.81	0.64	2.81	5.18E-04	2.27E-03	-	-
HT-10 (H-3711)	2.51	10.97	3.53	15.44	0.46	2.03	0.05	0.21	0.64	2.81	0.64	2.81	0.64	2.81	5.18E-04	2.27E-03	-	-
HT-11 (H-3720)	0.78	3.42	0.65	2.86	0.09	0.38	0.01	0.04	0.12	0.52	0.12	0.52	0.12	0.52	9.60E-05	4.20E-04	-	-
HT-12 (H-3730)	1.06	2.32	1.49	3.27	0.20	0.43	0.02	0.04	0.27	0.59	0.27	0.59	0.27	0.59	2.19E-04	4.80E-04	-	-
REB-02	0.49	2.15	0.41	1.80	0.03	0.12	0.00	0.01	0.04	0.16	0.04	0.16	0.04	0.16	3.01E-05	1.32E-04	-	-
ECD-03	0.42	1.86	0.36	1.56	1.52	6.68	0.01	0.04	0.03	0.13	0.03	0.13	0.03	0.13	5.20E-03	2.28E-02	-	-
FLARE-03	0.02	0.07	0.08	0.33	0.16	0.71	3.76	16.49	0.00	0.00	0.00	0.00	-	-	-	-	-	-
FLARE-04	0.01	0.04	0.04	0.19	0.09	0.00	0.00	0.00	-	-	-	-	-	-	7.86E-07	3.44E-06	-	-
TO-03	4.90	21.47	4.12	18.04	0.71	3.12	6.39	27.99	0.37	1.63	0.37	1.63	0.37	1.63	0.03	0.15	-	-
FUG-03	-	-	-	-	2.75	12.06	-	-	-	-	-	-	-	-	2.05E-05	8.99E-05	-	-
NRU-02	-	-	-	-	0.74	3.24	-	-	-	-	-	-	-	-	-	-	-	-
Totals	34.03	140.63	34.77	142.31	158.76	173.86	18.16	79.44	5.28	21.01	4.72	18.99	4.55	18.38	0.13	0.56	-	-

[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 scehduled maintenance are no higher than those listed in Table 2-E and a malfunction emission limit is not already permitted or requested. If you are required to report GHG emissions as described in Section 6a, include any GHG emissions during Startup, Shutdown, and/or Scheduled Maintenance (SSM) in Table 2-P. Provide an explanations of SSM emissions in Section 6 and 6a.

All applications for facilities that have emissions during routine our 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_2S		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
FLARE-01 SSM	31.95	3.68	145.66	16.77	113.05	6.83	2.15	0.94	-	-	-	-	-	-	0.02	0.01	-	-
MSS-01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FLARE-02b SSM	7.90	6.92	36.01	31.54	7.43	6.51	5.84	5.11	-	-	-	-	-	-	0.06	0.06	-	-
FLARE-02a SSM	507.16	4.30	1012.48	8.59	997.55	6.01	1.97	0.01	-	-	-	-	-	-	0.02	1.28E-04	-	-
MSS-02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FLARE-03 SSM	768.39	6.73	1536.37	14.13	1315.14	9.02	3.82	16.50	-	-	-	-	-	-	5.87E-04	1.29E-04	-	-
FLARE-04 SSM	7.51	6.61	36.34	31.98	4.61	3.96	6.33	5.54	-	-	-	-	-	-	0.07	0.06	-	-
SSM-03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Totals	1322.92	28.24	2766.86	103.02	2437.78	32.33	20.11	28.11	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.13	0.00	0.00

[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_2S 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 - Scenario 1

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)			
CE-01	CE-01	V	No	40	847	202.30	174.28	10%	64.39	2.00
CE-02	CE-02	V	No	40	847	202.30	174.28	10%	64.39	2.00
CE-03	CE-03	V	No	40	847	202.30	174.28	10%	64.39	2.00
HT-01	HT-01	V	No	55	600	472.02	406.64	10%	37.56	4.00
HT-02	HT-02	V	No	14	600	81.47	70.18	10%	25.93	2.00
HT-03	HT-03	V	No	20	600	89.85	77.41	10%	28.60	2.00
ECD-01	ECD-01	V	No	30	1100	27.57	23.75	10%	2.19	4.00
TO-01	TO-01	V	No	25	1600	189.70	163.43	10%	60.38	2.00
FLARE-01	FLARE-01	V	No	195	1832	6956.31	5992.84	10%	65.62	21.74
REB-01	REB-01	V	No	10	600	44.93	38.70	10%	25.42	1.50
HT-04	HT-04	V	No	15	600	658.91	567.65	10%	68.49	3.50
HT-05	HT-05	V	No	15	600	211.09	181.85	10%	67.19	2.00
HT-06	HT-06	V	No	15	600	215.04	185.26	10%	43.81	2.50
HT-07	HT-07	V	No	15	600	455.25	392.19	10%	92.74	2.50
ECD-02	ECD-02	V	No	10	1100	18.88	16.27	10%	1.50	4.00
TO-02	TO-02	V	No	61	1400	144.12	124.16	10%	20.39	3.00
TO-02a	TO-02a	V	No	61	1400	144.12	124.16	10%	20.39	3.00
FLARE-02b (Scenario 1)	FLARE-02b	V	No	154	1832	281.53	242.53	10%	65.62	3.19
FLARE-02a	FLARE-02a	V	No	154	1832	54390.44	46857.14	10%	65.62	65.67
ECD-03	ECD-03	V	No	10	1100	43.61	37.57	10%	3.47	4.00
TO-03	TO-03	V	No	68	1500	632.78	545.14	10%	16.44	7.00
REB-02	REB-02	V	No	31	750	68.38	58.91	10%	21.77	2.00
FLARE-03	FLARE-03	V	No	154	1832	192.63	165.95	10%	65.62	82.84
HT-09	HT-09	V	No	33	493	926.30	798.00	10%	73.71	4.00
HT-10	HT-10	V	No	33	493	926.30	798.00	10%	73.71	4.00
HT-11	HT-11	V	No	20	429	159.96	137.80	10%	60.62	1.83
HT-12	HT-12	V	No	27	449	373.86	322.08	10%	66.92	2.67
FLARE-04	FLARE-04	V	No	75	1832	41.37	35.64	10%	65.62	10.71
HT-08	HT-08	V	No	25	490	657.86	566.74	10%	153.89	2.33

Table 2-H: Stack Exit Conditions - Scenario 2

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)			
CE-01	CE-01	V	No	40	847	202.30	174.28	10%	64.39	2.00
CE-02	CE-02	V	No	40	847	202.30	174.28	10%	64.39	2.00
CE-03	CE-03	V	No	40	847	202.30	174.28	10%	64.39	2.00
HT-01	HT-01	V	No	55	600	472.02	406.64	10%	37.56	4.00
HT-02	HT-02	V	No	14	600	81.47	70.18	10%	25.93	2.00
HT-03	HT-03	V	No	20	600	89.85	77.41	10%	28.60	2.00
ECD-01	ECD-01	V	No	30	1100	27.57	23.75	10%	2.19	4.00
TO-01	TO-01	V	No	25	1600	189.70	163.43	10%	60.38	2.00
FLARE-01	FLARE-01	V	No	195	1832	6956.31	5992.84	10%	65.62	21.74
REB-01	REB-01	V	No	10	600	44.93	38.70	10%	25.42	1.50
HT-04	HT-04	V	No	15	600	658.91	567.65	10%	68.49	3.50
HT-05	HT-05	V	No	15	600	211.09	181.85	10%	67.19	2.00
HT-06	HT-06	V	No	15	600	215.04	185.26	10%	43.81	2.50
HT-07	HT-07	V	No	15	600	455.25	392.19	10%	92.74	2.50
ECD-02	ECD-02	V	No	10	1100	18.88	16.27	10%	1.50	4.00
TO-02	TO-02	V	No	61	1400	144.12	124.16	10%	20.39	3.00
TO-02a	TO-02a	V	No	61	1400	144.12	124.16	10%	20.39	3.00
FLARE-02b (Scenario 2)	FLARE-02b	V	No	75	1832	281.53	242.53	10%	65.62	3.19
FLARE-02a	FLARE-02a	V	No	154	1832	54390.44	46857.14	10%	65.62	65.67
ECD-03	ECD-03	V	No	10	1100	43.61	37.57	10%	3.47	4.00
TO-03	TO-03	V	No	68	1500	632.78	545.14	10%	16.44	7.00
REB-02	REB-02	V	No	31	750	68.38	58.91	10%	21.77	2.00
FLARE-03	FLARE-03	V	No	154	1832	192.63	165.95	10%	65.62	82.84
HT-09	HT-09	V	No	33	493	926.30	798.00	10%	73.71	4.00
HT-10	HT-10	V	No	33	493	926.30	798.00	10%	73.71	4.00
HT-11	HT-11	V	No	20	429	159.96	137.80	10%	60.62	1.83
HT-12	HT-12	V	No	27	449	373.86	322.08	10%	66.92	2.67
FLARE-04	FLARE-04	V	No	75	1832	41.37	35.64	10%	65.62	10.71
HT-08	HT-08	V	No	25	490	657.86	566.74	10%	153.89	2.33

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

Stack No.	Unit No.(s)	Total HAPs		Formaldehyde ☑ HAP		Acetaldehyde ☑ HAP		Benzene ☑ HAP		Hexane ☑ HAP		Toluene ☑ HAP		Ethylbenzene ☑ HAP		Xylene ☑ HAP		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
CE-01	CE-01	0.21	0.91	0.12	0.51	0.05	0.21	2.52E-03	0.01	6.35E-03	9.95E-04	2.33E-03	0.01	2.27E-04	9.95E-04	1.05E-03	4.61E-03		
CE-02	CE-02	0.21	0.91	0.12	0.51	0.05	0.21	2.52E-03	0.01	6.35E-03	9.95E-04	2.33E-03	0.01	2.27E-04	9.95E-04	1.05E-03	4.61E-03		
CE-03	CE-03	0.21	0.91	0.12	0.51	0.05	0.21	2.52E-03	0.01	6.35E-03	9.95E-04	2.33E-03	0.01	2.27E-04	9.95E-04	1.05E-03	4.61E-03		
AMINE-01	AMINE-01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
HT-01	HT-01	0.07	0.16	2.90E-03	6.34E-03	-	-	8.11E-05	3.55E-04	0.01	0.30	1.31E-04	5.75E-04	-	-	-	-		
HT-02	HT-02	0.01	0.05	5.00E-04	2.19E-03	-	-	1.40E-05	6.13E-05	0.01	0.05	2.27E-05	9.93E-05	-	-	-	-		
HT-03	HT-03	0.01	0.06	5.51E-04	2.42E-03	-	-	1.54E-05	6.76E-05	0.01	0.06	2.50E-05	1.10E-04	-	-	-	-		
OILTANK-01 - 02	OILTANK-01 - 02	0.68	0.15	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
PWTANK-01 - 04	PWTANK-01 - 04	0.13	0.15	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
ECD-01	ECD-01	0.04	0.18	-	-	-	-	0.01	0.05	0.03	0.11	3.23E-03	0.01	3.06E-05	1.34E-04	3.53E-04	1.54E-03		
TO-01	TO-01	0.09	0.38	-	-	-	-	0.09	0.38	1.07E-04	4.69E-04	0.03	0.13	-	-	4.89E-03	0.02		
FLARE-01	FLARE-01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
FLARE-01 SSM	FLARE-01 SSM	0.92	0.07	-	-	-	-	0.47	0.04	0.09	6.86E-03	0.14	0.01	0.09	6.85E-03	0.14	0.01		
OILLOAD-01	OILLOAD-01	2.30	0.04	-	-	-	-	0.59	0.01	1.54	0.03	0.15	2.68E-03	1.76E-03	3.08E-05	0.01	2.58E-04		
ROAD-01	ROAD-01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
FUG-01	FUG-01	0.27	1.19	-	-	-	-	0.06	0.25	0.14	0.62	0.05	0.20	5.95E-03	0.03	0.02	0.09		
MSS-01	MSS-01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
AMINE-02	AMINE-02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
DEHY-01	DEHY-01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
REB-01	REB-01	6.91E-03	0.03	2.76E-04	1.21E-03	-	-	-	-	-	-	-	-	-	-	-	-		
HT-04	HT-04	0.10	0.44	4.04E-03	0.02	-	-	1.13E-04	4.96E-04	0.10	0.43	1.83E-04	8.03E-04	-	-	-	-		
HT-05	HT-05	0.03	0.07	1.30E-03	2.84E-03	-	-	3.63E-05	1.59E-04	0.03	0.14	5.87E-05	2.57E-04	-	-	-	-		
HT-06	HT-06	0.03	0.14	1.32E-03	5.78E-03	-	-	3.70E-05	1.62E-04	0.03	0.14	5.98E-05	2.62E-04	-	-	-	-		
HT-07	HT-07	0.07	0.31	2.79E-03	0.01	-	-	7.82E-05	3.43E-04	0.07	0.29	1.27E-04	5.55E-04	-	-	-	-		
OILTANK-03 - 06	OILTANK-03 - 06	3.81	1.57	-	-	-	-	0.69	0.28	2.84	1.17	0.19	0.08	1.87E-03	7.73E-04	0.09	0.04		
ECD-02	ECD-02	0.08	0.37	-	-	-	-	0.01	0.06	0.06	0.27	4.24E-03	0.02	4.15E-05	1.82E-04	2.06E-03	9.01E-03		
TO-02	TO-02	0.76	3.32	-	-	-	-	0.44	1.94	0.03	0.13	0.14	0.62	7.04E-03	0.03	0.14	0.60		
TO-02a	TO-02a	0.27	1.19	-	-	-	-	0.20	0.89	1.63E-04	7.13E-04	0.06	0.27	-	-	7.26E-03	0.03		
FLARE-02b	FLARE-02b	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
FLARE-02b SSM	FLARE-02b SSM	1.09	0.95	-	-	-	-	0.68	0.60	0.04	0.03	0.22	0.19	7.04E-03	6.16E-03	0.14	0.13		
FLARE-02a	FLARE-02a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
FLARE-02a SSM	FLARE-02a SSM	98.75	0.59	-	-	-	-	24.23	0.15	67.19	0.40	0.50	3.00E-03	5.50	0.03	1.33	8.00E-03		
OILLOAD-02	OILLOAD-02	0.68	0.90	-	-	-	-	0.10	0.13	0.52	0.70	0.04	0.05	3.62E-04	4.81E-04	0.02	0.02		
ROAD-02	ROAD-02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		

Stack No.	Unit No.(s)	Total HAPs		Formaldehyde ☑ HAP		Acetaldehyde ☑ HAP		Benzene ☑ HAP		Hexane ☑ HAP		Toluene ☑ HAP		Ethylbenzene ☑ HAP		Xylene ☑ HAP		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
NRU-01	NRU-01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
FUG-02	FUG-02	0.29	1.28	-	-	-	-	0.06	0.27	0.15	0.66	0.05	0.22	6.71E-03	0.03	0.02	0.09		
MSS-02	MSS-02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
AMINE-03	AMINE-03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
DEHY-02	DEHY-02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
HT-08 (H-3780)	HT-08 (H-3780)	0.11	0.49	4.51E-03	0.02	-	-	1.26E-04	5.53E-04	0.11	0.47	2.04E-04	8.95E-04	-	-	-	-		
HT-09 (H-3710)	HT-09 (H-3710)	0.16	0.69	6.32E-03	0.03	-	-	1.77E-04	7.76E-04	0.15	0.66	2.87E-04	1.26E-03	-	-	-	-		
HT-10 (H-3711)	HT-10 (H-3711)	0.16	0.69	6.32E-03	0.03	-	-	1.77E-04	7.76E-04	0.15	0.66	2.87E-04	1.26E-03	-	-	-	-		
HT-11 (H-3720)	HT-11 (H-3720)	0.03	0.13	1.17E-03	5.13E-03	-	-	3.28E-05	1.44E-04	0.03	0.12	5.31E-05	2.32E-04	-	-	-	-		
HT-12 (H-3730)	HT-12 (H-3730)	0.07	0.15	2.68E-03	5.86E-03	-	-	7.49E-05	3.28E-04	0.06	0.28	1.21E-04	5.31E-04	-	-	-	-		
REB-02	REB-02	9.22E-03	0.04	3.68E-04	1.61E-03	-	-	1.03E-05	4.51E-05	8.82E-03	0.04	1.67E-05	7.30E-05	-	-	-	-		
ECD-03	ECD-03	0.49	2.16	-	-	-	-	0.34	1.49	0.04	0.18	0.10	0.45	-	-	0.01	0.05		
FLARE-03	FLARE-03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
FLARE-03 SSM	FLARE-03 SSM	19.26	0.13	-	-	-	-	4.98	0.04	12.04	0.07	1.96	0.01	-	-	0.29	2.07E-03		
FLARE-04	FLARE-04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
FLARE-04 SSM	FLARE-04 SSM	0.68	0.60	-	-	-	-	0.51	0.44	3.86E-04	3.38E-04	0.16	0.14	-	-	0.02	0.02		
TO-03	TO-03	0.34	1.50	-	-	-	-	0.27	1.20	3.07E-03	0.01	0.08	0.37	-	-	0.01	0.05		
FUG-03	FUG-03	0.22	0.95	-	-	-	-	0.05	0.21	0.11	0.49	0.04	0.16	5.23E-03	0.02	0.02	0.07		
NRU-02	NRU-02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
SSM-03	SSM-03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Totals:		132.67	23.85	0.39	1.68	0.14	0.63	33.79	8.47	85.62	8.55	3.91	2.97	5.62	0.16	2.29	1.25		

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 (BTU/scf)	Hourly Usage (MMSCF/hr)	Annual Usage (MMSCF/yr)	% Sulfur	% Ash
CE-01	Natural Gas	Pipeline Quality Natural Gas	1,259.00	0.011	93.99	0.25 gr S / 100 scf	0%
CE-02	Natural Gas	Pipeline Quality Natural Gas	1,259.00	0.011	93.99	0.25 gr S / 100 scf	0%
CE-03	Natural Gas	Pipeline Quality Natural Gas	1,259.00	0.011	93.99	0.25 gr S / 100 scf	0%
HT-01	Natural Gas	Pipeline Quality Natural Gas	1,259.00	0.031	137.07	0.25 gr S / 100 scf	0%
HT-02	Natural Gas	Pipeline Quality Natural Gas	1,259.00	0.005	47.31	0.25 gr S / 100 scf	0%
HT-03	Natural Gas	Pipeline Quality Natural Gas	1,259.00	0.006	52.18	0.25 gr S / 100 scf	0%
ECD-01	Natural Gas	Pipeline Quality Natural Gas	1,259.00	0.002	17.52	0.25 gr S / 100 scf	0%
TO-01	Natural Gas	Pipeline Quality Natural Gas	1,259.00	0.002	19.37	0.25 gr S / 100 scf	0%
FLARE-01	Natural Gas	Pipeline Quality Natural Gas	1,259.00	1.37E-04	1.20	0.25 gr S / 100 scf	0%
REB-01	Natural Gas	Pipeline Quality Natural Gas	1,259.00	0.003	26.09	0.25 gr S / 100 scf	0%
HT-04	Natural Gas	Pipeline Quality Natural Gas	1,259.00	0.044	382.68	0.25 gr S / 100 scf	0%
HT-05	Natural Gas	Pipeline Quality Natural Gas	1,259.00	0.014	61.30	0.25 gr S / 100 scf	0%
HT-06	Natural Gas	Pipeline Quality Natural Gas	1,259.00	0.014	124.89	0.25 gr S / 100 scf	0%
HT-07	Natural Gas	Pipeline Quality Natural Gas	1,259.00	0.030	264.40	0.25 gr S / 100 scf	0%
ECD-02	Natural Gas	Pipeline Quality Natural Gas	1,259.00	1.00E-04	0.88	0.25 gr S / 100 scf	0%
TO-02	Natural Gas	Pipeline Quality Natural Gas	1,259.00	0.008	67.09	0.25 gr S / 100 scf	0%
TO-02a	Natural Gas	Pipeline Quality Natural Gas	1,259.00	0.008	71.93	0.25 gr S / 100 scf	0%
FLARE-02a	Natural Gas	Pipeline Quality Natural Gas	1,259.00	0.000	1.10	0.25 gr S / 100 scf	0%

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 (BTU/scf)	Hourly Usage (MMSCF/hr)	Annual Usage (MMSCF/yr)	% Sulfur	% Ash
FLARE-02b	Natural Gas	Pipeline Quality Natural Gas	1,259.00	0.001	7.77	0.25 gr S / 100 scf	0%
HT-08	Natural Gas	Pipeline Quality Natural Gas	1,259.00	0.049	426.31	0.25 gr S / 100 scf	0%
HT-09	Natural Gas	Pipeline Quality Natural Gas	1,259.00	0.068	598.38	0.25 gr S / 100 scf	0%
HT-10	Natural Gas	Pipeline Quality Natural Gas	1,259.00	0.068	598.38	0.25 gr S / 100 scf	0%
HT-11	Natural Gas	Pipeline Quality Natural Gas	1,259.00	0.013	110.77	0.25 gr S / 100 scf	0%
HT-12	Natural Gas	Pipeline Quality Natural Gas	1,259.00	0.029	126.60	0.25 gr S / 100 scf	0%
REB-02	Natural Gas	Pipeline Quality Natural Gas	1,259.00	0.004	34.79	0.25 gr S / 100 scf	0%
ECD-03	Natural Gas	Pipeline Quality Natural Gas	1,259.00	0.002	17.52	0.25 gr S / 100 scf	0%
FLARE-03	Natural Gas	Pipeline Quality Natural Gas	1,259.00	1.95E-04	1.71	0.25 gr S / 100 scf	0%
FLARE-04	Natural Gas	Pipeline Quality Natural Gas	1,259.00	1.10E-04	0.96	0.25 gr S / 100 scf	0%
TO-03	Natural Gas	Pipeline Quality Natural Gas	1,259.00	0.038	329.41	0.25 gr S / 100 scf	0%

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			
OILTANK-01	2018	Reject Condensate	N/A - Fixed Roof Tank	FX	400	63.59	3.66	31.80	WH	WH	Good	3121425.13 (per tank)	185.8 (per tank)
OILTANK-02	2018	Reject Condensate	N/A - Fixed Roof Tank	FX	400	63.59	3.66	31.80	WH	WH	Good	3121425.13 (per tank)	185.8 (per tank)
PWTANK-1	2018	Produced Water	N/A - Fixed Roof Tank	FX	400	63.59	3.66	31.80	WH	WH	Good	2475228.85 (per tank)	147.34 (per tank)
PWTANK-2	2018	Produced Water	N/A - Fixed Roof Tank	FX	400	63.59	3.66	31.80	WH	WH	Good	2475228.85 (per tank)	147.34 (per tank)
PWTANK-3	2018	Produced Water	N/A - Fixed Roof Tank	FX	400	63.59	3.66	31.80	WH	WH	Good	2475228.85 (per tank)	147.34 (per tank)
PWTANK-4	2018	Produced Water	N/A - Fixed Roof Tank	FX	400	63.59	3.66	31.80	WH	WH	Good	2475228.85 (per tank)	147.34 (per tank)
OILTANK-03	Jan-25	Condensate	N/A - Fixed Roof Tank	FX	750	119	4.88	59.62	WH	WH	Good	15618006.64 (per tank)	495.81 (per tank)
OILTANK-04	Jan-25	Condensate	N/A - Fixed Roof Tank	FX	750	119	4.88	59.62	WH	WH	Good	15618006.64 (per tank)	495.81 (per tank)
OILTANK-05	Jan-25	Condensate	N/A - Fixed Roof Tank	FX	750	119	4.88	59.62	WH	WH	Good	15618006.64 (per tank)	495.81 (per tank)
OILTANK-06	Jan-25	Condensate	N/A - Fixed Roof Tank	FX	750	119	4.88	59.62	WH	WH	Good	15618006.64 (per tank)	495.81 (per tank)

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)
OILTANK-01	40400311	Reject Condensate	Mixed Hydrocarbons	5.57	63.60	64.09	6.24	71.78	7.21
OILTANK-02	40400311	Reject Condensate	Mixed Hydrocarbons	5.57	63.60	64.09	6.24	71.78	7.21
PWTANK-1	40400315	Produced Water	Water	8.16	26.26	64.09	12.00	71.78	12.88
PWTANK-2	40400315	Produced Water	Water	8.16	26.26	64.09	12.00	71.78	12.88
PWTANK-3	40400315	Produced Water	Water	8.16	26.26	64.09	12.00	71.78	12.88
PWTANK-4	40400315	Produced Water	Water	8.16	26.26	64.09	12.00	71.78	12.88
OILTANK-03	40400311	Condensate	Mixed Hydrocarbons	5.60	62.93	70.28	6.63	82.21	8.23
OILTANK-04	40400311	Condensate	Mixed Hydrocarbons	5.60	62.93	70.28	6.63	82.21	8.23
OILTANK-05	40400311	Condensate	Mixed Hydrocarbons	5.60	62.93	70.28	6.63	82.21	8.23
OILTANK-06	40400311	Condensate	Mixed Hydrocarbons	5.60	62.93	70.28	6.63	82.21	8.23

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

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

Note: 1.00 bbl = 0.159 M^3 = 42.0 gal

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

Material Processed				Material Produced			
Description	**Chemical Composition**	**Phase (Gas, Liquid, or Solid)**	**Quantity (specify units)**	**Description**	**Chemical Composition**	**Phase**	**Quantity (specify units)**
Natural Gas	Mixed Hydrocarbons	Gas	573.76 MMSCF/DAY	Natural Gas	Mixed Hydrocarbons	Gas	573.76 MMSCF/DAY
				Oil/Condensate	Mixed Hydrocarbons	Liquid	11889.87 BOPD
				Produced Water	Mixed Hydrocarbons	Liquid	974.85 BOPD

Table 2-N: CEM Equipment

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

Stack No.	Pollutant(s)	Manufacturer	Model No.	Serial No.	Sample Frequency	Averaging Time	Range	Sensitivity	Accuracy
N/A - No Continuous Emissions Measurement equipment at this facility.									

Table 2-O: Parametric Emissions Measurement Equipment

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

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

Table 2-P: Greenhouse Gas Emissions

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

		CO_2 ton/yr	CH_4 ton/yr	N_2O ton/yr	SF_6 ton/yr	PFC/HFC ton/yr[2]									Total GHG Mass Basis ton/yr[4]	Total CO_2e ton/yr[5]
Unit No.	**GWPs [1]**	**1**	**28**	**265**	**23,500**	**footnote 3**										
CE-01	**mass GHG**	6920.77	0.13	0.01											6920.91	
	CO_2e	6920.77	3.65	3.46												6927.87
CE-02	**mass GHG**	6920.77	0.13	0.01											6920.91	
	CO_2e	6920.77	3.65	3.46												6927.87
CE-03	**mass GHG**	6920.77	0.13	0.01											6920.91	
	CO_2e	6920.77	3.65	3.46												6927.87
HT-01	**mass GHG**	20186.80	0.38	0.04											20187.21	
	CO_2e	20186.80	10.65	10.08												20207.53
HT-02	**mass GHG**	3484.02	0.07	6.57E-03											3484.09	
	CO_2e	3484.02	1.84	1.74												3487.59
HT-03	**mass GHG**	3842.66	0.07	7.24E-03											3842.74	
	CO_2e	3842.66	2.03	1.92												3846.61
OILTANK-01 - 02	**mass GHG**	0.01	0.11												0.12	
	CO_2e	0.01	2.95													2.96
PWTANK-01 - 04	**mass GHG**	4.38	4.11												8.49	
	CO_2e	4.38	115.04													119.42
ECD-01	**mass GHG**	1402.14	0.03	2.64E-03											1402.17	
	CO_2e	1402.14	0.74	0.70												1403.58
TO-01	**mass GHG**	7307.23	0.14	0.01											7307.38	
	CO_2e	7307.23	3.86	3.65												7314.74
FLARE-01 SSM	**mass GHG**	26233.62	68.71	0.03											26302.36	
	CO_2e	26233.62	1923.79	6.79												28164.20
OILLOAD-01	**mass GHG**	2.58E-04	1.84E-03	-											0.00	
	CO_2e	2.58E-04	0.05	-												0.05
FUG-01	**mass GHG**	20.78	16.48	-											37.26	
	CO_2e	20.78	461.37	-												482.15
REB-01	**mass GHG**	1921.33	0.04	3.62E-03											1921.37	
	CO_2e	1921.33	1.01	0.96												1923.31
HT-04	**mass GHG**	28179.54	0.53	0.05											28180.12	
	CO_2e	28179.54	14.87	14.07												28208.48
HT-05	**mass GHG**	9027.70	0.17	0.02											9027.89	
	CO_2e	9027.70	4.76	4.51												9036.97
HT-06	**mass GHG**	9196.78	0.17	0.02											9196.97	
	CO_2e	9196.78	4.85	4.59												9206.22
HT-07	**mass GHG**	19469.50	0.37	0.04											19469.90	
	CO_2e	19469.50	10.27	9.72												19489.50
OILTANK-03 - 06	**mass GHG**	1.04E-03	0.07	-											0.08	
	CO_2e	1.04E-03	2.09	-												2.09

ECD-02	**mass GHG**	960.36	0.02	1.81E-03											960.38	
	CO_2e	960.36	0.51	0.48												961.35
TO-02	**mass GHG**	6148.26	0.12	0.01											6148.39	
	CO_2e	6148.26	3.24	3.07												6154.58
TO-02a	**mass GHG**	6148.26	0.12	0.01											6148.39	
	CO_2e	6148.26	3.24	3.07												6154.58
FLARE-02b SSM	**mass GHG**	41680.91	8.47	0.09											41689.46	
	CO_2e	41680.91	237.03	22.80												41940.73
FLARE-02a SSM	**mass GHG**	18995.03	73.58	0.03											19068.64	
	CO_2e	18995.03	2060.14	7.20												21062.37
OILLOAD-02	**mass GHG**	1.19E-04	0.04	-											0.04	
	CO_2e	1.19E-04	1.22	-												1.22
NRU-01	**mass GHG**	-	282.77	-											282.77	
	CO_2e	-	7917.46	-												7917.46
FUG-02	**mass GHG**	114.56	15.65	-											130.20	
	CO_2e	114.56	438.11	-												552.66
HT-08 (H-3780)	**mass GHG**	31392.00	0.59	0.06											31392.65	
	CO_2e	31392.00	16.57	15.68												31424.25
HT-09 (H-3710)	**mass GHG**	44062.55	0.83	0.08											44063.46	
	CO_2e	44062.55	23.25	22.01												44107.81
HT-10 (H-3711)	**mass GHG**	44062.55	0.83	0.08											44063.46	
	CO_2e	44062.55	23.25	22.01												44107.81
HT-11 (H-3720)	**mass GHG**	8156.69	0.15	0.02											8156.86	
	CO_2e	8156.69	4.30	4.07												8165.07
HT-12 (H-3730)	**mass GHG**	18644.61	0.35	0.04											18644.99	
	CO_2e	18644.61	9.84	9.31												18663.76
REB-02	**mass GHG**	2561.78	0.05	4.83E-03											2561.83	
	CO_2e	2561.78	1.35	1.28												2564.41
ECD-03	**mass GHG**	2218.05	0.04	4.18E-03											2218.09	
	CO_2e	2218.05	1.17	1.11												2220.33
FLARE-03 SSM	**mass GHG**	14217.65	22.21	8.74E-03											14239.88	
	CO_2e	14217.65	621.94	2.32												14841.91
FLARE-04 SSM	**mass GHG**	616.61	1.23	0.11											617.95	
	CO_2e	616.61	34.40	28.59												679.60
TO-03	**mass GHG**	25617.76	0.48	0.05											25618.29	
	CO_2e	25617.76	13.52	12.79												25644.07
FUG-03	**mass GHG**	0.83	3.47	-											4.31	
	CO2e	0.83	97.21	-												98.05
NRU-02	**mass GHG**	0.00	437.41	-											437.41	
	CO_2e	0.00	12247.54	-												12247.54
Total	**mass GHG**	416637.26	940.23	0.85											417578.34	
	CO_2e	416637.26	26326.43	224.89												443188.57

[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] **CO_2e** 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.

Pronto Midstream, LLC (Pronto) owns and operates the Marlan Gas Plant, located 23 miles northeast of Loving, NM in Eddy County, currently authorized under GCP-O&G 7426-M5. Pronto is submitting this initial NSR application for its Marlan Gas Plant (Marlan) pursuant to 20.2.72.200.A(1) NMAC.

Pronto will be adding an additional process train (Train 3) to the facility and modifying the routing of process liquids and gas throughout the site. The following new units will be installed at this facility with the addition of Train 3:

- One (1) Amine Unit (AMINE-03)
- One (1) Dehydrator Unit (DEHY-02)
- One (1) Stabilizer Heater (HT-08)
- Two (2) Amine Hot Oil Heaters (HT-09 & HT-10)
- One (1) Molecular Sieve Regenerator Heater (HT-11)
- One (1) Cry HMO Heater (HT-12)
- One (1) Dehy Reboiler (REB-02)
- One (1) Vapor Combustor (ECD-03)
- One (1) Facility Flare (FLARE-03)
- One (1) Acid Gas Flare (FLARE-04)
- Two (2) Thermal Oxidizers (TO-02a & TO-03)
- One (1) Nitrogen Rejection Unit (NRU-02)
- Additional Facility Fugitives (FUG-03)

Pronto proposes to install an additional Thermal Oxidizer, unit TO-02a, to control surplus emissions from AMINE-02. Existing unit FLARE-02 will now consist of two units, FLARE-02a and FLARE-02b, with FLARE-02b controlling thermal oxidizer downtime from both TO-02 and TO-02a. FLARE-02a will control facility SSM from train 2. Two construction scenarios, detailed in Section 15 of the application, are requested for FLARE-02b.

Additionally, Pronto will revise the storage tanks on trains 1 and 2. Train 1 will convert two (2) of the existing oil tanks to produced water tanks. As a result, there will now be four (4) 400 bbl produced water tanks that will handle all process produced water at Train 1. The remaining two (2) oil tanks will contain reject condensate from the LACT unit. The two (2) existing produced water tanks at Train 2 will be converted to condensate tanks. The four (4) condensate tanks at Train 2 will handle all process condensate at the facility. The table below contains a cross reference for updates to units IDs and contents of each tank for this permit modification.

Tank Location	Tank Size	Old Unit ID	Old Tank Content	New Unit ID	New Tank Content
Train 1	400 bbl	OILTANK-01	Condensate	OILTANK-01	Condensate
		OILTANK-02	Condensate	OILTANK-02	Condensate
		OILTANK-03	Condensate	PWTANK-03	Produced Water
		OILTANK-04	Condensate	PWTANK-04	Produced Water
		PWTANK-01	Produced Water	PWTANK-01	Produced Water
		PWTANK-02	Produced Water	PWTANK-02	Produced Water
Train 2	750 bbl	OILTANK-05	Condensate	OILTANK-05	Condensate
		OILTANK-06	Condensate	OILTANK-06	Condensate
		PWTANK-03	Produced Water	OILTANK-03	Condensate
		PWTANK-04	Produced Water	OILTANK-04	Condensate

Process emissions from additional units at the site will be updated in this application due to changes in analyses and throughputs. Fugitives and SSM emissions will be updated as well. The units below are considered to be modified with this application:

- CE-01 through CE-03
- AMINE-01 and AMINE-02
- DEHY-01
- HT-01 through HT-07
- OILTANK-01 through OILTANK-06
- PWTANK-01 through PWTANK-04
- ECD-01 and ECD-02
- FLARE-01
- TO-01 and TO-02
- OILLOAD-01
- ROAD-01 and ROAD-02
- FUG-1 and FUG-2
- MSS-01 and MSS-02

Written description of the routine operations of the facility

Inlet gas enters the facility and is directed to a slug catcher to separate liquids from the inlet natural gas. Liquids from the slug catcher will be routed to a stabilizer where stabilized condensate and produced water are directed to storage tanks, where liquids are either piped offsite or transferred via truck load out (Units OILLOAD-01 and PWLOAD-01 (exempt pursuant 20.2.72.202.B.5 NMAC)). Stabilized NGL is directed straight to the NGL pipeline. Unpaved haul roads (ROAD-01 and ROAD-02) are used for truck loading and unloading. The roads are subject to a 25 mph speed limit and will have base course applied as needed. Liquid storage at the facility consists of two (2) 400 bbl reject condensate tanks (Units OILTANK-01 – 02), four (4) 750 bbl condensate tanks (Units OILTANK-03 – 06), and four (4) 400 bbl produced water storage tanks (Units PWTANK-01 – 04). Vapors from the tanks and loading operations are controlled by the tank combustors (Units ECD-01 & ECD-02) with a destruction efficiency of 98%. After passing through the slug catcher, the gas stream is directed to amine treating units at a rate of 70 MMscfd for Train 1 (Unit AMINE-01), 200 MMscfd for Train 2 (Unit AMINE-02), and 300 MMscfd for Train 3 (Amine -03) where the gas is contacted with amine solution. The gas is routed from the top of the contactors for further processing. The rich amine solution streams from the bottoms of the contractors is flashed in flash tanks and then routed to the amine regeneration stills where it is heated by hot oil to regenerate the amine solution. Separate natural gas-fired heaters heat the hot oil that is circulated through each train's process as a heat transfer medium. The flashed vapors from the flash tanks are captured and either consumed as fuel gas or sent to the facility flares (Units FLARE-01, FLARE-02, or Flare-04) with a 98% DRE. The waste gas from the amine regeneration stills is routed to thermal oxidizers (Units TO-01 through TO-03) with a 98% DRE. During thermal oxidizer downtime, the vapors are routed to the facility flares.

The gas from the amine treating unit in Train 1 is sent through a cryogenic unit to separate and extract natural gas liquids. Gas is then sent through molecular sieve dehydration and a cryo unit before passing through a demethanizer prior to sales. Besides the regeneration heater and the cryo hot oil heater, this is a closed system. The resulting residue gas and NGL

streams are sent directly to the residue and NGL pipelines, respectively. The residue compression is handled by three (3) 1,775 hp Caterpillar 3606 A3 compressor engines (Units CE-01 – 03), which are equipped with oxidation catalysts for control of CO, VOCs, and HCHO.

The gases from the amine treating units in Train 2 and Train 3 are sent to a TEG dehydrator (Units DEHY-01 & DEHY-02) for further treatment. The dehy overheads are sent to the molecular sieve dehydrator, then through the cryo unit, then through a demethanizer before being routed to the nitrogen rejection unit (Units NRU-01 & NRU-02) to remove nitrogen from the sales gas. The dehydrator operates with a flash tank and a BTEX condenser. Natural gas-fired reboilers provide heat for the regenerator. The non-condensable overheads from the BTEX condenser are sent to the thermal oxidizer (Unit TO-02) on Train 2 and the enclosed combustion device (ECD-03) on Train 3 with a 98% DRE. The flash gas overheads are used as fuel at the facility.

The SSM activities that will be controlled by the facility flares (FLARE-01 through FLARE-04) include vessel blowdowns, compressor blowdowns, and amine acid gas and dehy sour gas during downtimes of the primary control devices. Compressors are blown down for maintenance, start-up, and shutdown purposes.

Section 4

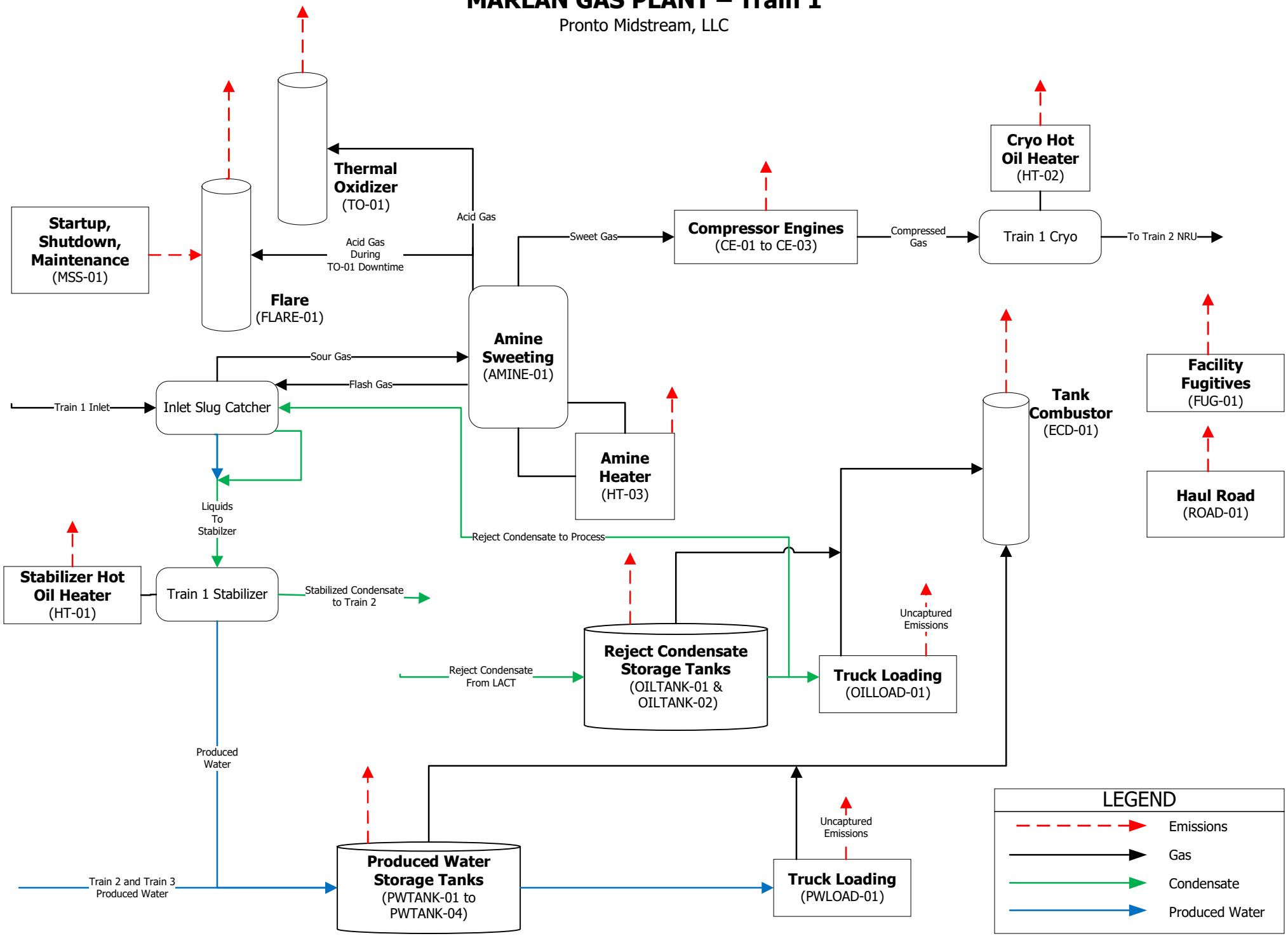
Process Flow Sheet

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

A process flow diagram is attached to this section.

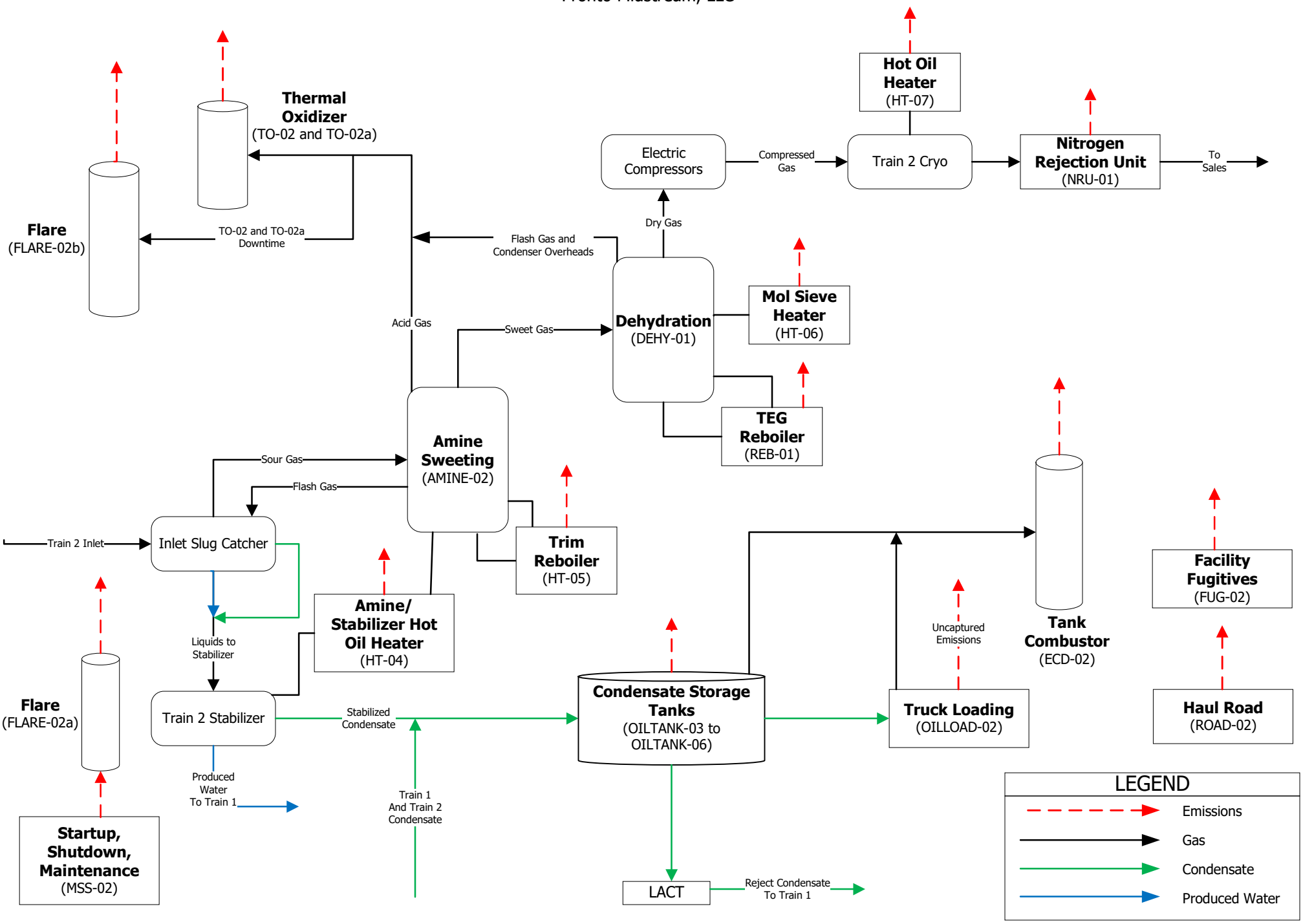
MARLAN GAS PLANT – Train 1

Pronto Midstream, LLC



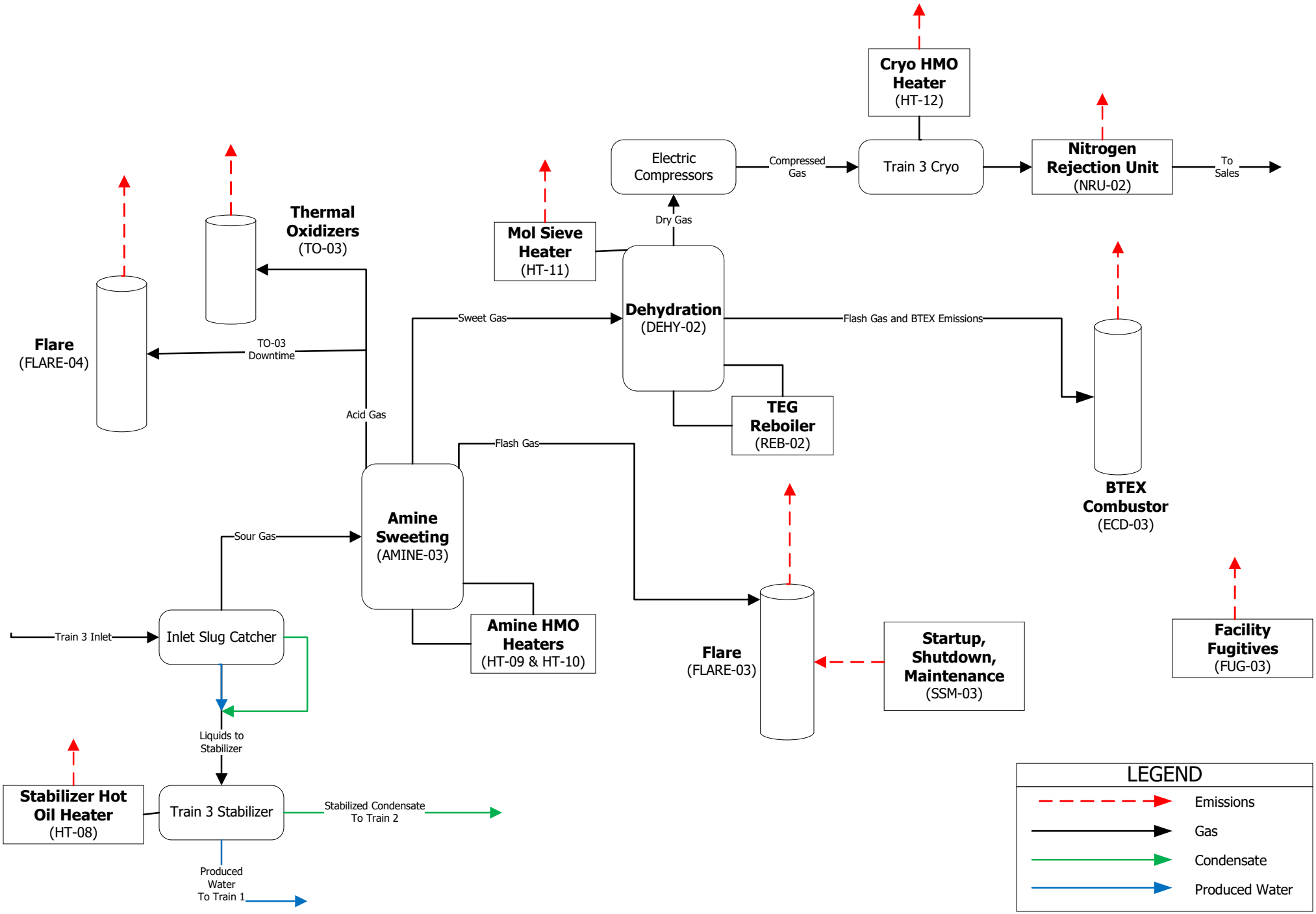
MARLAN GAS PLANT – Train 2

Pronto Midstream, LLC



MARLAN GAS PLANT – Train 3

Pronto Midstream, LLC



Section 5

Plot Plan Drawn to Scale

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

A plot plan is attached to this section.

EQUIPMENT

① SC-3400 – SLUG CATCHER
② V-3401 – INLET SEPARATOR
③ F-3410 – INLET FILTER/COELESCER
④ E-3210 – GAS/GAS EXCHANGER
⑤ T-3510 – AMINE CONTACTOR
⑥ A-3310 – TREATED GAS COOLER
⑦ V-3411 – TREATED GAS SCRUBBER
⑧ F-3421 – TREATED GAS FILTER/COELESCER
⑨ TEG CONTACTOR
⑩ ---
⑪ V-3412 – AMINE FLASH TANK
⑫ AMINE FLASH TANK SKID
⑬ AMINE REGEN SKIDS
⑭ T-3511 – AMINE STILL
⑮ E-3212 – AMINE REBOILER
⑯ E-3213 – AMINE REBOILER
⑰ AMINE REBOILER VALVE SKID
⑱ A-3311 – AMINE STILL REFLUX CONDENSER
⑲ V-3417 – STILL REFLUX ACCUMULATOR
⑳ A-3312 – LEAN AMINE COOLER
㉑ V-3415 – AMINE CHARCOAL FILTER
㉒ P-3613/14/15 – AMINE CIRCULATION PUMPS
㉓ F-3420 – DEHY INLET FILTER/COELESCER
㉔ DEHY SKID – DUST FILTERS
㉕ DEHY SKID – SWITCH VALVES
㉖ V-3421/22/23 – DEHY VESSELS
㉗ A-3320 – REGEN GAS COOLER
㉘✱ H-3720 – REGEN GAS HEATER
㉙ E-3230/E-3235 – PLATEFIN
㉚ E-3234 – CHILLER

㉛ CRYO SKID – PROCESS
㉜ CRYO SKID – PROCESS
㉝ EC-3130 / EXPANDER/COMPRESSOR
㉞ A-3330 – EXPANDER/COMPRESSOR AFTERCOOLER
㉟ V-3430 – COLD SEPARATOR
㊱ V-3431 – PRODUCT SURGE TANK
㊲ CRYO SKID – PRODUCT CHARGE PUMPS
㊳ T-3530 – DEMETHANIZER
㊴ E-3232/E-3233 – REBOILER PLATEFIN
㊵ P-3633/34/35 – PROPANE PIPELINE PUMPS
㊶ A-3370 – REFRIGERANT COOLER
㊷ V-3470 – REFRIGERANT ACCUMULATOR
㊸ V-3471 – REFRIGERANT ECONOMIZER
㊹ V-3472 – REFRIGERANT RECLAIMER
㊺ V-3473 – REFRIGERANT SUCTION SCRUBBER
㊻ C-3170/71/72 – REFRIGERANT COMPRESSORS
㊼ C-3173/74/75 – REFRIGERANT COMPRESSORS
㊽ REFRIG SKID – PIPERACK MODULE
㊾ REFRIG SKID – PIPERACK MODULE
㊿ F-3475 – RESIDUE GAS FILTER/COELESCER

(51) C-3174 – RESIDUE GAS COMPRESSOR
(52) A-3174 – RESIDUE GAS INTERSTAGE COOLER
(53) C-3175 – RESIDUE GAS COMPRESSOR
(54) A-3175 – RESIDUE GAS INTERSTAGE COOLER
(55) C-3176 – RESIDUE GAS COMPRESSOR
(56) A-3176 – RESIDUE GAS INTERSTAGE COOLER
(57) C-3177 – RESIDUE GAS COMPRESSOR
(58) A-3177 – RESIDUE GAS INTERSTAGE COOLER
(59) C-3178 – RESIDUE GAS COMPRESSOR
(60) A-3178 – RESIDUE GAS INTERSTAGE COOLER
(61) C-3179 – RESIDUE GAS COMPRESSOR
(62) A-3179 – RESIDUE GAS INTERSTAGE COOLER
(63) A-33xx – RESIDUE GAS AFTERCOOLER
(64) V-3480 – STABILIZER FEED SEPARATOR
(65) STABILIZER SKID – FEED HEATER/COND. FILTERS
(66) T-3580 – STABILIZER
(67) STABILIZER SKID – REBOILER
(68) STABILIZER SKID – RVP REBOILER
(69) A-3385 – RVP PRODUCT COOLER
(70) T-3581 – RVP STABILIZER

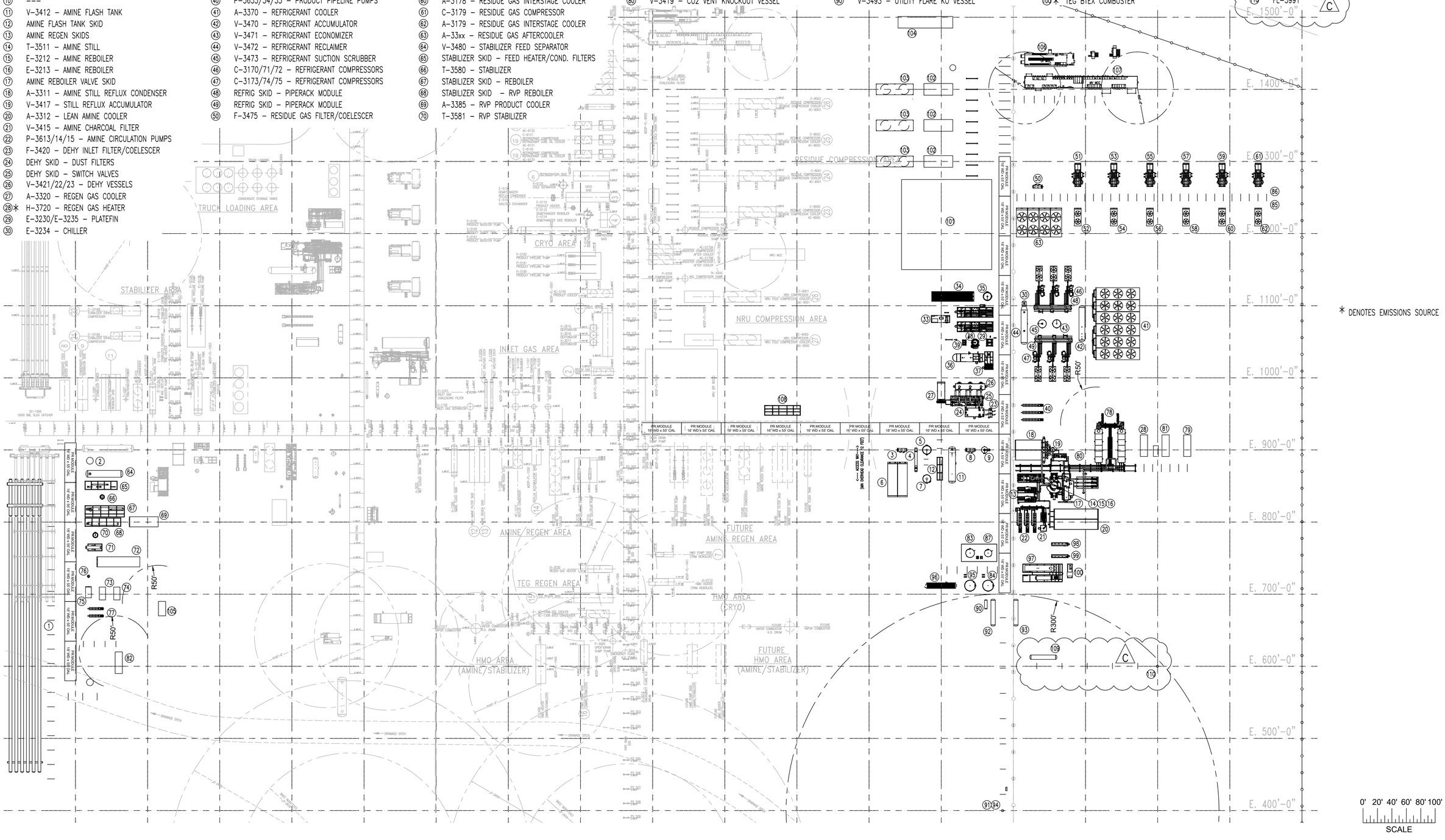
(71) STABILIZER SKID – REFLUX
(72) A-3384 – RVP STAB OVHD CONDENSOR
(73) C-3180 – STAB OVHD COMPRESSOR
(74) C-3181 – STAB OVHD COMPRESSOR
(75) A-3380 – STAB OVHD COMPRESSOR AFTER-COOLER
(76) V-3484 STABILIZER OVERHEAD DISCHARGE SCRUBBER
(77) P-3685/86 – STABILIZER PIPELINE PUMPS
(78)✱ H-3710/11 – HMO HEATERS (AMINE)
(79)✱ TO-3991 – THERMAL OXIDIZER
(80) V-3419 – CO2 VENT KNOCKOUT VESSEL

(81)✱ H-3730 – HEAT MEDIUM HEATER (CRYO)
(82)✱ H-3780 – STABILIZER HMO HEATER
(83) TK-3811 – AMINE STORAGE TANK
(84) TK-3815 – RO WATER STORAGE TANK
(85) TK-3871 – RES. GAS COMP. LUBE OIL TANK
(86) TK-3872 – RES. GAS COMP. USED LUBE OIL TANK
(87) TK-3830 – TEG STORAGE TANK
(88) V-3490 – CLOSED DRAIN TANK
(89) ---
(90) V-3493 – UTILITY FLARE KO VESSEL

(91)✱ FL-3991 – UTLITY FLARE
(92) V-3491 – COLD FLARE KO VESSEL
(93) V-3492 – WARM FLARE KO VESSEL
(94)✱ FL-3990 – EMERGENCY FLARE
(95) RAW WATER STORAGE
(96) R.O. UNIT
(97)✱ TEG REGEN SKIDS
(98) TEG BTEX CONDENSER #1
(99) TEG BTEX CONDENSER #2
(100)✱ TEG BTEX COMBUSTER

(101) NRU
(102) NRU COMPRESSOR
(103) NRU FEED COMPRESSOR COOLER
(104) MCC – NRU
(105) MCC – STABILIZER
(106) MCC – LV
(107) MCC – MV
(108) METER SKID – INLET/RESIDUE/NGL
(109) V-3493
(110) FL-3991

✱ DENOTES EMISSIONS SOURCE



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REVISIONS

REV.	DESCRIPTION	BY	DATE	APP'D	DATE
C	REVISED TO ADD FLARE & KO	ZWL	11/14/25	JSR	11/14/25
B	REVISED PER CUSTOMER COMMENT & ADDED EMISSIONS SOURCES	bwl	10/23/25	JSR	10/23/25
A	ISSUE FOR BID	bwl	3/28/25	JSR	3/28/25
REV.	DESCRIPTION	BY	DATE	APP'D	DATE

DERRICK ONEAL COMPANY
8282 S. MEMORIAL DR.
SUITE 301, TULSA 74133
PH# 918-957-5175

SAN MATEO MIDSTREAM
MARLAN III GAS PROCESSING FACILITY
PLOT PLAN

DRAWING NO.	SCALE	DRAWN BY	APPVD. BY	CHK'D BY
00825-5-1-3000	NONE	b.lowe	JSR	JSR
REV. C	DATE	7/28/25	DATE	DATE

File Name: 00825-5-1-3000.dwg Z:\Quotes\000s\0825-5 San Mateo Marlan III Feed Study\Drafting\Cad\
Nov 14, 2025 – 1:45pm

Section 6

All Calculations

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

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

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

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

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

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

Significant Figures:

A. All emissions standards are deemed to have at least two significant figures, but not more than three significant figures.

B. At least 5 significant figures shall be retained in all intermediate calculations.

C. In calculating emissions to determine compliance with an emission standard, the following rounding off procedures shall be used:

(1) If the first digit to be discarded is less than the number 5, the last digit retained shall not be changed;

(2) If the first digit discarded is greater than the number 5, or if it is the number 5 followed by at least one digit other than the number zero, the last figure retained shall be increased by one unit; **and**

(3) If the first digit discarded is exactly the number 5, followed only by zeros, the last digit retained shall be rounded upward if it is an odd number, but no adjustment shall be made if it is an even number.

(4) The final result of the calculation shall be expressed in the units of the standard.

Control Devices: In accordance with 20.2.72.203.A(3) and (8) NMAC, 20.2.70.300.D(5)(b) and (e) NMAC, and 20.2.73.200.B(7) NMAC, the permittee shall report all control devices and list each pollutant controlled by the control device regardless if the applicant takes credit for the reduction in emissions. The applicant can indicate in this section of the application if they chose to not take credit for the reduction in emission rates. For notices of intent submitted under 20.2.73 NMAC, only uncontrolled emission rates can be considered to determine applicability unless the state or federal Acts require the control. This information is necessary to determine if federally enforceable conditions are necessary for the control device, and/or if the control device produces its own regulated pollutants or increases emission rates of other pollutants.

Engines (Units CE-01 through CE-03)
NO_X, CO, VOC, and HCHO were calculated using emission factors provided by the manufacturer and catalyst specifications. PM_{10}, $PM_{2.5}$, and HAP emissions were calculated using AP-42 Chapter 3.2, Natural Gas-fired Reciprocating Engines, Table 3.2-2 for four stroke lean burn engines. It was assumed that PM(Total) = PM (filterable) + PM (condensable). SO_2 emissions are based on a fuel sulfur content of 0.25 gr S/100 scf. The fuel heating value is based on the site-specific inlet gas analysis dated 10/22/2025.

Greenhouse gas emissions were estimated using methodology from 40 CFR Part 98 and emission factors from Tables C-1 and C-2 of Part 98.

Heaters and Reboilers (Units HT-01 through HT-12; REB-01 & REB-02)
NO_X, CO, VOC, PM, and HAP emissions were calculated using AP-42 Chapter 1.4, Natural Gas Combustion, Tables 1.4-1. 1.4-2, and 1.4-3. It was assumed that PM(Total) = PM (filterable) + PM (condensable). SO_2 emissions are based on a fuel sulfur content of 0.25 gr S/100 scf. The fuel heating value is based on the site-specific inlet gas analysis dated 10/22/2025.

The following heaters assume 50 ppm of CO in the exhaust gas: HT-01, HT-04, HT-08, HT-09, HT-10, HT-11, and HT-12.

Greenhouse gas emissions were estimated using methodology from 40 CFR Part 98 and emission factors from Tables C-1 and C-2 of Part 98.

Units HT-01, HT-05, and HT-12 will not operate more than 4,380 hours per year.

Glycol Dehydrators (Units DEHY-01 & DEHY-02)
All emissions from the dehydration units (DEHY-01 & DEHY-02) were calculated using BR&E ProMax. For the Train 2 glycol dehydrator (DEHY-01), flash tank emissions and non-condensable BTEX emissions from the regenerator are routed to the thermal oxidizer (TO-02) with 100% capture efficiency and 98% DRE. During TO-02 downtime, the emissions are routed to the flare (FLARE-02b). For the Train 3 glycol dehydrator (DEHY-02), flash tank emissions are routed back to inlet or used as fuel and non-condensable BTEX emissions from the regenerator are routed to the enclosed combustion device (ECD-03) with 100% capture efficiency and 98% DRE. During ECD-03 downtime, the emissions are routed to the flare (FLARE-03). Controlled emissions from DEHY-01 and DEHY-02 will be represented at the primary control devices (TO-02 and ECD-03, respectively).

Amine Units (Units AMINE-01 through AMINE-03)
All emissions from the amine sweetening units (AMINE-01 through AMINE-03) were calculated using BR&E ProMax. For all three amine units, the flash tank emissions are captured and consumed as facility fuel gas or recycled to inlet. For the Train 1 amine unit (AMINE-01), acid gas emissions from the regenerator are routed to the thermal oxidizer (TO-01) with 100% capture efficiency and 98% DRE. During TO-01 downtime, emissions are sent to the flare (FLARE-01). For the train 2 amine unit (AMINE-02), acid gas emissions from the regenerator and assist gas are routed to the thermal oxidizers (TO-02 and TO-02a) with 100% capture efficiency and 98% DRE. During TO-02 and TO-2a downtime, emissions are sent to the flare (FLARE-02b). For the Train 3 amine unit (AMINE-03), acid gas emissions from the regenerator and assist gas are routed to the thermal oxidizer (TO-03) with 100% capture efficiency and 98% DRE. During TO-03 downtime, emissions are sent to the flare (FLARE-04). Controlled emissions from AMINE-01, AMINE-02, and AMINE-03 will be represented at the primary control devices (TO-01, TO-02, TO-02a, and TO-03, respectively).

Condensate and Produced Water Storage Tanks (Units OILTANK 01-06, PWTANK 01-04)
Emissions from the condensate and produced water tanks were calculated using BR&E ProMax. During normal operations, the emissions from the routine storage tanks are routed to the enclosed combustion devices (ECD-01 and ECD-02) with 100% capture

efficiency and 98% DRE. Emissions from the reject condensate tanks will be uncontrolled. Emissions are routed to atmosphere during ECD downtime.

Product Loadout (OILLOAD-01, PWLOAD-01)
Condensate and Produced water may be transferred out of the facility via truck loading. Emissions from the loading of condensate and produced water out of the facility by truck were estimated using BR&E ProMax. Calculations assume one 180-bbl truck will be loaded in one hour, and the total throughput will be loaded annually. Loading emissions for OILLOAD-01, PWLOAD-01, and OILLOAD-02 are routed to the enclosed combustion devices (ECD-01 and ECD-02, respectively) with 70% capture efficiency and 98% DRE. PWLOAD-01 is exempt pursuant to 20.2.72.202.B(5) NMAC.

Enclosed Combustion Devices (Units ECD-01 through ECD-03)
The enclosed combustion devices ECD-01, ECD-02, and ECD-03 control the condensate and produced water storage tanks at train 1 and train 2, as well as the non-condensable emissions from DEHY-02 at train 3, respectively. NO_X, CO, and PM emissions were calculated using AP-42 Chapter 1.4. SO_2 emissions are based on a fuel sulfur content of 0.25 gr S/100 scf. Emissions from VOC, H_2S and HAPs are based off of mass balance from a 98% DRE and emissions streams from BR&E ProMax.

Greenhouse gas emissions were estimated using methodology from 40 CFR Part 98 and emission factors from Tables C-1 and C-2 of Part 98.

Thermal Oxidizers (Units TO-01 through TO-03)
The regenerator emissions from AMINE-01, AMINE-02, and AMINE-03 are routed to TO-01, TO-02, TO-02a, and TO-03, respectively. TO-02 also controls the Train 2 glycol dehydrator (DEHY-01) flash tank and non-condensable BTEX emissions. The NO_X, CO, and PM emission factors are from AP-42 Chapter 1.4 and a manufacturer guarantee. SO_2 emissions are based on a fuel sulfur content of 0.25 gr S/100 scf. The emissions from VOC, H_2S, and HAPs are based off of mass balance from a 98% DRE and emissions streams from BR&E ProMax.

Flares (Units FLARE-01 through FLARE-04)
The plant flares are used for flaring during startup, shutdown, maintenance and upset conditions. The only steady state conditions associated with these flares are from the pilot and purge gas streams. SSM may be routed to plant flares due to various maintenance activities throughout the facility per manufacturer-recommended maintenance schedules. These maintenance activities include but are not limited to blowdowns for associated maintenance throughout the facility, instrumental calibrations, and process safety device maintenance. All flares assume a 98% destruction removal efficiency for VOC, H_2S, and HAPs.

The following emissions are represented as possible events routed to FLARE-01: regenerator emissions from AMINE-01 during TO-01 downtime, Plant 1 and 2 surge vessel gas, and compressor and vessel blowdown SSM activities.

The following emissions are represented as possible events routed to FLARE-02b: regenerator emissions from AMINE-02 and flash tank and non-condensable regenerator emissions from DEHY-01 during TO-02 and TO-2a downtime.

The following emissions are represented as possible events routed to FLARE-02a: Compressor and vessel blowdown SSM activities.

The following emissions are represented as possible events routed to FLARE-03: flash tank emissions from AMINE-03 and flash tank and non-condensable regenerator emissions from DEHY-02 during ECD-03 downtime, and SSM activities.

The following emissions are represented as possible events routed to FLARE-04: regenerator emissions from AMINE-03 during TO-03 downtime.

The basis of the flaring calculations is the expected composition and maximum expected volumes of the gas for each representative stream. The SO_2 composition is based on a 98% molar conversion of H_2S to SO_2. NO_X and CO emissions are calculated using emissions factors from ZEECO manufacturer data. VOC emissions are calculated from the VOC volume fraction for each representative stream routed to the flare, the specific volume of the VOC fraction of the gas of each stream, and a 98% destruction efficiency. Where appropriate, such as with amine and dehydrator streams, the BR&E ProMax outputs were also used.

The pilot and purge/sweep gas emissions for FLARE-01 is based on an hourly flow rate of 137 scf/hr. The pilot and purge/sweep gas along with blanket gas from V-3022 and V-1017 for FLARE-02b is based on an hourly flow rate of approximately 710 scf/hr. The pilot and purge/sweep gas emission for FLARE-02a is based on an hourly flow rate of 100 scf/hr. The pilot and purge/sweep

gas emissions for FLARE-03 are based on an hourly flow rate of 630 scf/hr. The pilot and purge/sweep gas emissions for FLARE-04 are based on an hourly flow rate of 110 scf/hr. H_2S emissions for pilot and purge/sweep gas were calculated using mass balance of the SO_2 emissions.

Emissions of greenhouse gases are calculated using methodology from 40 CFR Subpart 98.233(n).

Nitrogen Rejection Units (Unit NRU-01 & NRU-02)
Emissions from the nitrogen rejection unit are calculated based on a vent flowrate provided by Pronto Midstream and a representative feed analysis to the unit. For NRU-01, a vent flow rate of 3 MMscfd is represented based on an inlet flowrate of 202 MMscfd. For NRU-02, a vent flow rate of 4.6 MMSCFD is represented based on an inlet flowrate of 310 MMSCFD.

Fugitives (Units FUG-01 through FUG-03)
Fugitive emissions were estimated using emission factors from Table 2-4 of EPA Protocol for Equipment Leak Emission Estimates, November 1995, EPA-453/R-95-017. The percent VOC, H_2S, and HAPs are from the inlet gas analysis dated 10/22/2025. The weight percents of VOC, H_2S, and HAPs for light oil and water/oil fugitives were calculated using laboratory analyses or BR&E ProMax; light oil was referenced from the loadout from the condensate tank, and water/oil was referenced from the loadout from the produced water tanks. Component counts were estimated as previously permitted or are based on estimated design of the new units.

Compressor and Vessel Blowdown SSM Activities
Compressor and process vessel blowdowns will occur during routine maintenance events at the plant. Emissions are based on the volume, temperature, and pressure of the gas released during these events, all of which are conservative estimates. Emissions from blowdown events are routed to the respective SSM flare for each train.

Haul Road Emissions (Units ROAD-01 and ROAD-02)
Unpaved haul road emissions were estimated based on Equations 1a and 2 of AP-42 Section 13.2.2 (11/06). Particle size multipliers and constants for these equations are found in AP-42 Table 13.2.2-2, Industrial Roads. Silt content is taken from AP-42 Table 13.2.2-1 and annual wet days is from AP-42 Figure 13.2.2-1. Parameters are based on the defaults provided by NMED guidance document entitled Department Accepted Values For: Aggregate Handling, Storage Pile, and Haul Road Emissions. The length of the haul road is estimated from Google Earth. A 25-mph speed limit was assumed, resulting in a 44% emissions reduction in accordance with the WRAP Handbook. Additionally, the facility will apply base coarse as needed, resulting in an additional emissions reduction of 60%. A combined control efficiency was calculated as follow:

ControlAB = ControlA + (1-ControlA) x ControlB
ControlAB = 60% for Base Course + (1-60% for Base Course) x 44% for Speed Limit
Control AB = 78%

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 (CO_2), nitrous oxide (N_2O), methane (CH_4), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6).

Calculating GHG Emissions:

1. Calculate the ton per year (tpy) GHG mass emissions and GHG CO_2e emissions from your facility.
2. GHG mass emissions are the sum of the total annual tons of greenhouse gases without adjusting with the global warming potentials (GWPs). GHG CO_2e emissions are the sum of the mass emissions of each individual GHG multiplied by its GWP found in Table A-1 in 40 CFR 98 Mandatory Greenhouse Gas Reporting.
3. Emissions from routine or predictable start up, shut down, and maintenance must be included.
4. Report GHG mass and GHG CO_2e 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 CO_2 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)

Pronto Midstream, LLC - Marlan Gas Plant

Facility-wide Emissions Summary

Uncontrolled Emissions																		
	NO_x		CO		VOC		SO_2		PM		PM_{10}		$PM_{2.5}$		H_2S		Total HAPs	
Unit	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
CE-01	1.96	8.57	10.76	47.13	4.17	18.26	7.66E-03	0.034	0.13	0.59	0.13	0.59	0.13	0.59	-	-	1.65	7.25
CE-02	1.96	8.57	10.76	47.13	4.17	18.26	7.66E-03	0.034	0.13	0.59	0.13	0.59	0.13	0.59	-	-	1.65	7.25
CE-03	1.96	8.57	10.76	47.13	4.17	18.26	7.66E-03	0.034	0.13	0.59	0.13	0.59	0.13	0.59	-	-	1.65	7.25
AMINE-01	-	-	-	-	20.30	88.91	-	-	-	-	-	-	-	-	1.04	4.56	4.59	20.10
HT-01	1.93	4.23	1.62	3.55	0.21	0.47	0.022	0.048	0.29	0.64	0.29	0.64	0.29	0.64	2.38E-04	5.20E-04	0.073	0.16
HT-02	0.33	1.46	0.56	2.45	0.037	0.16	3.78E-03	0.017	0.051	0.22	0.051	0.22	0.051	0.22	4.10E-05	1.80E-04	0.013	0.055
HT-03	0.37	1.61	0.62	2.71	0.040	0.18	4.17E-03	0.018	0.056	0.24	0.056	0.24	0.056	0.24	4.52E-05	1.98E-04	0.014	0.061
OILTANK-01 - 02	-	-	-	-	12.36	10.74	-	-	-	-	-	-	-	-	4.60E-06	4.00E-06	0.68	0.59
PWTANK-01 - 04	-	-	-	-	0.93	4.08	-	-	-	-	-	-	-	-	4.13E-03	0.018	0.13	0.58
ECD-01	0.25	1.08	0.21	0.91	0.014	0.059	1.40E-03	6.13E-03	0.019	0.082	0.019	0.082	0.019	0.082	1.52E-05	6.65E-05	-	-
TO-01	0.28	1.22	0.22	0.98	0.015	0.066	1.55E-03	6.78E-03	0.021	0.091	0.021	0.091	0.021	0.091	1.68E-05	7.35E-05	-	-
FLARE-01	0.012	0.051	0.053	0.23	0.11	0.50	9.59E-05	4.20E-04	-	-	-	-	-	-	1.04E-06	4.55E-06	-	-
FLARE-01 SSM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OILLOAD-01	-	-	-	-	32.42	1.34	-	-	-	-	-	-	-	-	1.19E-05	4.83E-07	1.77	0.073
ROAD-01	-	-	-	-	-	-	-	-	0.45	1.59	0.11	0.40	0.011	0.040	-	-	-	-
FUG-01	-	-	-	-	3.09	13.53	-	-	-	-	-	-	-	-	2.98E-05	1.31E-04	0.27	1.19
MSS-01	-	-	-	-	5621.75	240.81	-	-	-	-	-	-	-	-	6.42E-03	2.70E-04	41.82	1.76
AMINE-02	-	-	-	-	127.38	557.92	-	-	-	-	-	-	-	-	3.13	13.70	30.04	131.59
DEHY-01	-	-	-	-	89.46	391.84	-	-	-	-	-	-	-	-	3.05E-06	1.33E-05	24.33	106.59
REB-01	0.37	1.61	0.31	1.35	0.020	0.089	2.08E-03	9.13E-03	0.028	0.12	0.028	0.12	0.028	0.12	2.26E-05	9.90E-05	6.91E-03	0.030
HT-04	2.70	11.81	2.78	12.19	0.30	1.30	0.031	0.13	0.41	1.79	0.41	1.79	0.41	1.79	3.32E-04	1.45E-03	0.10	0.44
HT-05	0.86	1.89	1.45	3.18	0.095	0.21	9.80E-03	0.021	0.13	0.29	0.13	0.29	0.13	0.29	1.06E-04	2.33E-04	0.032	0.071
HT-06	0.88	3.85	1.48	6.47	0.097	0.42	9.98E-03	0.044	0.13	0.59	0.13	0.59	0.13	0.59	1.08E-04	4.74E-04	0.033	0.14
HT-07	1.86	8.16	3.13	13.71	0.20	0.90	0.021	0.093	0.28	1.24	0.28	1.24	0.28	1.24	2.29E-04	1.00E-03	0.070	0.31
OILTANK-03 - 06	-	-	-	-	70.56	309.05	-	-	-	-	-	-	-	-	2.35E-05	1.03E-04	0.95	4.17
ECD-02	0.012	0.054	0.010	0.045	6.79E-04	2.97E-03	7.00E-05	3.07E-04	9.38E-04	4.11E-03	9.38E-04	4.11E-03	9.38E-04	4.11E-03	7.59E-07	3.32E-06	-	-
TO-02	0.96	4.22	0.77	3.38	0.052	0.23	5.36E-03	0.023	0.072	0.31	0.072	0.31	0.072	0.31	5.81E-05	2.55E-04	-	-
TO-02a	1.03	4.53	0.83	3.62	0.056	0.24	5.75E-03	0.025	0.077	0.34	0.077	0.34	0.077	0.34	6.23E-05	2.73E-04	-	-
FLARE-02b	0.076	0.33	0.35	1.52	0.74	3.23	4.97E-04	2.18E-03	-	-	-	-	-	-	5.39E-06	2.36E-05	-	-
FLARE-02b SSM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FLARE-02a	0.019	0.083	0.038	0.17	0.090	0.40	7.00E-05	3.07E-04	-	-	-	-	-	-	7.59E-07	3.32E-06	-	-
FLARE-02a SSM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OILLOAD-02	-	-	-	-	11.07	48.47	-	-	-	-	-	-	-	-	3.41E-06	1.49E-05	0.52	2.29
ROAD-02	-	-	-	-	-	-	-	-	0.31	1.11	0.078	0.28	7.84E-03	0.028	-	-	-	-
NRU-01	-	-	-	-	0.48	2.10	-	-	-	-	-	-	-	-	-	-	-	-
FUG-02	-	-	-	-	3.25	14.24	-	-	-	-	-	-	-	-	2.73E-05	1.20E-04	0.29	1.28
MSS-02	-	-	-	-	49877.37	300.26	-	-	-	-	-	-	-	-	1.07	6.42E-03	4937.65	29.63
AMINE-03	-	-	-	-	140.39	614.93	-	-	-	-	-	-	-	-	3.46	15.15	37.31	163.42
DEHY-02	-	-	-	-	233.11	1021.03	-	-	-	-	-	-	-	-	9.26E-03	0.041	30.27	132.58
HT-08 (H-3780)	1.79	7.82	2.51	11.00	0.33	1.45	0.034	0.15	0.46	2.00	0.46	2.00	0.46	2.00	3.69E-04	1.62E-03	0.11	0.49
HT-09 (H-3710)	2.51	10.97	3.53	15.44	0.46	2.03	0.048	0.21	0.64	2.81	0.64	2.81	0.64	2.81	5.18E-04	2.27E-03	0.16	0.69
HT-10 (H-3711)	2.51	10.97	3.53	15.44	0.46	2.03	0.048	0.21	0.64	2.81	0.64	2.81	0.64	2.81	5.18E-04	2.27E-03	0.16	0.69
HT-11 (H-3720)	0.78	3.42	0.65	2.86	0.086	0.38	8.85E-03	0.039	0.12	0.52	0.12	0.52	0.12	0.52	9.60E-05	4.20E-04	0.029	0.13
HT-12 (H-3730)	1.06	2.32	1.49	3.27	0.20	0.43	0.020	0.044	0.27	0.59	0.27	0.59	0.27	0.59	2.19E-04	4.80E-04	0.067	0.15
REB-02	0.49	2.15	0.41	1.80	0.027	0.12	2.78E-03	0.012	0.037	0.16	0.037	0.16	0.037	0.16	3.01E-05	1.32E-04	9.22E-03	0.040
ECD-03	0.25	1.08	0.21	0.91	0.014	0.059	5.27E-05	2.31E-04	0.019	0.082	0.019	0.082	0.019	0.082	1.43E-05	6.26E-05	-	-
FLARE-03	0.016	0.069	0.076	0.33	0.16	0.71	3.76	16.49	-	-	-	-	-	-	-	-	-	-
FLARE-03 SSM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FLARE-04	8.88E-03	0.039	0.043	0.19	0.091	1.57E-04	2.90E-06	1.27E-05	-	-	-	-	-	-	7.86E-07	3.44E-06	-	-
FLARE-04 SSM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TO-03	4.64	20.33	3.90	17.08	0.26	1.12	1.25E-04	5.48E-04	1.34E-04	5.88E-04	1.34E-04	5.88E-04	0.35	1.55	0.35	1.55	-	-
FUG-03	-	-	-	-	2.75	12.06	-	-	-	-	-	-	-	-	2.05E-05	8.99E-05	0.22	0.95
NRU-02	-	-	-	-	0.74	3.24	-	-	-	-	-	-	-	-	-	-	-	-
SSM-03	-	-	-	-	65654.45	394.76	-	-	-	-	-	-	-	-	-	-	-	-
Total	**31.85**	**131.08**	**63.06**	**266.19**	**121918.54**	**4100.88**	**4.07**	**17.70**	**4.92**	**19.41**	**4.36**	**17.40**	**4.54**	**18.33**	**9.07**	**35.03**	**5116.69**	**621.99**

Pronto Midstream, LLC - Marlan Gas Plant

Facility-wide Emissions Summary

Controlled Emissions																						
	NO_x		CO		VOC		SO_2		PM		PM_{10}		$PM_{2.5}$		H_2S		Total HAPs		CO_2	CH_4	N_2O	CO_{2e}
Unit	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	tpy	tpy	tpy	tpy
CE-01	1.96	8.57	0.74	3.26	1.43	6.27	7.66E-03	0.034	0.13	0.59	0.13	0.59	0.13	0.59	-	-	0.21	0.91	6920.77	0.13	0.013	6927.87
CE-02	1.96	8.57	0.74	3.26	1.43	6.27	7.66E-03	0.034	0.13	0.59	0.13	0.59	0.13	0.59	-	-	0.21	0.91	6920.77	0.13	0.013	6927.87
CE-03	1.96	8.57	0.74	3.26	1.43	6.27	7.66E-03	0.034	0.13	0.59	0.13	0.59	0.13	0.59	-	-	0.21	0.91	6920.77	0.13	0.013	6927.87
AMINE-01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HT-01	1.93	4.23	1.62	3.55	0.21	0.47	0.022	0.048	0.29	0.64	0.29	0.64	0.29	0.64	2.38E-04	5.20E-04	0.073	0.16	20186.80	0.38	0.038	20207.53
HT-02	0.33	1.46	0.56	2.45	0.037	0.16	3.78E-03	0.017	0.051	0.22	0.051	0.22	0.051	0.22	4.10E-05	1.80E-04	0.013	0.055	3484.02	0.066	6.57E-03	3487.59
HT-03	0.37	1.61	0.62	2.71	0.040	0.18	4.17E-03	0.018	0.056	0.24	0.056	0.24	0.056	0.24	4.52E-05	1.98E-04	0.014	0.061	3842.66	0.072	7.24E-03	3846.61
OILTANK-01 - 02	-	-	-	-	12.36	2.69	-	-	-	-	-	-	-	-	4.60E-06	9.99E-07	0.68	0.15	0.011	0.11	-	2.96
PWTANK-01 - 04	-	-	-	-	0.93	1.02	-	-	-	-	-	-	-	-	4.13E-03	4.52E-03	0.13	0.15	4.38	4.11	-	119.42
ECD-01	0.27	1.18	0.23	0.99	0.73	3.21	9.52E-03	0.042	0.020	0.088	0.020	0.088	0.020	0.088	1.03E-04	4.52E-04	0.041	0.18	1402.14	0.026	2.64E-03	1403.58
TO-01	1.43	6.25	1.14	5.00	2.55	11.15	1.92	8.40	0.11	0.47	0.11	0.47	0.11	0.47	0.021	0.091	0.086	0.38	7307.23	0.14	0.014	7314.74
FLARE-01	0.012	0.051	0.053	0.23	0.11	0.50	9.59E-05	4.20E-04	-	-	-	-	-	-	1.04E-06	4.55E-06	-	-	-	-	-	-
FLARE-01 SSM	31.95	3.68	145.66	16.77	113.05	6.83	2.15	0.94	-	-	-	-	-	-	0.023	0.010	0.92	0.073	26233.62	68.71	0.026	28164.20
OILLOAD-01	-	-	-	-	32.42	0.33	-	-	-	-	-	-	-	-	-	-	2.30	0.040	2.58E-04	1.84E-03	-	0.052
ROAD-01	-	-	-	-	-	-	-	-	0.45	1.59	0.11	0.40	0.011	0.040	-	-	-	-	-	-	-	-
FUG-01	-	-	-	-	3.09	13.53	-	-	-	-	-	-	-	-	2.98E-05	1.31E-04	0.27	1.19	20.78	16.48	-	482.15
MSS-01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AMINE-02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DEHY-01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
REB-01	0.37	1.61	0.31	1.35	0.020	0.089	2.08E-03	9.13E-03	0.028	0.12	0.028	0.12	0.028	0.12	2.26E-05	9.90E-05	6.91E-03	0.030	1921.33	0.036	3.62E-03	1923.31
HT-04	2.70	11.81	2.78	12.19	0.30	1.30	0.031	0.13	0.41	1.79	0.41	1.79	0.41	1.79	3.32E-04	1.45E-03	0.10	0.44	28179.54	0.53	0.053	28208.48
HT-05	0.86	1.89	1.45	3.18	0.095	0.21	9.80E-03	0.021	0.13	0.29	0.13	0.29	0.13	0.29	1.06E-04	2.33E-04	0.032	0.071	9027.70	0.17	0.017	9036.97
HT-06	0.88	3.85	1.48	6.47	0.097	0.42	9.98E-03	0.044	0.13	0.59	0.13	0.59	0.13	0.59	1.08E-04	4.74E-04	0.033	0.14	9196.78	0.17	0.017	9206.22
HT-07	1.86	8.16	3.13	13.71	0.20	0.90	0.021	0.093	0.28	1.24	0.28	1.24	0.28	1.24	2.29E-04	1.00E-03	0.070	0.31	19469.50	0.37	0.037	19489.50
OILTANK-03 - 06	-	-	-	-	70.56	29.11	-	-	-	-	-	-	-	-	-	-	3.81	1.57	1.04E-03	0.075	-	2.09
ECD-02	0.18	0.80	0.15	0.68	1.57	6.86	1.18E-04	5.16E-04	0.014	0.061	0.014	0.061	0.014	0.061	1.28E-06	5.59E-06	0.083	0.37	960.36	0.018	1.81E-03	961.35
TO-02	1.20	5.26	0.96	4.20	2.22	9.72	2.89	12.66	0.018	0.077	0.018	0.077	0.018	0.077	0.031	0.14	0.76	3.32	6148.26	0.12	0.012	6154.58
TO-02a	1.20	5.26	0.96	4.20	0.43	1.90	2.89	12.66	0.012	0.054	0.012	0.054	0.012	0.054	0.031	0.14	0.27	1.19	6148.26	0.12	0.012	6154.58
FLARE-02b	0.076	0.33	0.35	1.52	0.74	3.23	4.97E-04	2.18E-03	-	-	-	-	-	-	5.39E-06	2.36E-05	-	-	-	-	-	-
FLARE-02b SSM	7.90	6.92	36.01	31.54	7.43	6.51	5.84	5.11	-	-	-	-	-	-	0.063	0.055	1.09	0.95	41680.91	8.47	0.086	41940.73
FLARE-02a	0.019	0.083	0.038	0.17	0.090	0.40	7.00E-05	3.07E-04	-	-	-	-	-	-	7.59E-07	3.32E-06	-	-	-	-	-	-
FLARE-02a SSM	507.16	4.30	1012.48	8.59	997.55	6.01	1.97	0.012	-	-	-	-	-	-	0.021	1.28E-04	98.75	0.59	18995.03	73.58	0.027	21062.37
OILLOAD-02	-	-	-	-	14.39	19.11	-	-	-	-	-	-	-	-	4.43E-06	5.88E-06	0.68	0.90	1.19E-04	0.044	-	1.22
ROAD-02	-	-	-	-	-	-	-	-	0.31	1.11	0.078	0.28	7.84E-03	0.028	-	-	-	-	-	-	-	-
NRU-01	-	-	-	-	0.48	2.10	-	-	-	-	-	-	-	-	-	-	-	-	-	282.77	-	7917.46
FUG-02	-	-	-	-	3.25	14.24	-	-	-	-	-	-	-	-	2.73E-05	1.20E-04	0.29	1.28	114.56	15.65	-	552.66
MSS-02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AMINE-03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DEHY-02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HT-08 (H-3780)	1.79	7.82	2.51	11.00	0.33	1.45	0.034	0.15	0.46	2.00	0.46	2.00	0.46	2.00	3.69E-04	1.62E-03	0.11	0.49	31392.00	0.59	0.059	31424.25
HT-09 (H-3710)	2.51	10.97	3.53	15.44	0.46	2.03	0.048	0.21	0.64	2.81	0.64	2.81	0.64	2.81	5.18E-04	2.27E-03	0.16	0.69	44062.55	0.83	0.083	44107.81
HT-10 (H-3711)	2.51	10.97	3.53	15.44	0.46	2.03	0.048	0.21	0.64	2.81	0.64	2.81	0.64	2.81	5.18E-04	2.27E-03	0.16	0.69	44062.55	0.83	0.083	44107.81
HT-11 (H-3720)	0.78	3.42	0.65	2.86	0.086	0.38	8.85E-03	0.039	0.12	0.52	0.12	0.52	0.12	0.52	9.60E-05	4.20E-04	0.029	0.13	8156.69	0.15	0.015	8165.07
HT-12 (H-3730)	1.06	2.32	1.49	3.27	0.20	0.43	0.020	0.044	0.27	0.59	0.27	0.59	0.27	0.59	2.19E-04	4.80E-04	0.067	0.15	18644.61	0.35	0.035	18663.76
REB-02	0.49	2.15	0.41	1.80	0.027	0.12	2.78E-03	0.012	0.037	0.16	0.037	0.16	0.037	0.16	3.01E-05	1.32E-04	9.22E-03	0.040	2561.78	0.048	4.83E-03	2564.41
ECD-03	0.42	1.86	0.36	1.56	1.52	6.68	9.62E-03	0.042	0.030	0.13	0.030	0.13	0.030	0.13	5.20E-03	0.023	0.49	2.16	2218.05	0.042	4.18E-03	2220.33
FLARE-03	0.016	0.069	0.076	0.33	0.16	0.71	3.76	16.49	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FLARE-03 SSM	768.39	6.73	1536.37	14.13	1315.14	9.02	3.82	16.50	-	-	-	-	-	-	5.87E-04	1.29E-04	19.26	0.13	14217.65	22.21	8.74E-03	14841.91
FLARE-04	8.88E-03	0.039	0.043	0.19	0.091	1.57E-04	2.90E-06	1.27E-05	-	-	-	-	-	-	7.86E-07	3.44E-06	-	-	-	-	-	-
FLARE-04 SSM	7.51	6.61	36.34	31.98	4.61	3.96	6.33	5.54	-	-	-	-	-	-	0.069	0.061	0.68	0.60	616.61	1.23	0.11	679.60
TO-03	4.90	21.47	4.12	18.04	0.71	3.12	6.39	27.99	0.37	1.63	0.37	1.63	0.37	1.63	0.034	0.15	0.34	1.50	25617.76	0.48	0.048	25644.07
FUG-03	-	-	-	-	2.75	12.06	-	-	-	-	-	-	-	-	2.05E-05	8.99E-05	0.22	0.95	0.83	3.47	-	98.05
NRU-02	-	-	-	-	0.74	3.24	-	-	-	-	-	-	-	-	-	-	-	-	-	437.41	-	12247.54
SSM-03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	**1356.95**	**168.87**	**2801.63**	**245.33**	**2596.54**	**206.19**	**38.27**	**107.54**	**5.28**	**21.01**	**4.72**	**18.99**	**4.55**	**18.38**	**0.31**	**0.68**	**132.67**	**23.85**	**416637.26**	**940.23**	**0.85**	**443188.57**
Total w/o Fugitives	**1356.95**	**168.87**	**2801.63**	**245.33**	**2587.45**	**166.36**	**38.27**	**107.54**	**5.28**	**21.01**	**4.72**	**18.99**	**4.55**	**18.38**	**0.31**	**0.68**	**131.89**	**20.44**	**416501.09**	**904.63**	**0.85**	**442055.71**

* Indicates an hourly emission limit is not appropriate for this unit.
"-" Indicates emissions of this pollutant are not expected.

Pronto Midstream, LLC - Marlan Gas Plant

Facility-wide Emissions Summary

HAPs Emissions Summary

Unit	Formaldehyde		Acetaldehyde		Benzene		n-Hexane		Toluene		Ethylbenzene		Xylenes	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
CE-01	0.12	0.51	0.048	0.21	2.52E-03	0.011	6.35E-03	9.95E-04	2.33E-03	1.02E-02	2.27E-04	9.95E-04	1.05E-03	4.61E-03
CE-02	0.12	0.51	0.048	0.21	2.52E-03	0.011	6.35E-03	9.95E-04	2.33E-03	0.010	2.27E-04	9.95E-04	1.05E-03	4.61E-03
CE-03	0.12	0.51	0.048	0.21	2.52E-03	0.011	6.35E-03	9.95E-04	2.33E-03	0.010	2.27E-04	9.95E-04	1.05E-03	4.61E-03
AMINE-01[1]	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HT-01	2.90E-03	6.34E-03	-	-	8.11E-05	3.55E-04	0.012	0.30	1.31E-04	5.75E-04	-	-	-	-
HT-02	5.00E-04	2.19E-03	-	-	1.40E-05	6.13E-05	0.012	0.053	2.27E-05	9.93E-05	-	-	-	-
HT-03	5.51E-04	2.42E-03	-	-	1.54E-05	6.76E-05	0.013	0.058	2.50E-05	1.10E-04	-	-	-	-
OILTANK-01 - 02[2]	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PWTANK-01 - 04[2]	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ECD-01	-	-	-	-	0.012	0.053	0.026	0.11	3.23E-03	0.014	3.06E-05	1.34E-04	3.53E-04	1.54E-03
TO-01	-	-	-	-	0.086	0.38	1.07E-04	4.69E-04	0.029	0.13	-	-	4.89E-03	0.021
FLARE-01	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FLARE-01 SSM [3]	-	-	-	-	0.47	0.037	0.087	6.86E-03	0.14	0.011	0.087	6.85E-03	0.14	0.011
OILLOAD-01[2]	-	-	-	-	0.59	0.010	1.54	0.027	0.15	2.68E-03	1.76E-03	3.08E-05	0.015	2.58E-04
ROAD-01	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FUG-01	-	-	-	-	0.058	0.25	0.14	0.62	0.045	0.20	5.95E-03	0.026	0.020	0.086
MSS-01	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AMINE-02[4]	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DEHY-01[5]	-	-	-	-	-	-	-	-	-	-	-	-	-	-
REB-01	2.76E-04	1.21E-03	-	-	-	-	-	-	-	-	-	-	-	-
HT-04	4.04E-03	0.018	-	-	1.13E-04	4.96E-04	0.097	0.43	1.83E-04	8.03E-04	-	-	-	-
HT-05	1.30E-03	2.84E-03	-	-	3.63E-05	1.59E-04	0.031	0.14	5.87E-05	2.57E-04	-	-	-	-
HT-06	1.32E-03	5.78E-03	-	-	3.70E-05	1.62E-04	0.032	0.14	5.98E-05	2.62E-04	-	-	-	-
HT-07	2.79E-03	0.012	-	-	7.82E-05	3.43E-04	0.067	0.29	1.27E-04	5.55E-04	-	-	-	-
OILTANK-03 - 06[6]	-	-	-	-	0.69	0.28	2.84	1.17	0.19	0.079	1.87E-03	7.73E-04	0.092	0.038
ECD-02	-	-	-	-	0.015	0.064	0.062	0.27	4.24E-03	0.019	4.15E-05	1.82E-04	2.06E-03	9.01E-03
TO-02	-	-	-	-	0.44	1.94	0.030	0.13	0.14	0.62	7.04E-03	0.031	0.14	0.60
TO-02a	-	-	-	-	0.20	0.89	1.63E-04	7.13E-04	0.062	0.27	-	-	7.26E-03	0.032
FLARE-02b	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FLARE-02b SSM[7]	-	-	-	-	0.68	0.60	0.035	0.031	0.22	0.19	7.04E-03	6.16E-03	0.14	0.13
FLARE-02a	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FLARE-02a SSM[8]	-	-	-	-	24.23	0.15	67.19	0.40	0.50	3.00E-03	5.50	0.033	1.33	8.00E-03
OILLOAD-02[6]	-	-	-	-	0.099	0.13	0.52	0.70	0.038	0.050	3.62E-04	4.81E-04	0.019	0.025
ROAD-02	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NRU-01	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FUG-02	-	-	-	-	0.062	0.27	0.15	0.66	0.050	0.22	6.71E-03	0.029	0.021	0.094
MSS-02	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AMINE-03	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DEHY-02	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HT-08 (H-3780)	4.51E-03	0.020	-	-	1.26E-04	5.53E-04	0.11	0.47	2.04E-04	8.95E-04	-	-	-	-
HT-09 (H-3710)	6.32E-03	0.028	-	-	1.77E-04	7.76E-04	0.15	0.66	2.87E-04	1.26E-03	-	-	-	-
HT-10 (H-3711)	6.32E-03	0.028	-	-	1.77E-04	7.76E-04	0.15	0.66	2.87E-04	1.26E-03	-	-	-	-
HT-11 (H-3720)	1.17E-03	5.13E-03	-	-	3.28E-05	1.44E-04	0.028	0.12	5.31E-05	2.32E-04	-	-	-	-
HT-12 (H-3730)	2.68E-03	5.86E-03	-	-	7.49E-05	3.28E-04	0.064	0.28	1.21E-04	5.31E-04	-	-	-	-
REB-02	3.68E-04	1.61E-03	-	-	1.03E-05	4.51E-05	8.82E-03	0.039	1.67E-05	7.30E-05	-	-	-	-
ECD-03	-	-	-	-	0.34	1.49	0.041	0.18	0.10	0.45	-	-	0.011	0.048
FLARE-03	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FLARE-03 SSM	-	-	-	-	4.98	0.039	12.04	0.073	1.96	0.015	-	-	0.29	2.07E-03
FLARE-04	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FLARE-04 SSM	-	-	-	-	0.51	0.44	3.86E-04	3.38E-04	0.16	0.14	-	-	0.022	0.019
TO-03	-	-	-	-	0.27	1.20	3.07E-03	0.013	0.085	0.37	-	-	0.012	0.051
FUG-03	-	-	-	-	0.047	0.21	0.11	0.49	0.037	0.16	5.23E-03	0.023	0.016	0.071
NRU-02	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SSM-03	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	**0.39**	**1.68**	**0.14**	**0.63**	**33.79**	**8.47**	**85.62**	**8.55**	**3.91**	**2.97**	**5.62**	**0.16**	**2.29**	**1.25**
Total w/o Fugitives	**0.39**	**1.68**	**0.14**	**0.63**	**33.62**	**7.74**	**85.22**	**6.77**	**3.78**	**2.40**	**5.60**	**0.081**	**2.23**	**1.00**

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

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

[1] Amine regenerator overheads are sent to the TO-1 with a 100% capture efficiency and a 98% DRE.

[2] Condensate and produced water flash, working, and breathing emissions and condensate and produced water loading emissions are sent to the ECD-1 with a 100% capture efficiency and a 98% DRE efficiency.

[3] The amine flash gas and regenerator emissions are sent to the FL-1 during downtime along with SSM compressor and vessel blowdowns with a 100% capture efficiency and a 98% DRE.

[4] Amine flash tank and regenerator overhead emissions are sent to the TO-2 with a 100% capture efficiency and a 98% DRE.

[5] Dehy flash tank and condenser overhead emissions are sent to the TO-2 with a 100% capture efficiency and a 98% DRE.

[6] Condensate flash, working, and breathing emissions and condensate loading emissions are sent to the ECD-2 with a 100% capture efficiency and a 98% DRE efficiency. H_2S emissions from these units are negligible.

[7] The amine and dehy emissions are sent to the FLARE-02b during downtime with a 100% capture efficiency and a 98% DRE.

[8] SSM vessel blowdowns are sent to FLARE-02a with a 100% capture efficiency and a 98% DRE.

GHG Emissions from Natural Gas Combustion

Emission Source		Heat Rate	CO_2 EF	CO_2 Emissions		CH_4 EF	CH_4 Emissions		N_2O EF	N_2O Emissions	
	Source Description	MMBtu/hr	kg/mmbtu	metric TPY	short tpy	kg/mmbtu	metric TPY	short tpy	kg/mmbtu	metric TPY	short tpy
CE-01	Caterpillar G3606 A3 1775 hp Engine	13.51	53.06	6278.48	6920.77	0.001	0.118	0.130	0.0001	0.012	0.013
CE-02	Caterpillar G3606 A3 1775 hp Engine	13.51	53.06	6278.48	6920.77	0.001	0.118	0.130	0.0001	0.012	0.013
CE-03	Caterpillar G3606 A3 1775 hp Engine	13.51	53.06	6278.48	6920.77	0.001	0.118	0.130	0.0001	0.012	0.013
HT-01	Train 1 Amine Hot Oil Heater	39.4	53.06	18313.34	20186.80	0.001	0.345	0.380	0.0001	0.035	0.038
HT-02	Train 1 Cryo Hot Oil Heater	6.8	53.06	3160.68	3484.02	0.001	0.060	0.066	0.0001	0.006	0.007
HT-03	Train 1 Amine Regenerator Gas Heater	7.5	53.06	3486.04	3842.66	0.001	0.066	0.072	0.0001	0.007	0.007
OILTANK-01 - 02	400 bbl Reject Condensate Tanks			9.71E-03	0.01		0.096	0.105			
PWTANK-01 - 04	Train 1 Produced Water Storage Tanks			3.98	4.38		3.727	4.108			
ECD-01	Train 1 Enclosed Combustion Device	2.74	53.06	1272.01	1402.14	0.001	0.024	0.026	0.0001	0.002	0.003
TO-01	Thermal Oxidizer TO-01	14.26	53.06	6629.08	7307.23	0.001	0.125	0.138	0.0001	0.012	0.014
FLARE-01 SSM	Train 1 SSM Flare			23798.99	26233.62		62.330	68.707		0.023	0.026
OILLOAD-01	Reject Condensate Loading			2.34E-04	2.58E-04		0.002	0.002			
FUG-01	Train 1 Fugitives			18.85	20.78		14.948	16.478			
REB-01	Train 2 TEG Dehy Reboiler	3.75	53.06	1743.02	1921.33	0.001	0.033	0.036	0.0001	0.003	0.004
HT-04	Train 2 Amine/Cryo Hot Oil Heater	55.00	53.06	25564.31	28179.54	0.001	0.482	0.531	0.0001	0.048	0.053
HT-05	Train 2 Trim Reboiler	17.62	53.06	8189.87	9027.70	0.001	0.154	0.170	0.0001	0.015	0.017
HT-06	Train 2 Mol Sieve Heater	17.95	53.06	8343.26	9196.78	0.001	0.157	0.173	0.0001	0.016	0.017
HT-07	Train 2 Hot Oil Heater	38.00	53.06	17662.61	19469.50	0.001	0.333	0.367	0.0001	0.033	0.037
OILTANK-03 - 06	750 bbl Condensate Tanks			9.46E-04	1.04E-03		0.068	0.075			
ECD-02	Train 2 Enclosed Combustion Device	1.87	53.06	871.23	960.36	0.001	0.016	0.018	0.0001	0.002	0.002
TO-02	Train 2 Thermal Oxidizer	12.00	53.06	5577.67	6148.26	0.001	0.105	0.116	0.0001	0.011	0.012
TO-02a	Train 2 Thermal Oxidizer	12.00	53.06	5577.67	6148.26	0.001	0.105	0.116	0.0001	0.011	0.012
FLARE-02b SSM	Facility Flare			37812.67	41680.91		7.680	8.465		0.078	0.086
FLARE-02a SSM	Facility SSM Flare			17232.18	18995.03		66.748	73.576	0.0001	0.025	0.027
OILLOAD-02	Train 2 Condensate Loading			1.08E-04	1.19E-04		0.040	0.044			
NRU-01	Nitrogen Rejection Unit (NRU)			0.00	0.00		256.524	282.766			
FUG-02	Train 2 Fugitives			103.93	114.56		14.195	15.647			
HT-08 (H-3780)	Train 3 Stabilizer Hot Oil Heater	61.27	53.06	28478.64	31392.00	0.001	0.537	0.592	0.0001	0.054	0.059
HT-09 (H-3710)	Train 3 Amine Hot Oil Heater	86.00	53.06	39973.28	44062.55	0.001	0.753	0.830	0.0001	0.075	0.083
HT-10 (H-3711)	Train 3 Amine Hot Oil Heater	86.00	53.06	39973.28	44062.55	0.001	0.753	0.830	0.0001	0.075	0.083
HT-11 (H-3720)	Train 3 Molecular Sieve Regenerator Heater	15.92	53.06	7399.71	8156.69	0.001	0.139	0.154	0.0001	0.014	0.015
HT-12 (H-3730)	Train 3 Cryo HMO Heater	36.39	53.06	16914.28	18644.61	0.001	0.319	0.351	0.0001	0.032	0.035
REB-02	Train 3 Dehydration Reboiler	5.00	53.06	2324.03	2561.78	0.001	0.044	0.048	0.0001	0.004	0.005
ECD-03	Train 3 Enclosed Combustion Device	4.33	53.06	2012.20	2218.05	0.001	0.038	0.042	0.0001	0.004	0.004
FLARE-03 SSM	Train 3 Facility Flare			12898.17	14217.65		20.151	22.212		0.008	0.009
FLARE-04 SSM	Train 3 Acid Gas Flare			559.39	616.61		1.115	1.229		0.098	0.108
TO-03	Train 3 Thermal Oxidizer	50.00	53.06	23240.28	25617.76	0.001	0.438	0.483	0.0001	0.044	0.048
FUG-03	Train 3 Fugitives			0.76	0.83		3.150	3.472			
NRU-02	Train 3 Nitrogen Rejection Unit			0.00	0.00		396.818	437.412			

Emission Factors (EF) from Tables C-1 and C-2 to 40 CFR 98 Subpart C

Pronto Midstream, LLC - Marlan Gas Plant

Emission Calculation Inputs - Train 1

Site-Wide		
Description	**Value**	**Unit**
Gas Throughput	72	MMscf/day
Reject Condensate Throughput	4,074	bbl/day
Produced Water Throughput	646	bbl/day
Annual Operating Hours	8,760	hr
Daily Operating Hours	24	hr
Site Elevation	3,560	ft MSL

Fuel Gas			
	Value	**Unit**	**Notes**
Fuel Heat Value	1,259.00	Btu/scf	Treated Gas
Fuel Sulfur Content	0.25	gr S / 100 scf	Engineering Estimate

Engine Input Information			
	Value	**Unit**	**Notes**
Unit:	CE-01 through CE-03		
Description:	Caterpillar G3606 A3 1775 hp Engine		
Rating:	1775	hp	
Fuel Usage:	10729.0	scf/hr	Per engine

Storage Tanks			
	Value	**Unit**	**Notes**
Unit:	OILTANK-01 through OILTANK-02		
Description:	400 bbl Reject Condensate Tanks		
Number of Tanks	2		
Volume	400	bbl	
Height (Shell)	20	ft	
Diameter	12	ft	
Unit:	PWTANK-1 through PWTANK-4		
Description:	400 bbl Produced Water Tanks		
Number of Tanks	4		
Volume	400	bbl	
Height (Shell)	20	ft	
Diameter	12	ft	
Capture Efficiency	100%	%	Emissions controlled by ECD-1
Control Efficiency	98%	%	DRE of ECD-1

Thermal Oxidizer			
Parameter	**Value**	**Unit**	**Notes**
Unit:	TO-1		
Description:	Amine Thermal Oxidizer		
Pilot Flowrate	2211.07	scf/hr	Based on 7.5 MMBtu/hr total heat rate
Destruction rate efficiency (DRE)	98.0%	%	Manufacturer Guarantee

Enclosed Combustion Device			
Parameter	**Value**	**Unit**	**Notes**
Unit:	ECD-1		
Description:	Tank Enclosed Combustion Device		
Pilot Flowrate	2000	scf/hr	Assumed to meet minimum stack velocity
Destruction rate efficiency (DRE)	98%	%	Assumption

Process Flare			
Parameter	**Value**	**Unit**	**Notes**
Unit:	FL-1		
Description:	SSM Flare		
Pilot Flowrate	137	scf/hr	
Destruction rate efficiency (DRE)	98%	%	Assumption

Pronto Midstream, LLC - Marlan Gas Plant

Caterpillar 1775 hp Residue Engines

Emission Unit: CE-01 through CE-03
Source Description: Caterpillar G3606 A3 1775 hp Engine
Manufacturer: Caterpillar
Model: G3606 A3
Type: 4SLB

Fuel Consumption

Site horsepower	1775	hp	Manufacturer Rating
Fuel heat value	1259.00	Btu/scf	Treated Gas
Heat input	13.51	MMBtu/hr	Fuel consumption * Fuel heat value
Fuel consumption	10.73	Mscf/hr	Heat input / fuel heat value
Hours of Operation	8760	hrs/yr	
Annual fuel usage	93.99	MMscf/yr	8760 hrs/yr operation
Fuel Consumption	7610	Btu/hp-hr	Manufacturer Spec Sheet @ Max Rating

Emission Calculations

Uncontrolled	NO_x	CO	VOC	SO_2[2]	HCHO	PM_{10}[4]	$PM_{2.5}$[4]	Total HAPs[3]	Units	Notes
	0.50	2.75	0.63		0.40				g/hp-hr	Catalyst Data
Emission Factors						9.99E-03	9.99E-03		lb/MMBtu	AP-42 Table 3.2-2
				0.0025					gr/scf	Engineering Estimate
	1.96	**10.76**	**4.17**	**0.008**	**1.57**	**0.13**	**0.13**	**1.65**	lb/hr	
	8.57	**47.13**	**18.26**	**0.03**	**6.86**	**0.59**	**0.59**	**7.25**	tpy	

Controlled	NO_x	CO	VOC[1]	SO_2[2]	HCHO	PM_{10}[4]	$PM_{2.5}$[4]	Total HAPs[3]	Units	Notes
	0.50	0.190	0.30		0.03				g/hp-hr	NOx, VOC Catalyst Guarantee, CO Test Results
Emission Factors	0.00%	93.09%	65.69%		92.50%					% Reduction
						9.99E-03	9.99E-03		lb/MMBtu	AP-42 Table 3.2-2
				0.0025					gr/scf	Engineering Estimate
	1.96	**0.74**	**1.43**	**0.008**	**0.12**	**0.13**	**0.13**	**0.21**	lb/hr	
	8.57	**3.26**	**6.27**	**0.03**	**0.51**	**0.59**	**0.59**	**0.91**	tpy	

Acetaldehyde[5]	Acrolein[5]	Benzene[5]	E-Benzene[5]	n-Hexane[5]	Toluene[5]	Xylene[5]	Units	Notes
8.36E-03	5.14E-03	4.40E-04	3.97E-05	1.11E-03	4.08E-04	1.84E-04	lb/MMBtu	AP-42 Table 3.2-2
1.03E-02	6.34E-03	5.43E-04	4.90E-05	1.37E-03	5.04E-04	2.27E-04	lb/MMBtu	AP-42 Table 3.2-2 (adjusted)
65.69%	65.69%	65.69%	65.69%	65.69%	65.69%	65.69%		% Reduction
0.05	**0.029**	**2.52E-03**	**2.27E-04**	**6.35E-03**	**2.33E-03**	**1.05E-03**	lb/hr	
0.21	**0.13**	**0.011**	**9.95E-04**	**0.028**	**1.02E-02**	**4.61E-03**	tpy	

[1] VOC emissions include aldehydes

[2] SO_2 emissions are based on fuel consumption and fuel sulfur content of 0.25 grains of sulfur per 100 scf
0.25 gr S/100 scf * fuel scf/hr * 1 lb/7000 gr * 64 lb-mol SO_2/ 32 lb-mol S = lb/hr SO_2

[3] HAPs emissions factors are referenced from AP-42 Table 3.2-2 (except formaldehyde: provided in mfg. spec sheet).

[4] Assumes PM (Filterable + Condensable) = PM_{10} = $PM_{2.5}$

[5] AP-42 Table 3.2-2 & adjusted for 1259.00 Btu/scf and the VOC reduction rate was applied to each HAP emission factor.

Pronto Midstream, LLC - Marlan Gas Plant

Train 1 Amine Unit

Emission Unit: AMINE-01
Source Description: Amine Treating Unit
Operating Hours: 8760 hrs/yr
Throughput: 72.48 MMSCFD
Regenerator Capture Efficieny: 100%
Flash and Assist Gas Capture Efficiency: 100%

Uncontrolled [1]	VOC		H_2S		Total HAP		Benzene		Toluene		Ethylbenzene		Xylene		n-Hexane	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Uncontrolled Flash Tank Overheads	12.04	52.72	0.00	0.01	0.29	1.27	0.18	0.81	0.06	0.25	0.00	0.00	0.006	0.03	0.042	0.18
Uncontrolled Regenerator Overheads	8.26	36.19	1.04	4.55	4.30	18.83	4.29	18.79	0.00	0.01	-	-	-	-	0.005	0.02
Uncontrolled Emissions Per Unit	20.30	88.91	1.04	4.56	4.59	20.10	4.48	19.60	0.06	0.26	-	-	0.01	0.03	0.047	0.21

Controlled	VOC		H_2S		Total HAP		Benzene		Toluene		Ethylbenzene		Xylene		n-Hexane	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Controlled Flash Tank Overheads [2]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Controlled Regenerator Overheads [3]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Controlled Emissions Per Unit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

[1] Emissions estimated using BR&E ProMax.

[2] Emissions from the flash tank are captured and routed to process.

[3] Acid gas emissions from the regenerator are sent to the TO-01 with a 100% capture efficiency and a 98% DRE. During downtime, emissions are sent to the FLARE-1 with a 98% DRE.

Pronto Midstream, LLC - Marlan Gas Plant

Train 1 Amine Hot Oil Heater

Unit:	HT-01	
Heat Input:	39.4	MMBTU/hr
Fuel Heat Value:	1259.00	BTU/scf
Operating Hours:	4,380	hours/yr
Fuel Usage:	31294.68	scf/hr
Fuel Usage:	0.031	MMscf/hr
H2S to SO2 conversion Efficiency:	98%	

Uncontrolled Emissions

	NO_x	CO	VOC	SO_2[1]	H_2S[1]	PM[2]	Units	Notes
Emission Factors	50	42	5.5	-	-	7.6	lb/MMscf	AP-42 Table 1.4-1 & 2
	61.72	51.84	6.79	-	-	9.38	lb/MMscf	Adjusted EF, per footnote a in Tables 1.4-2
	-	-	-	-	0.25	-	gr/100 scf	Fuel Sulfur Content
Emissions	1.93	1.62	0.21	0.02	2.38E-04	0.29	lb/hr[3]	
	4.23	3.55	0.47	0.05	5.20E-04	0.64	tons/year[4]	

HAP Emission Rates

	Formaldehyde	Benzene	Hexane	Toluene	Total HAPs[5]	Units	Notes
Emission Factors	0.075	2.10E-03	1.80	3.40E-03	1.88	lb/MMscf	AP-42 Table 1.4-3
	0.093	2.59E-03	2.22	4.20E-03	2.32	lb/MMscf	Adjusted EF, per footnote a in Table 1.4-3
Emissions	2.90E-03	8.11E-05	0.070	1.31E-04	0.073	lb/hr[3]	lb/ MMscf * hourly natural gas usage
	0.006	3.55E-04	0.30	5.75E-04	0.16	tons/year[4]	lb/ MMscf * annual natural gas usage

[1] SO_2 emissions based on fuel sulfur (gr/100 scf) assuming 98% conversion efficiency of H_2S to SO_2. The remaining 2% is accounted for in H_2S emissions.

[2] Assumes $PM_{10} = PM_{2.5}$

[3] lb/hr emissions calculated using the following methods:

[4] Criteria and HAPs lb/hr = EF (lb/MMscf) * Rating (MMBtu/hr) / Heat value (Btu/scf)

[5] For all pollutant calculations, tons/year = lb/hr * Operating hours * 1ton/2000lb

Pronto Midstream, LLC - Marlan Gas Plant

Train 1 Cryo Hot Oil Heater

Unit:	HT-02	
Heat Input:	6.8	MMBTU/hr
Fuel Heat Value:	1259.00	BTU/scf
Operating Hours:	8,760	hours/yr
Fuel Usage:	5401.11	scf/hr
Fuel Usage:	0.0054	MMscf/hr
H2S to SO2 conversion Efficiency:	98%	

Uncontrolled Emissions

	NO_x	CO	VOC	SO_2[1]	H_2S[1]	PM[2]	Units	Notes
Emission Factors	50	84	5.5	-	-	7.6	lb/MMscf	AP-42 Table 1.4-1 & 2
	61.72	103.68	6.79	-	-	9.38	lb/MMscf	Adjusted EF, per footnote a in Tables 1.4-2
	-	-	-	-	0.25	-	gr/100 scf	Fuel Sulfur Content
Emissions	0.33	0.56	0.037	3.78E-03	4.10E-05	0.051	lb/hr[3]	
	1.46	2.45	0.16	0.02	1.80E-04	0.22	tons/year[4]	

HAP Emission Rates

	Formaldehyde	Benzene	Hexane	Toluene	Total HAPs[5]	Units	Notes
Emission Factors	0.075	2.10E-03	1.80	3.40E-03	1.88	lb/MMscf	AP-42 Table 1.4-3
	0.093	2.59E-03	2.22	4.20E-03	2.32	lb/MMscf	Adjusted EF, per footnote a in Table 1.4-3
Emissions	5.00E-04	1.40E-05	0.012	2.27E-05	0.013	lb/hr[3]	lb/ MMscf * hourly natural gas usage
	2.19E-03	6.13E-05	0.05	9.93E-05	0.055	tons/year[4]	lb/ MMscf * annual natural gas usage

[1] SO_2 emissions based on fuel sulfur (gr/100 scf) assuming 98% conversion efficiency of H_2S to SO_2. The remaining 2% is accounted for in H_2S emissions.

[2] Assumes $PM_{10} = PM_{2.5}$

[3] lb/hr emissions calculated using the following methods:

[4] Criteria and HAPs lb/hr = EF (lb/MMscf) * Rating (MMBtu/hr) / Heat value (Btu/scf)

[5] For all pollutant calculations, tons/year = lb/hr * Operating hours * 1ton/2000lb

Pronto Midstream, LLC - Marlan Gas Plant

Train 1 Amine Regenerator Gas Heater

Unit:	HT-03	
Heat Input:	7.5	MMBTU/hr
Fuel Heat Value:	1259.00	BTU/scf
Operating Hours:	8,760	hours/yr
Fuel Usage:	5957.11	scf/hr
Fuel Usage:	0.0060	MMscf/hr
H2S to SO2 conversion Efficiency:	98%	

Uncontrolled Emissions

	NO_x	CO	VOC	SO_2[1]	H_2S[1]	PM[2]	Units	Notes
Emission Factors	50	84	5.5	-	-	7.6	lb/MMscf	AP-42 Table 1.4-1 & 2
	61.72	103.68	6.79	-	-	9.38	lb/MMscf	Adjusted EF, per footnote a in Tables 1.4-2
	-	-	-	-	0.25	-	gr/100 scf	Fuel Sulfur Content
Emissions	0.37	0.62	0.040	4.17E-03	4.52E-05	0.056	lb/hr[3]	
	1.61	2.71	0.18	0.02	1.98E-04	0.24	tons/year[4]	

HAP Emission Rates

	Formaldehyde	Benzene	Hexane	Toluene	Total HAPs[5]	Units	Notes
Emission Factors	0.075	2.10E-03	1.80	3.40E-03	1.88	lb/MMscf	AP-42 Table 1.4-3
	0.093	2.59E-03	2.22	4.20E-03	2.32	lb/MMscf	Adjusted EF, per footnote a in Table 1.4-3
Emissions	5.51E-04	1.54E-05	0.013	2.50E-05	0.014	lb/hr[3]	lb/ MMscf * hourly natural gas usage
	2.42E-03	6.76E-05	0.058	1.10E-04	0.061	tons/year[4]	lb/ MMscf * annual natural gas usage

[1] SO_2 emissions based on fuel sulfur (gr/100 scf) assuming 98% conversion efficiency of H_2S to SO_2. The remaining 2% is accounted for in H_2S emissions.

[2] Assumes $PM_{10} = PM_{2.5}$

[3] lb/hr emissions calculated using the following methods:

[4] Criteria and HAPs lb/hr = EF (lb/MMscf) * Rating (MMBtu/hr) / Heat value (Btu/scf)

[5] For all pollutant calculations, tons/year = lb/hr * Operating hours * 1ton/2000lb

Pronto Midstream, LLC - Marlan Gas Plant

Train 1 Reject Condensate Storage Tanks

Emission unit number(s): OILTANK-01 through OILTANK-02
Source description: 400 bbl Reject Condensate Tanks

Annual Operating Hours: 8,760 hr/yr
ECD-01 Downtime Hours: 2,190 hr/yr
Capture Efficiency: 100%
Control: ECD-1
Control Efficiency: 98%
Number of Tanks: 2
Capacity of Tanks: 400 bbl
Hourly Throughout: 169.74 bbl/hr
Daily Throughput: 4073.72 bbl/d
Annual Throughput: 148,639.29 bbl/yr

Reject Condensate Tank Emissions

Component	Flash - All Tanks (lb/hr)	Working and Breathing - All Tanks (lb/hr)	Flash - All Tanks (tpy)	Working and Breathing - All Tanks (tpy)	Uncontrolled Emissions [1] Total per Tank (lb/hr)	Uncontrolled Emissions [1] Total Per Tank (tpy)	Controlled Emissions [2] Total per Tank (lb/hr)	Controlled Emissions [2] Total Per Tank (tpy)	ECD Downtime Emissions [3] Total Emissions from All Tanks (lb/hr)	ECD Downtime Emissions [3] Total Emissions from All Tanks (tpy)
Nitrogen	-	2.31E-03	-	1.43E-03	1.16E-03	7.16E-04	-	-	2.31E-03	3.58E-04
Carbon Dioxide	-	9.713E-03	-	8.442E-03	4.86E-03	4.221E-03	-	-	9.71E-03	2.11E-03
H2S	-	4.60E-06	-	4.00E-06	2.30E-06	2.00E-06	-	-	4.60E-06	9.99E-07
Methane	-	0.10	-	0.08	0.05	0.04	-	-	0.10	0.02
Ethane	-	0.09	-	0.08	0.05	0.04	-	-	0.09	0.02
Propane	-	0.42	-	0.37	0.21	0.18	-	-	0.42	0.09
i-Butane	-	0.98	-	0.85	0.489	0.43	-	-	0.98	0.21
n-Butane	-	4.53	-	3.93	2.26	1.97	-	-	4.53	0.98
i-Pentane	-	2.40	-	2.08	1.199	1.04	-	-	2.40	0.52
n-Pentane	-	2.35	-	2.05	1.177	1.02	-	-	2.35	0.51
i-Hexane	-	-	-	-	-	-	-	-	-	-
n-Hexane	-	0.455	-	0.396	0.228	0.198	-	-	0.46	0.10
Benzene	-	0.173	-	0.150	0.087	0.075	-	-	0.17	0.04
Cyclohexane	-	-	-	-	-	-	-	-	-	-
i-Heptane	-	-	-	-	-	-	-	-	-	-
n-Heptane	-	1.006	-	0.874	0.50	0.437	-	-	1.01	0.22
Toluene	-	0.045	-	0.039	0.02	0.020	-	-	0.05	9.85E-03
i-Octane	-	-	-	-	-	-	-	-	-	-
n-Octane	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	-	5.24E-04	-	4.55E-04	2.62E-04	2.28E-04	-	-	5.24E-04	1.14E-04
o-Xylene	-	-	-	-	-	-	-	-	-	-
m-Xylene	-	4.39E-03	-	3.81E-03	2.19E-03	1.91E-03	-	-	4.39E-03	9.53E-04
p-Xylene	-	-	-	-	-	-	-	-	-	-
Nonane	-	-	-	-	-	-	-	-	-	-
Decane	-	-	-	-	-	-	-	-	-	-
MDEA	-	-	-	-	-	-	-	-	-	-
Water	-	3.524E-04	-	3.063E-04	1.762E-04	1.531E-04	-	-	3.52E-04	7.66E-05
Piperazine	-	-	-	-	-	-	-	-	-	-
2,2-Dimethylbutane	-	-	-	-	-	-	-	-	-	-
Cyclopentane	-	-	-	-	-	-	-	-	-	-
3-Methylpentane	-	-	-	-	-	-	-	-	-	-
Methylcyclopentane	-	-	-	-	-	-	-	-	-	-
Methylcyclohexane	-	-	-	-	-	-	-	-	-	-
3-Methylhexane	-	-	-	-	-	-	-	-	-	-
Oxygen	-	-	-	-	-	-	-	-	-	-
TEG	-	-	-	-	-	-	-	-	-	-
VOC	**-**	**12.36**	**-**	**10.74**	**6.18**	**5.37**	**-**	**-**	**12.36**	**2.69**
Total HAPS	**-**	**0.68**	**-**	**0.59**	**0.34**	**0.29**	**-**	**-**	**0.68**	**0.15**
H_2S	**-**	**4.60E-06**	**-**	**4.00E-06**	**2.30E-06**	**2.00E-06**	**-**	**-**	**4.60E-06**	**9.99E-07**

[1] Uncontrolled emissions are calculated using BR&E ProMax.
[2] Emissions from the condensate tanks are sent to the ECD-01 with a 100% capture efficiency and a 98% DRE.
[3] Emissions from the condensate tanks during ECD-01 downtime.

Pronto Midstream, LLC - Marlan Gas Plant

Train 1 Produced Water Storage Tanks

Emission unit number(s):	PWTANK-1 through PWTANK-4	
Source description:	Train 1 Produced Water Storage Tanks	
Annual Operating Hours:	8,760	hr/yr
ECD-01 Downtime Hours:	2,190	hr/yr
Capture Efficiency:	100%	
Control:	ECD-01	
Control Efficiency:	98%	
Number of Tanks:	4	
Capacity of Tanks:	400	bbl
Hourly Throughout:	26.91	bbl/hr
Daily Throughput:	645.85	bbl/d
Annual Throughput:	235,736.08	bbl/yr

Produced Water Tank Emissions

Component			Uncontrolled Emissions [1]		Controlled Emissions [2]		ECD-01 Downtime Emissions [3]	
	Flash (lb/hr)	Working and Breathing (lb/hr)	Total per Tank (lb/hr)	Total Per Tank (tpy)	Total per Tank (lb/hr)	Total Per Tank (tpy)	Total Emissions from All Tanks (lb/hr)	Total Emissions from All Tanks (tpy)
Nitrogen	3.38	0.04	0.86	3.75	-	-	3.42	3.75
Carbon Dioxide	2.43	1.20	0.91	3.98	-	-	3.63	3.98
H2S	2.33E-03	1.80E-03	1.03E-03	4.52E-03	-	-	4.13E-03	4.52E-03
Methane	3.32	0.08	0.85	3.73	-	-	3.40	3.73
Ethane	1.80	0.07	0.47	2.04	-	-	1.87	2.04
Propane	0.58	0.01	0.15	0.65	-	-	0.59	0.65
i-Butane	0.04	7.66E-04	0.01	0.05	-	-	0.04	0.05
n-Butane	0.13	2.98E-03	0.03	0.14	-	-	0.13	0.14
i-Pentane	0.01	2.37E-04	3.52E-03	0.02	-	-	0.01	0.02
n-Pentane	0.02	1.06E-04	4.06E-03	0.02	-	-	0.02	0.02
i-Hexane	-	-	-	-	-	-	-	-
n-Hexane	2.12E-03	9.65E-06	5.31E-04	2.33E-03	-	-	2.13E-03	2.33E-03
Benzene	0.06	0.041	0.02	0.11	-	-	0.10	0.11
Cyclohexane	-	-	-	-	-	-	-	-
i-Heptane	-	-	-	-	-	-	-	-
n-Heptane	2.10E-03	7.20E-06	5.27E-04	2.31E-03	-	-	2.11E-03	2.31E-03
Toluene	0.02	0.01	7.18E-03	0.03	-	-	0.03	0.03
i-Octane	-	-	-	-	-	-	-	-
n-Octane	-	-	-	-	-	-	-	-
Ethylbenzene	3.18E-05	2.21E-05	1.35E-05	5.89E-05	-	-	5.38E-05	5.89E-05
o-Xylene	-	-	-	-	-	-	-	-
m-Xylene	2.59E-03	1.87E-03	1.11E-03	4.88E-03	-	-	4.46E-03	4.88E-03
p-Xylene	1.59E-04	1.14E-04	6.82E-05	2.99E-04	-	-	2.73E-04	2.99E-04
Nonane	-	-	-	-	-	-	-	-
Decane	-	-	-	-	-	-	-	-
MDEA	-	-	-	-	-	-	-	-
Water	0.26	0.168	0.11	0.47	-	-	0.43	0.47
Piperazine	-	-	-	-	-	-	-	-
2,2-Dimethylbutane	-	-	-	-	-	-	-	-
Cyclopentane	-	-	-	-	-	-	-	-
3-Methylpentane	-	-	-	-	-	-	-	-
Methylcyclopentane	-	-	-	-	-	-	-	-
Methylcyclohexane	-	-	-	-	-	-	-	-
3-Methylhexane	-	-	-	-	-	-	-	-
Oxygen	-	-	-	-	-	-	-	-
TEG	-	-	-	-	-	-	-	-
VOC	**0.86**	**0.07**	**0.23**	**1.02**	**-**	**-**	**0.93**	**1.02**
Total HAPS	**0.08**	**0.05**	**0.03**	**0.15**	**-**	**-**	**0.13**	**0.15**
H_2S	**2.33E-03**	**1.80E-03**	**1.03E-03**	**4.52E-03**	**-**	**-**	**4.13E-03**	**4.52E-03**

[1] Uncontrolled emissions are calculated using BR&E ProMax.
[2] Emissions from the produced water tanks are sent to the ECD-01 with a 100% capture efficiency and a 98% DRE.
[3] Emissions from the produced water tanks during ECD-01 downtime.

Pronto Midstream, LLC - Marlan Gas Plant

Train 1 SSM Flare

Emission Unit:	FLARE-01	
Source Description:	Facility Flare	
TO-1 Downtime Hours:	876	hrs/yr
TO-1 Downtime	10.00%	Assumption
DRE:	98%	
H2S to SO2 conversion Efficiency:	98%	

Emissions, Heat Input, and Flow Rate Calculation

Parameters	Value	Unit	Notes
Amine Regenerator VOC emissions	8.26	lb/hr	BR&E ProMax Regenerator Overheads Stream
Amine Regenerator HAP emissions	4.30	lb/hr	BR&E ProMax Regenerator Overheads Stream
Amine Regenerator H_2S emissions	1.04	lb/hr	BR&E ProMax Regenerator Overheads Stream
Assist Gas VOC emissions	0.12	lb/hr	BR&E ProMax Assist Gas Stream
Assist Gas HAP emissions	0.12	lb/hr	BR&E ProMax Assist Gas Stream
Assist Gas H_2S emissions	0.12	lb/hr	BR&E ProMax Assist Gas Stream
Vessel Blowdowns VOC emissions	5590.48	lb/hr	Vessel Blowdowns with Inlet Gas
	234.80	tpy	Vessel Blowdowns with Inlet Gas
Vessel Blowdowns HAP emissions	41.82	lb/hr	Vessel Blowdowns with Inlet Gas
	1.76	tpy	Vessel Blowdowns with Inlet Gas
Vessel Blowdown H_2S Emissions	0.01	lb/hr	Vessel Blowdowns with Inlet Gas
	2.70E-04	tpy	Vessel Blowdowns with Inlet Gas
Compressor Blowdowns VOC emissions	31.27	lb/hr	Compressor Blowdowns with Inlet Gas
	6.01	tpy	Compressor Blowdowns with Inlet Gas
Compressor Blowdowns HAP emissions	0.00	lb/hr	Compressor Blowdowns with Inlet Gas
	0.00E+00	tpy	Compressor Blowdowns with Inlet Gas
Compressor Blowdown H_2S Emissions	0.00E+00	lb/hr	Compressor Blowdowns with Inlet Gas
	0.00E+00	tpy	Compressor Blowdowns with Inlet Gas
Amine Regenerator Heating Value	5.37	Btu/scf	BR&E ProMax Regenerator Overheads Stream
Plant 1 and 2 Surge Vessel Gas	1096.70	Btu/scf	Amine Inlet Gas Analysis
Vessel Blowdowns Heating Value	1096.70	Btu/scf	Amine Inlet Gas Analysis
Compressor Blowdowns Heating Value	1040.16	Btu/scf	Inlet Gas Analysis
Burner Gas Heating Value	872.80	Btu/scf	Inlet Gas Analysis
Amine Regenerator Flow Rate	111295.42	scf/hr	BR&E ProMax Regenerator Overheads Stream
Plant 1 and 2 Surge Vessel Gas	1784.82	scf/hr	Measured Value
Vessel Blowdowns Flow Rate	357142.86	scf/hr	Hourly
Compressor Blowdowns Flow Rate	52061.00	scf/hr	Hourly
Burner Gas Flow Rate	24617.95	scf/hr	BR&E ProMax Assist Gas Stream
Amine Regenerator Flow Rate	97.49	MMscf/yr	Annually
Plant 1 and 2 Surge Vessel Gas	15.64	MMscf/yr	Annually
Vessel Blowdowns Flow Rate	30.00	MMscf/yr	Annualy
Compressor Blowdowns Flow Rate	37.32	MMscf/yr	Annualy
Burner Gas Flow Rate	21.57	MMscf/yr	Annually
Regenerator Heat Rate	0.60	MMBtu/hr	Regenerator Heat Value (Btu/scf) * Flow (scf/hr) / 10^6
Plant 1 and 2 Surge Vessel Gas Heat Rate	1.96	MMBtu/hr	Surge Heat Value (Btu/scf) * Flow (scf/hr) / 10^6
Blowdown Hourly Heat Rate	445.83	MMBtu/hr	Blowdowns Heat Value (Btu/scf) * Flow (scf/hr) / 10^6
Burner Gas Hourly Heat Rate	21.49	MMBtu/hr	Assist Gas Heat Value (Btu/scf) * Flow (scf/hr) / 10^6
Blowdown Annual Heat Rate	71718.92	MMBtu/yr	Blowdowns Heat Value (Btu/scf) * Flow (MMscf/yr)
Total Heating Value	859.15	Btu/scf	Weighted average heating value of all streams
TO Downtime Heating Value	162.48	Btu/scf	
Total Flow	546902.05	scf/hr	Combined flow
Total Heating Value	469.87	MMBtu/hr	Btu/scf x scf/hr
	0	%	Safety Factor
Flow Rate with Safety Factor	546902.05	scf/hr	Flow with safety factor
	202.01	MMscf/yr	Annual flow rate with safety factor
Heating Rate	469.87	MMBtu/hr	

Burner	Value	Unit	Notes
	137	scf/hr	From previous application
	0	%	Safety Factor
Hourly Volume Flow Rate	137	scf/hr	Burner flow with safety factor
	1.37E-04	MMscf/hr	
Treated Gas Heat Value	1,259.00	Btu/scf	Treated Natural Gas
Hourly Heat Rate	0.17	MMBtu/hr	
Annual Flow Rate	1.20	MMscf/yr	

Emission Rates

	NO_x[1]	CO[1]	VOC[2]	SO_2[3]	H_2S[2]	HAPs[2]	Units	Notes
Emission Factors	0.068	0.31	0.66				lb/MMBtu	Per 3/28/2024 email from Zeeco and AP 42 Table 13.5-2
				4.89E-05			lb S/hr	0.25 gr/100 scf
			8.38		1.16	4.30	lb/hr	From Amine TO-1 Downtime
			5621.75		6.42E-03	41.82	lb/hr	From compressor and vessel blowdowns
			0.25				lb/Mscf	From Surge Flash VOC (controlled)
			240.81		2.70E-04	1.76	tpy	From compressor and vessel blowdowns
Burner Emissions	0.012	0.053	0.11	9.59E-05	1.04E-06	-	lb/hr	EF (lb/MMBtu) * Pilot Heat Rate (MMBtu/hr)
	0.051	0.23	0.50	4.20E-04	4.55E-06	-	tpy	8760 hr/yr/2000 lb/ton
TO Downtime Emissions	1.50	6.85	0.17	2.14	0.023	0.09	lb/hr	EF (lb/MMBtu) * Amine Heat Rate (MMBtu/hr)
	0.66	3.00	0.073	0.94	0.01	0.04	tpy	43.8 hr/yr/2000 lb/ton
Plant 1 and 2 Surge Vessel Emissions	0.13	0.61	0.44				lb/hr	EF (lb/Mscf) * Surge Vessel Rate (scf/hr) / 10^3
Plant 1 and 2 Surge Vessel Emissions	0.58	2.66	1.94				tpy	
SSM Emissions	30.32	138.21	112.44	0.01	1.28E-04	0.84	lb/hr	EF (lb/MMBtu) * Blowdown Heat Rate (MMBtu/hr)
	2.44	11.12	4.82	4.97E-04	5.39E-06	0.04	tpy	annual rate
Total Emissions	**31.96**	**145.71**	**113.16**	**2.15**	**0.02**	**0.92**	lb/hr	Burner Emissions + Process Emissions
	3.73	**17.01**	**7.33**	**0.94**	**0.01**	**0.07**	tpy	Burner Emissions + Process Emissions

[1] Flare NO_x and CO emission factors based on manufacture data, see 3/28/2024 email from Zeeco.

[2] Efficiency for combustion of VOC, H_2S and HAPs in the FLARE-01 is: 98%

lb/hr emission rate based on DRE of flare: lb/hr * (1 - DRE)

[3] Fuel sulfur content is assumed to be 0.25 gr/100 Scf

"-" Indicates emissions of this pollutant are not expected

Pronto Midstream, LLC - Marlan Gas Plant

Train 1: Process Flare Greenhouse Gas Emissions

Emission Unit: FLARE-01

Source Description: Facility Flare

Notes: The flare will combust amine unit vent gas, pilot gas, and assist gas. A weighted averaged of the fuel gas and vent gas analyses are used to determine the greenhouse gas emissions from this unit.

§98.233(n) Flare stack GHG emissions.

Step 1. Calculate contribution of un-combusted CH_4 emissions from the flare combustion gas vent (actual conditions).

$E_{a,CH4}$ (un-combusted) = V_a * (1- η)* X_{CH4} *(Equation W-39B)*

where:

$E_{a,CH4}$ = contribution of annual un-combusted CH_4 emissions from flare in cubic feet under actual conditions.

V_a = volume of gas sent to combustion unit during the year (cf)

η = Fraction of gas combusted by a burning flare (or regenerator), default value from Subpart W = 0.98
For gas sent to an unlit flare, η is zero.

	Inlet Gas	**TO Downtime**	
X_{CH4} = Mole fraction of CH_4 in gas to the flare =	0.73	0.72	(Gas analysis)

Step 2. Calculate contribution of un-combusted CO_2 emissions from the flare combustion gas vent (actual conditions).

$E_{a,CO2}$ = V_a * X_{CO2} *(Equation W-20)*

where:

$E_{a,CO2}$ = contribution of annual un-combusted CO_2 emissions from flare in cubic feet under actual conditions.

V_a = volume of gas sent to combustion unit during the year (cf)

X_{CO2} = Mole fraction of CO_2 in gas to the flare =	0.003	0.005

Step 3. Calculate contribution of combusted CO_2 emissions from the flare combustion gas vent (actual conditions).

$E_{a,CO2}$ (combusted) = Σ (η * V_a * Y_j * R_j) *(Equation W-21)*

where:

η = Fraction of gas combusted by a burning flare (or regenerator) =	0.98	0.98
For gas sent to an unlit flare, η is zero.		

V_a = volume of gas sent to combustion unit during the year (cf)

Y_j = mole fraction of gas hydrocarbon constituents j:

Constituent j, Methane =	0.731	0.718
Constituent j, Ethane =	0.1247	0.1318
Constituent j, Propane =	0.0591	0.0671
Constituent j, Butane =	0.0236	0.02552
Constituent j, Pentanes =	0.00700	0.00630
Constituent j, Hexane Plus =	0.00372	0.00309

R_j = number of carbon atoms in the gas hydrocarbon constituent j:

Constituent j, Methane =	1	1
Constituent j, Ethane =	2	2
Constituent j, Propane =	3	3
Constituent j, Butane =	4	4
Constituent j, Pentanes =	5	5
Constituent j, Hexane Plus =	6	6

Pronto Midstream, LLC - Marlan Gas Plant

Train 1: Process Flare Greenhouse Gas Emissions

Step 4. Calculate GHG volumetric emissions at standard conditions (scf).

$$E_{s,n} = \frac{E_{a,n} * (459.67 + T_s) * P_a}{(459.67 + T_a) * P_s}$$ *(Equation W-33)*

where:

$E_{s,n}$ = GHG i volumetric emissions at standard temperature and pressure (STP) in cubic feet

$E_{a,n}$ = GHG i volumetric emissions at actual conditions (cf)

T_s = Temperature at standard conditions (F) = 60 F

T_a = Temperature at actual conditions (F) = 76 F (Annual Avg Max Temperature for Midland, TX from Western Regional Climate Center)

P_s = Absolute pressure at standard conditions (psia) = 12.73 psia

P_a = Absolute pressure at actual conditions (psia) = 13.28 psia Pressure in Midland, TX from TANKS

Constant = 459.67 (temperature conversion from F to R)

Step 5. Calculate annual CH_4 and CO_2 mass emissions (ton).

$Mass_{s,i} = E_{s,i} * \rho_i * 0.0011023$ *(Equation W-36)*

where:

$Mass_{s,i}$ = GHG i (CO_2, CH_4, or N_2O) mass emissions at standard conditions in tons (tpy)

$E_{s,i}$ = GHG i (CO_2, CH_4, or N_2O) volumetric emissions at standard conditions (cf)

ρ_i = Density of GHG i. Use:

CH_4: 0.0192 kg/ft^3 (at 60F and 14.7 psia)

CO_2: 0.0526 kg/ft^3 (at 60F and 14.7 psia)

Step 6. Calculate annual N_2O emissions from portable or stationary fuel combustion sources under actual conditions (cf) using Equation W

$Mass_{N2O} = 0.0011023 * Fuel * HHV * EF$ *(Equation W-40)*

where:

$Mass_{N2O}$ = annual N_2O emissions from combustion of a particular type of fuel (tons).

Fuel = mass or volume of the fuel combusted

HHV = high heat value of the fuel

Field gas HHV = 1.038E-03 MMBtu/scf (Default provided in Subpart W Final Amendment;)

EF = 1.00E-04 kg N_2O/MMBtu

10^{-3} = conversion factor from kg to metric tons.

Step 7. Calculate total annual emission from flare (regenerator) by summing Equations W-40, W-19, W-20, and W-21.

Gas Sent to Flare (scf/yr)	CH_4 Un-Combusted, $E_{a,CH4}$ (scf)	CO_2 Un-Combusted, $E_{a,CO2}$ (scf)	CO_2 Combusted, $E_{a,CO2}$ (scf)	CH_4 Un-Combusted, $E_{a,CH4}$ (tpy)	CO_2 Un-Combusted, $E_{a,CO2}$ (tpy)	CO_2 Combusted, $E_{a,CO2}$ (tpy)	N_2O Mass Emissions (tpy)
105,719,525	1546021	77,301,060	135,695,789	32.72	4,481.991	7,867.77	1.21E-02
97,494,789	1399074	69,953,708	127,511,398	29.61	4,055.985	7,393.24	1.11E-02

Step 8. Calculate CO_2 equivalent[1]

$CO_2e = CO_2 + \{CH_4 \text{ X GWP}\} + \{N_2O \text{ X GWP}\}$

CO_2e = 23,798.99 + 1,745.25 + 6.16

CO_2e = 25,550.40 tons/year

[1] Global Warming Potentials (GWP) are from Table A-1 of the EPA GHG MRR under 40 CFR Part 98.

CH_4 GWP = 28

N_2O GWP = 265

Pronto Midstream, LLC - Marlan Gas Plant

Reject Condensate Loading

Unit:	OILLOAD-1	
Annual Operating Hours:	826	hr/yr
ECD-01 Downtime Hours:	2,190	hr/yr
Truck Capacity:	180	bbl
Capture Efficiency:	70%	
Control:	ECD-01	
Control Efficiency:	98%	

	Uncontrolled Emissions [3]		Controlled Emissions [4]		ECD-01 Downtime Emissions [5]	
Component	**lb/hr**	**tpy**	**lb/hr**	**tpy**	**lb/hr**	**tpy**
Nitrogen	1.82E-03	7.51E-04	5.46E-04	2.25E-04	1.82E-03	1.88E-04
Carbon Dioxide	0.02	9.347E-04	7.27E-03	2.80E-04	0.02	2.337E-04
H2S	1.19E-05	4.83E-07	3.58E-06	1.45E-07	1.19E-05	1.21E-07
Methane	0.21	6.660E-03	0.062	1.998E-03	0.21	1.67E-03
Ethane	0.24	9.470E-03	0.071	2.841E-03	0.24	2.37E-03
Propane	1.11	0.045	0.332	0.014	1.11	0.01
i-Butane	2.574	0.106	0.772	0.032	2.57	0.03
n-Butane	11.90	0.490	3.569	0.147	11.90	0.12
i-Pentane	6.292	0.260	1.887	0.078	6.29	0.06
n-Pentane	6.165	0.255	1.850	0.076	6.17	0.06
i-Hexane	-	-	-	-	-	-
n-Hexane	1.188	0.049	0.36	0.015	1.19	0.01
Benzene	0.452	0.019	0.14	5.597E-03	0.45	4.66E-03
Cyclohexane	-	-	-	-	-	-
i-Heptane	-	-	-	-	-	-
n-Heptane	2.61	0.108	0.78	0.03	2.61	0.03
Toluene	0.12	4.866E-03	0.04	1.46E-03	0.12	1.22E-03
i-Octane	-	-	-	-	-	-
n-Octane	-	-	-	-	-	-
Ethylbenzene	1.36E-03	5.60E-05	4.07E-04	1.68E-05	1.36E-03	1.40E-05
o-Xylene	-	-	-	-	-	-
m-Xylene	0.01	4.69E-04	3.41E-03	1.41E-04	0.01	1.17E-04
p-Xylene	-	-	-	-	-	-
Nonane	-	-	-	-	-	-
Decane	-	-	-	-	-	-
MDEA	-	-	-	-	-	-
Water	8.899E-04	3.478E-05	2.67E-04	1.04E-05	8.90E-04	8.70E-06
Piperazine	-	-	-	-	-	-
2,2-Dimethylbutane	-	-	-	-	-	-
Cyclopentane	-	-	-	-	-	-
3-Methylpentane	-	-	-	-	-	-
Methylcyclopentane	-	-	-	-	-	-
Methylcyclohexane	-	-	-	-	-	-
3-Methylhexane	-	-	-	-	-	-
TEG	-	-	-	-	-	-
Total VOC	**32.42**	**1.34**	**9.72**	**0.40**	**32.42**	**0.33**
Total HAP	**1.77**	**0.07**	**0.53**	**0.02**	**1.77**	**0.02**

[1] Annual operating hours = (Daily Condensate Throughput (bbl/day)) * (365 day/yr) / (180 bbl/truck) * (1 hr/truck)

[2] Assumes 1 hour of loading per truck.

[3] Uncontrolled emissions are calculated using BR&E ProMax.

[4] Condensate loading emissions are controlled by the ECD-01 with a 70% capture efficiency and a 98% DRE.

[5] Condensate loading emissions during ECD-01 downtime.

Pronto Midstream, LLC - Marlan Gas Plant

Produced Water Loading

Unit:	PWLOAD-1	
Annual Operating Hours:	1,310	hr/yr
Truck Capacity:	180	bbl
Capture Efficiency:	70%	
Control:	ECD-01	
Control Efficiency:	98%	

	Uncontrolled Emissions [3]		Controlled Emissions [4]	
Component	**lb/hr**	**tpy**	**lb/hr**	**tpy**
Nitrogen	-	-	-	-
Carbon Dioxide	-	-	-	-
H2S	3.70E-04	2.42E-04	1.11E-04	7.26E-05
Methane	-	-	-	-
Ethane	-	-	-	-
Propane	-	-	-	-
i-Butane	-	-	-	-
n-Butane	-	-	-	-
i-Pentane	-	-	-	-
n-Pentane	-	-	-	-
i-Hexane	-	-	-	-
n-Hexane	-	-	-	-
Benzene	0.01	8.679E-03	3.98E-03	2.60E-03
Cyclohexane	-	-	-	-
i-Heptane	-	-	-	-
n-Heptane	-	-	-	-
Toluene	3.57E-03	2.34E-03	1.07E-03	7.02E-04
i-Octane	-	-	-	-
n-Octane	-	-	-	-
Ethylbenzene	6.36E-06	4.17E-06	1.91E-06	1.25E-06
o-Xylene	-	-	-	-
m-Xylene	3.99E-04	2.61E-04	1.20E-04	7.83E-05
p-Xylene	2.66E-05	1.74E-05	7.99E-06	5.23E-06
Nonane	-	-	-	-
Decane	-	-	-	-
MDEA	-	-	-	-
Water	0.07	0.05	0.02	0.01
Piperazine	-	-	-	-
2,2-Dimethylbutane	-	-	-	-
Cyclopentane	-	-	-	-
3-Methylpentane	-	-	-	-
Methylcyclopentane	-	-	-	-
Methylcyclohexane	-	-	-	-
3-Methylhexane	-	-	-	-
Oxygen	-	-	-	-
TEG	-	-	-	-
Total VOC	**0.02**	**0.01**	**5.18E-03**	**3.39E-03**
Total HAP	**0.02**	**0.01**	**5.18E-03**	**3.39E-03**

[1] Annual operating hours = (Daily Produced Water Throughput (bbl/day)) * (365 day/yr) / (180 bbl/truck) * (1 hr/truck)

[2] Assumes 1 hour of loading per truck.

[3] Uncontrolled emissions are calculated using BR&E ProMax.

[4] Produced water loading emissions are controlled by the ECD-01 with a 70% capture efficiency and a 98% DRE.

Pronto Midstream, LLC - Marlan Gas Plant

Thermal Oxidizer TO-01

Emission Unit:	TO-01
Source Description:	Amine Oxidizer
Operating Hours:	8,760 hrs/yr
DRE	98.0%
H2S to SO2 conversion Efficiency:	98%

Emissions, Heat Input, and Flow Rate Calculation

Parameters	Value	Unit	Notes
VOC emissions routed to TO	126.54	lb/hr	Regenerator Overheads, fuel gas
HAP emissions routed to TO	4.30	lb/hr	Regenerator Overheads, fuel gas
H2S Emissions routed to TO	1.04	lb/hr	Regenerator Overheads, fuel gas
Amine Regenerator Heating Value	43.83	Btu/scf	BR&E ProMax Acid Gas Stream
Amine Regenerator Flow Rate	261879.27	scf/hr	BR&E ProMax Acid Gas Stream
Total Heating Value	43.83	Btu/scf	Weighted average heating value of all streams
Total Flow	261879.27	scf/hr	Combined flow
Total Heating Value	11.48	MMBtu/hr	Btu/scf x scf/hr
Flow Rate with Safety Factor	0	%	Safety Factor
	261879.27	scf/hr	Flow with safety factor
	2294.06	MMscf/yr	Annual flow rate with safety factor
Heating Rate	11.48	MMBtu/hr	

*Amine Flash is routed as fuel on train 1

Burner	Value	Unit	Notes
Hourly Volume Flow Rate	2211.07	scf/hr	Based on 12 MMBtu/hr fuel + waste gas stream.
	0	%	Safety Factor
	2211.07	scf/hr	Burner flow with safety factor
	2.21E-03	MMscf/hr	
Natural Gas Heat Value	1,259.00	Btu/scf	Treated Natural Gas
Hourly Heat Rate	2.78	MMBtu/hr	
Annual Flow Rate	19.37	MMscf/yr	

Emission Rates

	NOx[1]	CO[1]	VOC[2]	SO_2[3]	H_2S[2]	PM[1,4]	HAPs[2]	Units	Notes
Emission Factors	102.00	81.60	5.50			7.60		lb/MMscf	Per 3/28/2024 email from Zeeco
	125.90	100.72	6.79			9.38		lb/MMscf	Adjusted for Pilot
	4.38	3.51				0.33		lb/MMscf	Adjusted for Combustion Stream
				7.90E-04				lb S/hr	0.25 gr/100 scf in fuel gas
			126.54		1.04	-	4.30	lb/hr	
Burner Emissions	0.28	0.22	0.015	1.55E-03	1.68E-05	0.021	-	lb/hr	hourly rate
	1.22	0.98	0.07	6.78E-03	7.35E-05	0.09	-	tpy	8760 hr/yr/2000 lb/ton
Process Emissions	1.15	0.92	2.53	1.92	0.02	0.086	0.09	lb/hr	hourly rate
	5.03	4.02	11.08	8.40	0.09	0.375	0.38	tpy	8760 hr/yr/2000 lb/ton
Total Emissions	**1.43**	**1.14**	**2.55**	**1.92**	**0.021**	**0.106**	**0.09**	lb/hr	Burner Emissions + Process Emissions
	6.25	**5.00**	**11.15**	**8.40**	**0.091**	**0.47**	**0.38**	tpy	Burner Emissions + Process Emissions

[1] AP-42 Chapter 1.4, External Combustion Sources

[2] Efficiency for combustion of VOC, H_2S and HAPs in the TO-01 is: 98%

lb/hr emission rate based on DRE of flare: lb/hr * (1 - DRE)

[3] Fuel sulfur content is assumed to be 0.25 gr/100 Scf

[4] Assumes PM = PM_{10} = $PM_{2.5}$

"-" Indicates emissions of this pollutant are not expected

Pronto Midstream, LLC - Marlan Gas Plant

Train 1 Fugitives

Unit: FUG-01

Annual Operating Hours: 8,760

Facility-wide Fugitive Emissions Per Piece of Equipment

Subcomponent		Emission Factor[1] (lb/hr/comp)	VOC Content[2] (wt%)	HAP Content[2] (wt%)	H2S Content[2] (wt%)	Benzene Content[2] (wt%)	n-Hexane Content[2] (wt%)	Toluene Content[2] (wt%)	Ethylbenzene Content[2] (wt%)	Xylene Content[2] (wt%)	CO2 Content[2] (wt%)	Methane[2] Content (wt%)	Subcomponent Counts[3]
Valves	Gas	9.92E-03	26.07%	0.20%	0.0000%	0.09%	0.02%	0.03%	0.02%	0.03%	0.65%	55.57%	297
	Light Oil	5.51E-03	99.97%	18.13%	0.0000%	3.64%	9.77%	3.12%	0.35%	1.25%	0.00%	0.00%	162
	Water/Oil	2.16E-04	0.01%	0.00%	0.0062%	0.00%	0.00%	0.00%	0.00%	0.00%	0.04%	0.04%	162
Flanges	Gas	8.60E-04	26.07%	0.20%	0.0000%	0.09%	0.02%	0.03%	0.02%	0.03%	0.65%	55.57%	297
	Light Oil	2.43E-04	99.97%	18.13%	0.0000%	3.64%	9.77%	3.12%	0.35%	1.25%	0.00%	0.00%	162
	Water/Oil	6.39E-06	0.01%	0.00%	0.0062%	0.00%	0.00%	0.00%	0.00%	0.00%	0.04%	0.04%	162
Connectors	Gas	4.41E-04	26.07%	0.20%	0.0000%	0.09%	0.02%	0.03%	0.02%	0.03%	0.65%	55.57%	1830
	Light Oil	4.63E-04	99.97%	18.13%	0.0000%	3.64%	9.77%	3.12%	0.35%	1.25%	0.00%	0.00%	396
	Water/Oil	2.43E-04	0.01%	0.00%	0.0062%	0.00%	0.00%	0.00%	0.00%	0.00%	0.04%	0.04%	396
Other	Gas	1.94E-02	26.07%	0.20%	0.0000%	0.09%	0.02%	0.03%	0.02%	0.03%	0.65%	55.57%	40
	Light Oil	1.65E-02	99.97%	18.13%	0.0000%	3.64%	9.77%	3.12%	0.35%	1.25%	0.00%	0.00%	8
	Water/Oil	3.09E-02	0.01%	0.00%	0.0062%	0.00%	0.00%	0.00%	0.00%	0.00%	0.04%	0.04%	8
Pump Seals	Gas	5.29E-03	26.07%	0.20%	0.0000%	0.09%	0.02%	0.03%	0.02%	0.03%	0.65%	55.57%	0
	Light Oil	2.87E-02	99.97%	18.13%	0.0000%	3.64%	9.77%	3.12%	0.35%	1.25%	0.00%	0.00%	4
	Water/Oil	5.29E-05	0.01%	0.00%	0.0062%	0.00%	0.00%	0.00%	0.00%	0.00%	0.04%	0.04%	4
Open Ended Lines	Gas	4.41E-03	26.07%	0.20%	0.0000%	0.09%	0.02%	0.03%	0.02%	0.03%	0.65%	55.57%	66
	Light Oil	3.09E-03	99.97%	18.13%	0.0000%	3.64%	9.77%	3.12%	0.35%	1.25%	0.00%	0.00%	15
	Water/Oil	5.51E-04	0.01%	0.00%	0.0062%	0.00%	0.00%	0.00%	0.00%	0.00%	0.04%	0.04%	15
	Hourly Emission Rate (llb/hr) [4]	**2.73**	**0.27**	**2.59E-05**	**0.056**	**0.139**	**0.045**	**0.0060**	**0.019**	**4.280**	**2.742**		
	Annual Emission Rate (tpy) [5]	**11.96**	**1.16**	**1.14E-04**	**0.25**	**0.61**	**0.20**	**0.026**	**0.08**	**18.75**	**12.01**		

[1] Emission factors from Table 2-4 of EPA Protocol for Equipment Leak Emission Estimates, 1995.

[2] Weight percent of gas and liquid components from gas and liquid streams generated in a ProMax simulation of this facility.

[3] Component counts are based on estimated design.

[4] Hourly Emissions [lb/hr] = Emissions Factor [lb/hr/component] * Weight Content of Chemical Component [%] * Subcomponent Count.

[5] Annual Emissions [ton/yr] = Hourly Emissions [lb/hr] * Operating Hours [hr/yr] * 1/2000 [ton/lb].

[6] H_2S is not expected for Train-1 sources.

Total Fugitive Emissions

	VOC	HAP	H2S	Benzene	n-Hexane	Toluene	Ethylbenzene	Xylenes	CO2	Methane	Units
Fugitive Emissions	2.73	0.27	0.000	0.056	0.139	0.045	0.006	0.019	4.280	2.742	lb/hr
	11.96	1.16	0.00	0.25	0.61	0.20	0.03	0.08	18.75	12.01	tpy
Rod Packing	0.358	5.65E-03	3.90E-06	1.56E-03	2.86E-03	7.38E-04	6.07E-05	4.25E-04	0.02	0.67	lb/hr
	1.57	2.47E-02	1.71E-05	6.85E-03	1.25E-02	3.23E-03	2.66E-04	1.86E-03	0.11	2.94	tpy
Total:	**3.09**	**0.27**	**2.98E-05**	**5.76E-02**	**1.42E-01**	**4.61E-02**	**6.01E-03**	**1.97E-02**	**4.30**	**3.41**	**lb/hr**
	13.53	**1.19**	**1.31E-04**	**2.52E-01**	**6.20E-01**	**2.02E-01**	**2.63E-02**	**8.64E-02**	**18.85**	**14.95**	**tpy**

Pronto Midstream, LLC - Marlan Gas Plant

Train 1 Enclosed Combustion Device

Emission Unit:	ECD-01
Source Description:	Tank Combustor
Operating Hours:	8760 hrs/yr
DRE:	98%
H2S to SO2 conversion Efficiency:	98%

Emissions, Heat Input, and Flow Rate Calculation

Parameters	Value	Unit	Notes
Condensate Tanks VOC emissions	12.36	lb/hr	BR&E ProMax Flash, Working and Breathing emissions
Condensate Tanks HAP emissions	0.68	lb/hr	BR&E ProMax Flash, Working and Breathing emissions
Condensate Tanks H_2S emissions	4.60E-06	lb/hr	BR&E ProMax Flash, Working and Breathing emissions
PW Tanks VOC emissions	0.93	lb/hr	PR&E ProMax Flash, Working and breathing emissions
PW Tanks HAP emissions	0.13	lb/hr	PR&E ProMax Flash, Working and breathing emissions
PW Tanks H_2S emissions	4.13E-03	lb/hr	PR&E ProMax Flash, Working and breathing emissions
Condensate Loading VOC emissions	22.69	lb/hr	BR&E ProMax Loading emissions
Condensate Loading HAP emissions	1.24	lb/hr	BR&E ProMax Loading emissions
Condensate Loading H_2S emissions	8.36E-06	lb/hr	BR&E ProMax Loading emissions
PW Loading VOC emissions	0.01	lb/hr	BR&E ProMax Produced Water Loading emissions
PW Loading HAP emissions	0.01	lb/hr	BR&E ProMax Produced Water Loading emissions
PW Loading H_2S emissions	0.00	lb/hr	BR&E ProMax Produced Water Loading emissions
Condensate Tanks Heating Value	3539.30	Btu/scf	BR&E ProMax Working and Breathing Streams
PW Tanks Heating Value	723.63	Btu/scf	BR&E ProMax Working and Breathing Streams
Condensate Loading Heating Value	4762.98	Btu/scf	BR&E ProMax Loading Stream
PW Loading Heating Value	253.12	Btu/scf	BR&E ProMax Loading Stream
Condensate Tanks Flow Rate	2.98	scf/hr	BR&E ProMax Working and Breathing Streams
PW Tanks Flow Rate	197.78	scf/hr	BR&E ProMax Working and Breathing Streams
Condensate Loading Emissions Flow Rate	13.58	scf/hr	BR&E ProMax Loading Stream
PW Loading Emissions Flow Rate	1.08	scf/hr	BR&E ProMax Loading Stream
Total Heating Value	1014.97	Btu/scf	Weighted average heating value of all streams
Total Flow	215.42	scf/hr	Combined flow
Total Heating Value	0.22	MMBtu/hr	Btu/scf x scf/hr
	0	%	Safety Factor
Flow Rate with Safety Factor	215.42	scf/hr	Flow with safety factor
	1.89	MMscf/yr	Annual flow rate with safety factor
Heating Rate	0.22	MMBtu/hr	

Pilot	Value	Unit	Notes
	2000	scf/hr	Assumed in order to meet minimum stack velocity
	0	%	Safety Factor
Hourly Volume Flow Rate	2000	scf/hr	Pilot flow with safety factor
	2.00E-03	MMscf/hr	
Natural Gas Heat Value	1,259.00	Btu/scf	Treated Natural Gas
Hourly Heat Rate	2.518	MMBtu/hr	
Annual Flow Rate	17.52	MMscf/yr	

Emission Rates

	NOx[1]	CO[1]	VOC[2]	SO_2[3]	H_2S[2]	PM[1,4]	HAPs[2]	Units	Notes
	100.00	84.00	5.50			7.60		lb/MMscf	AP-42 Chapter 1.4
	123.43	103.68	6.79			9.38		lb/MMscf	Adjusted for Pilot
Emission Factors	99.51	83.59				6.13		lb/MMscf	Adjusted for Combustion Stream
				7.14E-04				lb S/hr	0.25 gr/100 scf
			36.00		4.40E-03	-	2.06	lb/hr	Mass flow from waste streams
Pilot Emissions	0.25	0.21	0.01	1.40E-03	1.52E-05	0.019	-	lb/hr	hourly rate
	1.08	0.91	0.059	6.132E-03	6.648E-05	0.082	-	tpy	8760 hr/yr/2000 lb/ton
Process Emissions	0.021	0.018	0.72	8.12E-03	8.81E-05	1.32E-03	0.04	lb/hr	hourly rate
	0.094	0.079	3.15	0.04	3.86E-04	5.78E-03	0.18	tpy	8760 hr/yr/2000 lb/ton
Total Emissions	**0.27**	**0.23**	**0.73**	**9.52E-03**	**1.03E-04**	**0.020**	**0.04**	lb/hr	Pilot Emissions + Process Emissions
	1.18	**0.99**	**3.21**	**0.04**	**4.52E-04**	**0.088**	**0.18**	tpy	Pilot Emissions + Process Emissions

[1] AP-42 Chapter 1.4, External Combustion Sources

[2] Efficiency for combustion of VOC, H_2S and HAPs in the ECD-01 is: 98%

lb/hr emission rate based on DRE of flare: lb/hr * (1 - DRE)

[3] Fuel sulfur content is assumed to be 0.25 gr/100 Scf

[4] Assumes PM = PM_{10} = $PM_{2.5}$

"-" Indicates emissions of this pollutant are not expected

Surface silt content8

Unpaved Haul Road

Haul Input Information	
Unit(s):	ROAD-01
Description:	Unpaved haul road emissions

Input Data		
Empty vehicle weight[1]	16	tons
Load weight[2]	31.5	tons
Loaded vehicle[3]	47.5	tons
Mean vehicle weight[4]	31.73	tons
Oil & Water Throughput	4720	bbl/day
Loadout volume	1722643	bbl/yr
Vehicle size	180	bbl
Vehicle frequency[5]	27	vehicles/day
Round-trip distance	0.25	mile/trip
Truck Size:	7560	Nominal
Filling Time:	0.75	Nominal
Oil Loadout Spots	1	Assumed
Trip frequency[6]	1.1	trips/hour
Trip frequency[7]	9571	trips/yr
Surface silt content[8]	4.8	%
Annual wet days[9]	70	days/yr
Vehicle miles traveled[10]	0.27	mile/hr
Vehicle miles traveled	2392.8	miles/yr

Emission Factors and Constants			
Parameter	**PM**	**PM_{10}**	**$PM_{2.5}$**
k, lb/VMT[11]	4.9	1.5	0.15
a, lb/VMT[11]	0.70	0.90	0.90
b, lb/VMT[11]	0.45	0.45	0.45
Hourly EF, lb/VMT[12]	7.46	1.90	0.19
Annual EF, lb/VMT[13]	6.03	1.54	0.15

Emission Calculations for Particulate Matter			
PM	**PM_{10}**	**$PM_{2.5}$**	
0.45	0.11	0.011	lb/hr[14]
1.59	0.40	0.040	ton/yr[15]

[1] Empty vehicle weight includes driver and occupants and full fuel load.

[2] Cargo, transported materials, etc.

Load weight (tons) = Liquid Density (lb/ft^3) / (7.48 gal/ft^3) * Truck Size (gal) / (2000 lb/ton)

[3] Loaded vehicle weight = Empty + Load Size

[4] Mean Vehicle weight = (Loaded Weight + Empty Weight) / 2

[5] Vehicles per day = Loadout volume / Truck size

[6] Trips per hour = Total loadout spots / Loading time

[7] Trips per year = Total throughput (bbl/yr) / Truck size (bbl)

[8] AP-42 Table 13.2.2-1

[9] Per NMED Guidance

[10] VMT/hr = Vehicle Miles Traveled per hour= Trips per hour * Segment Length

[11] Table 13.2.2-2, Industrial Roads

[12] AP-42 13.2.2, Equation 1a

[13] AP-42 13.2.2, Equation 2

[14] b/hr = Hourly EF (lb/VMT) * VMT (mile/hr)

[15] ton/yr = Annual EF (lb/VMT) * VMT (mile/hr) * Hours of operation (hr/yr)

Pronto Midstream, LLC - Marlan Gas Plant

Emission Calculation Inputs - Train 2

Site-Wide		
Description	**Value**	**Unit**
Gas Throughput	200	MMscf/day
Condensate Throughput	4,075	bbl/day
Annual Operating Hours	8,760	hr
Daily Operating Hours	24	hr
Site Elevation	3,560	ft MSL

Fuel Gas			
	Value	**Unit**	**Notes**
Fuel Heat Value	1,259	Btu/scf	Treated Gas
Fuel Sulfur Content	0.25	gr S / 100 scf	Engineering Estimate

Storage Tanks			
	Value	**Unit**	**Notes**
Unit:	OILTANK-03 through OILTANK-06		
Description:	750 bbl Condensate Tanks		
Number of Tanks	4		
Volume	750	bbl	
Height (Shell)	24	ft	
Diameter	16	ft	
Capture Efficiency	100%	%	Emissions controlled by ECD-02
Control Efficiency	98%	%	DRE of ECD-02

Thermal Oxidizer			
Parameter	**Value**	**Unit**	**Notes**
Unit:	TO-02		
Description:	Amine Oxidizer		
Pilot Flowrate	7659.21	scf/hr	Based on 20 MMBtu/hr heat rate
Destruction rate efficiency (DRE)	98%	%	Manufacturer Specification

Enclosed Combustion Device			
Parameter	**Value**	**Unit**	**Notes**
Unit:	ECD-02		
Description:	Tank Combustor		
Pilot Flowrate	100	scf/hr	Engineering Estimate
Destruction rate efficiency (DRE)	98%	%	Manufacturer Specification

Process Flare			
Parameter	**Value**	**Unit**	**Notes**
Unit:	FLARE-02		
Description:	Facilty Flare		
Pilot Flowrate	137	scf/hr	From previous application
Destruction rate efficiency (DRE)	98%	%	Manufacturer Specification

Pronto Midstream, LLC - Marlan Gas Plant

Train 2 Amine Unit

Emission Unit: AMINE-02
Source Description: Amine Treating Unit
Operating Hours: 8760 hrs/yr
Throughput: 200 MMSCFD
Regenerator Capture Efficiency: 100%
Flash Gas Capture Efficiency: 100%

Uncontrolled [1]	VOC		H_2S		Total HAP		Benzene		Toluene		Ethylbenzene		Xylene		n-Hexane	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Uncontrolled Flash Tank Overheads	89.55	392.23	1.11E-05	4.85E-05	2.88	12.63	1.91	8.36	0.63	2.75	-	-	0.072	0.32	0.27	1.20
Uncontrolled Regenerator Overheads	37.83	165.69	3.13	13.70	27.16	118.96	20.24	88.65	6.18	27.06	-	-	0.73	3.18	0.016	0.071
Uncontrolled Emissions Per Unit	127.38	557.92	3.13	13.70	30.04	131.59	22.15	97.01	6.81	29.81	-	-	0.80	3.50	0.29	1.27

Controlled	VOC		H_2S		Total HAP		Benzene		Toluene		Ethylbenzene		Xylene		n-Hexane	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Controlled Flash Tank Overheads [2]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Controlled Regenerator Overheads [3]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Controlled Emissions Per Unit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

[1] Emissions estimated using BR&E ProMax.

[2] Emissions from the flash tank are captured and routed to process.

3 Acid gas emissions from the regenerator sent to the TO-02 with a 100% capture efficiency and a 98% DRE. During downtime, emissions are sent to the FLARE-2 with a 98% DRE.

Pronto Midstream, LLC - Marlan Gas Plant

Train 2 Glycol Dehydrator

Emission Unit: DEHY-01
Source Description: TEG Dehydration Unit
Operating Hours: 8760 hrs/yr
Throughput: 200 MMSCFD
Regenerator Capture Efficiency: 100%
Flash Capture Efficiency: 100%

Uncontrolled [1]	VOC		H_2S		Total HAP		Benzene		Toluene		Ethylbenzene		Xylene		n-Hexane	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Uncontrolled Flash Tank Overheads	48.41	212.03	1.03E-06	4.50E-06	5.10	22.32	1.16	5.06	0.45	1.96	0.056	0.25	2.86	12.51	0.58	2.53
Uncontrolled Condenser Overheads	41.05	179.81	2.02E-06	8.83E-06	19.24	84.27	10.88	47.67	3.58	15.69	0.30	1.29	3.58	15.69	0.89	3.92
Uncontrolled Emissions Per Unit	89.46	391.84	3.05E-06	1.33E-05	24.33	106.59	12.04	52.74	4.03	17.65	0.35	1.54	6.44	28.20	1.47	6.45

Controlled [2]	VOC		H_2S		Total HAP		Benzene		Toluene		Ethylbenzene		Xylene		n-Hexane	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Controlled Flash Tank Overheads	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Controlled Regenerator Overheads	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Controlled Emissions Per Unit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

[1] Emissions estimated using BR&E ProMax.

[2] Flash tank and non-condensable BTEX emissions from the condenser are sent to the TO-02 with a 100% capture efficiency and a 98% DRE. During downtime, emissions are sent to the FLARE-2.

Pronto Midstream, LLC - Marlan Gas Plant

Train 2 TEG Dehy Reboiler

Unit:	REB-01	
Heat Input:	3.75	MMBTU/hr
Fuel Heat Value:	1259.00	BTU/scf
Operating Hours:	8,760	hours/yr
Fuel Usage:	2978.55	scf/hr
Fuel Usage:	0.0030	MMscf/hr
H_2S to SO_2 conversion Efficiency:	98%	

Uncontrolled Emissions

	NO_x	CO	VOC	SO_2[1]	H_2S[1]	PM[2]	Units	Notes
Emission Factors	100	84	5.5	-	-	7.6	lb/MMscf	AP-42 Table 1.4-1 & 2
	123.4	103.7	6.8	-	-	9.4	lb/MMscf	Adjusted EF, per footnote a in Tables 1.4-2
	-	-	-	-	0.25	-	gr/100 scf	Fuel Sulfur Content
Emissions	0.37	0.31	0.020	2.08E-03	2.26E-05	0.028	lb/hr[3]	
	1.61	1.35	0.089	0.01	9.90E-05	0.12	tons/year[4]	

HAP Emission Rates

	Formaldehyde	Benzene	Hexane	Toluene	Total HAPs[5]	Units	Notes
Emission Factors	0.075	2.10E-03	1.80	3.40E-03	1.88	lb/MMscf	AP-42 Table 1.4-3
	0.093	2.59E-03	2.22	4.20E-03	2.32	lb/MMscf	Adjusted EF, per footnote a in Table 1.4-3
Emissions	2.76E-04	7.72E-06	6.62E-03	1.25E-05	6.91E-03	lb/hr[3]	lb/ MMscf * hourly natural gas usage
	1.21E-03	3.38E-05	0.029	5.48E-05	0.030	tons/year[4]	lb/ MMscf * annual natural gas usage

[1] SO_2 emissions based on fuel sulfur (gr/100 scf) assuming 98% conversion efficiency of H_2S to SO_2. The remaining 2% is accounted for in H_2S emissions.

SO_2 (lb/hr) = Fuel Sulfur (gr/100 scf) / (7000 g/lb) * [Fuel Usage (scf/hr)] * [SO_2 to S Molar Ratio (64/32)] * (98% conversion efficiency)

H_2S (lb/hr) = H_2S Content (gr H_2S / 100 scf) / (7000 g/lb) * Fuel Consumption (scf/hr) * [H_2S to S Molar Ratio (34/32)] * (1 - 98% conversion efficiency)

[2] Assumes PM_{10} = $PM_{2.5}$

[3] lb/hr emissions calculated using the following methods:

[4] Criteria and HAPs lb/hr = EF (lb/MMscf) * Rating (MMBtu/hr) / Heat value (Btu/scf)

[5] For all pollutant calculations, tons/year = lb/hr * Operating hours * 1ton/2000lb

Pronto Midstream, LLC - Marlan Gas Plant

Train 2 Amine/Cryo Hot Oil Heater

Unit:	HT-04	
Heat Input:	55.00	MMBTU/hr
Fuel Heat Value:	1259	BTU/scf
Operating Hours:	8,760	hours/yr
Fuel Usage:	43685.46	scf/hr
Fuel Usage:	0.044	MMscf/hr
H2S to SO2 conversion Efficiency:	98%	

Uncontrolled Emissions

	NO_x	CO	VOC	SO_2[1]	H_2S[1]	PM[2]	Units	Notes
Emission Factors	50	51.619	5.5	-	-	7.6	lb/MMscf	AP-42 Table 1.4-1 & 2
	61.7	63.7	6.8	-	-	9.4	lb/MMscf	Adjusted EF, per footnote a in Tables 1.4-2
	-	-	-	-	0.25	-	gr/100 scf	Fuel Sulfur Content
Emissions	2.70	2.78	0.30	0.031	3.32E-04	0.41	lb/hr[3]	
	11.81	12.19	1.30	0.13	1.45E-03	1.79	tons/year[4]	

HAP Emission Rates

	Formaldehyde	Benzene	Hexane	Toluene	Total HAPs[5]	Units	Notes
Emission Factors	0.075	2.10E-03	1.80	3.40E-03	1.88	lb/MMscf	AP-42 Table 1.4-3
	0.093	2.59E-03	2.22	4.20E-03	2.32	lb/MMscf	Adjusted EF, per footnote a in Table 1.4-3
Emissions	4.04E-03	1.13E-04	0.097	1.83E-04	0.10	lb/hr[3]	lb/ MMscf * hourly natural gas usage
	0.018	4.96E-04	0.43	8.03E-04	0.44	tons/year[4]	lb/ MMscf * annual natural gas usage

[1] SO_2 emissions based on fuel sulfur (gr/100 scf) assuming 98% conversion efficiency of H_2S to SO_2. The remaining 2% is accounted for in H_2S emissions.

SO_2 (lb/hr) = Fuel Sulfur (gr/100 scf) / (7000 g/lb) * [Fuel Usage (scf/hr)] * [SO_2 to S Molar Ratio (64/32)] * (98% conversion efficiency)

H_2S (lb/hr) = H_2S Content (gr H_2S / 100 scf) / (7000 g/lb) * Fuel Consumption (scf/hr) * [H_2S to S Molar Ratio (34/32)] * (1 - 98% conversion efficiency)

[2] Assumes PM_{10} = $PM_{2.5}$

[3] lb/hr emissions calculated using the following methods:

[4] Criteria and HAPs lb/hr = EF (lb/MMscf) * Rating (MMBtu/hr) / Heat value (Btu/scf)

[5] For all pollutant calculations, tons/year = lb/hr * Operating hours * 1ton/2000lb

Pronto Midstream, LLC - Marlan Gas Plant

Train 2 Trim Reboiler

Unit:	HT-05	
Heat Input:	17.62	MMBTU/hr
Fuel Heat Value:	1259	BTU/scf
Operating Hours:	4,380	hours/yr
Fuel Usage:	13995.23	scf/hr
Fuel Usage:	0.0140	MMscf/hr
H2S to SO2 conversion Efficiency:	98%	

Uncontrolled Emissions

	NO_x	CO	VOC	SO_2[1]	H_2S[1]	PM[2]	Units	Notes
Emission Factors	50	84	5.5	-	-	7.6	lb/MMscf	AP-42 Table 1.4-1 & 2
	61.7	103.7	6.8	-	-	9.4	lb/MMscf	Adjusted EF, per footnote a in Tables 1.4-2
	-	-	-	-	0.25	-	gr/100 scf	Fuel Sulfur Content
Emissions	0.86	1.45	0.095	9.80E-03	1.06E-04	0.13	lb/hr[3]	
	1.89	3.18	0.21	0.021	2.33E-04	0.29	tons/year[4]	

HAP Emission Rates

	Formaldehyde	Benzene	Hexane	Toluene	Total HAPs[5]	Units	Notes
Emission Factors	0.075	2.10E-03	1.80	3.40E-03	1.88	lb/MMscf	AP-42 Table 1.4-3
	0.093	2.59E-03	2.22	4.20E-03	2.32	lb/MMscf	Adjusted EF, per footnote a in Table 1.4-3
Emissions	1.30E-03	3.63E-05	0.031	5.87E-05	0.032	lb/hr[3]	lb/ MMscf * hourly natural gas usage
	2.84E-03	1.59E-04	0.14	2.57E-04	0.071	tons/year[4]	lb/ MMscf * annual natural gas usage

[1] SO_2 emissions based on fuel sulfur (gr/100 scf) assuming 98% conversion efficiency of H_2S to SO_2. The remaining 2% is accounted for in H_2S emissions.

SO_2 (lb/hr) = Fuel Sulfur (gr/100 scf) / (7000 g/lb) * [Fuel Usage (scf/hr)] * [SO_2 to S Molar Ratio (64/32)] * (98% conversion efficiency)

H_2S (lb/hr) = H_2S Content (gr H_2S / 100 scf) / (7000 g/lb) * Fuel Consumption (scf/hr) * [H_2S to S Molar Ratio (34/32)] * (1 - 98% conversion efficiency)

[2] Assumes PM_{10} = $PM_{2.5}$

[3] lb/hr emissions calculated using the following methods:

[4] Criteria and HAPs lb/hr = EF (lb/MMscf) * Rating (MMBtu/hr) / Heat value (Btu/scf)

[5] For all pollutant calculations, tons/year = lb/hr * Operating hours * 1ton/2000lb

Pronto Midstream, LLC - Marlan Gas Plant

Train 2 Mol Sieve Heater

Unit:	HT-06	
Heat Input:	17.95	MMBTU/hr
Fuel Heat Value:	1259	BTU/scf
Operating Hours:	8,760	hours/yr
Fuel Usage:	14257.35	scf/hr
Fuel Usage:	0.0143	MMscf/hr
H2S to SO2 conversion Efficiency:	98%	

Uncontrolled Emissions

	NO_x	CO	VOC	SO_2[1]	H_2S[1]	PM[2]	Units	Notes
Emission Factors	50	84	5.5	-	-	7.6	lb/MMscf	AP-42 Table 1.4-1 & 2
	61.7	103.7	6.8	-	-	9.4	lb/MMscf	Adjusted EF, per footnote a in Tables 1.4-2
	-	-	-	-	0.25	-	gr/100 scf	Fuel Sulfur Content
Emissions	0.88	1.48	0.097	9.98E-03	1.08E-04	0.13	lb/hr[3]	
	3.85	6.47	0.42	0.044	4.74E-04	0.59	tons/year[4]	

HAP Emission Rates

	Formaldehyde	Benzene	Hexane	Toluene	Total HAPs[5]	Units	Notes
Emission Factors	0.075	2.10E-03	1.80	3.40E-03	1.88	lb/MMscf	AP-42 Table 1.4-3
	0.093	2.59E-03	2.22	4.20E-03	2.32	lb/MMscf	Adjusted EF, per footnote a in Table 1.4-3
Emissions	1.32E-03	3.70E-05	0.032	5.98E-05	0.033	lb/hr[3]	lb/ MMscf * hourly natural gas usage
	5.78E-03	1.62E-04	0.14	2.62E-04	0.145	tons/year[4]	lb/ MMscf * annual natural gas usage

[1] SO_2 emissions based on fuel sulfur (gr/100 scf) assuming 98% conversion efficiency of H_2S to SO_2. The remaining 2% is accounted for in H_2S emissions.

SO_2 (lb/hr) = Fuel Sulfur (gr/100 scf) / (7000 g/lb) * [Fuel Usage (scf/hr)] * [SO_2 to S Molar Ratio (64/32)] * (98% conversion efficiency)

H_2S (lb/hr) = H_2S Content (gr H_2S / 100 scf) / (7000 g/lb) * Fuel Consumption (scf/hr) * [H_2S to S Molar Ratio (34/32)] * (1 - 98% conversion efficiency)

[2] Assumes PM_{10} = $PM_{2.5}$

[3] lb/hr emissions calculated using the following methods:

[4] Criteria and HAPs lb/hr = EF (lb/MMscf) * Rating (MMBtu/hr) / Heat value (Btu/scf)

[5] For all pollutant calculations, tons/year = lb/hr * Operating hours * 1ton/2000lb

Pronto Midstream, LLC - Marlan Gas Plant

Train 2 Hot Oil Heater

Unit:	HT-07	
Heat Input:	38.00	MMBTU/hr
Fuel Heat Value:	1259	BTU/scf
Operating Hours:	8,760	hours/yr
Fuel Usage:	30182.68	scf/hr
Fuel Usage:	0.0302	MMscf/hr
H2S to SO2 conversion Efficiency:	98%	

Uncontrolled Emissions

	NO_x	CO	VOC	SO_2[1]	H_2S[1]	PM[2]	Units	Notes
Emission Factors	50	84	5.5	-	-	7.6	lb/MMscf	AP-42 Table 1.4-1 & 2
	61.7	103.7	6.8	-	-	9.4	lb/MMscf	Adjusted EF, per footnote a in Tables 1.4-2
	-	-	-	-	0.25	-	gr/100 scf	Fuel Sulfur Content
Emissions	1.86	3.13	0.205	0.021	2.29E-04	0.28	lb/hr[3]	
	8.16	13.71	0.90	0.093	1.00E-03	1.24	tons/year[4]	

HAP Emission Rates

	Formaldehyde	Benzene	Hexane	Toluene	Total HAPs[5]	Units	Notes
Emission Factors	0.075	2.10E-03	1.80	3.40E-03	1.88	lb/MMscf	AP-42 Table 1.4-3
	0.093	2.59E-03	2.22	4.20E-03	2.32	lb/MMscf	Adjusted EF, per footnote a in Table 1.4-3
Emissions	2.79E-03	7.82E-05	0.067	1.27E-04	0.070	lb/hr[3]	lb/ MMscf * hourly natural gas usage
	0.012	3.43E-04	0.29	5.55E-04	0.307	tons/year[4]	lb/ MMscf * annual natural gas usage

[1] SO_2 emissions based on fuel sulfur (gr/100 scf) assuming 98% conversion efficiency of H_2S to SO_2. The remaining 2% is accounted for in H_2S emissions.

SO_2 (lb/hr) = Fuel Sulfur (gr/100 scf) / (7000 g/lb) * [Fuel Usage (scf/hr)] * [SO_2 to S Molar Ratio (64/32)] * (98% conversion efficiency)

H_2S (lb/hr) = H_2S Content (gr H_2S / 100 scf) / (7000 g/lb) * Fuel Consumption (scf/hr) * [H_2S to S Molar Ratio (34/32)] * (1 - 98% conversion efficiency)

[2] Assumes PM_{10} = $PM_{2.5}$

[3] lb/hr emissions calculated using the following methods:

[4] Criteria and HAPs lb/hr = EF (lb/MMscf) * Rating (MMBtu/hr) / Heat value (Btu/scf)

[5] For all pollutant calculations, tons/year = lb/hr * Operating hours * 1ton/2000lb

Pronto Midstream, LLC - Marlan Gas Plant

Train 2 Condensate Storage Tanks

Emission unit number(s): OILTANK-03 through OILTANK-06
Source description: 750 bbl Condensate Tanks

Annual Operating Hours:	8,760	hr/yr
ECD-02 Downtime Emissions:	825	hr/yr
Capture Efficiency:	100%	
Control:	ECD-02	
Control Efficiency:	98%	
Number of Tanks:	4	
Capacity of Tanks:	750	bbl
Hourly Throughout:	169.80	bbl/hr
Daily Throughput:	4075.15	bbl/d
Annual Throughput:	1,487,429.20	bbl/yr

Condensate Tank Emissions

Component			Uncontrolled Emissions [1]		Controlled Emissions [2]		ECD-02 Downtime Emissions [3]	
	Flash (lb/hr)	Working and Breathing (lb/hr)	Total per Tank (lb/hr)	Total Per Tank (tpy)	Total per Tank (lb/hr)	Total Per Tank (tpy)	Total Emissions from All Tanks (lb/hr)	Total Emissions from All Tanks (tpy)
H2S	-	2.35E-05	5.88E-06	2.58E-05	-	-	2.35E-05	9.70E-06
N2	-	0.022	0.01	0.024	-	-	0.022	0.01
CO2	-	0.00	5.73E-04	0.00	-	-	0.00	9.46E-04
C1	-	0.16	0.041	0.18	-	-	0.16	0.068
C2	-	0.78	0.20	0.86	-	-	0.78	0.32
C3	-	2.60	0.65	2.84	-	-	2.60	1.07
iC4	-	6.03	1.51	6.61	-	-	6.03	2.49
nC4	-	27.70	6.92	30.33	-	-	27.70	11.43
iC5	-	14.67	3.67	16.06	-	-	14.67	6.05
nC5	-	14.38	3.60	15.75	-	-	14.38	5.93
nC6	-	2.84	0.71	3.10	-	-	2.84	1.17
Benzene	-	0.69	0.17	0.75	-	-	0.69	0.28
Ethylbenzene	-	1.37	0.34	1.50	-	-	1.37	0.56
Toluene	-	0.19	0.048	0.21	-	-	0.19	0.079
m-Xylene	-	0.00	4.68E-04	0.00	-	-	0.00	7.73E-04
C7	-	0.092	0.023	0.10	-	-	0.092	0.038
C8	-	-	-	-	-	-	-	-
C9	-	-	-	-	-	-	-	-
C10	-	-	-	-	-	-	-	-
H2O	-	9.29E-07	2.32E-07	1.02E-06	-	-	9.29E-07	3.83E-07
UCARSOL™ AP-814	-	-	-	-	-	-	-	-
Oxygen	-	-	-	-	-	-	-	-
TEG	-	-	-	-	-	-	-	-
VOC	**-**	**70.56**	**17.64**	**77.26**	**-**	**-**	**70.56**	**29.11**
Total HAPS	**-**	**3.81**	**0.95**	**4.17**	**-**	**-**	**3.81**	**1.57**
H_2S	**-**	**2.35E-05**	**5.88E-06**	**2.58E-05**	**-**	**-**	**2.35E-05**	**9.70E-06**

[1] Uncontrolled emissions are calculated using BR&E ProMax.
[2] Emissions from the condensate tanks are sent to the ECD-02 with a 100% capture efficiency and a 98% DRE.
[3] Emissions from the condensate tanks during ECD-02 downtime.

Pronto Midstream, LLC - Marlan Gas Plant

Train 2 Enclosed Combustion Device

Emission Unit:	ECD-02
Source Description:	Tank Combustor
Operating Hours:	8,760 hrs/yr
DRE:	98%
H2S to SO2 conversion Efficiency:	98%

Emissions, Heat Input, and Flow Rate Calculation

Parameters	Value	Unit	Notes
Condensate Tanks VOC emissions	70.56	lb/hr	BR&E ProMax Working and breathing emissions
Condensate Tanks HAP emissions	3.81	lb/hr	BR&E ProMax Working and breathing emissions
Condensate Tanks H_2S emissions	2.35E-05	lb/hr	BR&E ProMax Working and breathing emissions
Condensate Loading VOC emissions	7.75	lb/hr	BR&E ProMax Loading emissions
Condensate Loading HAP emissions	0.37	lb/hr	BR&E ProMax Loading emissions
Condensate Loading H_2S emissions	2.38E-06	lb/hr	BR&E ProMax Loading emissions
Condensate Tanks Heating Value	3502.16	Btu/scf	BR&E ProMax TK Losses to ECD-02 PStream
Condensate Loading Heating Value	3399.39	Btu/scf	BR&E ProMax Loading Stream
Condensate Tanks Flow Rate	431.33	scf/hr	BR&E ProMax TK Losses to ECD-02 PStream
Condensate Loading Flow Rate	69.99	scf/hr	BR&E ProMax Loading Stream
Total Heating Value	3487.81	Btu/scf	Weighted average heating value of all streams
Total Flow	501.32	scf/hr	Combined flow
Total Heating Value	1.75	MMBtu/hr	Btu/scf x scf/hr
	0	%	Safety Factor
Flow Rate with Safety Factor	501.32	scf/hr	Flow with safety factor
	4.39	MMscf/yr	Annual flow rate with safety factor
Heating Rate	1.75	MMBtu/hr	

Pilot	Value	Unit	Notes
	100	scf/hr	Engineering Estimate
Hourly Volume Flow Rate	0	%	Safety Factor
	100	scf/hr	Pilot flow with safety factor
	1.00E-04	MMscf/hr	
Natural Gas Heat Value	1,259.00	Btu/scf	Plant fuel gas
Hourly Heat Rate	0.126	MMBtu/hr	
Annual Flow Rate	0.88	MMscf/yr	

Emission Rates

	NOx[1]	CO[1]	VOC[2]	SO_2[3]	H_2S[2]	PM[1,4]	HAPs[2]	Units	Notes
	100.00	84.00	5.50			7.60		lb/MMscf	AP-42 Chapter 1.4
	123.43	103.68	6.79			9.38		lb/MMscf	Adjusted for Pilot
Emission Factors	341.94	287.23				25.99		lb/MMscf	Adjusted for Combustion Stream
				3.57E-05				lb S/hr	0.25 gr/100 scf
			78.30		2.59E-05	-	4.17	lb/hr	
Pilot Emissions	0.012	0.010	6.79E-04	7.00E-05	7.59E-07	9.38E-04	-	lb/hr	hourly rate
	0.054	0.045	2.97E-03	3.07E-04	3.32E-06	4.11E-03	-	tpy	8760 hr/yr/2000 lb/ton
Process Emissions	0.17	0.14	1.57	4.78E-05	5.18E-07	0.013	0.083	lb/hr	hourly rate
	0.75	0.63	6.86	2.09E-04	2.27E-06	0.057	0.37	tpy	8760 hr/yr/2000 lb/ton
Total Emissions	**0.18**	**0.15**	**1.57**	**1.18E-04**	**1.28E-06**	**0.014**	**0.083**	lb/hr	Pilot Emissions + Process Emissions
	0.80	**0.68**	**6.86**	**5.16E-04**	**5.59E-06**	**0.061**	**0.37**	tpy	Pilot Emissions + Process Emissions

[1] AP-42 Chapter 1.4, External Combustion Sources

[2] Efficiency for combustion of VOC, H_2S and HAPs in the ECD-02 is: 98%
lb/hr emission rate based on DRE of flare: lb/hr * (1 - DRE)

[3] Fuel sulfur content is assumed to be 0.25 gr/100 Scf

[4] Assumes PM = PM_{10} = $PM_{2.5}$

"-" Indicates emissions of this pollutant are not expected

Pronto Midstream, LLC - Marlan Gas Plant

Train 2 Thermal Oxidizer

Emission Unit:	TO-02	
Source Description:	Amine Oxidizer	
Operating Hours:	8,760	hrs/yr
DRE:	98%	
H2S to SO2 conversion Efficiency:	98%	

Emissions, Heat Input, and Flow Rate Calculation

Parameters	Value	Unit	Notes
Amine Regenerator VOC Emissions sent to TO-02	18.91	lb/hr	Regenerator Overheads
Amine Regenerator HAP Emissions sent to TO-02	13.58	lb/hr	Regenerator Overheads
Amine Regenerator H_2S Emissions sent to TO-02	1.56	lb/hr	Regenerator Overheads
Dehy VOC Emissions	89.46	lb/hr	Flash tank and Condenser Overheads
Dehy HAP Emissions	24.33	lb/hr	Flash tank and Condenser Overheads
Dehy H_2S Emissions	3.05E-06	lb/hr	Flash tank and Condenser Overheads
Amine Regenerator Heating Value	8.78	Btu/scf	BR&E ProMax Acid Gas Stream
Dehy Condenser Heating Value	2551.31	Btu/scf	BR&E ProMax Flash Gas Stream
Dehy Flash Tank Heating Value	1687.19	Btu/scf	BR&E ProMax Flash Gas Stream
Amine Regenerator Flow Rate	94594.64	scf/hr	BR&E ProMax Acid Gas Stream
Dehy Condenser Flow Rate	190.87	scf/hr	BR&E ProMax Flash Gas Stream
Dehy Flash Tank Flow Rate	615.95	scf/hr	BR&E ProMax Flash Gas Stream
Total Heating Value	24.71	Btu/scf	Weighted average heating value of all streams
Total Flow	95401.46	scf/hr	Combined flow
Total Heating Value	2.36	MMBtu/hr	Btu/scf x scf/hr
	0	%	Safety Factor
Flow Rate with Safety Factor	95401.46	scf/hr	Flow with safety factor
	835.72	MMscf/yr	Annual flow rate with safety factor
Heating Rate	2.36	MMBtu/hr	

Burner	Value	Unit	Notes
	7659.21	scf/hr	Goal seek for 12 MMBTU/hr unit.
	0	%	Safety Factor
Hourly Volume Flow Rate	7659.21	scf/hr	Burner fuel flow with safety factor
	7.66E-03	MMscf/hr	
Natural Gas Heat Value	1,259.00	Btu/scf	Treated Natural Gas
Hourly Heat Rate	9.64	MMBtu/hr	
Annual Flow Rate	67.09	MMscf/yr	

Emission Rates

	NOx[1]	CO[1]	VOC[2]	SO_2[3]	H_2S[2]	PM[1,4]	HAPs[2]	Units	Notes
Emission Factors	102.00	81.60	5.50			7.60		lb/MMscf	Per 3/28/2024 email from Zeeco
	125.90	100.72	6.79			9.38		lb/MMscf	Adjusted for Burner
	2.47	1.98				0.18		lb/MMscf	Adjusted for Combustion Stream
				2.735E-03				lb S/hr	0.25 gr/100 scf
			108.38		1.56	-	37.91	lb/hr	
Burner Emissions	0.96	0.77	0.052	5.36E-03	5.81E-05	0.072	-	lb/hr	hourly rate
	4.22	3.38	0.23	0.02	2.55E-04	0.31	-	tpy	8760 hr/yr/2000 lb/ton
Process Emissions	0.24	0.19	2.17	2.88	0.03	0.018	0.76	lb/hr	hourly rate
	1.03	0.83	9.49	12.63	0.14	0.08	3.32	tpy	8760 hr/yr/2000 lb/ton
Total Emissions	**1.20**	**0.96**	**2.22**	**2.89**	**0.03**	**0.09**	**0.76**	lb/hr	Burner Emissions + Process Emissions
	5.26	**4.20**	**9.72**	**12.66**	**0.14**	**0.39**	**3.32**	tpy	Burner Emissions + Process Emissions

[1] Efficiency for combustion of VOC, H_2S and HAPs in TO-02 is: 98% lb/hr emission rate based on DRE of flare: lb/hr * (1 - DRE)

[2] Fuel sulfur content is assumed to be 0.25 gr/100 Scf

[3] Mass balance of H_2S is assuming 98% conversion of combusted H_2S to SO_2.

[4] Assumes PM = PM_{10} = $PM_{2.5}$

"-" Indicates emissions of this pollutant are not expected

Pronto Midstream, LLC - Marlan Gas Plant

Train 2 Thermal Oxidizer

Emission Unit:	TO-02
Source Description:	Amine Oxidizer
Operating Hours:	8,760 hrs/yr
DRE:	98%
H2S to SO2 conversion Efficiency:	98%

Emissions, Heat Input, and Flow Rate Calculation

Parameters	Value	Unit	Notes
Amine Regenerator VOC Emissions sent to TO-02	18.91	lb/hr	Regenerator Overheads
Amine Regenerator HAP Emissions sent to TO-02	13.58	lb/hr	Regenerator Overheads
Amine Regenerator H_2S Emissions sent to TO-02	1.56	lb/hr	Regenerator Overheads
Amine Regenerator Heating Value	8.78	Btu/scf	BR&E ProMax Acid Gas Stream
Amine Regenerator Flow Rate	189189.27	scf/hr	BR&E ProMax Acid Gas Stream
Total Heating Value	8.78	Btu/scf	Weighted average heating value of all streams
Total Flow	189189.27	scf/hr	Combined flow
Total Heating Value	1.66	MMBtu/hr	Btu/scf x scf/hr
	0	%	Safety Factor
Flow Rate with Safety Factor	189189.27	scf/hr	Flow with safety factor
	1657.30	MMscf/yr	Annual flow rate with safety factor
Heating Rate	1.66	MMBtu/hr	

Burner	Value	Unit	Notes
	8211.50	scf/hr	Goal seek for 12 MMBTU/hr unit.
Hourly Volume Flow Rate	0	%	Safety Factor
	8211.50	scf/hr	Burner fuel flow with safety factor
	8.21E-03	MMscf/hr	
Natural Gas Heat Value	1,259.00	Btu/scf	Treated Natural Gas
Hourly Heat Rate	10.34	MMBtu/hr	
Annual Flow Rate	71.93	MMscf/yr	

Emission Rates

	NO_x[1]	CO[1]	VOC[2]	SO_2[3]	H_2S[2]	PM[1,4]	HAPs[2]	Units	Notes
Emission Factors	102.00	81.60	5.50			7.60		lb/MMscf	Per 3/28/2024 email from Zeeco
	125.90	100.72	6.79			9.38		lb/MMscf	Adjusted for Burner
	0.88	0.70				0.07		lb/MMscf	Adjusted for Combustion Stream
				2.933E-03				lb S/hr	0.25 gr/100 scf
			18.91		1.56	-	13.58	lb/hr	
Burner Emissions	1.03	0.83	0.056	5.75E-03	6.23E-05	0.077	-	lb/hr	hourly rate
	4.53	3.62	0.24	0.03	2.73E-04	0.34	-	tpy	8760 hr/yr/2000 lb/ton
Process Emissions	0.17	0.13	0.38	2.88	0.03	0.012	0.27	lb/hr	hourly rate
	0.73	0.58	1.66	12.63	0.14	0.05	1.19	tpy	8760 hr/yr/2000 lb/ton
Total Emissions	**1.20**	**0.96**	**0.43**	**2.89**	**0.03**	**0.09**	**0.27**	lb/hr	Burner Emissions + Process Emissions
	5.26	**4.20**	**1.90**	**12.66**	**0.14**	**0.39**	**1.19**	tpy	Burner Emissions + Process Emissions

[1] Efficiency for combustion of VOC, H_2S and HAPs in TO-02 is: 98% lb/hr emission rate based on DRE of flare: lb/hr * (1 - DRE)

[2] Fuel sulfur content is assumed to be 0.25 gr/100 Scf

[3] Mass balance of H_2S is assuming 98% conversion of combusted H_2S to SO_2.

[4] Assumes PM = PM_{10} = $PM_{2.5}$

"-" Indicates emissions of this pollutant are not expected

Pronto Midstream, LLC - Marlan Gas Plant

Train 2 Facility Flare

Emission Unit:	FLARE-02b		
Source Description:	Facility Flare		
Operating Hours:	8760	hr/yr	
TO-2 Downtime Hours:	1,752	hrs/yr	Adjusted to 95 tpy CO
TO-2 Downtime	20.00%	Assumption	
DRE:	98%		
H2S to SO2 conversion Efficiency:	98%		

TO-02 & TO-2a Downtime Emissions, Heat Input, and Flow Rate Calculation

Parameters	Value	Unit	Notes
Amine Regenerator VOC Emissions	37.83	lb/hr	Total Regenerator Vapors
Amine Regenerator HAP Emissions	27.16	lb/hr	Total Regenerator Vapors
Amine Regenerator H_2S Emissions	3.13	lb/hr	Total Regenerator Vapors
Amine Flash Tank VOC Emissions	89.55	lb/hr	Total Flash Tank Vapors
Amine Flash Tank HAP Emissions	2.88	lb/hr	Total Flash Tank Vapors
Amine Flash Tank H2S Emissions	1.11E-05	lb/hr	Total Flash Tank Vapors
Dehy VOC Emissions	89.46	lb/hr	BR&E ProMax Condenser and Flash Tank Streams
Dehy HAP Emissions	24.33	lb/hr	BR&E ProMax Condenser and Flash Tank Streams
Dehy H_2S Emissions	3.05E-06	lb/hr	BR&E ProMax Condenser and Flash Tank Streams
Amine Regenerator Heating Value	8.78	Btu/scf	Total Regenerator Vapors
Amine Flash Tank Heating Value	1212.52	Btu/scf	Total Flash Tank Vapors
Dehy Condenser Heating Value	2551.31	Btu/scf	BR&E ProMax Condenser and Flash Tank Streams
Dehy Flash Tank Heating Value	1687.19	Btu/scf	BR&E ProMax Condenser and Flash Tank Streams
Amine Regenerator Flow Rate sent to TO-02	378378.55	scf/hr	Total Regenerator Vapors
Amine Flash Tank Flow Rate	9509.06	scf/hr	Total Flash Tank Vapors
Dehy Condenser Flow Rate	381.74	scf/hr	BR&E ProMax Condenser and Flash Tank Streams
Dehy Flash Tank Flow Rate	1231.90	scf/hr	BR&E ProMax Condenser and Flash Tank Streams
Amine Regenerator Flow Rate during TO-02 downtime	662.92	MMscf/yr	Annualy
Amine Flash Tank Flow Rate during TO-02 downtime	16.66	MMscf/yr	Annualy
Dehy Condenser Flow Rate during TO-02 downtime	0.6688	MMscf/yr	Annualy
Dehy Flash Tank Flow Rate during TO-02 downtime	2.1583	MMscf/yr	Annualy
Amine Regenerator Heat Rate	3.32	MMBtu/hr	Total Regenerator and Flash Tank Vapors
Amine Flash Tank Heat Rate	11.53	MMBtu/hr	Total Regenerator and Flash Tank Vapors
Dehy Condenser Heat Rate	0.97	MMBtu/hr	BR&E ProMax Condenser and Flash Tank Streams
Dehy Flash Tank Heat Rate	2.08	MMBtu/hr	BR&E ProMax Condenser and Flash Tank Streams
Total Heating Value	45.97	Btu/scf	Weighted average heating value of all streams
Total Flow	389501.25	scf/hr	Combined flow
Total Heating Value	17.91	MMBtu/hr	Btu/scf x scf/hr
	0	%	Safety Factor
Flow Rate with Safety Factor	389501.25	scf/hr	Flow with safety factor
	682.41	MMscf/yr	Annual flow rate with safety factor
Heating Rate	17.91	MMBtu/hr	

Assist Gas	Value	Unit	Notes
	94449.18	scf/hr	
	0	%	Safety Factor
Hourly Volume Flow Rate	94449.18345	scf/hr	Burner flow with safety factor
	9.44E-02	MMscf/hr	
Treated Gas Heat Value	1,040.16	Btu/scf	Engineering Estimate
Hourly Heat Rate	98.24	MMBtu/hr	
Annual Flow Rate	165.47	MMscf/yr	
Total Heating Value To Flare	240	Btu/scf	Acid Gas + Assist Gas

Pilot/Purge	Value	Unit	Notes
	709.93	scf/hr	Pilot + Blanket Gas from V-3022 & V-1017
	25	%	Safety Factor
Hourly Volume Flow Rate	887.41	scf/hr	Burner flow with safety factor
	8.87E-04	MMscf/hr	
Treated Gas Heat Value	1,259.00	Btu/scf	Treated Natural Gas
Hourly Heat Rate	1.12	MMBtu/hr	
Annual Flow Rate	7.77	MMscf/yr	

Emission Rates

	NOx[1]	CO[1]	VOC[2]	SO_2[3]	H_2S[2]	HAPs[2]	Units	Notes
	0.068	0.31					lb/MMBtu	Manufacturer Specifications
			0.66				lb/MMBtu	AP 42 Table 13.5-3
Emission Factors				2.54E-04			lb S/hr	0.25 gr/100 scf
			216.84		3.13	54.38	lb/hr	TO-02 Downtime Emissions
							lb/hr	Assist Gas
Pilot/Blanket Emissions	0.076	0.346	0.74	4.97E-04	5.39E-06	-	lb/hr	hourly rate
	0.33	1.52	3.23	2.18E-03	2.36E-05	-	tpy	8760 hr/yr/2000 lb/ton
Assist Gas Emissions	6.68	30.46	3.10	6.61E-02	7.17E-04	-	lb/hr	hourly rate
	5.85	26.68	2.71	5.79E-02	6.28E-04	-	tpy	1752 hr/yr/2000 lb/ton
TO-02 & TO-02a Downtime Emissions	1.22	5.55	4.34	5.77	0.063	1.09	lb/hr	hourly rate
	1.07	4.86	3.80	5.054	0.05	0.953	tpy	876 hr/yr/2000 lb/ton
Total Emissions	**7.97**	**36.35**	**8.17**	**5.84**	**0.06**	**1.09**	lb/hr	Burner Emissions + Process Emissions
	7.25	**33.06**	**9.74**	**5.11**	**0.06**	**0.95**	tpy	+ TO-02 Downtime Emissions

[1] Flare NO_X and CO emission factors based on manufacture data, see 3/28/2024 email from Zeeco.

[2] Efficiency for combustion of VOC, H_2S and HAPs in the FLARE-02 is: 98% lb/hr emission rate based on DRE of flare: lb/hr * (1 - DRE)

[3] Fuel sulfur content is assumed to be 0.25 gr/100 Scf

"-" Indicates emissions of this pollutant are not expected

Pronto Midstream, LLC - Marlan Gas Plant

Train 2 Facility Flare

Emission Unit:	FLARE-02a	
Source Description:	Facility SSM Flare	
Operating Hours:	8760	hr/yr
TO-2 Downtime Hours:	1,752	hrs/yr
TO-2 Downtime	20.00%	Assumption
DRE:	98%	
H2S to SO2 conversion Efficiency:	98%	

Pilot/Purge	Value	Unit	Notes
Hourly Volume Flow Rate	100.00	scf/hr	Assumed
	25	%	Safety Factor
	125.00	scf/hr	Burner flow with safety factor
	1.25E-04	MMscf/hr	
Treated Gas Heat Value	1,096.70	Btu/scf	Amine Inlet Gas Analysis
Hourly Heat Rate	0.14	MMBtu/hr	
Annual Flow Rate	1.10	MMscf/yr	

Emission Rates

	NO_x[1]	CO[1]	VOC[2]	SO_2[3]	H_2S[2]	HAPs[2]	Units	Notes
Emission Factors	0.138	0.28					lb/MMBtu	Manufacturer Specifications
			0.66				lb/MMBtu	AP 42 Table 13.5-3
				3.57E-05			lb S/hr	0.25 gr/100 scf
Pilot Emissions	0.02	0.04	0.09	7.00E-05	7.59E-07	-		hourly rate
	0.08	0.17	0.40	3.07E-04	3.32E-06	-		8760 hr/yr/2000 lb/ton
SSM Emissions	507.16	1012.48	997.55	1.97	0.02	98.75	lb/hr	hourly rate
	4.30	8.59	6.01	0.01	1.28E-04	0.59	tpy	8760 hr/yr/2000 lb/ton
Total Emissions	**507.18**	**1012.52**	**997.64**	**1.97**	**0.02**	**98.75**	lb/hr	
	4.38	**8.75**	**6.40**	**0.01**	**1.32E-04**	**0.59**	tpy	Pilot + SSM Emissions

[1] Flare NO_x and CO emission factors based on manufacture data, see 3/28/2024 email from Zeeco.

[2] Efficiency for combustion of VOC, H_2S and HAPs in the FLARE-02 is: 98% lb/hr emission rate based on DRE of flare: lb/hr * (1 - DRE)

[3] Fuel sulfur content is assumed to be 0.25 gr/100 Scf

"-" Indicates emissions of this pollutant are not expected

Pronto Midstream, LLC - Marlan Gas Plant

Train 2: Process Flare Greenhouse Gas Emissions

Emission Unit: FLARE-02b

Source Description: Facility Flare

Notes: The flare will combust amine unit vent gas, pilot gas, and assist gas. A weighted averaged of the fuel gas and vent gas analyses are used to determine the greenhouse gas emissions from this unit.

§98.233(n) Flare stack GHG emissions.

Step 1. Calculate contribution of un-combusted CH_4 emissions from the flare combustion gas vent (actual conditions).

$E_{a,CH4}$ (un-combusted) = $V_a * (1- \eta) * X_{CH4}$ *(Equation W-39B)*

where:

$E_{a,CH4}$ = contribution of annual un-combusted CH_4 emissions from flare in cubic feet under actual conditions.

V_a = volume of gas sent to combustion unit during the year (cf)

η = Fraction of gas combusted by a burning flare (or regenerator), default value from Subpart W = 0.98

For gas sent to an unlit flare, η is zero.

	Inlet Gas	Amine Regen	Assist Gas	Dehy Condensa	Dehy Flash	
X_{CH4} = Mole fraction of CH_4 in gas to the flare =	0.73	0.00	0.95	0.11	0.45	(Gas analysis)

Step 2. Calculate contribution of un-combusted CO_2 emissions from the flare combustion gas vent (actual conditions).

$E_{a,CO2} = V_a * X_{CO2}$ *(Equation W-20)*

where:

$E_{a,CO2}$ = contribution of annual un-combusted CO_2 emissions from flare in cubic feet under actual conditions.

V_a = volume of gas sent to combustion unit during the year (cf)

X_{CO2} = Mole fraction of CO_2 in gas to the flare =	0.01	0.92	0.00	0.00	0.01

Step 3. Calculate contribution of combusted CO_2 emissions from the flare combustion gas vent (actual conditions).

$E_{a,CO2}$ (combusted) = $\Sigma (\eta * V_a * Y_j * R_j)$ *(Equation W-21)*

where:

η = Fraction of gas combusted by a burning flare (or regenerator) = 0.98

For gas sent to an unlit flare, η is zero.

V_a = volume of gas sent to combustion unit during the year (cf)

Y_j = mole fraction of gas hydrocarbon constituents j:

Constituent j, Methane =	0.73	0.00	0.95	0.11	0.45
Constituent j, Ethane =	0.12	0.00	0.01	0.15	0.22
Constituent j, Propane =	0.07	0.00	0.00	0.19	0.16
Constituent j, Butane =	0.04	0.00	0.00	0.15	0.08
Constituent j, Pentanes =	0.01	0.00	0.00	0.07	0.02
Constituent j, Hexane Plus =	0.00	0.00	0.00	0.23	0.02

R_j = number of carbon atoms in the gas hydrocarbon constituent j:

Constituent j, Methane =	1
Constituent j, Ethane =	2
Constituent j, Propane =	3
Constituent j, Butane =	4
Constituent j, Pentanes =	5
Constituent j, Hexane Plus =	6

Step 4. Calculate GHG volumetric emissions at standard conditions (scf).

$$E_{s,n} = \frac{E_{a,n} * (459.67 + T_s) * P_a}{(459.67 + T_a) * P_s}$$ *(Equation W-33)*

where:

$E_{s,n}$ = GHG i volumetric emissions at standard temperature and pressure (STP) in cubic feet

$E_{a,n}$ = GHG i volumetric emissions at actual conditions (cf)

T_s = Temperature at standard conditions (F) =	60	F	
T_a = Temperature at actual conditions (F) =	76	F	(Annual Avg Max Temperature for Midland, TX from Western Regional Climate Center)
P_s = Absolute pressure at standard conditions (psia) =	12.73	psia	
P_a = Absolute pressure at actual conditions (psia) =	13.28	psia	Pressure in Midland, TX from TANKS 4.0.9d

Constant = 459.67 (temperature conversion from F to R)

Pronto Midstream, LLC - Marlan Gas Plant

Train 2: Process Flare Greenhouse Gas Emissions

Step 5. Calculate annual CH_4 and CO_2 mass emissions (ton).

$Mass_{s,i} = E_{s,i} * \rho_i * 0.0011023$ *(Equation W-36)*

where:

$Mass_{s,i}$ = GHG i (CO_2, CH_4, or N_2O) mass emissions at standard conditions in tons (tpy)

$E_{s,i}$ = GHG i (CO_2, CH_4, or N_2O) volumetric emissions at standard conditions (cf)

ρ_i = Density of GHG i. Use:

CH_4:	0.0192	kg/ft³ (at 60F and 14.7 psia)
CO_2:	0.0526	kg/ft³ (at 60F and 14.7 psia)

Step 6. Calculate annual N_2O emissions from portable or stationary fuel combustion sources under actual conditions (cf) using Equation W-40.

$Mass_{N2O} = 0.0011023 * Fuel * HHV * EF$ *(Equation W-40)*

where:

$Mass_{N2O}$ = annual N_2O emissions from combustion of a particular type of fuel (tons).

Fuel = mass or volume of the fuel combusted

HHV = high heat value of the fuel

Field gas HHV =	1.038E-03	MMBtu/scf	(Default provided in Subpart W Final Amendment;)
EF =	1.00E-04	kg N_2O/MMBtu	

10^{-3} = conversion factor from kg to metric tons.

Step 7. Calculate total annual emission from flare (regenerator) by summing Equations W-40, W-19, W-20, and W-21.

	Gas Sent to Flare (scf/yr)	CH_4 Un-Combusted, $E_{a,CH4}$ (scf)	CO_2 Un-Combusted, $E_{a,CO2}$ (scf)	CO_2 Combusted, $E_{a,CO2}$ (scf)	CH_4 Un-Combusted, $E_{a,CH4}$ (tpy)	CO_2 Un-Combusted, $E_{a,CO2}$ (tpy)	CO_2 Combusted, $E_{a,CO2}$ (tpy)	N_2O Mass Emissions (tpy)
Inlet Gas	215,663,719	3153823	2,053,119	295,150,896	66.75	119.042	17,113.14	2.47E-02
Amine Regen	662,919,213	26358	610,700,091	3,802,274	0.56	35,408.990	220.46	7.58E-02
Assist Gas	16,659,875	315435	15,771,769	15,696,021	6.68	914.463	910.07	1.91E-03
Dehy Conden	668,805	1474	382	2,130,239	0.03	0.022	123.51	7.65E-05
Dehy Flash	2,158,297	19593	15,726	4,040,007	0.41	0.912	234.24	2.47E-04

Step 8. Calculate CO_2 equivalent[1]

$CO_2e = CO_2 + \{CH_4 \text{ X GWP}\} + \{N_2O \text{ X GWP}\}$

CO_2e =	55,044.85	+	2,083.97	+	27.22
CO_2e =	57,156.04	tons/year			

[1] Global Warming Potentials (GWP) are from Table A-1 of the EPA GHG MRR under 40 CFR Part 98.

CH_4 GWP =	28
N_2O GWP =	265

Pronto Midstream, LLC - Marlan Gas Plant

Train 2 Condensate Loading

Unit:	OILLOAD-02		
Annual Operating Hours[1,2]:	8,760	hr/yr	28,115,220
ECD-02 Downtime Hours:	825	hr/yr	
Truck Size:	180	bbl	
Capture Efficiency:	70%		
Control:	ECD-02		
Control Efficiency:	98%		

	Uncontrolled Emissions [3]		Controlled Emissions [4]		ECD-02 Downtime Emissions [5]	
Component	**lb/hr**	**tpy**	**lb/hr**	**tpy**	**lb/hr**	**tpy**
H2S	3.41E-06	1.49E-05	1.02E-06	4.48E-06	3.41E-06	1.41E-06
N2	0.08	0.357	0.02	0.11	0.08	0.03
CO2	2.61E-04	1.14E-03	7.83E-05	3.43E-04	2.61E-04	1.08E-04
C1	0.10	0.42	0.03	0.13	0.10	0.04
C2	0.08	0.37	0.03	0.11	0.08	0.03
C3	0.39	1.71	0.12	0.51	0.39	0.16
iC4	0.984	4.311	0.30	1.293	0.98	0.41
nC4	4.35	19.04	1.304	5.71	4.35	1.79
iC5	2.35	10.31	0.71	3.09	2.35	0.97
nC5	2.29	10.01	0.69	3.00	2.29	0.94
nC6	0.40	1.77	0.12	0.53	0.40	0.17
Benzene	0.08	0.33	0.02	0.10	0.08	0.03
Ethylbenzene	0.18	0.80	0.05	0.24	0.18	0.08
Toluene	0.03	0.13	8.743E-03	0.04	0.03	0.01
m-Xylene	2.78E-04	1.22E-03	8.35E-05	3.66E-04	2.78E-04	1.15E-04
C7	0.01	0.06	4.313E-03	0.02	0.01	5.93E-03
C8	-	-	-	-	-	-
C9	-	-	-	-	-	-
C10	-	-	-	-	-	-
H2O	1.20E-04	5.27E-04	3.61E-05	1.58E-04	1.20E-04	4.97E-05
UCARSOL™ AP-814	-	-	-	-	-	-
Oxygen	-	-	-	-	-	-
TEG	-	-	-	-	-	-
Total VOC	**11.07**	**48.47**	**3.32**	**14.54**	**11.07**	**4.56**
Total HAP	**0.52**	**2.29**	**0.16**	**0.69**	**0.52**	**0.22**

[1] Annual operating hours = (Daily Condensate Throughput (bbl/day)) * (365 day/yr) / (180 bbl/truck) * (1 hr/truck)

[2] Assumes 1 hour of loading per truck.

[3] Uncontrolled emissions are calculated using BR&E ProMax.

[4] Condensate loading emissions are controlled by the ECD-02 with a 70% capture efficiency and a 98% DRE.

[5] Condensate loading emissions during ECD-02 downtime.

Pronto Midstream, LLC - Marlan Gas Plant

Train 2: Unpaved Haul Road

Haul Input Information	
Unit(s):	ROAD-02
Description:	Unpaved haul road emissions

Input Data		
Empty vehicle weight[1]	16	tons
Load weight[2]	24.1	tons
Loaded vehicle[3]	40.1	tons
Mean vehicle weight[4]	28.07	tons
Oil Throughput	4075	bbl/day
Loadout volume	1487429	bbl/yr
Vehicle size	180	bbl
Vehicle frequency[5]	23	vehicles/day
Round-trip distance	0.21	mile/trip
Truck Size:	7560	Nominal
Filling Time:	0.75	Nominal
Oil Loadout Spots	1	Assumed
Trip frequency[6]	1	trips/hour
Trip frequency[7]	8264	trips/yr
Surface silt content[8]	4.8	%
Annual wet days[9]	70	days/yr
Vehicle miles traveled[10]	0.20	mile/hr
Vehicle miles traveled	1735.4	miles/yr

Emission Factors and Constants			
Parameter	**PM**	**PM_{10}**	**$PM_{2.5}$**
k, lb/VMT[11]	4.9	1.5	0.15
a, lb/VMT[11]	0.70	0.90	0.90
b, lb/VMT[11]	0.45	0.45	0.45
Hourly EF, lb/VMT[12]	7.06	1.80	0.18
Annual EF, lb/VMT[13]	5.70	1.45	0.15

Emission Calculations for Particulate Matter			
PM	**PM_{10}**	**$PM_{2.5}$**	
0.31	0.08	0.008	lb/hr[14]
1.11	0.28	0.028	ton/yr[15]

[1] Empty vehicle weight includes driver and occupants and full fuel load.

[2] Cargo, transported materials, etc.

Load weight (tons) = Liquid Density (lb/ft^3) / (7.48 gal/ft^3) * Truck Size (gal) / (2000 lb/ton)

[3] Loaded vehicle weight = Empty + Load Size

[4] Mean Vehicle weight = (Loaded Weight + Empty Weight) / 2

[5] Vehicles per day = Loadout volume / Truck size

[6] Trips per hour = Total loadout spots / Loading time

[7] Trips per year = Total throughput (bbl/yr) / Truck size (bbl)

[8] AP-42 Table 13.2.2-1

[9] Per NMED Guidance

[10] VMT/hr = Vehicle Miles Traveled per hour= Trips per hour * Segment Length

[11] Table 13.2.2-2, Industrial Roads

[12] AP-42 13.2.2, Equation 1a

[13] AP-42 13.2.2, Equation 2

[14] b/hr = Hourly EF (lb/VMT) * VMT (mile/hr)

[15] ton/yr = Annual EF (lb/VMT) * VMT (mile/hr) * Hours of operation (hr/yr)

Pronto Midstream, LLC - Marlan Gas Plant

Train 2 Fugitives

Unit: FUG-02

Annual Operating Hours: 8,760

Facility-wide Fugitive Emissions Per Piece of Equipment													
Subcomponent		**Emission Factor[1] (lb/hr/comp)**	**VOC Content[2] (wt%)**	**HAP Content[2] (wt%)**	**H_2S Content[2] (wt%)**	**Benzene Content[2] (wt%)**	**n-Hexane Content[2] (wt%)**	**Toluene Content[2] (wt%)**	**Ethylbenzene Content[2] (wt%)**	**Xylene Content[2] (wt%)**	**CO2 Content[2] (wt%)**	**Methane[2] Content (wt%)**	**Subcomponent Counts[3]**
Valves	Gas	9.92E-03	26.07%	0.20%	0.0000%	0.09%	0.02%	0.026%	0.0210%	0.0330%	2.77%	50.62%	385
	Light Oil	5.51E-03	100.00%	18.13%	0.00003%	3.64%	9.77%	3.12%	0.35%	1.25%	0.00%	0.00%	180
	Water/Oil	2.16E-04	0.01%	0.00%	0%	0.00%	0.00%	0.00%	0.00%	0.00%	0.04%	0.04%	180
Flanges	Gas	8.60E-04	26.07%	0.20%	0.0000%	0.09%	0.02%	0.026%	0.0210%	0.0330%	2.77%	50.62%	385
	Light Oil	2.43E-04	100.00%	18.13%	0.00003%	3.638%	9.77%	3.12%	0.35%	1.25%	0.00%	0.00%	180
	Water/Oil	6.39E-06	0.01%	0.00%	0%	0.0027%	0.00%	0.00%	0.000%	0.000%	0.04%	0.04%	180
Connectors	Gas	4.41E-04	26.07%	0.20%	0.0000%	0.09%	0.02%	0.026%	0.0210%	0.0330%	2.77%	50.62%	2375
	Light Oil	4.63E-04	100.00%	18.13%	0.00003%	3.638%	9.77%	3.12%	0.35%	1.25%	0.00%	0.00%	438
	Water/Oil	2.43E-04	0.01%	0.00%	0%	0.0027%	0.00%	0.00%	0.000%	0.000%	0.04%	0.04%	438
Other	Gas	1.94E-02	26.07%	0.20%	0.0000%	0.09%	0.02%	0.026%	0.0210%	0.0330%	2.77%	50.62%	52
	Light Oil	1.65E-02	100.00%	18.13%	0.00003%	3.638%	9.77%	3.12%	0.35%	1.25%	0.00%	0.00%	8
	Water/Oil	3.09E-02	0.01%	0.00%	0%	0.0027%	0.00%	0.00%	0.000%	0.000%	0.04%	0.04%	8
Pump Seals	Gas	5.29E-03	26.07%	0.20%	0.0000%	0.09%	0.02%	0.026%	0.0210%	0.0330%	2.77%	50.62%	0
	Light Oil	2.87E-02	100.00%	18.13%	0.00003%	3.638%	9.77%	3.12%	0.35%	1.25%	0.00%	0.00%	4
	Water/Oil	5.29E-05	0.01%	0.00%	0%	0.0027%	0.00%	0.00%	0.000%	0.000%	0.04%	0.04%	4
Open Ended Lines	Gas	4.41E-03	26.07%	0.20%	0.0000%	0.09%	0.02%	0.026%	0.0210%	0.0330%	2.77%	50.62%	86
	Light Oil	3.09E-03	100.00%	18.13%	0.00003%	3.638%	9.77%	3.12%	0.35%	1.25%	0.00%	0.00%	16
	Water/Oil	5.51E-04	0.01%	0.00%	0%	0.0027%	0.00%	0.00%	0.000%	0.000%	0.04%	0.04%	16
	Hourly Emission Rate (lb/hr)[4]	**3.25**	**0.29**	**2.73E-05**	**0.062**	**0.15**	**0.050**	**6.71E-03**	**2.14E-02**	**23.73**	**3.24**	
	Annual Emission Rate (tpy)[5]	**14.24**	**1.28**	**1.20E-04**	**0.27**	**0.66**	**0.22**	**0.029**	**0.094**	**103.926**	**14.195**	

[1] Emission factors from Table 2-4 of EPA Protocol for Equipment Leak Emission Estimates, 1995.

[2] Weight percent of gas and liquid components from gas and liquid streams generated in a ProMax simulation of this facility.

[3] Component counts are based on estimated design.

[4] Hourly Emissions [lb/hr] = Emissions Factor [lb/hr/component] * Weight Content of Chemical Component [%] * Subcomponent Count.

[5] Annual Emissions [ton/yr] = Hourly Emissions [lb/hr] * Operating Hours [hr/yr] * 1/2000 [ton/lb].

Pronto Midstream, LLC - Marlan Gas Plant

Train 2 Nitrogen Rejection Unit

Emission Unit: NRU-01
Source Description: Nitrogen Rejection Unit (NRU)

NRU Inlet Flow Rate 200 MMSCFD
NRU Vent Flow Rate[1] 3 MMSCFD

Component	MW	NRU Inlet mol %[2]	NRU Vent mol %	NRU Vent lb/year[3]	NRU Vent lb/hr	NRU Vent ton/yr
He	4	0.00%	0.00%	0.00	0.00	0.00
N2	28.01	3.83%	98.89%	79,817,111.72	9,111.54	39,908.56
CO2	44.01	0.01%	0.00%	0.00	0.00	0.00
CH4	16.04	83.44%	1.11%	513,047.84	58.57	256.52
C2[4]	30.07	12.39%	1.00%	866,490.79	98.91	433.25
C3	44.1	0.33%	0.003%	4,193.56	0.479	2.097
iC4	58.12	0.00%	0.00%	0.00	0.00	0.00
nC4	58.12	0.00%	0.00%	0.00	0.00	0.00
iC5	72.15	0.00%	0.00%	0.00	0.00	0.00
nC5	72.15	0.00%	0.00%	0.00	0.00	0.00
C6	86.18	0.00%	0.00%	0.00	0.00	0.00
Total		100.0%	101.0%	81,200,843.9	9,269.5	40,600.4
Total VOC				**4,193.56**	**0.479**	**2.10**

[1] NRU Vent Flow Rate provided by Pronto Midstream
[2] Representative feed analysis
[3] NRU Vent scf x mol % x 365 days x MW lb/lbmol / 380 scf/lbmol = lb/year
[4] NRU Vent C2 mol percent conservatively assumed to be 1% of NRU inlet.

Pronto Midstream, LLC - Marlan Gas Plant

Emission Calculation Inputs - Train 3

Site-Wide		
Description	**Value**	**Unit**
Gas Throughput	301	MMscf/day
Condensate Throughput	3,741	bbl/day
Produced Water Throughput	329	bbl/day
Annual Operating Hours	8,760	hr
Daily Operating Hours	24	hr
Site Elevation	3,560	ft MSL

Fuel Gas			
	Value	**Unit**	**Notes**
Fuel Heat Value	1,259.00	Btu/scf	Treated Gas
Fuel Sulfur Content	0.25	gr S / 100 scf	Engineering Estimate

Thermal Oxidizer			
Parameter	**Value**	**Unit**	**Notes**
Unit:	TO-03		
Description:	Amine Thermal Oxidizer		
Pilot/Purge Flowrate	37603.72	scf/hr	Based on 7.5 MMBtu/hr total heat rate
Destruction rate efficiency (DRE)	98.0%	%	Manufacturer Guarantee

Enclosed Combustion Device			
Parameter	**Value**	**Unit**	**Notes**
Unit:	Spiral X		
Description:	BTEX Enclosed Combustion Device		
Pilot/Purge Flowrate	2000	scf/hr	Assumed to meet minimum stack velocity
Destruction rate efficiency (DRE)	98%	%	Assumption

Process Flare			
Parameter	**Value**	**Unit**	**Notes**
Unit:	FL-3		
Description:	SSM Flare		
Pilot Flowrate	630	scf/hr	
Destruction rate efficiency (DRE)	98%	%	Assumption
Unit:	FL-4		
Description:	SSM Flare		
Pilot Flowrate	110	scf/hr	
Destruction rate efficiency (DRE)	98%	%	Assumption

Pronto Midstream, LLC - Marlan Gas Plant

Train 3 Amine Unit

Emission Unit:	AMINE-03	
Source Description:	Amine Treating Unit	
Operating Hours:	8760	hrs/yr
Throughput:	301	MMSCFD
Regenerator Capture Efficiency:	100%	
Flash and Assist Gas Capture Efficiency:	100%	

Uncontrolled [1]	VOC		H_2S		Total HAP		Benzene		Toluene		Ethylbenzene		Xylene		n-Hexane	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Uncontrolled Flash Tank Overheads	94.60	414.34	0.03	0.129	3.15	13.81	2.11	9.23	0.68	2.98	-	-	0.08	0.34	0.29	1.26
Uncontrolled Regenerator Overheads	45.80	200.58	3.43	15.02	34.16	149.61	25.28	110.72	7.78	34.09	-	-	1.08	4.72	0.02	0.08
Uncontrolled Emissions Per Unit	140.39	614.93	3.46	15.15	37.31	163.42	27.39	119.95	8.46	37.06	-	-	1.16	5.06	0.31	1.35

Controlled	VOC		H_2S		Total HAP		Benzene		Toluene		Ethylbenzene		Xylene		n-Hexane	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Controlled Flash Tank Overheads [2]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Controlled Regenerator Overheads [3]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Controlled Emissions Per Unit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

[1] Emissions estimated using BR&E ProMax.

[2] Emissions from the flash tank are captured and routed to process. Alternatively, when the vapors from the flash tank cannot be routed back to the process, they will be sent to FLARE-03 with a 98% DRE.

[3] Acid gas emissions from the regenerator are sent to the TO-03 with a 100% capture efficiency and a 98% DRE. During TO-03 downtime, emissions are sent to the FLARE-04 with a 98% DRE.

Pronto Midstream, LLC - Marlan Gas Plant

Train 2 Glycol Dehydrator

Emission Unit: DEHY-02
Source Description: TEG Dehydration Unit
Operating Hours: 8760 hrs/yr
Throughput: 301 MMSCFD
Regenerator Capture Efficiency: 100%
Flash Capture Efficiency: 100%

Uncontrolled [1]	VOC		H_2S		Total HAP		Benzene		Toluene		Ethylbenzene		Xylene		n-Hexane	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Uncontrolled Flash Tank Overheads	157.55	690.09	4.07E-03	0.02	5.57	24.42	2.35	10.31	0.83	3.65	-	-	0.102	0.45	2.28	10.00
Uncontrolled Condenser Overheads	75.56	330.94	5.19E-03	0.02	24.69	108.16	17.02	74.56	5.10	22.32	-	-	0.55	2.39	2.03	8.89
Uncontrolled Emissions Per Unit	233.11	1021.03	9.26E-03	0.04	30.27	132.58	19.38	84.87	5.93	25.98	-	-	0.65	2.84	4.31	18.89

Controlled	VOC		H_2S		Total HAP		Benzene		Toluene		Ethylbenzene		Xylene		n-Hexane	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Controlled Flash Tank Overheads [2]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Controlled Regenerator Overheads [2]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Controlled Emissions Per Unit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

[1] Emissions estimated using BR&E ProMax.

[2] Flash tank and non-condensable BTEX emissions from the condenser are sent to the ECD-03 with a 100% capture efficiency and a 98% DRE. During ECD downtime, emissions are sent to the FL-03.

Pronto Midstream, LLC - Marlan Gas Plant

Train 3 Stabilizer Hot Oil Heater

Unit:	HT-08 (H-3780)	
Heat Input:	61.27	MMBTU/hr
Fuel Heat Value:	1259	BTU/scf
Operating Hours:	8,760	hours/yr
Fuel Usage:	48665.61	scf/hr
Fuel Usage:	0.049	MMscf/hr
H2S to SO2 conversion Efficiency:	98%	

Uncontrolled Emissions								
	NO_x	CO	VOC	SO_2[1]	H_2S[1]	PM[2]	Units	Notes
Emission Factors	30	-	-	-	-	-	ppm	20.2.50 NMAC Limit
	46	-	-	-	-	-	lb/lb-mol	Molecular Weight
	-		5.5	-	-	7.6	lb/MMscf	AP-42 Table 1.4-1 & 2
	-		6.8	-	-	9.4	lb/MMscf	Adjusted EF, per footnote a in Tables 1.4-2
		0.041					lb/MMBTU	
	-	-	-	-	0.25	-	gr/100 scf	Fuel Sulfur Content
Emissions	1.79	2.51	0.33	0.034	3.69E-04	0.46	lb/hr[3]	
	7.82	11.00	1.45	0.15	1.62E-03	2.00	tons/year[4]	

HAP Emission Rates							
	Formaldehyde	Benzene	Hexane	Toluene	Total HAPs[5]	Units	Notes
Emission Factors	0.075	2.10E-03	1.80	3.40E-03	1.88	lb/MMscf	AP-42 Table 1.4-3
	0.093	2.59E-03	2.22	4.20E-03	2.32	lb/MMscf	Adjusted EF, per footnote a in Table 1.4-3
Emissions	4.51E-03	1.26E-04	0.11	2.04E-04	0.11	lb/hr[3]	lb/ MMscf * hourly natural gas usage
	0.020	5.53E-04	0.47	8.95E-04	0.49	tons/year[4]	lb/ MMscf * annual natural gas usage

[1] SO_2 emissions based on fuel sulfur (gr/100 scf) assuming 98% conversion efficiency of H_2S to SO_2. The remaining 2% is accounted for in H_2S emissions.

[2] Assumes $PM_{10} = PM_{2.5}$

[3] lb/hr emissions calculated using the following methods:

[4] Criteria and HAPs lb/hr = EF (lb/MMscf) * Rating (MMBtu/hr) / Heat value (Btu/scf)

[5] For all pollutant calculations, tons/year = lb/hr * Operating hours * 1ton/2000lb

[6] PV= nRT = n = PV/RT

P=	1.00	ATM				
Gas Constant, R=	1.31	(atm*ft3)/(lb-mole*K)				
T=	490.00	°F =	328.889	°C =	602.0389	K

Greenhouse Emissions						
	CO_2	CH_4	N_2O	CO_{2e}	Units	Notes
Emission Factors	1	28	265	-	-	GWP
	53.0600	1.00E-03	0.0001	-	kg/MMBtu	40 CFR 98 Subpart C, Table C-1 & C-2
Total Emissions	3,250.99	0.061	6.13E-03	3,254.33	kg/hr	kg/ MMBtu * hourly natural gas heat input
	31,392.00	0.59	0.059	31,424.25	ton/yr	kg/hr * 8760 hr/hr * (mton/1000 kg) * (1.1023 ton/mton)

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Train 3 Amine Hot Oil Heater

Unit:	HT-09 (H-3710)	
Heat Input:	86.00	MMBTU/hr
Fuel Heat Value:	1259	BTU/scf
Operating Hours:	8,760	hours/yr
Fuel Usage:	68308.18	scf/hr
Fuel Usage:	0.068	MMscf/hr
H2S to SO2 conversion Efficiency:	98%	

Uncontrolled Emissions								
	NO_x	CO	VOC	SO_2[1]	H_2S[1]	PM^2	Units	Notes
Emission Factors	30	-	-	-	-	-	ppm	20.2.50 NMAC Limit
	46						lb/lb-mol	Molecular Weight
	-		5.5	-	-	7.6	lb/MMscf	AP-42 Table 1.4-1 & 2
	-		6.8	-	-	9.4	lb/MMscf	Adjusted EF, per footnote a in Tables 1.4-2
		0.041					lb/MMBTU	
	-	-	-	-	0.25	-	gr/100 scf	Fuel Sulfur Content
Emissions	2.51	3.53	0.46	0.05	5.18E-04	0.64	lb/hr[3]	
	10.97	15.44	2.03	0.21	2.27E-03	2.81	tons/year[4]	

HAP Emission Rates							
	Formaldehyde	Benzene	Hexane	Toluene	Total HAPs[5]	Units	Notes
Emission Factors	0.075	2.10E-03	1.80	3.40E-03	1.88	lb/MMscf	AP-42 Table 1.4-3
	0.093	2.59E-03	2.22	4.20E-03	2.32	lb/MMscf	Adjusted EF, per footnote a in Table 1.4-3
Emissions	6.32E-03	1.77E-04	0.152	2.87E-04	0.16	lb/hr[3]	lb/ MMscf * hourly natural gas usage
	0.028	7.76E-04	0.66	1.26E-03	0.69	tons/year[4]	lb/ MMscf * annual natural gas usage

[1] SO_2 emissions based on fuel sulfur (gr/100 scf) assuming 98% conversion efficiency of H_2S to SO_2. The remaining 2% is accounted for in H_2S emissions.

[2] Assumes $PM_{10} = PM_{2.5}$

[3] lb/hr emissions calculated using the following methods:

[4] Criteria and HAPs lb/hr = EF (lb/MMscf) * Rating (MMBtu/hr) / Heat value (Btu/scf)

[5] For all pollutant calculations, tons/year = lb/hr * Operating hours * 1ton/2000lb

[6] PV= nRT = n = PV/RT

P=	1.00	ATM				
Gas Constant, R=	1.31	(atm*ft3)/(lb-mole*K)				
T=	493.00	°F =	328.889	°C =	602.0389	K

Greenhouse Emissions						
	CO_2	CH_4	N_2O	CO_{2e}	Units	Notes
Emission Factors	1	28	265	-	-	GWP
	53.0600	1.00E-03	0.0001	-	kg/MMBtu	40 CFR 98 Subpart C, Table C-1 & C-2
Total Emissions	4,563.16	0.086	8.60E-03	4,567.85	kg/hr	kg/ MMBtu * hourly natural gas heat input
	44,062.55	0.83	0.083	44,107.81	ton/yr	kg/hr * 8760 hr/hr * (mton/1000 kg) * (1.1023 ton/mton

Pronto Midstream, LLC - Marlan Gas Plant

Train 3 Amine Hot Oil Heater

Unit:	HT-10 (H-3711)	
Heat Input:	86.00	MMBTU/hr
Fuel Heat Value:	1259	BTU/scf
Operating Hours:	8,760	hours/yr
Fuel Usage:	68308.18	scf/hr
Fuel Usage:	0.068	MMscf/hr
H2S to SO2 conversion Efficiency:	98%	

Uncontrolled Emissions

	NO_x	CO	VOC	SO_2[1]	H_2S[1]	PM[2]	Units	Notes
Emission Factors	30	-	-	-	-	-	ppm	20.2.50 NMAC Limit
	46						lb/lb-mol	Molecular Weight
	-		5.5	-	-	7.6	lb/MMscf	AP-42 Table 1.4-1 & 2
	-		6.8	-	-	9.4	lb/MMscf	Adjusted EF, per footnote a in Tables 1.4-2
		0.041					lb/MMBTU	
	-	-	-	-	0.25	-	gr/100 scf	Fuel Sulfur Content
Emissions	2.51	3.53	0.46	0.05	5.18E-04	0.64	lb/hr[3]	
	10.97	15.44	2.03	0.21	2.27E-03	2.81	tons/year[4]	

HAP Emission Rates

	Formaldehyde	Benzene	Hexane	Toluene	Total HAPs[5]	Units	Notes
Emission Factors	0.075	2.10E-03	1.80	3.40E-03	1.88	lb/MMscf	AP-42 Table 1.4-3
	0.093	2.59E-03	2.22	4.20E-03	2.32	lb/MMscf	Adjusted EF, per footnote a in Table 1.4-3
Emissions	6.32E-03	1.77E-04	0.152	2.87E-04	0.16	lb/hr[3]	lb/ MMscf * hourly natural gas usage
	0.028	7.76E-04	0.66	1.26E-03	0.69	tons/year[4]	lb/ MMscf * annual natural gas usage

[1] SO_2 emissions based on fuel sulfur (gr/100 scf) assuming 98% conversion efficiency of H_2S to SO_2. The remaining 2% is accounted for in H_2S emissions.

[2] Assumes $PM_{10} = PM_{2.5}$

[3] lb/hr emissions calculated using the following methods:

[4] Criteria and HAPs lb/hr = EF (lb/MMscf) * Rating (MMBtu/hr) / Heat value (Btu/scf)

[5] For all pollutant calculations, tons/year = lb/hr * Operating hours * 1ton/2000lb

[6] PV= nRT = n = PV/RT

P=	1.00	ATM				
Gas Constant, R=	1.31	(atm*ft3)/(lb-mole*K)				
T=	493.00	°F =	328.889	°C =	602.0389	K

Greenhouse Emissions

	CO_2	CH_4	N_2O	CO_{2e}	Units	Notes
Emission Factors	1	28	265	-	-	GWP
	53.0600	1.00E-03	0.0001	-	kg/MMBtu	40 CFR 98 Subpart C, Table C-1 & C-2
Total Emissions	4,563.16	0.086	8.60E-03	4,567.85	kg/hr	kg/ MMBtu * hourly natural gas heat input
	44,062.55	0.83	0.083	44,107.81	ton/yr	kg/hr * 8760 hr/hr * (mton/1000 kg) * (1.1023 ton/mton

Pronto Midstream, LLC - Marlan Gas Plant

Train 3 Molecular Sieve Regenerator Heater

Unit:	HT-11 (H-3720)	
Heat Input:	15.92	MMBTU/hr
Fuel Heat Value:	1259.00	BTU/scf
Operating Hours:	8,760	hours/yr
Fuel Usage:	12644.96	scf/hr
Fuel Usage:	0.013	MMscf/hr
H2S to SO2 conversion Efficiency:	98%	

Uncontrolled Emissions

	NO_x	CO	VOC	SO_2[1]	H_2S[1]	PM[2]	Units	Notes
Emission Factors	50		5.5	-	-	7.6	lb/MMscf	AP-42 Table 1.4-1 & 2
	61.72		6.79	-	-	9.38	lb/MMscf	Adjusted EF, per footnote a in Tables 1.4-2
		0.041					lb/MMBTU	
	-	-	-	-	0.25	-	gr/100 scf	Fuel Sulfur Content
Emissions	0.78	0.65	0.09	0.01	9.60E-05	0.12	lb/hr[3]	
	3.42	2.86	0.38	0.04	4.20E-04	0.52	tons/year[4]	

HAP Emission Rates

	Formaldehyde	Benzene	Hexane	Toluene	Total HAPs[5]	Units	Notes
Emission Factors	0.075	2.10E-03	1.80	3.40E-03	1.88	lb/MMscf	AP-42 Table 1.4-3
	0.093	2.59E-03	2.22	4.20E-03	2.32	lb/MMscf	Adjusted EF, per footnote a in Table 1.4-3
Emissions	1.17E-03	3.28E-05	0.028	5.31E-05	0.029	lb/hr[3]	lb/ MMscf * hourly natural gas usage
	0.005	1.44E-04	0.12	2.32E-04	0.13	tons/year[4]	lb/ MMscf * annual natural gas usage

[1] SO_2 emissions based on fuel sulfur (gr/100 scf) assuming 98% conversion efficiency of H_2S to SO_2. The remaining 2% is accounted for in H_2S emissions.

[2] Assumes PM_{10} = $PM_{2.5}$

[3] lb/hr emissions calculated using the following methods:

[4] Criteria and HAPs lb/hr = EF (lb/MMscf) * Rating (MMBtu/hr) / Heat value (Btu/scf)

[5] For all pollutant calculations, tons/year = lb/hr * Operating hours * 1ton/2000lb

Greenhouse Emissions

	CO_2	CH_4	N_2O	CO_{2e}	Units	Notes
Emission Factors	1	28	265	-	-	GWP
	53.0600	1.00E-03	0.0001	-	kg/MMBtu	40 CFR 98 Subpart C, Table C-1 & C-2
Total Emissions	844.72	0.016	1.59E-03	845.58	kg/hr	kg/ MMBtu * hourly natural gas heat input
	8,156.69	0.15	0.015	8,165.07	ton/yr	kg/hr * 8760 hr/hr * (mton/1000 kg) * (1.1023 ton/mton

Pronto Midstream, LLC - Marlan Gas Plant

Train 3 Cryo HMO Heater

Unit:	HT-12 (H-3730)	
Heat Input:	36.39	MMBTU/hr
Fuel Heat Value:	1259	BTU/scf
Operating Hours:	4,380	hours/yr
Fuel Usage:	28903.89	scf/hr
Fuel Usage:	0.029	MMscf/hr
H2S to SO2 conversion Efficiency:	98%	

Uncontrolled Emissions

	NO_x	CO	VOC	SO_2[1]	H_2S[1]	PM[2]	Units	Notes
Emission Factors	30	-	-	-	-	-	ppm	20.2.50 NMAC Limit
	46						lb/lb-mol	Molecular Weight
	-		5.5	-	-	7.6	lb/MMscf	AP-42 Table 1.4-1 & 2
	-		6.8	-	-	9.4	lb/MMscf	Adjusted EF, per footnote a in Tables 1.4-2
		0.041					lb/MMBTU	
	-	-	-	-	0.25	-	gr/100 scf	Fuel Sulfur Content
Emissions	1.06	1.49	0.20	0.020	2.19E-04	0.27	lb/hr[3]	
	2.32	3.27	0.43	0.044	4.80E-04	0.59	tons/year[4]	

HAP Emission Rates

	Formaldehyde	Benzene	Hexane	Toluene	Total HAPs[5]	Units	Notes
Emission Factors	0.075	2.10E-03	1.80	3.40E-03	1.88	lb/MMscf	AP-42 Table 1.4-3
	0.093	2.59E-03	2.22	4.20E-03	2.32	lb/MMscf	Adjusted EF, per footnote a in Table 1.4-3
Emissions	2.68E-03	7.49E-05	0.064	1.21E-04	0.067	lb/hr[3]	lb/ MMscf * hourly natural gas usage
	0.006	3.28E-04	0.28	5.31E-04	0.15	tons/year[4]	lb/ MMscf * annual natural gas usage

[1] SO_2 emissions based on fuel sulfur (gr/100 scf) assuming 98% conversion efficiency of H_2S to SO_2. The remaining 2% is accounted for in H_2S emissions.

[2] Assumes $PM_{10} = PM_{2.5}$

[3] lb/hr emissions calculated using the following methods:

[4] Criteria and HAPs lb/hr = EF (lb/MMscf) * Rating (MMBtu/hr) / Heat value (Btu/scf)

[5] For all pollutant calculations, tons/year = lb/hr * Operating hours * 1ton/2000lb

[6] PV= nRT = n = PV/RT

P=	1.00	ATM				
Gas Constant, R=	1.31	(atm*ft3)/(lb-mole*K)				
T=	449.00	°F =	328.889	°C =	602.0389	K

Greenhouse Emissions

	CO_2	CH_4	N_2O	CO_{2e}	Units	Notes
Emission Factors	1	28	265	-	-	GWP
	53.0600	1.00E-03	0.0001	-	kg/MMBtu	40 CFR 98 Subpart C, Table C-1 & C-2
Total Emissions	1,930.85	0.036	3.64E-03	1,932.84	kg/hr	kg/ MMBtu * hourly natural gas heat input
	9,322.30	0.18	0.018	9,331.88	ton/yr	kg/hr * 8760 hr/hr * (mton/1000 kg) * (1.1023 ton/mton

Pronto Midstream, LLC - Marlan Gas Plant

Train 3 Dehydration Reboiler

Unit:	REB-02	
Heat Input:	5	MMBTU/hr
Fuel Heat Value:	1259.00	BTU/scf
Operating Hours:	8,760	hours/yr
Fuel Usage:	3971.41	scf/hr
Fuel Usage:	0.0040	MMscf/hr
H2S to SO2 conversion Efficiency:	98%	

Uncontrolled Emissions								
	NO_x	**CO**	**VOC**	**SO_2[1]**	**H_2S[1]**	**PM[2]**	**Units**	Notes
Emission Factors	100	84	5.5	-	-	7.6	lb/MMscf	AP-42 Table 1.4-1 & 2
	123.4	103.7	6.8	-	-	9.4	lb/MMscf	Adjusted EF, per footnote a in Tables 1.4-2
	-	-	-	-	0.25	-	gr/100 scf	Fuel Sulfur Content
Emissions	0.49	0.41	0.027	2.78E-03	3.01E-05	0.037	lb/hr[3]	
	2.15	1.80	0.12	1.22E-02	1.32E-04	0.16	tons/year[4]	

HAP Emission Rates							
	Formaldehyde	**Benzene**	**Hexane**	**Toluene**	**Total HAPs[5]**	**Units**	Notes
Emission Factors	0.075	2.10E-03	1.80	3.40E-03	1.88	lb/MMscf	AP-42 Table 1.4-3
	0.09	2.59E-03	2.22	4.20E-03	2.32	lb/MMscf	Adjusted EF, per footnote a in Table 1.4-3
Emissions	3.68E-04	1.03E-05	8.82E-03	1.67E-05	9.22E-03	lb/hr[3]	lb/ MMscf * hourly natural gas usage
	1.61E-03	4.51E-05	0.039	7.30E-05	0.040	tons/year[4]	lb/ MMscf * annual natural gas usage

[1] SO_2 emissions based on fuel sulfur (gr/100 scf) assuming 98% conversion efficiency of H_2S to SO_2. The remaining 2% is accounted for in H_2S emissions.

[2] Assumes $PM_{10} = PM_{2.5}$

[3] lb/hr emissions calculated using the following methods:

[4] Criteria and HAPs lb/hr = EF (lb/MMscf) * Rating (MMBtu/hr) / Heat value (Btu/scf)

[5] For all pollutant calculations, tons/year = lb/hr * Operating hours * 1ton/2000lb

Greenhouse Emissions						
	CO_2	**CH_4**	**N_2O**	**CO_{2e}**	**Units**	**Notes**
Emission Factors	1	28	265	-	-	GWP
	53.0600	1.00E-03	0.0001	-	kg/MMBtu	40 CFR 98 Subpart C, Table C-1 & C-2
Total Emissions	265.30	5.00E-03	5.00E-04	265.57	kg/hr	kg/ MMBtu * hourly natural gas heat input
	2,561.78	0.048	4.83E-03	2,564.41	ton/yr	kg/hr * 8760 hr/hr * (mton/1000 kg) * (1.1023 ton/mton

Pronto Midstream, LLC - Marlan Gas Plant

Train 3 Enclosed Combustion Device

Emission Unit: ECD-03
Source Description: BTEX Combustor
Operating Hours: 8760 hrs/yr
DRE: 98%

Emissions, Heat Input, and Flow Rate Calculation

Parameters	Value	Unit	Notes
Dehy BTEX VOC emissions	75.56	lb/hr	BR&E ProMax BTEX Stream
Dehy BTEX HAP emissions	24.69	lb/hr	BR&E ProMax BTEX Stream
Dehy BTEX H_2S emissions	0.005	lb/hr	BR&E ProMax BTEX Stream
Dehy BTEX Heating Value	2367.66	Btu/scf	BR&E ProMax BTEX Stream
Dehy BTEX Flow Rate	764.94	scf/hr	BR&E ProMax BTEX Stream
Total Heating Value	2367.66	Btu/scf	
Total Flow	764.94	scf/hr	
Total Heating Value	1.81	MMBtu/hr	Btu/scf x scf/hr
	0	%	Safety Factor
Flow Rate with Safety Factor	764.94	scf/hr	Flow with safety factor
	6.70	MMscf/yr	Annual flow rate with safety factor
Heating Rate	1.81	MMBtu/hr	

Pilot	Value	Unit	Notes
	2000	scf/hr	Assumed in order to meet minimum stack velocity
Hourly Volume Flow Rate	0	%	Safety Factor
	2000	scf/hr	Pilot flow with safety factor
	2.00E-03	MMscf/hr	
Natural Gas Heat Value	1,259.00	Btu/scf	Treated Natural Gas
Hourly Heat Rate	2.518	MMBtu/hr	
Annual Flow Rate	17.52	MMscf/yr	

Emission Rates

	NO_x[1]	CO[1]	VOC[2]	SO_2[3]	H_2S[2]	PM[1,4]	HAPs[2]	Units	Notes
Emission Factors	100.00	84.00	5.50			7.60		lb/MMscf	AP-42 Chapter 1.4
	123.43	103.68	6.79			9.38		lb/MMscf	Adjusted for Pilot
	232.12	194.98				14.29		lb/MMscf	Adjusted for Combustion Stream
				2.00	0.25			gr/100 scf	
			75.56		5.19E-03		24.69	lb/hr	
Pilot Emissions	0.25	0.21	0.014	5.27E-05	1.43E-05	0.019	-	lb/hr	hourly rate
	1.08	0.91	0.059	2.31E-04	6.26E-05	0.082	-	tpy	8760 hr/yr/2000 lb/ton
Process Emissions	0.18	0.15	1.51	9.57E-03	5.19E-03	0.011	0.49	lb/hr	hourly rate
	0.78	0.65	6.62	0.04	0.02	0.048	2.16	tpy	8760 hr/yr/2000 lb/ton
Total Emissions	**0.42**	**0.36**	**1.52**	**9.62E-03**	**5.20E-03**	**0.030**	**0.49**	lb/hr	Pilot Emissions + Process Emissions
	1.86	**1.56**	**6.68**	**0.042**	**0.02**	**0.13**	**2.16**	tpy	Pilot Emissions + Process Emissions

[1] AP-42 Chapter 1.4, External Combustion Sources

[2] Efficiency for combustion of VOC, H_2S and HAPs in the ECD-03 is: 98%
lb/hr emission rate based on DRE of flare: lb/hr * (1 - DRE)

[3] Pilot SO_2 emissions are based on fuel consumption, fuel sulfur content, fuel H_2S content, and DRE. Process SO_2 emissions are based on the combustion of H_2S. It is assumed 98% of combusted H_2S is converted to SO_2:
Pilot SO_2 (lb/hr) = [Sulfur Content (gr S / 100 scf) * SO2 to Sulfur Molar Ratio (64/32) + H_2S Content (gr H_2S / 100 scf) * DRE (%) * SO2 to H_2S Molar Ratio (64/34)] / (7000 g/lb) * Fuel Consumption (scf/hr)
Pilot H_2S (lb/hr) = H_2S Content (gr H_2S / 100 scf) / (7000 g/lb) * Fuel Consumption (scf/hr) * (1 - DRE (%))

[4] Assumes PM = PM_{10} = $PM_{2.5}$

"-" Indicates emissions of this pollutant are not expected

Pronto Midstream, LLC - Marlan Gas Plant

Train 3 Facility Flare

Emission Unit:	FLARE-03	
Source Description:	Facility Flare	
Operating Hours:	8760	hr/yr
Amine Flash Emissions routed to Flare	5.00%	
	438	hrs/yr
DRE:	98%	

Amine Flash Emissions, Heat Input, and Flow Rate Calculation

Parameters	Value	Unit	Notes
Amine Flash VOC Emissions	94.60	lb/hr	Total Flash Tank Vapors
Amine Flash HAP Emissions	3.15	lb/hr	Total Flash Tank Vapors
Amine Flash H_2S Emissions	2.94E-02	lb/hr	Total Flash Tank Vapors
Amine Flash Tank Heating Value	961.03	Btu/scf	Total Flash Tank Vapors
Amine Flash Tank Flow Rate	13288.32	scf/hr	Total Flash Tank Vapors
Amine Flash Tank Flow Rate	116.41	MMscf/yr	Annualy
Amine Flash Tank Heat Rate	12.77	MMBtu/hr	Total Regenerator and Flash Tank Vapors
Total Heating Value	961.03	Btu/scf	Weighted average heating value of all streams
Total Flow	13288.32	scf/hr	Combined flow
Total Heating Value	12.77	MMBtu/hr	Btu/scf x scf/hr
	0	%	Safety Factor
Flow Rate with Safety Factor	13288.32	scf/hr	Flow with safety factor
	5.82	MMscf/yr	Annual flow rate with safety factor
Heating Rate	12.77	MMBtu/hr	

Pilot	Value	Unit	Notes
	195	scf/hr	From Main Flare Pilot Data
Hourly Volume Flow Rate	0	%	Safety Factor
	195	scf/hr	Burner flow with safety factor
	1.95E-04	MMscf/hr	
Treated Gas Heat Value	1,259.00	Btu/scf	Plant Fuel Gas
Hourly Heat Rate	0.25	MMBtu/hr	
Annual Flow Rate	1.71	MMscf/yr	

Emission Rates

	NO_X[1]	CO[1]	VOC[2]	SO_2[3]	H_2S[2]	HAPs[2]	Units	Notes
Emission Factors	0.064	0.31	0.66				lb/MMBtu	Per 3/28/2024 email from Zeeco
				2.00	0.25		gr/100 scf	
			94.60		0.03	3.15	lb/hr	Process Emissions
Pilot Emissions	0.016	0.076	0.16	3.76	-	-	lb/hr	hourly rate
	0.07	0.33	0.71	16.49	-	-	tpy	8760 hr/yr/2000 lb/ton
SSM Emissions	767.56	1532.34	1313.09	0.04	0.04	19.20	lb/hr	hourly rate
	6.48	12.93	7.90	0.02	2.16E-04	0.12	tpy	Annual rate
Amine Flash Emissions	0.82	3.96	1.89	0.05	5.87E-04	0.06	lb/hr	hourly rate
	0.18	0.87	0.41	0.012	1.29E-04	0.01	tpy	438 hr/yr/2000 lb/ton
Total Emissions	**768.39**	**1536.37**	**1315.14**	**3.82**	**5.87E-04**	**19.26**	lb/hr	Burner Emissions + Process Emissions
	6.73	**14.13**	**9.02**	**16.50**	**1.29E-04**	**0.13**	tpy	

[1] Flare NO_X and CO emission factors based on manufacture data, see 3/28/2024 email from Zeeco.

[2] Efficiency for combustion of VOC, H_2S and HAPs in the FLARE-02 is: 98% lb/hr emission rate based on DRE of flare: lb/hr * (1 - DRE)

[3] Pilot SO_2 emissions are based on fuel consumption, fuel sulfur content, fuel H_2S content, and DRE. Process SO_2 emissions are based on the combustion of H_2S. It is assumed 98% of combusted H_2S is converted to SO_2:
Pilot SO_2 (lb/hr) = [Sulfur Content (gr S / 100 scf) * SO2 to Sulfur Molar Ratio (64/32) + H_2S Content (gr H_2S / 100 scf) * DRE (%) * SO2 to H_2S Molar Ratio (64/34)] / (7000 g/lb) * Fuel Consumption (scf/hr)
Pilot H_2S (lb/hr) = H_2S Content (gr H_2S / 100 scf) / (7000 g/lb) * Fuel Consumption (scf/hr) * (1 - DRE (%))

"-" Indicates emissions of this pollutant are not expected

Pronto Midstream, LLC - Marlan Gas Plant

Train 3: Process Flare Greenhouse Gas Emissions

Emission Unit: FLARE-03

Source Description: Facility Flare

Notes: The flare will combust amine unit vent gas, pilot gas, and assist gas. A weighted averaged of the fuel gas and vent gas analyses are used to determine the greenhouse gas emissions from this unit.

§98.233(n) Flare stack GHG emissions.

Step 1. Calculate contribution of un-combusted CH_4 emissions from the flare combustion gas vent (actual conditions).

$E_{a,CH4}$ (un-combusted) = V_a * (1- η)* X_{CH4} *(Equation W-39B)*

where:

$E_{a,CH4}$ = contribution of annual un-combusted CH_4 emissions from flare in cubic feet under actual conditions.

V_a = volume of gas sent to combustion unit during the year (cf)

η = Fraction of gas combusted by a burning flare (or regenerator), default value from Subpart W = 0.98

For gas sent to an unlit flare, η is zero.

	Pilot	**Amine Flash**	**SSM**
X_{CH4} = Mole fraction of CH_4 in gas to the flare =	0.73	0.59	0.69

Step 2. Calculate contribution of un-combusted CO_2 emissions from the flare combustion gas vent (actual conditions).

$E_{a,CO2}$ = V_a * X_{CO2} *(Equation W-20)*

where:

$E_{a,CO2}$ = contribution of annual un-combusted CO_2 emissions from flare in cubic feet under actual conditions.

V_a = volume of gas sent to combustion unit during the year (cf)

X_{CO2} = Mole fraction of CO_2 in gas to the flare =	0.003	0.190	0.040

Step 3. Calculate contribution of combusted CO_2 emissions from the flare combustion gas vent (actual conditions).

$E_{a,CO2}$ (combusted) = Σ (η * V_a * Y_j * R_j) *(Equation W-21)*

where:

η = Fraction of gas combusted by a burning flare (or regenerator) =		0.98	0.98

For gas sent to an unlit flare, η is zero.

V_a = volume of gas sent to combustion unit during the year (cf)

Y_j = mole fraction of gas hydrocarbon constituents j:

Constituent j, Methane =	0.731	0.593	0.69
Constituent j, Ethane =	0.1247	0.1177	0.13
Constituent j, Propane =	0.0591	0.0400	0.06
Constituent j, Butane =	0.0236	0.01233	0.02
Constituent j, Pentanes =	0.00700	0.00162	0.01
Constituent j, Hexane Plus =	0.00372	0.00123	0.25

R_j = number of carbon atoms in the gas hydrocarbon constituent j:

Constituent j, Methane =	1	1	1
Constituent j, Ethane =	2	2	2
Constituent j, Propane =	3	3	3
Constituent j, Butane =	4	4	4
Constituent j, Pentanes =	5	5	5
Constituent j, Hexane Plus =	6	6	6

Pronto Midstream, LLC - Marlan Gas Plant

Train 3: Process Flare Greenhouse Gas Emissions

Step 4. Calculate GHG volumetric emissions at standard conditions (scf).

$$E_{s,n} = \frac{E_{a,n} * (459.67 + T_s) * P_a}{(459.67 + T_a) * P_s}$$ *(Equation W-33)*

where:

$E_{s,n}$ = GHG i volumetric emissions at standard temperature and pressure (STP) in cubic feet

$E_{a,n}$ = GHG i volumetric emissions at actual conditions (cf)

T_s = Temperature at standard conditions (F) = 60 F

T_a = Temperature at actual conditions (F) = 76 F (Annual Avg Max Temperature for Midland, TX from Western Regional Climate Center)

P_s = Absolute pressure at standard conditions (psia) = 12.73 psia

P_a = Absolute pressure at actual conditions (psia) = 13.28 psia Pressure in Midland, TX from TANKS 4.0.9d

Constant = 459.67 (temperature conversion from F to R)

Step 5. Calculate annual CH_4 and CO_2 mass emissions (ton).

$Mass_{s,i} = E_{s,i} * \rho_i * 0.0011023$ *(Equation W-36)*

where:

$Mass_{s,i}$ = GHG i (CO_2, CH_4, or N_2O) mass emissions at standard conditions in tons (tpy)

$E_{s,i}$ = GHG i (CO_2, CH_4, or N_2O) volumetric emissions at standard conditions (cf)

ρ_i = Density of GHG i. Use:

CH_4: 0.0192 kg/ft^3 (at 60F and 14.7 psia)

CO_2: 0.0526 kg/ft^3 (at 60F and 14.7 psia)

Step 6. Calculate annual N_2O emissions from portable or stationary fuel combustion sources under actual conditions (cf) using Equation W-40.

$Mass_{N2O} = 0.0011023 * Fuel * HHV * EF$ *(Equation W-40)*

where:

$Mass_{N2O}$ = annual N_2O emissions from combustion of a particular type of fuel (tons).

Fuel = mass or volume of the fuel combusted

HHV = high heat value of the fuel

Field gas HHV = 1.038E-03 MMBtu/scf (Default provided in Subpart W Final Amendment;)

EF = 1.00E-04 kg N_2O/MMBtu

10^{-3} = conversion factor from kg to metric tons.

Step 7. Calculate total annual emission from flare (regenerator) by summing Equations W-40, W-19, W-20, and W-21.

	Gas Sent to Flare (scf/yr)	CH_4 Un-Combusted, $E_{a,CH4}$ (scf)	CO_2 Un-Combusted, $E_{a,CO2}$ (scf)	CO_2 Combusted, $E_{a,CO2}$ (scf)	CH_4 Un-Combusted, $E_{a,CH4}$ (tpy)	CO_2 Un-Combusted, $E_{a,CO2}$ (tpy)	CO_2 Combusted, $E_{a,CO2}$ (tpy)	N_2O Mass Emissions (tpy)
Inlet Gas	1,708,200	24980	1,249,019	2,192,552	0.53	72.419	127.13	1.95E-04
TO Downtime	5,820,285	69003	3,450,169	5,778,425	1.46	200.044	335.04	6.66E-04
SSM	61,800,000	858125	42,906,254	166,878,806	18.16	2,487.747	9,675.80	7.07E-03

Step 8. Calculate CO_2 equivalent[1]

$CO_2e = CO_2 + \{CH_4 \text{ X GWP}\} + \{N_2O \text{ X GWP}\}$

CO_2e = 12,898.17 + 564.22 + 2.10

CO_2e = 13,464.49 tons/year

[1] Global Warming Potentials (GWP) are from Table A-1 of the EPA GHG MRR under 40 CFR Part 98.

CH_4 GWP = 28

N_2O GWP = 265

Pronto Midstream, LLC - Marlan Gas Plant

Train 3 Acid Gas Flare

Emission Unit:	FLARE-04	
Source Description:	Facility Flare	
Operating Hours:	8760	hr/yr
TO-3 Downtime Hours:	1,752	hrs/yr
TO-3 Downtime	20.00%	Assumption
DRE:	98%	

TO-3 Downtime Emissions, Heat Input, and Flow Rate Calculation

Parameters	Value	Unit	Notes
Amine VOC emissions	45.80	lb/hr	Regenerator Vapors
Amine HAP emissions	34.16	lb/hr	Regenerator Vapors
Amine H_2S emissions	3.43	lb/hr	Regenerator Vapors
Amine Regenerator Heating Value	7.03	Btu/scf	Amine Regenerator Heating Value
Amine Regenerator Flow Rate	377839.15	scf/hr	Amine Regenerator Flow Rate
Amine Regenerator Flow Rate during TO-03 downtime	661.97	MMscf/yr	Annual
Amine Regenerator Flow Rate during TO-03 downtime	2.66	MMBtu/hr	
Total Heating Value	7.03	Btu/scf	Weighted average heating value of all streams
Total Flow	377839.15	scf/hr	Combined flow
Total Heating Value	2.66	MMBtu/hr	Btu/scf x scf/hr
	0	%	Safety Factor
Flow Rate with Safety Factor	377839.15	scf/hr	Flow with safety factor
	661.97	MMscf/yr	Annual flow rate with safety factor
Heating Rate	2.66	MMBtu/hr	

Assist Gas	Value	Unit	Notes
	110008.422	scf/hr	
	0	%	Safety Factor
Hourly Volume Flow Rate	110008.422	scf/hr	Burner flow with safety factor
	1.10E-01	MMscf/hr	
Treated Gas Heat Value	1,040.16	Btu/scf	Treated Natural Gas
Hourly Heat Rate	114.43	MMBtu/hr	
Annual Flow Rate	192.73	MMscf/yr	
Total Heating Value To Flare	240.00	Btu/scf	Acid Gas + Assist Gas

Pronto Midstream, LLC - Marlan Gas Plant

Train 3 Acid Gas Flare

Pilot/Purge	Value	Unit	Notes
Hourly Volume Flow Rate	110	scf/hr	From previous application
	0	%	Safety Factor
	110	scf/hr	Burner flow with safety factor
	1.10E-04	MMscf/hr	
Treated Gas Heat Value	1,259.00	Btu/scf	Treated Natural Gas
Hourly Heat Rate	0.14	MMBtu/hr	
Annual Flow Rate	0.96	MMscf/yr	

Emission Rates

	NO_x[1]	CO[1]	VOC[2]	SO_2[3]	H_2S[2]	HAPs[2]	Units	Notes
Emission Factors	0.064	0.31					lb/MMBtu	Per 3/28/2024 email from Zeeco
			0.66			-	lb/MMBtu	AP 42 Table 13.5-3
				2.00	0.25		gr/100 scf	
			45.80		3.43	34.16	lb/hr	TO-03 Downtime Emissions
Pilot/Purge Emissions	8.877E-03	0.043	0.09	2.90E-06	7.86E-07	-	lb/hr	hourly rate
	0.04	0.19	1.57E-04	1.27E-05	3.44E-06	-	tpy	8760 hr/yr/2000 lb/ton
Assist Gas Emissions	7.33	35.47	3.61	2.90E-03	7.858E-04	-	lb/hr	hourly rate
	6.425	31.074	3.16	2.540E-03	6.88E-04	-	tpy	1752 hr/yr/2000 lb/ton
TO-03 Downtime Emissions	0.17	0.82	0.92	6.33	0.069	0.68	lb/hr	hourly rate
	0.149	0.722	0.80	5.542	0.06	0.598	tpy	1752 hr/yr/2000 lb/ton
Total Emissions	**7.51**	**36.34**	**4.61**	**6.33**	**0.07**	**0.68**	lb/hr	Burner Emissions + Assist Gas
	6.61	**31.98**	**3.96**	**5.54**	**0.06**	**0.60**	tpy	+ TO-03 Downtime Emissions

[1] Flare NO_x and CO emission factors based on manufacture data, see 3/28/2024 email from Zeeco.

[2] Efficiency for combustion of VOC, H_2S and HAPs in the FLARE-04 is: 98% lb/hr emission rate based on DRE of flare: lb/hr * (1 - DRE)

[3] Pilot SO_2 emissions are based on fuel consumption, fuel sulfur content, fuel H_2S content, and DRE. Process SO_2 emissions are based on the combustion of H_2S. It is assumed 198% of combusted H_2S is converted to SO_2:

Pilot SO_2 (lb/hr) = [Sulfur Content (gr S / 100 scf) * SO2 to Sulfur Molar Ratio (64/32) + H_2S Content (gr H_2S / 100 scf) * DRE (%) * SO2 to H_2S Molar Ratio (64/34)] / (7000 g/lb) * Fuel Consumption (scf/hr)

Pilot H_2S (lb/hr) = H_2S Content (gr H_2S / 100 scf) / (7000 g/lb) * Fuel Consumption (scf/hr) * (1 - DRE (%))

"-" Indicates emissions of this pollutant are not expected

Pronto Midstream, LLC - Marlan Gas Plant

Train 3: Process Flare Greenhouse Gas Emissions

Emission Unit: FLARE-03

Source Description: Facility Flare

Notes: The flare will combust amine unit vent gas, pilot gas, and assist gas. A weighted averaged of the fuel gas and vent gas analyses are used to determine the greenhouse gas emissions from this unit.

§98.233(n) Flare stack GHG emissions.

Step 1. Calculate contribution of un-combusted CH_4 emissions from the flare combustion gas vent (actual conditions).

$E_{a,CH4}$ (un-combusted) = V_a * (1- η)* X_{CH4} *(Equation W-39B)*

where:

$E_{a,CH4}$ = contribution of annual un-combusted CH_4 emissions from flare in cubic feet under actual conditions.

V_a = volume of gas sent to combustion unit during the year (cf)

η = Fraction of gas combusted by a burning flare (or regenerator), default value from Subpart W = 0.98

For gas sent to an unlit flare, η is zero.

	Pilot	**Amine Regen**
X_{CH4} = Mole fraction of CH_4 in gas to the flare =	0.73	0.00

Step 2. Calculate contribution of un-combusted CO_2 emissions from the flare combustion gas vent (actual conditions).

$E_{a,CO2}$ = V_a * X_{CO2} *(Equation W-20)*

where:

$E_{a,CO2}$ = contribution of annual un-combusted CO_2 emissions from flare in cubic feet under actual conditions.

V_a = volume of gas sent to combustion unit during the year (cf)

X_{CO2} = Mole fraction of CO_2 in gas to the flare =	0.003	0.972

Step 3. Calculate contribution of combusted CO_2 emissions from the flare combustion gas vent (actual conditions).

$E_{a,CO2}$ (combusted) = Σ (η * V_a * Y_j * R_j) *(Equation W-21)*

where:

η = Fraction of gas combusted by a burning flare (or regenerator) =	0.98	0.98

For gas sent to an unlit flare, η is zero.

V_a = volume of gas sent to combustion unit during the year (cf)

Y_j = mole fraction of gas hydrocarbon constituents j:

Constituent j, Methane =	0.731	0.002
Constituent j, Ethane =	0.1247	0.0007
Constituent j, Propane =	0.0591	0.0002
Constituent j, Butane =	0.0236	0.00006
Constituent j, Pentanes =	0.00700	0.00000
Constituent j, Hexane Plus =	0.00372	0.00042

R_j = number of carbon atoms in the gas hydrocarbon constituent j:

Constituent j, Methane =	1	1
Constituent j, Ethane =	2	2
Constituent j, Propane =	3	3
Constituent j, Butane =	4	4
Constituent j, Pentanes =	5	5
Constituent j, Hexane Plus =	6	6

Pronto Midstream, LLC - Marlan Gas Plant

Train 3: Process Flare Greenhouse Gas Emissions

Step 4. Calculate GHG volumetric emissions at standard conditions (scf).

$$E_{s,n} = \frac{E_{a,n} * (459.67 + T_s) * P_a}{(459.67 + T_a) * P_s}$$ *(Equation W-33)*

where:

$E_{s,n}$ = GHG i volumetric emissions at standard temperature and pressure (STP) in cubic feet

$E_{a,n}$ = GHG i volumetric emissions at actual conditions (cf)

T_s = Temperature at standard conditions (F) = 60 F

T_a = Temperature at actual conditions (F) = 76 F (Annual Avg Max Temperature for Midland, TX from Western Regional Climate Center)

P_s = Absolute pressure at standard conditions (psia) = 12.73 psia

P_a = Absolute pressure at actual conditions (psia) = 13.28 psia Pressure in Midland, TX from TANKS 4.0.9d

Constant = 459.67 (temperature conversion from F to R)

Step 5. Calculate annual CH_4 and CO_2 mass emissions (ton).

$Mass_{s,i} = E_{s,i} * \rho_i * 0.0011023$ *(Equation W-36)*

where:

$Mass_{s,i}$ = GHG i (CO_2, CH_4, or N_2O) mass emissions at standard conditions in tons (tpy)

$E_{s,i}$ = GHG i (CO_2, CH_4, or N_2O) volumetric emissions at standard conditions (cf)

ρ_i = Density of GHG i. Use:

CH_4: 0.0192 kg/ft^3 (at 60F and 14.7 psia)

CO_2: 0.0526 kg/ft^3 (at 60F and 14.7 psia)

Step 6. Calculate annual N_2O emissions from portable or stationary fuel combustion sources under actual conditions (cf) using Equation W-40.

$Mass_{N2O} = 0.0011023 * Fuel * HHV * EF$ *(Equation W-40)*

where:

$Mass_{N2O}$ = annual N_2O emissions from combustion of a particular type of fuel (tons).

Fuel = mass or volume of the fuel combusted

HHV = high heat value of the fuel

Field gas HHV = 1.038E-03 MMBtu/scf (Default provided in Subpart W Final Amendment;)

EF = 1.00E-04 kg N_2O/MMBtu

10^{-3} = conversion factor from kg to metric tons.

Step 7. Calculate total annual emission from flare (regenerator) by summing Equations W-40, W-19, W-20, and W-21.

	Gas Sent to Flare (scf/yr)	CH_4 Un-Combusted, $E_{a,CH4}$ (scf)	CO_2 Un-Combusted, $E_{a,CO2}$ (scf)	CO_2 Combusted, $E_{a,CO2}$ (scf)	CH_4 Un-Combusted, $E_{a,CH4}$ (tpy)	CO_2 Un-Combusted, $E_{a,CO2}$ (tpy)	CO_2 Combusted, $E_{a,CO2}$ (tpy)	N_2O Mass Emissions (tpy)
Inlet Gas	963,600	14091	704,575	1,236,824	0.30	40.852	71.71	1.10E-04
TO Downtime	854,708,948	38571	1,928,532	5,777,849	0.82	111.818	335.01	9.77E-02

Step 8. Calculate CO_2 equivalent[1]

$CO_2e = CO_2 + \{CH_4 X GWP\} + \{N_2O X GWP\}$

CO_2e = 559.39 + 31.21 + 25.93

CO_2e = 616.53 tons/year

[1] Global Warming Potentials (GWP) are from Table A-1 of the EPA GHG MRR under 40 CFR Part 98.

CH_4 GWP = 28

N_2O GWP = 265

Pronto Midstream, LLC - Marlan Gas Plant

Train 3 Thermal Oxidizer

Emission Unit:	TO-03
Source Description:	Amine Oxidizer
Operating Hours:	8,760 hrs/yr
DRE:	99.0%

Emissions, Heat Input, and Flow Rate Calculation

Parameters	Value	Unit	Notes
Amine VOC emissions	45.80	lb/hr	Regenerator Overheads
Amine HAP emissions	34.16	lb/hr	Regenerator Overheads
Amine H_2S emissions	3.43	lb/hr	Regenerator Overheads
Amine Regenerator Heating Value	7.03	Btu/scf	BR&E ProMax Acid Gas Stream
Amine Regenerator Flow Rate	377839.15	scf/hr	BR&E ProMax Acid Gas Stream
Total Heating Value	7.03	Btu/scf	Weighted average heating value of all streams
Total Flow	377839.15	scf/hr	Combined flow
Total Heating Value	2.66	MMBtu/hr	Btu/scf x scf/hr
	0	%	Safety Factor
Flow Rate with Safety Factor	377839.15	scf/hr	Flow with safety factor
	3309.87	MMscf/yr	Annual flow rate with safety factor
Heating Rate	2.66	MMBtu/hr	

Pilot/Purge	Value	Unit	Notes
	37603.72	scf/hr	Goal Seek to 12 MMBTU/hr
Hourly Volume Flow Rate	0	%	Safety Factor
	37603.72	scf/hr	Burner flow with safety factor
	3.76E-02	MMscf/hr	
Natural Gas Heat Value	1,259.00	Btu/scf	Treated Natural Gas
Hourly Heat Rate	47.34	MMBtu/hr	
Annual Flow Rate	329.41	MMscf/yr	

Emission Rates

	NOx[1]	CO[1]	VOC[2]	SO_2[3]	H_2S[2]	PM[1,4]	HAPs[2]	Units	Notes
Emission Factors	100.00	84.00	5.50			7.60		lb/MMscf	AP-42 Chapter 1.4
	123.43	103.68	6.79			9.38		lb/MMscf	Adjusted for Pilot
	0.69	0.58				0.05		lb/MMscf	Adjusted for Combustion Stream
				0.25	0.25			gr/100 scf	
			45.80		3.43	-	34.16	lb/hr	
Pilot/Purge Emissions	4.64	3.90	0.255	1.25E-04	1.34E-04	0.353	-	lb/hr	hourly rate
	20.33	17.08	1.12	5.48E-04	5.88E-04	1.55	-	tpy	8760 hr/yr/2000 lb/ton
Process Emissions	0.26	0.22	0.46	6.39	0.03	0.020	0.34	lb/hr	hourly rate
	1.14	0.96	2.01	27.99	0.15	0.087	1.50	tpy	8760 hr/yr/2000 lb/ton
Total Emissions	**4.90**	**4.12**	**0.71**	**6.39**	**0.03**	**0.373**	**0.34**	lb/hr	Burner Emissions + Process Emissions
	21.47	**18.04**	**3.12**	**27.99**	**0.15**	**1.63**	**1.50**	tpy	Burner Emissions + Process Emissions

[1] AP-42 Chapter 1.4, External Combustion Sources

[2] Efficiency for combustion of VOC, H_2S and HAPs in the TO-03 is: 99%

lb/hr emission rate based on DRE of flare: lb/hr * (1 - DRE)

[3] Pilot SO_2 emissions are based on fuel consumption, fuel sulfur content, fuel H_2S content, and DRE. Process SO_2 emissions are based on the combustion of H_2S. It is assumed 98% of combusted H_2S is converted to SO_2:

Pilot SO_2 (lb/hr) = [Sulfur Content (gr S / 100 scf) * SO2 to Sulfur Molar Ratio (64/32) + H_2S Content (gr H_2S / 100 scf) * DRE (%) * SO2 to H_2S Molar Ratio (64/34)] / (7000 g/lb) * Fuel Consumption (scf/hr)

Pilot H_2S (lb/hr) = H_2S Content (gr H_2S / 100 scf) / (7000 g/lb) * Fuel Consumption (scf/hr) * (1 - DRE (%))

[4] Assumes PM = PM_{10} = $PM_{2.5}$

"-" Indicates emissions of this pollutant are not expected

Pronto Midstream, LLC - Marlan Gas Plant

Train 3 Nitrogen Rejection Unit

Emission Unit: NRU-02
Source Description: Nitrogen Rejection Unit (NRU)

NRU Inlet Flow Rate 310 MMSCFD
NRU Vent Flow Rate[1] 4.6 MMSCFD

Component	MW	NRU Inlet mol %[2]	NRU Vent mol %	NRU Vent lb/year[3]	NRU Vent lb/hr	NRU Vent ton/yr
He	4	0.00%	0.00%	0.00	0.00	0.00
N2	28.01	3.83%	98.89%	123,469,333.48	14,094.67	61,734.67
CO2	44.01	0.01%	0.00%	0.00	0.00	0.00
CH4	16.04	83.44%	1.11%	793,635.27	90.60	396.82
C2	30.07	12.39%	1.00%	1,340,377.24	153.01	670.19
C3[4]	44.1	0.33%	0.003%	6,487.03	0.741	3.244
iC4	58.12	0.00%	0.00%	0.00	0.00	0.00
nC4	58.12	0.00%	0.00%	0.00	0.00	0.00
iC5	72.15	0.00%	0.00%	0.00	0.00	0.00
nC5	72.15	0.00%	0.00%	0.00	0.00	0.00
C6	86.18	0.00%	0.00%	0.00	0.00	0.00
Total		100.0%	101.0%	125,609,833.0	14,339.0	62,804.9
Total VOC				**6,487.03**	**0.74**	**3.24**

[1] NRU Vent Flow Rate scaled from NRU-01
[2] Representative feed analysis
[3] NRU Vent scf x mol % x 365 days x MW lb/lbmol / 380 scf/lbmol = lb/year
[4] NRU Vent C3 mol percent conservatively assumed to be 1% of NRU inlet.

Pronto Midstream, LLC - Marlan Gas Plant

Train 3 Fugitives

Unit: FUG-03

Annual Operating Hours: 8,760

Facility-wide Fugitive Emissions Per Piece of Equipment

Subcomponent		Emission Factor[1] (lb/hr/comp)	VOC Content[2] (wt%)	HAP Content[2] (wt%)	H_2S Content[2] (wt%)	Benzene Content[2] (wt%)	n-Hexane Content[2] (wt%)	Toluene Content[2] (wt%)	Ethylbenzene Content[2] (wt%)	Xylene Content[2] (wt%)	CO2 Content[2] (wt%)	Methane[2] Content (wt%)	Subcomponent Counts[3]
Valves	Gas	9.92E-03	26.07%	0.20%	0.0000%	0.09%	0.02%	0.026%	0.0210%	0.0330%	2.77%	50.62%	364
	Light Oil	5.51E-03	99.97%	18.13%	0.00003%	3.64%	9.77%	3.12%	0.35%	1.25%	0.00%	0.00%	128
	Water/Oil	2.16E-04	0.01%	0.00%	0%	0.00%	0.00%	0.00%	0.00%	0.00%	0.04%	0.04%	128
Flanges	Gas	8.60E-04	26.07%	0.20%	0.0000%	0.09%	0.02%	0.026%	0.0210%	0.0330%	2.77%	50.62%	364
	Light Oil	2.43E-04	99.97%	18.13%	0.00003%	3.638%	9.77%	3.12%	0.35%	1.25%	0.00%	0.00%	128
	Water/Oil	6.39E-06	0.01%	0.00%	0%	0.0027%	0.00%	0.00%	0.000%	0.000%	0.04%	0.04%	128
Connectors	Gas	4.41E-04	26.07%	0.20%	0.0000%	0.09%	0.02%	0.026%	0.0210%	0.0330%	2.77%	50.62%	2245
	Light Oil	4.63E-04	99.97%	18.13%	0.00003%	3.638%	9.77%	3.12%	0.35%	1.25%	0.00%	0.00%	311
	Water/Oil	2.43E-04	0.01%	0.00%	0%	0.0027%	0.00%	0.00%	0.000%	0.000%	0.04%	0.04%	311
Other	Gas	1.94E-02	26.07%	0.20%	0.0000%	0.09%	0.02%	0.026%	0.0210%	0.0330%	2.77%	50.62%	49
	Light Oil	1.65E-02	99.97%	18.13%	0.00003%	3.638%	9.77%	3.12%	0.35%	1.25%	0.00%	0.00%	6
	Water/Oil	3.09E-02	0.01%	0.00%	0%	0.0027%	0.00%	0.00%	0.000%	0.000%	0.04%	0.04%	6
Pump Seals	Gas	5.29E-03	26.07%	0.20%	0.0000%	0.09%	0.02%	0.026%	0.0210%	0.0330%	2.77%	50.62%	0
	Light Oil	2.87E-02	99.97%	18.13%	0.00003%	3.638%	9.77%	3.12%	0.35%	1.25%	0.00%	0.00%	4
	Water/Oil	5.29E-05	0.01%	0.00%	0%	0.0027%	0.00%	0.00%	0.000%	0.000%	0.04%	0.04%	4
Open Ended Lines	Gas	4.41E-03	26.07%	0.20%	0.0000%	0.09%	0.02%	0.026%	0.0210%	0.0330%	2.77%	50.62%	81
	Light Oil	3.09E-03	99.97%	18.13%	0.00003%	3.638%	9.77%	3.12%	0.35%	1.25%	0.00%	0.00%	12
	Water/Oil	5.51E-04	0.01%	0.00%	0%	0.0027%	0.00%	0.00%	0.000%	0.000%	0.04%	0.04%	12
	Hourly Emission Rate (lb/hr)[4]		**2.75**	**0.22**	**2.05E-05**	**0.047**	**0.11**	**0.037**	**5.23E-03**	**0.02**	**0.17**	**3.15**	
	Annual Emission Rate (tpy)[5]		**12.06**	**0.95**	**8.99E-05**	**0.21**	**0.49**	**0.16**	**0.023**	**0.07**	**0.756**	**13.796**	

[1] Emission factors from Table 2-4 of EPA Protocol for Equipment Leak Emission Estimates, 1995.

[2] Weight percent of gas and liquid components from gas and liquid streams generated in a ProMax simulation of this facility.

[3] Component counts are based on estimated design.

[4] Hourly Emissions [lb/hr] = Emissions Factor [lb/hr/component] * Weight Content of Chemical Component [%] * Subcomponent Count.

[5] Annual Emissions [ton/yr] = Hourly Emissions [lb/hr] * Operating Hours [hr/yr] * 1/2000 [ton/lb].

Pronto Midstream, LLC - Marlan Gas Plant

MSS-01 Emission Calculation Inputs

Compressor Blowdowns

Compressor Name	Quantity of Compressors (#)	Quantity of Compressors Simultaneously (#)	Total Volume (scf/event)[1]	Hours / Blowdown (hr/event)	Number of Events/yr
Ariel JGE4-2	7	7	5687 or 5000	1	1260

[1] Blowdown volumes from previous application.

Vessel Blowdowns

Input Data	Value	Units	
Assumed Blowdown Duration	1	hr/event	Assumption
Estimated Gas Vented per Year	357143	scf/event	(10 MMscf/yr) / estimated # events/yr
	84	event/yr	

Pronto Midstream, LLC - Marlan Gas Plant

Compressor Blowdowns

Basis of Calculation:
Emissions from blowdowns are calculated based on a mass balance as follows:

Maximum Uncontrolled Hourly Emissions (lb/hr) = [Volume of blowdown (scf/event/unit)] x [MW of stream (lb/lb-mol)] x [wt % VOC or speciated constituent] x [# compressors blowndown simultaneously (units)] / [event duration (hr/event)] / [379.5 (scf/lb-mol)]

Maximum Uncontrolled Annual Emissions (tpy) = [Volume of blowdown (scf/event)] x [MW of stream (lb/lb-mol)] x [wt % VOC or speciated constituent] x [# compressors blowndown at site (units)] x [frequency of events (events/yr/unit)] / [379.5 (scf/lb-mol)] / [2,000 (lb/ton)]

Compressor Blowdown Emissions

Compressor Set 1

Estimated Gas Vented per Blowdown Event [1] =	5,687	scf/event
Compressors at Site =	3	units
Compressor Blowdowns in One Year =	378	events/yr

Compressor Set 2

Estimated Gas Vented per Blowdown Event [1] =	5,000	scf/event
Compressors at Site =	7	units
Compressor Blowdowns in One Year =	882	events/yr

Assumed Blowdown Duration =	1	hrs/event
Compressors Blowndown Simultaneously =	3	units
Molecular Weight of Stream =	22.60	lb/lb-mol
Control Type =	Flare	

Compound	Composition (wt %)	Maximum Uncontrolled Hourly Emissions (lb/hr)	Maximum Uncontrolled Annual Emissions (tpy)	Control Efficiency (%)	Maximum Controlled Hourly Emissions (lb/hr)	Maximum Controlled Annual Emissions (tpy)
Hydrogen Sulfide	-	-	-	98%	-	-
Nitrogen	-	-	-	0%	-	-
Carbon Dioxide	-	-	-	0%	-	-
Methane	94.21	956.93	183.96	98%	19.14	3.68
Ethane	2.72	27.59	5.30	98%	0.55	0.11
Propane	1.33	13.49	2.59	98%	0.27	0.05
Iso-Butane	0.88	8.89	1.71	98%	0.18	0.03
n-Butane	0.88	8.89	1.71	98%	0.18	0.03
Iso-Pentane	-	-	-	98%	-	-
n-Pentane	-	-	-	98%	-	-
2,2-Dimethylbutane	-	-	-	98%	-	-
Cyclopentane	-	-	-	98%	-	-
2-Methylpentane	-	-	-	98%	-	-
3-Methylpentane	-	-	-	98%	-	-
Hexane	-	-	-	98%	-	-
2,3-Dimethylpentane	-	-	-	98%	-	-
Methylcyclopentane	-	-	-	98%	-	-
2,2,3-Trimethylbutane	-	-	-	98%	-	-
Benzene	-	-	-	98%	-	-
Cyclohexane	-	-	-	98%	-	-
2-Methylhexane	-	-	-	98%	-	-
3-Methylhexane	-	-	-	98%	-	-
1,1-Dimethylcyclopentane	-	-	-	98%	-	-
Heptane	-	-	-	98%	-	-
Methylcyclohexane	-	-	-	98%	-	-
2,5-Dimethylhexane	-	-	-	98%	-	-
Toluene	-	-	-	98%	-	-
2-Methylheptane	-	-	-	98%	-	-
Octane	-	-	-	98%	-	-
Ethylcyclohexane	-	-	-	98%	-	-
Ethylbenzene	-	-	-	98%	-	-
m-Xylene	-	-	-	98%	-	-
o-Xylene	-	-	-	98%	-	-
Nonane	-	-	-	98%	-	-
Decane	-	-	-	98%	-	-
Total VOC	**3.08**	**31.27**	**6.01**		**0.63**	**0.12**
H_2S	**-**	**-**	**-**		**-**	**-**
Total HAP	**-**	**-**	**-**		**-**	**-**

[1] This is a representative estimate of the amount of gas vented per blow down event.

Pronto Midstream, LLC - Marlan Gas Plant

Vessel Blowdowns

Basis of Calculation:
Emissions from blowdowns are calculated based on a mass balance as follows:

Maximum Uncontrolled Hourly Emissions (lb/hr) = [Volume of blowdown (scf/event/unit)] x [MW of stream (lb/lb-mol)] x [wt % VOC or speciated constituent] x [# vessels blowndown simultaneously (units)] / [event duration (hr/event)] / [379.5 (scf/lb-mol)]

Maximum Uncontrolled Annual Emissions (tpy) = [Volume of blowdown (scf/event)] x [MW of stream (lb/lb-mol)] x [wt % VOC or speciated constituent] x [# vessels blowndown at site (units)] x [frequency of events (events/yr/unit)] / [379.5 (scf/lb-mol)] / [2,000 (lb/ton)]

Vessel Blowdown Emissions

Estimated Gas Vented per Blowdown Event [1] =	357,143	scf/event
Assumed Blowdown Duration =	1	hrs/event
Vessel Blowdowns in One Year =	84	events/yr
Molecular Weight of Stream =	22.79	lb/lb-mol
Control Type =	Flare	

Compound	Composition (wt %)	Maximum Uncontrolled Hourly Emissions (lb/hr)	Maximum Uncontrolled Annual Emissions (tpy)	Control Efficiency (%)	Maximum Controlled Hourly Emissions (lb/hr)	Maximum Controlled Annual Emissions (tpy)
Hydrogen Sulfide	2.99E-05	6.42E-03	2.70E-04	98%	1.28E-04	5.39E-06
Nitrogen	2.60	558.38	23.45	0%	558.38	23.45
Carbon Dioxide	2.77	594.62	24.97	0%	594.62	24.97
Methane	50.62	10856.68	455.98	98%	217.13	9.12
Ethane	17.65	3784.39	158.94	98%	75.69	3.18
Propane	13.56	2908.34	122.15	98%	58.17	2.44
Iso-Butane	2.06	441.08	18.53	98%	8.82	0.37
n-Butane	4.87	1044.70	43.88	98%	20.89	0.88
Iso-Pentane	1.31	281.92	11.84	98%	5.64	0.24
n-Pentane	1.38	295.50	12.41	98%	5.91	0.25
2,2-Dimethylbutane	0.02	4.93	0.21	98%	0.10	4.14E-03
Cyclopentane	0.04	8.36	0.35	98%	0.17	7.03E-03
2-Methylpentane	0.02	4.93	0.21	98%	0.10	4.14E-03
3-Methylpentane	0.02	4.29	0.18	98%	0.09	3.60E-03
Hexane	0.02	4.50	0.19	98%	0.09	3.78E-03
2,3-Dimethylpentane	0.03	5.58	0.23	98%	0.11	4.68E-03
Methylcyclopentane	0.03	5.58	0.23	98%	0.11	4.68E-03
2,2,3-Trimethylbutane	7.00E-03	1.50	0.06	98%	0.03	1.26E-03
Benzene	0.09	20.16	0.85	98%	0.40	0.02
Cyclohexane	0.04	8.15	0.34	98%	0.16	6.85E-03
2-Methylhexane	0.12	26.38	1.11	98%	0.53	0.02
3-Methylhexane	0.24	50.40	2.12	98%	1.01	0.04
1,1-Dimethylcyclopentane	-	-	-	98%	-	-
Heptane	7.00E-03	1.50	0.06	98%	0.03	1.26E-03
Methylcyclohexane	0.03	6.65	0.28	98%	0.13	5.58E-03
2,5-Dimethylhexane	0.03	5.58	0.23	98%	0.11	4.68E-03
Toluene	0.03	5.58	0.23	98%	0.11	4.68E-03
2-Methylheptane	0.11	24.45	1.03	98%	0.49	0.02
Octane	0.65	139.62	5.86	98%	2.79	0.12
Ethylcyclohexane	0.03	6.01	0.25	98%	0.12	5.04E-03
Ethylbenzene	0.02	4.50	0.19	98%	0.09	3.78E-03
m-Xylene	0.02	3.43	0.14	98%	0.07	2.88E-03
o-Xylene	0.02	3.65	0.15	98%	0.07	3.06E-03
Nonane	0.39	83.00	3.49	98%	1.66	0.07
Decane	0.89	190.23	7.99	98%	3.80	0.16
Total VOC	**26.07**	**5590.48**	**234.80**		**111.81**	**4.70**
H_2S	**2.99E-05**	**6.42E-03**	**2.70E-04**		**1.28E-04**	**5.39E-06**
Total HAP	**0.20**	**41.82**	**1.76**		**0.84**	**0.04**

[1] This is a representative estimate of the amount of gas vented per blow down event.

Pronto Midstream, LLC - Marlan Gas Plant

MSS-02 Emission Calculation Inputs

Compressor Blowdowns

Compressor Name	Quantity of Compressors (#)	Quantity of Compressors Simultaneously (#)	Total Volume (scf/event)[1]	Hours / Blowdown (hr/event)	Number of Events/yr
Ariel JGE4-2	11	11	5000	1	264

[1] Blowdown volumes from previous application.

Vessel Blowdowns

Input Data	Value	Units	
Assumed Blowdown Duration	1	hr/event	Assumption
Estimated Gas Vented per Year	3333333	scf/event	(10 MMscf/yr) / estimated # events/yr
	12	event/yr	

Pronto Midstream, LLC - Marlan Gas Plant

Compressor Blowdowns

Basis of Calculation:
Emissions from blowdowns are calculated based on a mass balance as follows:

Maximum Uncontrolled Hourly Emissions (lb/hr) = [Volume of blowdown (scf/event/unit)] x [MW of stream (lb/lb-mol)] x [wt % VOC or speciated constituent] x [# compressors blowndown simultaneously (units)] / [event duration (hr/event)] / [379.5 (scf/lb-mol)]

Maximum Uncontrolled Annual Emissions (tpy) = [Volume of blowdown (scf/event)] x [MW of stream (lb/lb-mol)] x [wt % VOC or speciated constituent] x [# compressors blowndown at site (units)] x [frequency of events (events/yr/unit)] / [379.5 (scf/lb-mol)] / [2,000 (lb/ton)]

Compressor Blowdown Emissions

Estimated Gas Vented per Blowdown Event [1] =	5,000	scf/event
Compressors at Site =	11	units
Compressors Blowndown Simultaneously =	3	units
Assumed Blowdown Duration =	1	hrs/event
Compressor Blowdowns in One Year =	264	events/yr
Molecular Weight of Stream =	21.58	lb/lb-mol
Control Type =	Flare	

Compound	Composition (wt %)	Maximum Uncontrolled Hourly Emissions (lb/hr)	Maximum Uncontrolled Annual Emissions (tpy)	Control Efficiency (%)	Maximum Controlled Hourly Emissions (lb/hr)	Maximum Controlled Annual Emissions (tpy)
H2S	-	-	-	98.00%	-	-
N2	-	-	-	98.00%	-	-
CO2	-	-	-	0.00%	-	-
C1	94.21	803.54	35.36	98.00%	16.07	0.71
C2	2.72	23.17	1.02	98.00%	0.46	0.02
C3	1.33	11.33	0.50	98.00%	0.23	9.97E-03
iC4	0.88	7.46	0.33	98.00%	0.15	6.57E-03
nC4	0.88	7.46	0.33	98.00%	0.15	6.57E-03
iC5	-	-	-	98.00%	-	-
nC5	-	-	-	98.00%	-	-
nC6	-	-	-	98.00%	-	-
Benzene	-	-	-	98.00%	-	-
Ethylbenzene	-	-	-	98.00%	-	-
Toluene	-	-	-	98.00%	-	-
m-Xylene	-	-	-	98.00%	-	-
C7	-	-	-	98.00%	-	-
C8	-	-	-	98.00%	-	-
C9	-	-	-	98.00%	-	-
C10	-	-	-	98.00%	-	-
H2O	-	-	-	98.00%	-	-
UCARSOL™ AP-814	-	-	-	98.00%	-	-
Oxygen	-	-	-	0.00%	-	-
TEG	-	-	-	98.00%	-	-
Total VOC	**3.08**	**26.26**	**1.16**		**0.53**	**0.02**
H_2S	**-**	**-**	**-**		**-**	**-**
Total HAP	**-**	**-**	**-**		**-**	**-**

[1] This is a representative estimate of the amount of gas vented per blow down event.

Pronto Midstream, LLC - Marlan Gas Plant

Vessel Blowdowns

Basis of Calculation:
Emissions from blowdowns are calculated based on a mass balance as follows:

Maximum Uncontrolled Hourly Emissions (lb/hr) = [Volume of blowdown (scf/event/unit)] x [MW of stream (lb/lb-mol)] x [wt % VOC or speciated constituent] x [# vessels blowndown simultaneously (units)] / [event duration (hr/event)] / [379.5 (scf/lb-mol)]

Maximum Uncontrolled Annual Emissions (tpy) = [Volume of blowdown (scf/event)] x [MW of stream (lb/lb-mol)] x [wt % VOC or speciated constituent] x [# vessels blowndown at site (units)] x [frequency of events (events/yr/unit)] / [379.5 (scf/lb-mol)] / [2,000 (lb/ton)]

Vessel Blowdown Emissions

Estimated Gas Vented per Blowdown Event [1] =	3,333,333	scf/event
Assumed Blowdown Duration =	1	hrs/event
Vessel Blowdowns in One Year =	12	events/yr
Molecular Weight of Stream =	21.58	lb/lb-mol
Control Type =	Flare	

Compound	Composition (wt %)	Maximum Uncontrolled Hourly Emissions (lb/hr)	Maximum Uncontrolled Annual Emissions (tpy)	Control Efficiency (%)	Maximum Controlled Hourly Emissions (lb/hr)	Maximum Controlled Annual Emissions (tpy)
H2S	5.65E-04	1.07	6.42E-03	98.00%	0.02	1.28E-04
N2	2.44	4619.57	27.72	98.00%	92.39	0.55
CO2	7.73	14645.94	87.88	0.00%	14645.94	87.88
C1	47.73	90477.91	542.87	98.00%	1809.56	10.86
C2	15.80	29952.05	179.71	98.00%	599.04	3.59
C3	12.78	24228.35	145.37	98.00%	484.57	2.91
iC4	2.15	4080.34	24.48	98.00%	81.61	0.49
nC4	5.51	10438.18	62.63	98.00%	208.76	1.25
iC5	0.01	22.66	0.14	98.00%	0.45	2.72E-03
nC5	1.55	2929.11	17.57	98.00%	58.58	0.35
nC6	1.77	3359.70	20.16	98.00%	67.19	0.40
Benzene	0.64	1211.30	7.27	98.00%	24.23	0.15
Ethylbenzene	0.23	429.37	2.58	98.00%	8.59	0.05
Toluene	0.01	25.01	0.15	98.00%	0.50	3.00E-03
m-Xylene	0.15	274.94	1.65	98.00%	5.50	0.03
C7	0.04	66.69	0.40	98.00%	1.33	8.00E-03
C8	1.47	2785.45	16.71	98.00%	55.71	0.33
C9	-	-	-	98.00%	-	-
C10	-	-	-	98.00%	-	-
H2O	-	-	-	98.00%	-	-
UCARSOL™ AP-814	-	-	-	98.00%	-	-
Oxygen	-	-	-	0.00%	-	-
TEG	-	-	-	98.00%	-	-
Total VOC	**26.30**	**49851.11**	**299.11**		**997.02**	**5.98**
H_2S	**5.65E-04**	**1.07**	**6.42E-03**		**0.02**	**1.28E-04**
Total HAP	**2.60**	**4937.65**	**29.63**		**98.75**	**0.59**

[1] This is a representative estimate of the amount of gas vented per blow down event.

Pronto Midstream, LLC - Marlan Gas Plant

MSS-03 Emission Calculation Inputs

Compressor Blowdowns

Compressor Name	Quantity of Compressors (#)	Quantity of Compressors Simultaneously (#)	Total Volume (scf/event)[1]	Hours / Blowdown (hr/event)	Number of Events/yr
Various	15	15	5000	1	360

[1] Blowdown volumes from previous application.

Vessel Blowdowns

Input Data	Value	Units	
Assumed Blowdown Duration	1	hr/event	Assumption
Estimated Gas Vented per Year	5000000	scf/event	(24 MMscf/yr) / estimated # events/yr
	12	event/yr	

Pronto Midstream, LLC - Marlan Gas Plant

Compressor Blowdowns

Basis of Calculation:
Emissions from blowdowns are calculated based on a mass balance as follows:

Maximum Uncontrolled Hourly Emissions (lb/hr) = [Volume of blowdown (scf/event/unit)] x [MW of stream (lb/lb-mol)] x [wt % VOC or speciated constituent] x [# compressors blowndown simultaneously (units)] / [event duration (hr/event)] / [379.5 (scf/lb-mol)]

Maximum Uncontrolled Annual Emissions (tpy) = [Volume of blowdown (scf/event)] x [MW of stream (lb/lb-mol)] x [wt % VOC or speciated constituent] x [# compressors blowndown at site (units)] x [frequency of events (events/yr/unit)] / [379.5 (scf/lb-mol)] / [2,000 (lb/ton)]

Compressor Blowdown Emissions

Estimated Gas Vented per Blowdown Event [1] =	5,000	scf/event
Compressors at Site =	15	units
Compressors Blowndown Simultaneously =	15	units
Assumed Blowdown Duration =	1	hrs/event
Compressor Blowdowns in One Year =	360	events/yr
Molecular Weight of Stream =	22.83	lb/lb-mol
Control Type =	Flare	

Compound	Composition (wt %)	Maximum Uncontrolled Hourly Emissions (lb/hr)	Maximum Uncontrolled Annual Emissions (tpy)	Control Efficiency (%)	Maximum Controlled Hourly Emissions (lb/hr)	Maximum Controlled Annual Emissions (tpy)
H2S	-	-	-	98.00%	-	-
Nitrogen	-	-	-	0.00%	-	-
Methane	94.21	4249.66	51.00	98.00%	84.99	1.02
Carbon Dioxide	-	-	-	0.00%	-	-
Ethane	2.72	122.54	1.47	98.00%	2.45	0.03
Propane	1.33	59.90	0.72	98.00%	1.20	0.01
i-Butane	0.88	39.48	0.47	98.00%	0.79	9.47E-03
n-Butane	0.88	39.48	0.47	98.00%	0.79	9.47E-03
i-Pentane	-	-	-	98.00%	-	-
n-Pentane	-	-	-	98.00%	-	-
2,2-Dimethylbutane	-	-	-	98.00%	-	-
Cyclopentane	-	-	-	98.00%	-	-
2-Methylpentane	-	-	-	98.00%	-	-
3-Methylpentane	-	-	-	98.00%	-	-
Hexane	-	-	-	98.00%	-	-
2,3-Dimethylpentane	-	-	-	98.00%	-	-
Methylcyclopentane	-	-	-	98.00%	-	-
2,2,3-Trimethylbutane	-	-	-	98.00%	-	-
Benzene	-	-	-	98.00%	-	-
Cyclohexane	-	-	-	98.00%	-	-
2-Methylhexane	-	-	-	98.00%	-	-
3-Methylhexane	-	-	-	98.00%	-	-
1,1-Dimethylcyclopentane	-	-	-	98.00%	-	-
Heptane	-	-	-	98.00%	-	-
Methylcyclohexane	-	-	-	98.00%	-	-
2,5-Dimethylhexane	-	-	-	98.00%	-	-
Toluene	-	-	-	98.00%	-	-
2-Methylheptane	-	-	-	98.00%	-	-
Octane	-	-	-	98.00%	-	-
Ethylcyclohexane	-	-	-	98.00%	-	-
Ethylbenzene	-	-	-	98.00%	-	-
m-Xylene	-	-	-	98.00%	-	-
o-Xylene	4.65E-03	0.21	2.52E-03	98.00%	4.20E-03	5.04E-05
Nonane	-	-	-	98.00%	-	-
Decane	-	-	-	98.00%	-	-
Water	-	-	-	0.00%	-	-
Piperazine	-	-	-	98.00%	-	-
MDEA	-	-	-	98.00%	-	-
TEG	-	-	-	98.00%	-	-
UCARSOL™ AP-814	-	-	-	98.00%	-	-
Total VOC	**3.08**	**139.07**	**1.67**		**2.78**	**0.03**
H_2S	**-**	**-**	**-**		**-**	**-**
Total HAP	**4.65E-03**	**0.21**	**2.52E-03**		**4.20E-03**	**5.04E-05**

[1] This is a representative estimate of the amount of gas vented per blow down event.

Pronto Midstream, LLC - Marlan Gas Plant

Vessel Blowdowns

Basis of Calculation:
Emissions from blowdowns are calculated based on a mass balance as follows:

Maximum Uncontrolled Hourly Emissions (lb/hr) = [Volume of blowdown (scf/event/unit)] x [MW of stream (lb/lb-mol)] x [wt % VOC or speciated constituent] x [# vessels blowndown simultaneously (units)] / [event duration (hr/event)] / [379.5 (scf/lb-mol)]

Maximum Uncontrolled Annual Emissions (tpy) = [Volume of blowdown (scf/event)] x [MW of stream (lb/lb-mol)] x [wt % VOC or speciated constituent] x [# vessels blowndown at site (units)] x [frequency of events (events/yr/unit)] / [379.5 (scf/lb-mol)] / [2,000 (lb/ton)]

Vessel Blowdown Emissions

Estimated Gas Vented per Blowdown Event [1] =	5,000,000	scf/event
Assumed Blowdown Duration =	1	hrs/event
Vessel Blowdowns in One Year =	12	events/yr
Molecular Weight of Stream =	22.83	lb/lb-mol
Control Type =	Flare	

Compound	Composition (wt %)	Maximum Uncontrolled Hourly Emissions (lb/hr)	Maximum Uncontrolled Annual Emissions (tpy)	Control Efficiency (%)	Maximum Controlled Hourly Emissions (lb/hr)	Maximum Controlled Annual Emissions (tpy)
H2S	5.97E-04	1.80	0.01	98.00%	0.04	2.16E-04
Nitrogen	4.91	14763.32	88.58	0.00%	14763.32	88.58
Methane	48.79	146744.33	880.47	98.00%	2934.89	17.61
Carbon Dioxide	7.71	23193.41	139.16	0.00%	23193.41	139.16
Ethane	16.80	50519.15	303.11	98.00%	1010.38	6.06
Propane	12.55	37734.00	226.40	98.00%	754.68	4.53
i-Butane	1.86	5597.80	33.59	98.00%	111.96	0.67
n-Butane	4.43	13309.14	79.85	98.00%	266.18	1.60
i-Pentane	0.99	2965.80	17.79	98.00%	59.32	0.36
n-Pentane	0.94	2823.21	16.94	98.00%	56.46	0.34
2,2-Dimethylbutane	-	-	-	98.00%	-	-
Cyclopentane	-	-	-	98.00%	-	-
2-Methylpentane	-	-	-	98.00%	-	-
3-Methylpentane	-	-	-	98.00%	-	-
Hexane	0.20	601.75	3.61	98.00%	12.04	0.07
2,3-Dimethylpentane	-	-	-	98.00%	-	-
Methylcyclopentane	-	-	-	98.00%	-	-
2,2,3-Trimethylbutane	-	-	-	98.00%	-	-
Benzene	0.08	246.99	1.48	98.00%	4.94	0.03
Cyclohexane	-	-	-	98.00%	-	-
2-Methylhexane	-	-	-	98.00%	-	-
3-Methylhexane	-	-	-	98.00%	-	-
1,1-Dimethylcyclopentane	-	-	-	98.00%	-	-
Heptane	0.71	2125.57	12.75	98.00%	42.51	0.26
Methylcyclohexane	-	-	-	98.00%	-	-
2,5-Dimethylhexane	-	-	-	98.00%	-	-
Toluene	0.03	97.12	0.58	98.00%	1.94	0.01
2-Methylheptane	-	-	-	98.00%	-	-
Octane	-	-	-	98.00%	-	-
Ethylcyclohexane	-	-	-	98.00%	-	-
Ethylbenzene	-	-	-	98.00%	-	-
m-Xylene	-	-	-	98.00%	-	-
o-Xylene	4.65E-03	13.99	0.08	98.00%	0.28	1.68E-03
Nonane	-	-	-	98.00%	-	-
Decane	-	-	-	98.00%	-	-
Water	-	-	-	0.00%	-	-
Piperazine	-	-	-	98.00%	-	-
MDEA	-	-	-	98.00%	-	-
TEG	-	-	-	98.00%	-	-
UCARSOL™ AP-814	-	-	-	98.00%	-	-
Total VOC	**21.78**	**65515.38**	**393.09**		**1310.31**	**7.86**
H_2S	**5.97E-04**	**1.80**	**0.01**		**0.04**	**2.16E-04**
Total HAP	**0.32**	**959.85**	**5.76**		**19.20**	**0.12**

[1] This is a representative estimate of the amount of gas vented per blow down event.

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.

Engines (Units CE-01 through CE-03)

- Manufacturers data and catalyst specification sheet
- AP-42 Table 3.2-2
- 40 CFR Part 98 methodology
- 40 CFR 98 Tables C-1 and C-2 Emission Factors

Heaters and Reboilers (Units HT-01 through HT-12; REB-01 & REB-02)

- Manufacturer's specifications
- AP-42 Tables 1.4-1, 1.4-2, and 1.4-3
- 40 CFR Part 98 methodology
- 40 CFR Tables C-1 and C-2 Emission Factors

Glycol Dehydrators and Amine Units (Units DEHY-01 & DEHY-02, AMINE-01 through AMINE-03)

- BR&E ProMax

Flares (Units FLARE-01 through FLARE-04)

- AP-42 Tables 1.4-1, 1.4-2, and 1.4-3
- BR&E ProMax
- 40 CFR Part 98 Methodology

Thermal Oxidizers (Units TO-01 through TO-03)

- Manufacturer's specifications
- AP-42 Tables 1.4-1, 1.4-2, and 1.4-3
- BR&E ProMax
- 40 CFR Part 98 Methodology

Enclosed Combustion Devices (Units ECD-01 through ECD-03)

- AP-42 Tables 1.4-1, 1.4-2, and 1.4-3
- 40 CFR Part 98 Methodology

Condensate and Produced Water Storage Tanks (Units OILTANK 01-06, PWTANK 01-04)

- BR&E ProMax

Fugitives (Units FUG-01 through FUG-03)

- Tables 2-4 and 5-2 of the EPA Protocol for Equipment Leak Emission Estimates, November 1995
- Inlet gas analysis
- Liquid analyses from laboratory analysis or BR&E ProMax

Nitrogen Rejection Unit (Units NRU-01 & NRU-02)

- Representative feed analysis
- Measured flowrates

Oil and Produced Water Loading (OILLOAD-01, OILLOAD-2, and PWLOAD-01)

- BR&E ProMax

Unpaved Haul Roads (ROAD-01 and ROAD-02)

- AP-42 Chapter 13.2.2
- NMED guidance document entitled Department Accepted Values For: Aggregate Handling, Storage Pile, and Haul Road Emissions
- WRAP Handbook

3.2 Natural Gas-fired Reciprocating Engines

Disclaimer: Emission factors in AP-42 are neither EPA-recommended emission limits (e.g., best available control technology or BACT, or lowest achievable emission rate or LAER) nor standards (e.g., National Emission Standard for Hazardous Air Pollutants or NESHAP, or New Source Performance Standards or NSPS). Use of these factors as source-specific permit limits and/or as emission regulation compliance determinations is **NOT** recommended by EPA. Because emission factors essentially represent an average of a range of emission rates, approximately half of the subject sources are expected to have emission rates greater than the emission factor, and the other half are expected to have emission rates less than the emission factor. As such, EPA does not recommend using emission factors as limits or standards. This could cause, for example, a permit limit using an AP-42 emission factor resulting in approximately half of the sources being in noncompliance. We recommend source testing be done for the best possible emission values. For more information on the use of emission factors, please refer to the AP-42 Introduction.

3.2.1 General [1-3]

Most natural gas-fired reciprocating engines are used in the natural gas industry at pipeline compressor and storage stations and at gas processing plants. These engines are used to provide mechanical shaft power for compressors and pumps. At pipeline compressor stations, engines are used to help move natural gas from station to station. At storage facilities, they are used to help inject the natural gas into high pressure natural gas storage fields. At processing plants, these engines are used to transmit fuel within a facility and for process compression needs (e.g., refrigeration cycles). The size of these engines ranges from 50 brake horsepower (bhp) to 11,000 bhp. In addition, some engines in service are 50 - 60 years old and consequently have significant differences in design compared to newer engines, resulting in differences in emissions and the ability to be retrofitted with new parts or controls.

At pipeline compressor stations, reciprocating engines are used to power reciprocating compressors that move compressed natural gas (500 - 2000 psig) in a pipeline. These stations are spaced approximately 50 to 100 miles apart along a pipeline that stretches from a gas supply area to the market area. The reciprocating compressors raise the discharge pressure of the gas in the pipeline to overcome the effect of frictional losses in the pipeline upstream of the station, in order to maintain the required suction pressure at the next station downstream or at various downstream delivery points. The volume of gas flowing and the amount of subsequent frictional losses in a pipeline are heavily dependent on the market conditions that vary with weather and industrial activity, causing wide pressure variations. The number of engines operating at a station, the speed of an individual engine, and the amount of individual engine horsepower (load) needed to compress the natural gas is dependent on the pressure of the compressed gas received by the station, the desired discharge pressure of the gas, and the amount of gas flowing in the pipeline. Reciprocating compressors have a wider operating bandwidth than centrifugal compressors, providing increased flexibility in varying flow conditions. Centrifugal compressors powered by natural gas turbines are also used in some stations and are discussed in another section of this document.

A compressor in storage service pumps gas from a low-pressure storage field (500 - 800 psig) to a higher pressure transmission pipeline (700 - 1000 psig) and/or pumps gas from a low-pressure transmission line (500 - 800 psig) to a higher pressure storage field (800 - 2000 psig).

Storage reciprocating compressors must be flexible enough to allow operation across a wide band of suction and discharge pressures and volume variations. The compressor must be able to compress at high compression ratios with low volumes and compress at low compression ratios with high volumes. These conditions require varying speeds and load (horsepower) conditions for the reciprocating engine powering the reciprocating compressor.

Reciprocating compressors are used at processing plants for process compression needs (e.g. refrigeration cycles). The volume of gas compressed varies, but the pressure needed for the process is more constant than the other two cases mentioned above.

3.2.2 Process Description [1-3]

Natural gas-fired reciprocating engines are separated into three design classes: 2-cycle (stroke) lean-burn, 4-stroke lean-burn, and 4-stroke rich-burn. Two-stroke engines complete the power cycle in a single crankshaft revolution as compared to the two crankshaft revolutions required for 4-stroke engines. All engines in these categories are spark-ignited.

In a 2-stroke engine, the air-to-fuel charge is injected with the piston near the bottom of the power stroke. The intake ports are then covered or closed, and the piston moves to the top of the cylinder, compressing the charge. Following ignition and combustion, the power stroke starts with the downward movement of the piston. As the piston reaches the bottom of the power stroke, exhaust ports or valves are opened to exhaust, or scavenge, the combustion products, and a new air-to-fuel charge is injected. Two-stroke engines may be turbocharged using an exhaust-powered turbine to pressurize the charge for injection into the cylinder and to increase cylinder scavenging. Non-turbocharged engines may be either blower scavenged or piston scavenged to improve removal of combustion products. Historically, 2-stroke designs have been widely used in pipeline applications. However, current industry practices reflect a decline in the usage of new 2-stroke engines for stationary applications.

Four-stroke engines use a separate engine revolution for the intake/compression cycle and the power/exhaust cycle. These engines may be either naturally aspirated, using the suction from the piston to entrain the air charge, or turbocharged, using an exhaust-driven turbine to pressurize the charge. Turbocharged units produce a higher power output for a given engine displacement, whereas naturally aspirated units have lower initial costs and require less maintenance.

Rich-burn engines operate near the stoichiometric air-to-fuel ratio (16:1) with exhaust excess oxygen levels less than 4 percent (typically closer to 1 percent). Additionally, it is likely that the emissions profile will be considerably different for a rich-burn engine at 4 percent oxygen than when operated closer to stoichiometric conditions. Considerations such as these can impact the quantitative value of the emission factor presented. It is also important to note that while rich-burn engines may operate, by definition, with exhaust oxygen levels as high as 4 percent, in reality, most will operate within plus or minus 1 air-to-fuel ratio of stoichiometry. Even across this narrow range, emissions will vary considerably, sometimes by more than an order of magnitude. Air-to-fuel ratios were not provided in the gathered emissions data used to develop the presented factors.

Lean-burn engines may operate up to the lean flame extinction limit, with exhaust oxygen levels of 12 percent or greater. The air to fuel ratios of lean-burn engines range from 20:1 to 50:1 and are typically higher than 24:1. The exhaust excess oxygen levels of lean-burn engines are typically around 8

percent, ranging from 4 to 17 percent. Some lean-burn engines are characterized as clean-burn engines. The term “clean-burn” technology is a registered trademark of Cooper Energy Systems and refers to engines designed to reduce NO_x by operating at high air-to-fuel ratios. Engines operating at high air-to fuel ratios (greater than 30:1) may require combustion modification to promote stable combustion with the high excess air. These modifications may include a turbo charger or a precombustion chamber (PCC). A turbo charger is used to force more air into the combustion chamber, and a PCC is used to ignite a fuel-rich mixture that propagates into the main cylinder and ignites the very lean combustion charge. Lean-burn engines typically have lower oxides of nitrogen (NO_x) emissions than rich-burn engines.

3.2.3 Emissions

The primary criteria pollutants from natural gas-fired reciprocating engines are oxides of nitrogen (NO_x), carbon monoxide (CO), and volatile organic compounds (VOC). The formation of nitrogen oxides is exponentially related to combustion temperature in the engine cylinder. The other pollutants, CO and VOC species, are primarily the result of incomplete combustion. Particulate matter (PM) emissions include trace amounts of metals, non-combustible inorganic material, and condensible, semi-volatile organics which result from volatized lubricating oil, engine wear, or from products of incomplete combustion. Sulfur oxides are very low since sulfur compounds are removed from natural gas at processing plants. However, trace amounts of sulfur containing odorant are added to natural gas at city gates prior to distribution for the purpose of leak detection.

It should be emphasized that the actual emissions may vary considerably from the published emission factors due to variations in the engine operating conditions. This variation is due to engines operating at different conditions, including air-to-fuel ratio, ignition timing, torque, speed, ambient temperature, humidity, and other factors. It is not unusual to test emissions from two identical engines in the same plant, operated by the same personnel, using the same fuel, and have the test results show significantly different emissions. This variability in the test data is evidenced in the high relative standard deviation reported in the data set.

3.2.3.1 Nitrogen Oxides –

Nitrogen oxides are formed through three fundamentally different mechanisms. The principal mechanism of NO_x formation with gas-fired engines is thermal NO_x. The thermal NO_x mechanism occurs through the thermal dissociation and subsequent reaction of nitrogen (N_2) and oxygen (O_2) molecules in the combustion air. Most NO_x formed through the thermal NO_x mechanism occurs in high temperature regions in the cylinder where combustion air has mixed sufficiently with the fuel to produce the peak temperature fuel/air interface. The second mechanism, called prompt NO_x, occurs through early reactions of nitrogen molecules in the combustion air and hydrocarbon radicals from the fuel. Prompt NO_x reactions occur within the flame and are usually negligible compared to the level of NO_x formed through the thermal NO_x mechanism. The third mechanism, fuel NO_x, stems from the evolution and reaction of fuel-bound nitrogen compounds with oxygen. Natural gas has negligible chemically bound fuel nitrogen (although some molecular nitrogen is present).

Essentially all NO_x formed in natural gas-fired reciprocating engines occurs through the thermal NO_x mechanism. The formation of NO_x through the prompt NO_x mechanism may be significant only under highly controlled situations in rich-burn engines when the thermal NO_x mechanism is suppressed. The rate of NO_x formation through the thermal NO_x mechanism is highly dependent upon the stoichiometric ratio, combustion temperature, and residence time at the combustion temperature.

Maximum NO_x formation occurs through the thermal NO_x mechanism near the stoichiometric air-to-fuel mixture ratio since combustion temperatures are greatest at this air-to-fuel ratio.

3.2.3.2 Carbon Monoxide and Volatile Organic Compounds –

CO and VOC emissions are both products of incomplete combustion. CO results when there is insufficient residence time at high temperature to complete the final step in hydrocarbon oxidation. In reciprocating engines, CO emissions may indicate early quenching of combustion gases on cylinder walls or valve surfaces. The oxidation of CO to carbon dioxide (CO_2) is a slow reaction compared to most hydrocarbon oxidation reactions.

The pollutants commonly classified as VOC can encompass a wide spectrum of volatile organic compounds that are photoreactive in the atmosphere. VOC occur when some of the gas remains unburned or is only partially burned during the combustion process. With natural gas, some organics are carryover, unreacted, trace constituents of the gas, while others may be pyrolysis products of the heavier hydrocarbon constituents. Partially burned hydrocarbons result from poor air-to-fuel mixing prior to, or during, combustion, or incorrect air-to-fuel ratios in the cylinder during combustion due to maladjustment of the engine fuel system. Also, low cylinder temperature may yield partially burned hydrocarbons due to excessive cooling through the walls, or early cooling of the gases by expansion of the combustion volume caused by piston motion before combustion is completed.

3.2.3.3 Particulate Matter[4] -

PM emissions result from carryover of noncombustible trace constituents in the fuel and lubricating oil and from products of incomplete combustion. Emission of PM from natural gas-fired reciprocating engines are generally minimal and comprise fine filterable and condensible PM. Increased PM emissions may result from poor air-to-fuel mixing or maintenance problems.

3.2.3.4 Carbon Dioxide, Methane, and Nitrous Oxide[5] -

Carbon dioxide (CO_2), methane (CH4), and nitrous oxide (N_2O) are referred to as greenhouse gases. Such gases are largely transparent to incoming solar radiation; however, they absorb infrared radiation re-emitted by the Earth. Where available, emission factors for these pollutants are presented in the emission factors tables of this section.

3.2.4 Control Technologies

Three generic control techniques have been developed for reciprocating engines: parametric controls (timing and operating at a leaner air-to-fuel ratio); combustion modifications such as advanced engine design for new sources or major modification to existing sources (clean-burn cylinder head designs and prestratified charge combustion for rich-burn engines); and postcombustion catalytic controls installed on the engine exhaust system. Post-combustion catalytic technologies include selective catalytic reduction (SCR) for lean-burn engines, nonselective catalytic reduction (NSCR) for rich-burn engines, and CO oxidation catalysts for lean-burn engines.

3.2.4.1 Control Techniques for 4-Cycle Rich-burn Engines [4,6] -

Nonselective Catalytic Reduction (NSCR) -

This technique uses the residual hydrocarbons and CO in the rich-burn engine exhaust as a reducing agent for NOx. In an NSCR, hydrocarbons and CO are oxidized by O_2 and NOx. The excess hydrocarbons, CO, and NOx pass over a catalyst (usually a noble metal such as platinum, rhodium, or palladium) that oxidizes the excess hydrocarbons and CO to H_2O and CO_2, while reducing NOx to N_2. NOx reduction efficiencies are usually greater than 90 percent, while CO reduction efficiencies are approximately 90 percent.

The NSCR technique is effectively limited to engines with normal exhaust oxygen levels of 4 percent or less. This includes 4-stroke rich-burn naturally aspirated engines and some 4-stroke richburn turbocharged engines. Engines operating with NSCR require tight air-to-fuel control to maintain high reduction effectiveness without high hydrocarbon emissions. To achieve effective NOx reduction performance, the engine may need to be run with a richer fuel adjustment than normal. This exhaust excess oxygen level would probably be closer to 1 percent. Lean-burn engines could not be retrofitted with NSCR control because of the reduced exhaust temperatures.

Prestratified Charge –

Prestratified charge combustion is a retrofit system that is limited to 4-stroke carbureted natural gas engines. In this system, controlled amounts of air are introduced into the intake manifold in a specified sequence and quantity to create a fuel-rich and fuel-lean zone. This stratification provides both a fuel-rich ignition zone and rapid flame cooling in the fuel-lean zone, resulting in reduced formation of NOx. A prestratified charge kit generally contains new intake manifolds, air hoses, filters, control valves, and a control system.

3.2.4.2 Control Techniques for Lean-burn Reciprocating Engines [4,6] -

Selective Catalytic Reduction [4,6] -

Selective catalytic reduction is a postcombustion technology that has been shown to be effective in reducing NOx in exhaust from lean-burn engines. An SCR system consists of an ammonia storage, feed, and injection system, and a catalyst and catalyst housing. Selective catalytic reduction systems selectively reduce NOx emissions by injecting ammonia (either in the form of liquid anhydrous ammonia or aqueous ammonium hydroxide) into the exhaust gas stream upstream of the catalyst. Nitrogen oxides, NH3, and O_2 react on the surface of the catalyst to form N_2 and H_2O. For the SCR system to operate properly, the exhaust gas must be within a particular temperature range (typically between 450 and 850°F). The temperature range is dictated by the catalyst (typically made from noble metals, base metal oxides such as vanadium and titanium, and zeolite-based material). Exhaust gas temperatures greater than the upper limit (850°F) will pass the NOx and ammonia unreacted through the catalyst. Ammonia emissions, called NH3 slip, are a key consideration when specifying a SCR system. SCR is most suitable for lean-burn engines operated at constant loads, and can achieve efficiencies as high as 90 percent. For engines which typically operate at variable loads, such as engines on gas transmission pipelines, an SCR system may not function effectively, causing either periods of ammonia slip or insufficient ammonia to gain the reductions needed.

Catalytic Oxidation -

Catalytic oxidation is a postcombustion technology that has been applied, in limited cases, to oxidize CO in engine exhaust, typically from lean-burn engines. As previously mentioned, lean-burn technologies may cause increased CO emissions. The application of catalytic oxidation has been shown

to be effective in reducing CO emissions from lean-burn engines. In a catalytic oxidation system, CO passes over a catalyst, usually a noble metal, which oxidizes the CO to CO_2 at efficiencies of approximately 70 percent for 2SLB engines and 90 percent for 4SLB engines.

3.2.5 Updates Since the Fifth Edition

The Fifth Edition was released in January 1995. Revisions to this section since that date are summarized below.

Supplement A, February 1996

- In the table for uncontrolled natural gas prime movers, the Source Classification Code (SCC) for 4-cycle lean-burn was changed from 2-01-002-53 to 2-02-002-54. The SCC for 4-cycle rich-burn was changed from 2-02-002-54 to 2-02-02-002-53.

- An SCC (2-02-002-53) was provided for 4-cycle rich-burn engines, and the "less than" symbol (<) was restored to the appropriate factors.

Supplement B, October 1996

- The introduction section was revised.

- Text was added concerning process description of turbines.

- Text concerning emissions and controls was revised.

- References in various tables were editorially corrected.

- The inconsistency between a CO_2 factor in the table and an equation in the footnote was corrected.

Supplement F, July 2000

- Turbines used for natural gas compression were removed from this section and combined with utility turbines in Section 3.1. Section 3.2 now only contains information on natural gas-fired reciprocating engines.

- All emission factors were updated based on emissions data points taken from 70 emission reports containing over 400 source tests. Many new emission factors have been incorporated in this section for speciated organic compounds, including hazardous air pollutants.

October 2024

- Standard disclaimer added

- Error in pollutant name identified and corrected in Table 3.2-2. Pollutant name changed from tetrachloroethane to perchloroethylene.

TABLE 3.2-1 UNCONTROLLED EMISSION FACTORS FOR 2-STROKE LEAN-BURN ENGINES [a]

(SCC 2-02-002-52)

Pollutant	Emission Factor (lb/MMBtu)b (fuel input)	Emission Factor Rating
Criteria Pollutants and Greenhouse Gases		
NOx [c] 90 - 105% Load	3.17 E+00	A
NOx [c] <90% Load	1.94 E+00	A
CO [c] 90 - 105% Load	3.86 E-01	A
CO [c] <90% Load	3.53 E-01	A
CO_2 [d]	1.10 E+02	A
SO_2 [e]	5.88 E-04	A
TOC[f]	1.64 E+00	A
Methane [g]	1.45 E+00	C
VOC[h]	1.20 E-01	C
PM10 (filterable)[i]	3.84 E-02	C
PM2.5 (filterable)[i]	3.84 E-02	C
PM Condensable[j]	9.91 E-03	E
Trace Organic Compounds		
1,1,2,2-Tetrachloroethane[k]	6.63 E-05	C
1,1,2-Trichloroethane[k]	5.27 E-05	C
1,1-Dichloroethane	3.91 E-05	C
1,2,3-Trimethylbenzene	3.54 E-05	D
1,2,4-Trimethylbenzene	1.11 E-04	C
1,2-Dichloroethane	4.22 E-05	D
1,2-Dichloropropane	4.46 E-05	C
1,3,5-Trimethylbenzene	1.80 E-05	D
1,3-Butadiene [k]	8.20 E-04	D
1,3-Dichloropropene [k]	4.38 E-05	C
2,2,4-Trimethylpentane [k]	8.46 E-04	B
2-Methylnaphthalene [k]	2.14 E-05	C
Acenaphthene [k]	1.33 E-06	C

Table 3.2-1. UNCONTROLLED EMISSION FACTORS FOR 2-STROKE LEAN-BURN ENGINES
(Continued)

Pollutant	Emission Factor (lb/MMBtu)b (fuel input)	Emission Factor Rating
Acenaphthylene[k]	3.17 E-06	C
Acetaldehydek,[l]	7.76 E-03	A
Acroleink,[l]	7.78 E-03	A
Anthracene[k]	7.18 E-07	C
Benz(a)anthracene[k]	3.36 E-07	C
Benzene[k]	1.94 E-03	A
Benzo(a)pyrene[k]	5.68 E-09	D
Benzo(b)fluoranthene[k]	8.51 E-09	D
Benzo(e)pyrene[k]	2.34 E-08	D
Benzo(g,h,i)perylene[k]	2.48 E-08	D
Benzo(k)fluoranthene[k]	4.26 E-09	D
Biphenyl[k]	3.95 E-06	C
Butane	4.75 E-03	C
Butyr/Isobutyraldehyde	4.37 E-04	C
Carbon Tetrachloride[k]	6.07 E-05	C
Chlorobenzene[k]	4.44 E-05	C
Chloroform[k]	4.71 E-05	C
Chrysene[k]	6.72 E-07	C
Cyclohexane	3.08 E-04	C
Cyclopentane	9.47 E-05	C
Ethane	7.09 E-02	A
Ethylbenzene[k]	1.08 E-04	B
Ethylene Dibromide[k]	7.34 E-05	C
Fluoranthene[k]	3.61 E-07	C
Fluorene[k]	1.69 E-06	C
Formaldehyde[k,l]	5.52 E-02	A

Table 3.2-1. UNCONTROLLED EMISSION FACTORS FOR 2-STROKE LEAN-BURN ENGINES
(Continued)

Pollutant	Emission Factor (lb/MMBtu)b (fuel input)	Emission Factor Rating
Indeno(1,2,3-c,d)pyrene[k]	9.93 E-09	D
Isobutane	3.75 E-03	C
Methanol [k]	2.48 E-03	A
Methylcyclohexane	3.38 E-04	C
Methylene Chloride [k]	1.47 E-04	C
n-Hexane [k]	4.45 E-04	C
n-Nonane	3.08 E-05	C
n-Octane	7.44 E-05	C
n-Pentane	1.53 E-03	C
Naphthalene [k]	9.63 E-05	C
PAH [k]	1.34 E-04	D
Perylene [k]	4.97 E-09	D
Phenanthrene [k]	3.53 E-06	C
Phenol [k]	4.21 E-05	C
Propane	2.87 E-02	C
Pyrene [k]	5.84 E-07	C
Styrene [k]	5.48 E-05	A
Toluene [k]	9.63 E-04	A
Vinyl Chloride [k]	2.47 E-05	C
Xylene [k]	2.68 E-04	A

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

[b] Emission factors were calculated in units of (lb/MMBtu) based on procedures in EPA

Method 19. To convert from (lb/MMBtu) to (lb/10^6 scf), multiply by the heat content of the fuel. If the heat content is not available, use 1020 Btu/scf. To convert from (lb/MMBtu) to (lb/hp-hr) use the following equation:

lb/hp-hr = (lb/MMBtu) (heat input, MMBtu/hr) (1/operating HP, 1/hp)

[c] Emission tests with unreported load conditions were not included in the data set.
[d] Based on 99.5% conversion of the fuel carbon to CO_2. CO_2 [lb/MMBtu] = (3.67)(%CON)(C)(D)(1/h), where %CON = percent conversion of fuel carbon to CO_2, C = carbon content of fuel by weight (0.75), D = density of fuel, 4.1 E+04 lb/10^6 scf, and h = heating value of natural gas (assume 1020 Btu/scf at 60°F).
[e] Based on 100% conversion of fuel sulfur to SO_2. Assumes sulfur content in natural gas of 2,000 gr/10^6 scf.
[f] Emission factor for TOC is based on measured emission levels of 43 tests.
[g] Emission factor for methane is determined by subtracting the VOC and ethane emission factors from the TOC emission factor. Measured emission factor for methane compares well with the calculated emission factor, 1.48 lb/MMBtu vs. 1.45 lb/MMBtu, respectively.
[h] VOC emission factor is based on the sum of the emission factors for all speciated organic compounds less ethane and methane.
[i] Considered ≤ 1 μm in aerodynamic diameter. Therefore, for filterable PM emissions, PM10(filterable) = PM2.5(filterable).
[j] No data were available for condensable PM emissions. The presented emission factor reflects emissions from 4SLB engines.
[k] Hazardous Air Pollutant as defined by Section 112(b) of the Clean Air Act.
[l] For lean burn engines, aldehyde emissions quantification using CARB 430 may reflect interference with the sampling compounds due to the nitrogen concentration in the stack. The presented emission factor is based on FTIR measurements. Emissions data based on CARB 430 are available in the background report.

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	8.47 E-01	B
CO [c] 90 - 105% Load	3.17 E-01	C
CO [c] <90% Load	5.57 E-01	B
CO_2 [d]	1.10 E+02	A
SO_2 [e]	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)[i]	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

Table 3.2-2. UNCONTROLLED EMISSION FACTORS FOR 4-STROKE LEAN-BURN ENGINES (Continued)

Pollutant	Emission Factor (lb/MMBtu)b (fuel input)	Emission Factor Rating
Acenaphthylene[k]	5.53 E-06	C
Acetaldehydek,[l]	8.36 E-03	A
Acroleink,[l]	5.14 E-03	A
Benzene[k]	4.40 E-04	A
Benzo(b)fluoranthene[k]	1.66 E-07	D
Benzo(e)pyrene[k]	4.15 E-07	D
Benzo(g,h,i)perylene[k]	4.14 E-07	D
Biphenyl[k]	2.12 E-04	D
Butane	5.41 E-04	D
Butyr/Isobutyraldehyde	1.01 E-04	C
Carbon Tetrachloride[k]	<3.67 E-05	E
Chlorobenzene[k]	<3.04 E-05	E
Chloroethane	1.87 E-06	D
Chloroform[k]	<2.85 E-05	E
Chrysene[k]	6.93 E-07	C
Cyclopentane	2.27 E-04	C
Ethane	1.05 E-01	C
Ethylbenzene[k]	3.97 E-05	B
Ethylene Dibromide[k]	<4.43 E-05	E
Fluoranthene[k]	1.11 E-06	C
Fluorene[k]	5.67 E-06	C
Formaldehyde[k, l]	5.28 E-02	A
Methanol[k]	2.50 E-03	B
Methylcyclohexane	1.23 E-03	C
Methylene Chloride[k]	2.00 E-05	C
n-Hexane[k]	1.11 E-03	C
n-Nonane	1.10 E-04	C

Table 3.2-2. UNCONTROLLED EMISSION FACTORS FOR 4-STROKE LEAN-BURN ENGINES (Continued)

Pollutant	Emission Factor (lb/MMBtu)b (fuel input)	Emission Factor Rating
n-Octane	3.51 E-04	C
n-Pentane	2.60 E-03	C
Naphthalene[k]	7.44 E-05	C
PAH[k]	2.69 E-05	D
Phenanthrene[k]	1.04 E-05	D
Phenol[k]	2.40 E-05	D
Propane	4.19 E-02	C
Pyrene[k]	1.36 E-06	C
Styrene[k]	<2.36 E-05	E
Perchloroethylene[k, m]	2.48 E-06	D
Toluene[k]	4.08 E-04	B
Vinyl Chloride[k]	1.49 E-05	C
Xylene[k]	1.84 E-04	B

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

[b] Emission factors were calculated in units of (lb/MMBtu) based on procedures in EPA Method 19. To convert from (lb/MMBtu) to (lb/10^6 scf), multiply by the heat content of the fuel. If the heat content is not available, use 1020 Btu/scf. To convert from (lb/MMBtu) to (lb/hp-hr) use the following equation:

lb/hp-hr = (lb/MMBtu) (heat input, MMBtu/hr) (1/operating HP, 1/hp)

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

[d] Based on 99.5% conversion of the fuel carbon to CO_2. CO_2 [lb/MMBtu] = (3.67)(%CON)(C)(D)(1/h), where %CON = percent conversion of fuel carbon to CO_2, C = carbon content of fuel by weight (0.75), D = density of fuel, 4.1 E+04 lb/10^6 scf, and

Table 3.2-2. UNCONTROLLED EMISSION FACTORS FOR 4-STROKE LEAN-BURN ENGINES (Continued)

h = heating value of natural gas (assume 1020 Btu/scf at 60°F).
[e] Based on 100% conversion of fuel sulfur to SO_2. Assumes sulfur content in natural gas of 2,000 gr/10^6 scf.
[f] Emission factor for TOC is based on measured emission levels from 22 source tests.
[g] Emission factor for methane is determined by subtracting the VOC and ethane emission factors from the TOC emission factor. Measured emission factor for methane compares well with the calculated emission factor, 1.31 lb/MMBtu vs. 1.25 lb/MMBtu, respectively.
[h] VOC emission factor is based on the sum of the emission factors for all speciated organic compounds less ethane and methane.
[i] Considered ≤ 1 µm in aerodynamic diameter. Therefore, for filterable PM emissions, PM10(filterable) = PM2.5(filterable).
[j] PM Condensable = PM Condensable Inorganic + PM-Condensable Organic
[k] Hazardous Air Pollutant as defined by Section 112(b) of the Clean Air Act.
[l] For lean burn engines, aldehyde emissions quantification using CARB 430 may reflect interference with the sampling compounds due to the nitrogen concentration in the stack. The presented emission factor is based on FTIR measurements. Emissions data based on CARB 430 are available in the background report.
[m]Error identified in pollutant name – October 2024. Pollutant name changed from tetrachloroethane to perchloroethylene.

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

Pollutant	Emission Factor (lb/MMBtu)[b] (fuel input)	Emission Factor Rating
Criteria Pollutants and Greenhouse Gases		
NO_x [c] 90 - 105% Load	2.21 E+00	A
NO_x [c] <90% Load	2.27 E+00	C
CO[c] 90 - 105% Load	3.72 E+00	A
CO[c] <90% Load	3.51 E+00	C
CO_2 [d]	1.10 E+02	A
SO_2 [e]	5.88 E-04	A
TOC[f]	3.58 E-01	C
Methane[g]	2.30 E-01	C
VOC[h]	2.96 E-02	C
PM10 (filterable)[i,j]	9.50 E-03	E
PM2.5 (filterable)[j]	9.50 E-03	E
PM Condensable[k]	9.91 E-03	E
Trace Organic Compounds		
1,1,2,2-Tetrachloroethane[l]	2.53 E-05	C
1,1,2-Trichloroethane[l]	<1.53 E-05	E
1,1-Dichloroethane	<1.13 E-05	E
1,2-Dichloroethane	<1.13 E-05	E
1,2-Dichloropropane	<1.30 E-05	E
1,3-Butadiene[l]	6.63 E-04	D
1,3-Dichloropropene[l]	<1.27 E-05	E
Acetaldehyde [l,m]	2.79 E-03	C
Acrolein [l,m]	2.63 E-03	C
Benzene[l]	1.58 E-03	B
Butyr/isobutyraldehyde	4.86 E-05	D
Carbon Tetrachloride[l]	<1.77 E-05	E

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

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

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

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

lb/hp-hr = (lb/MMBtu) (heat input, MMBtu/hr) (1/operating HP, 1/hp)

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

[d] Based on 99.5% conversion of the fuel carbon to CO_2. CO_2 [lb/MMBtu] = (3.67)(%CON)(C)(D)(1/h), where %CON = percent conversion of fuel carbon to CO_2,

C = carbon content of fuel by weight (0.75), D = density of fuel, 4.1 E+04 lb/10^6 scf, and h = heating value of natural gas (assume 1020 Btu/scf at 60°F).

[e] Based on 100% conversion of fuel sulfur to SO_2. Assumes sulfur content in natural gas of 2,000 gr/10^6scf.

[f] Emission factor for TOC is based on measured emission levels from 6 source tests.

[g] Emission factor for methane is determined by subtracting the VOC and ethane emission factors from the TOC emission factor.

[h] VOC emission factor is based on the sum of the emission factors for all speciated organic compounds. Methane and ethane emissions were not measured for this engine category.

[i] No data were available for uncontrolled engines. PM10 emissions are for engines equipped with a PCC.

[j] Considered # 1 Fm in aerodynamic diameter. Therefore, for filterable PM emissions, PM10 (filterable) = PM2.5 (filterable).

[k] No data were available for condensable emissions. The presented emission factor reflects emissions from 4SLB engines.

[l] Hazardous Air Pollutant as defined by Section 112(b) of the Clean Air Act.

[m] For rich-burn engines, no interference is suspected in quantifying aldehyde emissions. The presented emission factors are based on FTIR and CARB 430 emissions data measurements.

[n] Ethane emission factor is determined by subtracting the VOC emission factor from the NMHC emission factor.

References For Section 3.2

1. *Engines, Turbines, And Compressors Directory*, American Gas Association, Catalog #XF0488.

2. *Standards Support And Environmental Impact Statement, Volume I: Stationary Internal Combustion Engines*, EPA-450/2-78-125a, U. S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, NC, July 1979.

3. *Alternative Control Techniques Document* - NO_x *Emissions From Stationary Reciprocating Engines*, EPA-453/R-93-032, July 1993.

4. *Handbook - Control Technologies For Hazardous Air Pollutants*, EPA-625/6-91-014, June 1991.

5. *Limiting Net Greenhouse Gas Emissions In The United States, Volume II: Energy Responses,* Report for the Office of Environmental Analysis, Office of Policy, Planning and Analysis, Department of Energy (DOE), DOE/PE-0101 Volume II, September 1991.

6. C. Castaldini, NO_x *Reduction Technologies For Natural Gas Industry Prime Movers*, GRI-90/0215, Gas Research Institute, Chicago, IL, August 1990.

7. *Emission Factor Documentation for AP-42 Section 3.2, Natural Gas-Fired Reciprocating Engines*, EPA Contract No. 68-D2-0160, Alpha-Gamma Technologies, Inc., Raleigh, North Carolina, July 2000.

1.4 Natural Gas Combustion

1.4.1 General[1-2]

Natural gas is one of the major combustion fuels used throughout the country. It is mainly used to generate industrial and utility electric power, produce industrial process steam and heat, and heat residential and commercial space. Natural gas consists of a high percentage of methane (generally above 85 percent) and varying amounts of ethane, propane, butane, and inerts (typically nitrogen, carbon dioxide, and helium). The average gross heating value of natural gas is approximately 1,020 British thermal units per standard cubic foot (Btu/scf), usually varying from 950 to 1,050 Btu/scf.

1.4.2 Firing Practices[3-5]

There are three major types of boilers used for natural gas combustion in commercial, industrial, and utility applications: watertube, firetube, and cast iron. Watertube boilers are designed to pass water through the inside of heat transfer tubes while the outside of the tubes is heated by direct contact with the hot combustion gases and through radiant heat transfer. The watertube design is the most common in utility and large industrial boilers. Watertube boilers are used for a variety of applications, ranging from providing large amounts of process steam, to providing hot water or steam for space heating, to generating high-temperature, high-pressure steam for producing electricity. Furthermore, watertube boilers can be distinguished either as field erected units or packaged units.

Field erected boilers are boilers that are constructed on site and comprise the larger sized watertube boilers. Generally, boilers with heat input levels greater than 100 MMBtu/hr, are field erected. Field erected units usually have multiple burners and, given the customized nature of their construction, also have greater operational flexibility and NO_x control options. Field erected units can also be further categorized as wall-fired or tangential-fired. Wall-fired units are characterized by multiple individual burners located on a single wall or on opposing walls of the furnace while tangential units have several rows of air and fuel nozzles located in each of the four corners of the boiler.

Package units are constructed off-site and shipped to the location where they are needed. While the heat input levels of packaged units may range up to 250 MMBtu/hr, the physical size of these units are constrained by shipping considerations and generally have heat input levels less than 100 MMBtu/hr. Packaged units are always wall-fired units with one or more individual burners. Given the size limitations imposed on packaged boilers, they have limited operational flexibility and cannot feasibly incorporate some NO_x control options.

Firetube boilers are designed such that the hot combustion gases flow through tubes, which heat the water circulating outside of the tubes. These boilers are used primarily for space heating systems, industrial process steam, and portable power boilers. Firetube boilers are almost exclusively packaged units. The two major types of firetube units are Scotch Marine boilers and the older firebox boilers. In cast iron boilers, as in firetube boilers, the hot gases are contained inside the tubes and the water being heated circulates outside the tubes. However, the units are constructed of cast iron rather than steel. Virtually all cast iron boilers are constructed as package boilers. These boilers are used to produce either low-pressure steam or hot water, and are most commonly used in small commercial applications.

Natural gas is also combusted in residential boilers and furnaces. Residential boilers and furnaces generally resemble firetube boilers with flue gas traveling through several channels or tubes with water or air circulated outside the channels or tubes.

1.4.3 Emissions[3-4]

The emissions from natural gas-fired boilers and furnaces include nitrogen oxides (NO_x), carbon monoxide (CO), and carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), volatile organic compounds (VOCs), trace amounts of sulfur dioxide (SO_2), and particulate matter (PM).

Nitrogen Oxides -

Nitrogen oxides formation occurs by three fundamentally different mechanisms. The principal mechanism of NO_x formation in natural gas combustion is thermal NO_x. The thermal NO_x mechanism occurs through the thermal dissociation and subsequent reaction of nitrogen (N_2) and oxygen (O_2) molecules in the combustion air. Most NO_x formed through the thermal NO_x mechanism occurs in the high temperature flame zone near the burners. The formation of thermal NO_x is affected by three furnace-zone factors: (1) oxygen concentration, (2) peak temperature, and (3) time of exposure at peak temperature. As these three factors increase, NO_x emission levels increase. The emission trends due to changes in these factors are fairly consistent for all types of natural gas-fired boilers and furnaces. Emission levels vary considerably with the type and size of combustor and with operating conditions (e.g., combustion air temperature, volumetric heat release rate, load, and excess oxygen level).

The second mechanism of NO_x formation, called prompt NO_x, occurs through early reactions of nitrogen molecules in the combustion air and hydrocarbon radicals from the fuel. Prompt NO_x reactions occur within the flame and are usually negligible when compared to the amount of NO_x formed through the thermal NO_x mechanism. However, prompt NO_x levels may become significant with ultra-low-NO_x burners.

The third mechanism of NO_x formation, called fuel NO_x, stems from the evolution and reaction of fuel-bound nitrogen compounds with oxygen. Due to the characteristically low fuel nitrogen content of natural gas, NO_x formation through the fuel NO_x mechanism is insignificant.

Carbon Monoxide -

The rate of CO emissions from boilers depends on the efficiency of natural gas combustion. Improperly tuned boilers and boilers operating at off-design levels decrease combustion efficiency resulting in increased CO emissions. In some cases, the addition of NO_x control systems such as low NO_x burners and flue gas recirculation (FGR) may also reduce combustion efficiency, resulting in higher CO emissions relative to uncontrolled boilers.

Volatile Organic Compounds -

The rate of VOC emissions from boilers and furnaces also depends on combustion efficiency. VOC emissions are minimized by combustion practices that promote high combustion temperatures, long residence times at those temperatures, and turbulent mixing of fuel and combustion air. Trace amounts of VOC species in the natural gas fuel (e.g., formaldehyde and benzene) may also contribute to VOC emissions if they are not completely combusted in the boiler.

Sulfur Oxides -

Emissions of SO_2 from natural gas-fired boilers are low because pipeline quality natural gas typically has sulfur levels of 2,000 grains per million cubic feet. However, sulfur-containing odorants are added to natural gas for detecting leaks, leading to small amounts of SO_2 emissions. Boilers combusting unprocessed natural gas may have higher SO_2 emissions due to higher levels of sulfur in the natural gas. For these units, a sulfur mass balance should be used to determine SO_2 emissions.

Particulate Matter -

Because natural gas is a gaseous fuel, filterable PM emissions are typically low. Particulate matter from natural gas combustion has been estimated to be less than 1 micrometer in size and has filterable and condensable fractions. Particulate matter in natural gas combustion are usually larger molecular weight hydrocarbons that are not fully combusted. Increased PM emissions may result from poor air/fuel mixing or maintenance problems.

Greenhouse Gases -[6-9]

CO_2, CH_4, and N_2O emissions are all produced during natural gas combustion. In properly tuned boilers, nearly all of the fuel carbon (99.9 percent) in natural gas is converted to CO_2 during the combustion process. This conversion is relatively independent of boiler or combustor type. Fuel carbon not converted to CO_2 results in CH_4, CO, and/or VOC emissions and is due to incomplete combustion. Even in boilers operating with poor combustion efficiency, the amount of CH_4, CO, and VOC produced is insignificant compared to CO_2 levels.

Formation of N_2O during the combustion process is affected by two furnace-zone factors. N_2O emissions are minimized when combustion temperatures are kept high (above 1475°F) and excess oxygen is kept to a minimum (less than 1 percent).

Methane emissions are highest during low-temperature combustion or incomplete combustion, such as the start-up or shut-down cycle for boilers. Typically, conditions that favor formation of N_2O also favor emissions of methane.

1.4.4 Controls[4,10]

NO_x Controls -

Currently, the two most prevalent combustion control techniques used to reduce NO_x emissions from natural gas-fired boilers are flue gas recirculation (FGR) and low NO_x burners. In an FGR system, a portion of the flue gas is recycled from the stack to the burner windbox. Upon entering the windbox, the recirculated gas is mixed with combustion air prior to being fed to the burner. The recycled flue gas consists of combustion products which act as inerts during combustion of the fuel/air mixture. The FGR system reduces NO_x emissions by two mechanisms. Primarily, the recirculated gas acts as a dilutent to reduce combustion temperatures, thus suppressing the thermal NO_x mechanism. To a lesser extent, FGR also reduces NO_x formation by lowering the oxygen concentration in the primary flame zone. The amount of recirculated flue gas is a key operating parameter influencing NO_x emission rates for these systems. An FGR system is normally used in combination with specially designed low NO_x burners capable of sustaining a stable flame with the increased inert gas flow resulting from the use of FGR. When low NO_x burners and FGR are used in combination, these techniques are capable of reducing NO_x emissions by 60 to 90 percent.

Low NO_x burners reduce NO_x by accomplishing the combustion process in stages. Staging partially delays the combustion process, resulting in a cooler flame which suppresses thermal NO_x formation. The two most common types of low NO_x burners being applied to natural gas-fired boilers are staged air burners and staged fuel burners. NO_x emission reductions of 40 to 85 percent (relative to uncontrolled emission levels) have been observed with low NO_x burners.

Other combustion control techniques used to reduce NO_x emissions include staged combustion and gas reburning. In staged combustion (e.g., burners-out-of-service and overfire air), the degree of staging is a key operating parameter influencing NO_x emission rates. Gas reburning is similar to the use of overfire in the use of combustion staging. However, gas reburning injects additional amounts of natural gas in the upper furnace, just before the overfire air ports, to provide increased reduction of NO_x to NO_2.

Two postcombustion technologies that may be applied to natural gas-fired boilers to reduce NO_x emissions are selective noncatalytic reduction (SNCR) and selective catalytic reduction (SCR). The SNCR system injects ammonia (NH_3) or urea into combustion flue gases (in a specific temperature zone) to reduce NO_x emission. The Alternative Control Techniques (ACT) document for NO_x emissions from utility boilers, maximum SNCR performance was estimated to range from 25 to 40 percent for natural gas-fired boilers.[12] Performance data available from several natural gas fired utility boilers with SNCR show a 24 percent reduction in NO_x for applications on wall-fired boilers and a 13 percent reduction in NO_x for applications on tangential-fired boilers.[11] In many situations, a boiler may have an SNCR system installed to trim NO_x emissions to meet permitted levels. In these cases, the SNCR system may not be operated to achieve maximum NO_x reduction. The SCR system involves injecting NH_3 into the flue gas in the presence of a catalyst to reduce NO_x emissions. No data were available on SCR performance on natural gas fired boilers at the time of this publication. However, the ACT Document for utility boilers estimates NO_x reduction efficiencies for SCR control ranging from 80 to 90 percent.[12]

Emission factors for natural gas combustion in boilers and furnaces are presented in Tables 1.4-1, 1.4-2, 1.4-3, and 1.4-4.[11] Tables in this section present emission factors on a volume basis ($lb/10^6$ scf). To convert to an energy basis (lb/MMBtu), divide by a heating value of 1,020 MMBtu/10^6 scf. For the purposes of developing emission factors, natural gas combustors have been organized into three general categories: large wall-fired boilers with greater than 100 MMBtu/hr of heat input, boilers and residential furnaces with less than 100 MMBtu/hr of heat input, and tangential-fired boilers. Boilers within these categories share the same general design and operating characteristics and hence have similar emission characteristics when combusting natural gas.

Emission factors are rated from A to E to provide the user with an indication of how "good" the factor is, with "A" being excellent and "E" being poor. The criteria that are used to determine a rating for an emission factor can be found in the Emission Factor Documentation for AP-42 Section 1.4 and in the introduction to the AP-42 document.

1.4.5 Updates Since the Fifth Edition

The Fifth Edition was released in January 1995. Revisions to this section are summarized below. For further detail, consult the Emission Factor Documentation for this section. These and other documents can be found on the Emission Factor and Inventory Group (EFIG) home page (http://www.epa.gov/ttn/chief).

Supplement D, March 1998

- Text was revised concerning Firing Practices, Emissions, and Controls.
- All emission factors were updated based on 482 data points taken from 151 source tests. Many new emission factors have been added for speciated organic compounds, including hazardous air pollutants.

July 1998 - minor changes

- Footnote D was added to table 1.4-3 to explain why the sum of individual HAP may exceed VOC or TOC, the web address was updated, and the references were reordered.

Table 1.4-1. EMISSION FACTORS FOR NITROGEN OXIDES (NO_x) AND CARBON MONOXIDE (CO) FROM NATURAL GAS COMBUSTION[a]

Combustor Type (MMBtu/hr Heat Input) [SCC]	NO_x[b]		CO	
	Emission Factor ($lb/10^6$ scf)	Emission Factor Rating	Emission Factor ($lb/10^6$ scf)	Emission Factor Rating
Large Wall-Fired Boilers (>100) [1-01-006-01, 1-02-006-01, 1-03-006-01]				
Uncontrolled (Pre-NSPS)[c]	280	A	84	B
Uncontrolled (Post-NSPS)[c]	190	A	84	B
Controlled - Low NO_x burners	140	A	84	B
Controlled - Flue gas recirculation	100	D	84	B
Small Boilers (<100) [1-01-006-02, 1-02-006-02, 1-03-006-02, 1-03-006-03]				
Uncontrolled	100	B	84	B
Controlled - Low NO_x burners	50	D	84	B
Controlled - Low NO_x burners/Flue gas recirculation	32	C	84	B
Tangential-Fired Boilers (All Sizes) [1-01-006-04]				
Uncontrolled	170	A	24	C
Controlled - Flue gas recirculation	76	D	98	D
Residential Furnaces (<0.3) [No SCC]				
Uncontrolled	94	B	40	B

[a] Reference 11. Units are in pounds of pollutant per million standard cubic feet of natural gas fired. To convert from $lb/10^6$ scf to $kg/10^6$ m^3, multiply by 16. Emission factors are based on an average natural gas higher heating value of 1,020 Btu/scf. To convert from $lb/10^6$ scf to lb/MMBtu, divide by 1,020. The emission factors in this table may be converted to other natural gas heating values by multiplying the given emission factor by the ratio of the specified heating value to this average heating value. SCC = Source Classification Code. ND = no data. NA = not applicable.

[b] Expressed as NO_2. For large and small wall fired boilers with SNCR control, apply a 24 percent reduction to the appropriate NO_X emission factor. For tangential-fired boilers with SNCR control, apply a 13 percent reduction to the appropriate NO_X emission factor.

[c] NSPS=New Source Performance Standard as defined in 40 CFR 60 Subparts D and Db. Post-NSPS units are boilers with greater than 250 MMBtu/hr of heat input that commenced construction modification, or reconstruction after August 17, 1971, and units with heat input capacities between 100 and 250 MMBtu/hr that commenced construction modification, or reconstruction after June 19, 1984.

Table 1.4-1. EMISSION FACTORS FOR NITROGEN OXIDES (NO_x) AND CARBON MONOXIDE (CO) FROM NATURAL GAS COMBUSTION[a]

Combustor Type (MMBtu/hr Heat Input) [SCC]	NO_x[b]		CO	
	Emission Factor ($lb/10^6$ scf)	Emission Factor Rating	Emission Factor ($lb/10^6$ scf)	Emission Factor Rating
Large Wall-Fired Boilers (>100) [1-01-006-01, 1-02-006-01, 1-03-006-01]				
Uncontrolled (Pre-NSPS)[c]	280	A	84	B
Uncontrolled (Post-NSPS)[c]	190	A	84	B
Controlled - Low NO_x burners	140	A	84	B
Controlled - Flue gas recirculation	100	D	84	B
Small Boilers (<100) [1-01-006-02, 1-02-006-02, 1-03-006-02, 1-03-006-03]				
Uncontrolled	100	B	84	B
Controlled - Low NO_x burners	50	D	84	B
Controlled - Low NO_x burners/Flue gas recirculation	32	C	84	B
Tangential-Fired Boilers (All Sizes) [1-01-006-04]				
Uncontrolled	170	A	24	C
Controlled - Flue gas recirculation	76	D	98	D
Residential Furnaces (<0.3) [No SCC]				
Uncontrolled	94	B	40	B

[a] Reference 11. Units are in pounds of pollutant per million standard cubic feet of natural gas fired. To convert from $lb/10^6$ scf to $kg/10^6$ m^3, multiply by 16. Emission factors are based on an average natural gas higher heating value of 1,020 Btu/scf. To convert from $lb/10^6$ scf to lb/MMBtu, divide by 1,020. The emission factors in this table may be converted to other natural gas heating values by multiplying the given emission factor by the ratio of the specified heating value to this average heating value. SCC = Source Classification Code. ND = no data. NA = not applicable.

[b] Expressed as NO_2. For large and small wall fired boilers with SNCR control, apply a 24 percent reduction to the appropriate NO_X emission factor. For tangential-fired boilers with SNCR control, apply a 13 percent reduction to the appropriate NO_X emission factor.

[c] NSPS=New Source Performance Standard as defined in 40 CFR 60 Subparts D and Db. Post-NSPS units are boilers with greater than 250 MMBtu/hr of heat input that commenced construction modification, or reconstruction after August 17, 1971, and units with heat input capacities between 100 and 250 MMBtu/hr that commenced construction modification, or reconstruction after June 19, 1984.

TABLE 1.4-2. EMISSION FACTORS FOR CRITERIA POLLUTANTS AND GREENHOUSE GASES FROM NATURAL GAS COMBUSTION[a]

Pollutant	Emission Factor ($lb/10^6$ scf)	Emission Factor Rating
CO_2[b]	120,000	A
Lead	0.0005	D
N_2O (Uncontrolled)	2.2	E
N_2O (Controlled-low-NO_X burner)	0.64	E
PM (Total)[c]	7.6	D
PM (Condensable)[c]	5.7	D
PM (Filterable)[c]	1.9	B
SO_2[d]	0.6	A
TOC	11	B
Methane	2.3	B
VOC	5.5	C

[a] Reference 11. Units are in pounds of pollutant per million standard cubic feet of natural gas fired. Data are for all natural gas combustion sources. To convert from $lb/10^6$ scf to $kg/10^6$ m^3, multiply by 16. To convert from $lb/10^6$ scf to 1b/MMBtu, divide by 1,020. The emission factors in this table may be converted to other natural gas heating values by multiplying the given emission factor by the ratio of the specified heating value to this average heating value. TOC = Total Organic Compounds. VOC = Volatile Organic Compounds.

[b] Based on approximately 100% conversion of fuel carbon to CO_2. $CO_2[lb/10^6 scf] = (3.67)(CON)(C)(D)$, where CON = fractional conversion of fuel carbon to CO_2, C = carbon content of fuel by weight (0.76), and D = density of fuel, $4.2x10^4$ $lb/10^6$ scf.

[c] All PM (total, condensible, and filterable) is assumed to be less than 1.0 micrometer in diameter. Therefore, the PM emission factors presented here may be used to estimate PM_{10}, $PM_{2.5}$ or PM_1 emissions. Total PM is the sum of the filterable PM and condensible PM. Condensible PM is the particulate matter collected using EPA Method 202 (or equivalent). Filterable PM is the particulate matter collected on, or prior to, the filter of an EPA Method 5 (or equivalent) sampling train.

[d] Based on 100% conversion of fuel sulfur to SO_2. Assumes sulfur content is natural gas of 2,000 grains/10^6 scf. The SO_2 emission factor in this table can be converted to other natural gas sulfur contents by multiplying the SO_2 emission factor by the ratio of the site-specific sulfur content (grains/10^6 scf) to 2,000 grains/10^6 scf.

TABLE 1.4-3. EMISSION FACTORS FOR SPECIATED ORGANIC COMPOUNDS FROM NATURAL GAS COMBUSTION[a]

CAS No.	Pollutant	Emission Factor ($lb/10^6$ scf)	Emission Factor Rating
91-57-6	2-Methylnaphthalene[b, c]	2.4E-05	D
56-49-5	3-Methylchloranthrene[b, c]	<1.8E-06	E
	7,12-Dimethylbenz(a)anthracene[b,c]	<1.6E-05	E
83-32-9	Acenaphthene[b,c]	<1.8E-06	E
203-96-8	Acenaphthylene[b,c]	<1.8E-06	E
120-12-7	Anthracene[b,c]	<2.4E-06	E
56-55-3	Benz(a)anthracene[b,c]	<1.8E-06	E
71-43-2	Benzene[b]	2.1E-03	B
50-32-8	Benzo(a)pyrene[b,c]	<1.2E-06	E
205-99-2	Benzo(b)fluoranthene[b,c]	<1.8E-06	E
191-24-2	Benzo(g,h,i)perylene[b,c]	<1.2E-06	E
207-08-9	Benzo(k)fluoranthene[b,c]	<1.8E-06	E
106-97-8	Butane	2.1E+00	E
218-01-9	Chrysene[b,c]	<1.8E-06	E
53-70-3	Dibenzo(a,h)anthracene[b,c]	<1.2E-06	E
25321-22-6	Dichlorobenzene[b]	1.2E-03	E
74-84-0	Ethane	3.1E+00	E
206-44-0	Fluoranthene[b,c]	3.0E-06	E
86-73-7	Fluorene[b,c]	2.8E-06	E
50-00-0	Formaldehyde[b]	7.5E-02	B
110-54-3	Hexane[b]	1.8E+00	E
193-39-5	Indeno(1,2,3-cd)pyrene[b,c]	<1.8E-06	E
91-20-3	Naphthalene[b]	6.1E-04	E
109-66-0	Pentane	2.6E+00	E
85-01-8	Phenanathrene[b,c]	1.7E-05	D
74-98-6	Propane	1.6E+00	E

TABLE 1.4-3. EMISSION FACTORS FOR SPECIATED ORGANIC COMPOUNDS FROM NATURAL GAS COMBUSTION (Continued)

CAS No.	Pollutant	Emission Factor ($lb/10^6$ scf)	Emission Factor Rating
129-00-0	Pyrene[b, c]	5.0E-06	E
108-88-3	Toluene[b]	3.4E-03	C

[a] Reference 11. Units are in pounds of pollutant per million standard cubic feet of natural gas fired. Data are for all natural gas combustion sources. To convert from $lb/10^6$ scf to $kg/10^6$ m^3, multiply by 16. To convert from $1b/10^6$ scf to lb/MMBtu, divide by 1,020. Emission Factors preceeded with a less-than symbol are based on method detection limits.

[b] Hazardous Air Pollutant (HAP) as defined by Section 112(b) of the Clean Air Act.

[c] HAP because it is Polycyclic Organic Matter (POM). POM is a HAP as defined by Section 112(b) of the Clean Air Act.

[d] The sum of individual organic compounds may exceed the VOC and TOC emission factors due to differences in test methods and the availability of test data for each pollutant.

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

Pollutant	Emission Factor (lb/MMBtu)[b] (fuel input)	Emission Factor Rating
Criteria Pollutants and Greenhouse Gases		
NO_x[c] 90 - 105% Load	2.21 E+00	A
NO_x[c] <90% Load	2.27 E+00	C
CO[c] 90 - 105% Load	3.72 E+00	A
CO[c] <90% Load	3.51 E+00	C
CO_2[d]	1.10 E+02	A
SO_2[e]	5.88 E-04	A
TOC[f]	3.58 E-01	C
Methane[g]	2.30 E-01	C
VOC[h]	2.96 E-02	C
PM10 (filterable)[i,j]	9.50 E-03	E
PM2.5 (filterable)[j]	9.50 E-03	E
PM Condensable[k]	9.91 E-03	E
Trace Organic Compounds		
1,1,2,2-Tetrachloroethane[l]	2.53 E-05	C
1,1,2-Trichloroethane[l]	<1.53 E-05	E
1,1-Dichloroethane	<1.13 E-05	E
1,2-Dichloroethane	<1.13 E-05	E
1,2-Dichloropropane	<1.30 E-05	E
1,3-Butadiene[l]	6.63 E-04	D
1,3-Dichloropropene[l]	<1.27 E-05	E
Acetaldehyde[l,m]	2.79 E-03	C
Acrolein[l,m]	2.63 E-03	C
Benzene[l]	1.58 E-03	B
Butyr/isobutyraldehyde	4.86 E-05	D
Carbon Tetrachloride[l]	<1.77 E-05	E

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

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

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

[b] Emission factors were calculated in units of (lb/MMBtu) based on procedures in EPA Method 19. To convert from (lb/MMBtu) to (lb/10^6 scf), multiply by the heat content of the fuel. If the heat content is not available, use 1020 Btu/scf. To convert from (lb/MMBtu) to (lb/hp-hr) use the following equation:

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

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

[d] Based on 99.5% conversion of the fuel carbon to CO_2. CO_2 [lb/MMBtu] = (3.67)(%CON)(C)(D)(1/h), where %CON = percent conversion of fuel carbon to CO_2,

References For Section 1.4

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EXTENDED GAS REPORT
SUMMARY OF CHROMATOGRAPHIC ANALYSIS

Sample Name:	MARLAN PLANT INLET GAS	**For:**	26591G
Sample Date:	10/22/2025	**Cyl. Ident.:**	2025121933
Sampled By:	IN	**Company:**	SAN MATEO
Time Sampled:	10:18	**Analysis Date:**	10/22/2025
Sample Temp:	78 F	**Analysis By:**	LC
Sample Press:	878 PSI **H2S (PPM)** = 2.0	**Data File:**	LS1_1229.D

Component	Mole%	GPM REAL	GPM IDEAL
H2S	0.000		
Nitrogen	2.165		
Methane	73.119		
CO2	0.952		
Ethane	11.862	3.172	3.164
Propane	6.677	1.839	1.835
Isobutane	0.910	0.298	0.297
N-Butane	2.782	0.877	0.875
Isopentane	0.616	0.225	0.225
N-Pentane	0.511	0.185	0.185
Hexanes+	0.406	0.159	0.159
Total	100.000	6.755	6.740

CALCULATED PARAMETERS

TOTAL ANALYSIS SUMMARY

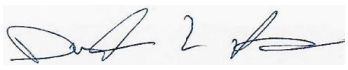
MOLE WT:	22.595
VAPOR PRESS PSIA:	3765.8
SPECIFIC GRAVITY	
AIR = 1 (REAL):	0.7828
AIR = 1 (IDEAL):	0.7800
H2O = 1 (IDEAL):	0.366
REPORTED BASIS:	14.73
Unnormalized Total:	13.961

HEATING VALUE

BTU/CUFT (DRY)	1310.0
BTU/CUFT (WET)	1287.8

BTEX SUMMARY

WT% BENZENE	9.151
WT% TOLUENE	3.503
WT% E BENZENE	0.288
WT% XYLENES	2.019



LAB MANAGER

Constants: GPA 2145
Method: GPA 2186.m

Report Rev 18-05.22
Template: eC6+ Liq

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Sample Name: MARLAN PLANT INLET GAS **Data File:** LS1_1229.D
Company: SAN MATEO

*ANALYSIS OF HEXANES PLUS

Component	MOLE%	WT%
2,2 DIMETHYL BUTANE	0.001	0.004
CYCLOPENTANE	0.027	0.093
2-METHYLPENTANE	0.048	0.185
3-METHYLPENTANE	0.028	0.105
HEXANE (C6)	0.058	0.213
DIMETHYLPENTANES	0.006	0.025
METHYLCYCLOPENTANE	0.048	0.177
2,2,3 TRIMETHYLBUTANE	0.005	0.022
BENZENE	0.033	0.115
CYCLOHEXANE	0.041	0.154
2-METHYLHEXANE	0.005	0.022
3-METHYLHEXANE	0.008	0.036
DIMETHYCYCLOPENTANES	0.000	0.000
HEPTANE (C7)	0.017	0.073
METHYLCYCLOHEXANE	0.022	0.098
2,5 DIMETHYLHEXANE	0.000	0.000
TOLUENE	0.014	0.058
2-METHYLHEPTANE	0.003	0.014
OTHER OCTANES	0.007	0.032
OCTANE (C8)	0.002	0.012
ETHYLCYCLOHEXANE	0.002	0.008
ETHYL BENZENE	0.001	0.006
M,P-XYLENE	0.005	0.023
O-XYLENE	0.002	0.007
OTHER NONANES	0.002	0.017
NONANE (C-9)	0.002	0.012
IC3 BENZENE	0.000	0.000
CYCLOOCTANE	0.000	0.002
NC3 BENZENE	0.001	0.003
TM BENZENE(S)	0.000	0.000
IC4 BENZENE	0.001	0.003
NC4 BENZENE	0.000	0.001
DECANES + (C10+)	0.011	0.084

*HEXANES PLUS SUMMARY

AVG MOLE WT	91.026
VAPOR PRESS PSIA	9.860
API GRAVITY @ 60F	59.7
SPECIFIC GRAVITY	
AIR = 1 (IDEAL):	2.975
H2O = 1 (IDEAL):	0.740

COMPONENT RATIOS

HEXANES (C6) MOLE%	39.411
HEPTANES (C7) MOLE%	41.601
OCTANES (C8) MOLE%	11.774
NONANES (C9) MOLE%	3.506
DECANES+ (C10+) MOLE%	3.708
HEXANES (C6) WT%	36.727
HEPTANES (C7) WT%	40.105
OCTANES (C8) WT%	12.976
NONANES (C9) WT%	4.400
DECANES+ (C10+) WT%	5.792

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EXTENDED GAS REPORT
SUMMARY OF CHROMATOGRAPHIC ANALYSIS

Sample Name:	MARLAN PLANT POST AMINE	**For:**	26592G
Sample Date:	10/22/2025	**Cyl. Ident.:**	2025121934
Sampled By:	IN	**Company:**	SAN MATEO
Time Sampled:	10:34	**Analysis Date:**	10/22/2025
Sample Temp:	109 F	**Analysis By:**	LC
Sample Press:	876 PSI **H2S (PPM)** = 0.5	**Data File:**	LS1_1227.D

Component	Mole%	GPM REAL	GPM IDEAL
H2S	0.000		
Nitrogen	2.369		
Methane	74.285		
CO2	0.028		
Ethane	12.759	3.411	3.403
Propane	6.475	1.783	1.779
Isobutane	0.749	0.245	0.244
N-Butane	1.893	0.597	0.595
Isopentane	0.417	0.152	0.152
N-Pentane	0.475	0.172	0.172
Hexanes+	0.550	0.232	0.231
Total	100.000	6.592	6.576

CALCULATED PARAMETERS

TOTAL ANALYSIS SUMMARY

MOLE WT:	22.007
VAPOR PRESS PSIA:	3830.2
SPECIFIC GRAVITY	
AIR = 1 (REAL):	0.7623
AIR = 1 (IDEAL):	0.7596
H2O = 1 (IDEAL):	0.359
REPORTED BASIS:	14.73
Unnormalized Total:	75.045

HEATING VALUE

BTU/CUFT (DRY)	1297.9
BTU/CUFT (WET)	1275.8

BTEX SUMMARY

WT% BENZENE	20.450
WT% TOLUENE	2.206
WT% E BENZENE	0.195
WT% XYLENES	0.586

LAB MANAGER

Constants: GPA 2145
Method: GPA 2186.m

Report Rev 18-05.22
Template: eC6+ Liq

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Sample Name: MARLAN PLANT POST AMINE
Company: SAN MATEO

Data File: LS1_1227.D

*ANALYSIS OF HEXANES PLUS

Component	MOLE%	WT%
2,2 DIMETHYL BUTANE	0.001	0.005
CYCLOPENTANE	0.044	0.156
2-METHYLPENTANE	0.069	0.276
3-METHYLPENTANE	0.033	0.128
HEXANE (C6)	0.061	0.238
DIMETHYLPENTANES	0.006	0.029
METHYLCYCLOPENTANE	0.059	0.226
2,2,3 TRIMETHYLBUTANE	0.009	0.043
BENZENE	0.034	0.119
CYCLOHEXANE	0.042	0.159
2-METHYLHEXANE	0.005	0.024
3-METHYLHEXANE	0.008	0.037
DIMETHYCYCLOPENTANES	0.000	0.000
HEPTANE (C7)	0.030	0.137
METHYLCYCLOHEXANE	0.025	0.112
2,5 DIMETHYLHEXANE	0.000	0.000
TOLUENE	0.013	0.054
2-METHYLHEPTANE	0.003	0.013
OTHER OCTANES	0.007	0.032
OCTANE (C8)	0.002	0.009
ETHYLCYCLOHEXANE	0.001	0.006
ETHYL BENZENE	0.001	0.005
M,P-XYLENE	0.002	0.011
O-XYLENE	0.001	0.003
OTHER NONANES	0.001	0.013
NONANE (C-9)	0.001	0.003
IC3 BENZENE	0.000	0.000
CYCLOOCTANE	0.000	0.002
NC3 BENZENE	0.000	0.000
TM BENZENE(S)	0.000	0.000
IC4 BENZENE	0.000	0.000
NC4 BENZENE	0.000	0.000
DECANES + (C10+)	0.085	0.592

*HEXANES PLUS SUMMARY

AVG MOLE WT	98.670
VAPOR PRESS PSIA	9.860
API GRAVITY @ 60F	55.9
SPECIFIC GRAVITY	
AIR = 1 (IDEAL):	2.975
H2O = 1 (IDEAL):	0.755

COMPONENT RATIOS

HEXANES (C6) MOLE%	37.981
HEPTANES (C7) MOLE%	36.432
OCTANES (C8) MOLE%	8.825
NONANES (C9) MOLE%	1.446
DECANES+ (C10+) MOLE%	15.316
HEXANES (C6) WT%	32.519
HEPTANES (C7) WT%	32.782
OCTANES (C8) WT%	8.964
NONANES (C9) WT%	1.677
DECANES+ (C10+) WT%	24.058

February 17, 2026

FESCO, Ltd.
1100 Fesco Ave. - Alice, Texas 78332

For: Matador Production Company
One Lincoln Centre
5400 LBJ Freeway, Suite 1500
Dallas, Texas 75240

Sample: San Mateo Midstream
Marlan II Amine Inlet
Spot Gas Sample @ 906 psig & 84 °F

Date Sampled: 02/12/2026 Job Number: 261333.011

CHROMATOGRAPH EXTENDED ANALYSIS - GPA 2286

COMPONENT	MOL%	GPM
Hydrogen Sulfide*	< 0.001	
Nitrogen	2.223	
Carbon Dioxide	1.377	
Methane	73.775	
Ethane	12.752	3.404
Propane	6.495	1.786
Isobutane	0.731	0.239
n-Butane	1.738	0.547
2-2 Dimethylpropane	0.004	0.002
Isopentane	0.312	0.114
n-Pentane	0.293	0.106
Hexanes	0.153	0.063
Heptanes Plus	0.147	0.054
Totals	100.000	6.314

Computed Real Characteristics Of Heptanes Plus:

Specific Gravity	3.130	(Air=1)
Molecular Weight	90.31	
Gross Heating Value	4715	BTU/CF

Computed Real Characteristics Of Total Sample:

Specific Gravity	0.759	(Air=1)
Compressibility (Z)	0.9963	
Molecular Weight	21.90	
Gross Heating Value		
Dry Basis	1254	BTU/CF
Saturated Basis	1233	BTU/CF

*Hydrogen Sulfide tested on location by: Stain Tube Method (GPA 2377)
<0.013 Gr/100 CF, <0.2 PPMV or <0.001 Mol %

Base Conditions: 14.650 PSI & 60 Deg F

Sampled By: (16) M.Martinez
Analyst: JS
Processor: RG
Cylinder ID: T-3978

Certified: FESCO, Ltd. - Alice, Texas

Conan Pierce 361-661-7015

CHROMATOGRAPH EXTENDED ANALYSIS - GPA 2286
TOTAL REPORT

COMPONENT	MOL %	GPM	WT %
Hydrogen Sulfide*	< 0.001		< 0.001
Nitrogen	2.223		2.843
Carbon Dioxide	1.377		2.767
Methane	73.775		54.038
Ethane	12.752	3.404	17.507
Propane	6.495	1.786	13.077
Isobutane	0.731	0.239	1.940
n-Butane	1.738	0.547	4.612
2,2 Dimethylpropane	0.004	0.002	0.013
Isopentane	0.312	0.114	1.028
n-Pentane	0.293	0.106	0.965
2,2 Dimethylbutane	0.002	0.001	0.008
Cyclopentane	0.000	0.000	0.000
2,3 Dimethylbutane	0.023	0.009	0.090
2 Methylpentane	0.049	0.020	0.193
3 Methylpentane	0.026	0.011	0.102
n-Hexane	0.053	0.022	0.209
Methylcyclopentane	0.028	0.010	0.108
Benzene	0.024	0.007	0.086
Cyclohexane	0.033	0.011	0.127
2-Methylhexane	0.004	0.002	0.018
3-Methylhexane	0.005	0.002	0.023
2,2,4 Trimethylpentane	0.003	0.002	0.016
Other C7's	0.011	0.005	0.050
n-Heptane	0.007	0.003	0.032
Methylcyclohexane	0.014	0.006	0.063
Toluene	0.008	0.003	0.034
Other C8's	0.007	0.003	0.035
n-Octane	0.001	0.001	0.005
Ethylbenzene	0.000	0.000	0.000
M & P Xylenes	0.001	0.000	0.005
O-Xylene	0.000	0.000	0.000
Other C9's	0.001	0.001	0.006
n-Nonane	0.000	0.000	0.000
Other C10's	0.000	0.000	0.000
n-Decane	0.000	0.000	0.000
Undecanes (11)	0.000	0.000	0.000
Totals	100.000	6.314	100.000

Computed Real Characteristics Of Total Sample:

Specific Gravity	0.759	(Air=1)
Compressibility (Z)	0.9963	
Molecular Weight	21.90	
Gross Heating Value		
Dry Basis	1254	BTU/CF
Saturated Basis	1233	BTU/CF

February 17, 2026

FESCO, Ltd.
1100 Fesco Ave. - Alice, Texas 78332

For: Matador Production Company
One Lincoln Centre
5400 LBJ Freeway, Suite 1500
Dallas, Texas 75240

Sample: San Mateo Midstream
Marlan II Inlet - Upstream of Slug Catcher
Spot Gas Sample @ 911 psig & 88 °F

Date Sampled: 02/12/2026 Job Number: 261333.001

CHROMATOGRAPH EXTENDED ANALYSIS - GPA 2286

COMPONENT	MOL%	GPM
Hydrogen Sulfide*	< 0.001	
Nitrogen	2.100	
Carbon Dioxide	1.449	
Methane	71.357	
Ethane	12.685	3.388
Propane	6.997	1.925
Isobutane	0.894	0.292
n-Butane	2.287	0.720
2-2 Dimethylpropane	0.004	0.002
Isopentane	0.517	0.189
n-Pentane	0.593	0.215
Hexanes	0.465	0.191
Heptanes Plus	0.652	0.255
Totals	100.000	7.177

Computed Real Characteristics Of Heptanes Plus:

Specific Gravity	3.281	(Air=1)
Molecular Weight	94.63	
Gross Heating Value	4952	BTU/CF

Computed Real Characteristics Of Total Sample:

Specific Gravity	0.806	(Air=1)
Compressibility (Z)	0.9957	
Molecular Weight	23.24	
Gross Heating Value		
Dry Basis	1326	BTU/CF
Saturated Basis	1303	BTU/CF

*Hydrogen Sulfide tested on location by: Stain Tube Method (GPA 2377)
0.125 Gr/100 CF, 2.0 PPMV or 0.0002 Mol%

Base Conditions: 14.650 PSI & 60 Deg F

Sampled By: (16) M.Martinez
Analyst: JS
Processor: RG
Cylinder ID: T-2850

Certified: FESCO, Ltd. - Alice, Texas

Conan Pierce 361-661-7015

CHROMATOGRAPH EXTENDED ANALYSIS - GPA 2286
TOTAL REPORT

COMPONENT	MOL %	GPM	WT %
Hydrogen Sulfide*	< 0.001		< 0.001
Nitrogen	2.100		2.531
Carbon Dioxide	1.449		2.744
Methane	71.357		49.249
Ethane	12.685	3.388	16.410
Propane	6.997	1.925	13.274
Isobutane	0.894	0.292	2.236
n-Butane	2.287	0.720	5.719
2,2 Dimethylpropane	0.004	0.002	0.012
Isopentane	0.517	0.189	1.605
n-Pentane	0.593	0.215	1.841
2,2 Dimethylbutane	0.005	0.002	0.019
Cyclopentane	0.000	0.000	0.000
2,3 Dimethylbutane	0.057	0.023	0.211
2 Methylpentane	0.144	0.060	0.534
3 Methylpentane	0.080	0.033	0.297
n-Hexane	0.179	0.074	0.664
Methylcyclopentane	0.094	0.033	0.340
Benzene	0.070	0.020	0.235
Cyclohexane	0.122	0.041	0.442
2-Methylhexane	0.020	0.009	0.086
3-Methylhexane	0.023	0.011	0.099
2,2,4 Trimethylpentane	0.015	0.008	0.074
Other C7's	0.046	0.020	0.196
n-Heptane	0.043	0.020	0.185
Methylcyclohexane	0.076	0.031	0.321
Toluene	0.038	0.013	0.151
Other C8's	0.048	0.022	0.228
n-Octane	0.014	0.007	0.069
Ethylbenzene	0.003	0.001	0.014
M & P Xylenes	0.007	0.003	0.032
O-Xylene	0.001	0.000	0.005
Other C9's	0.022	0.011	0.119
n-Nonane	0.004	0.002	0.022
Other C10's	0.006	0.003	0.036
n-Decane	0.000	0.000	0.000
Undecanes (11)	0.000	0.000	0.000
Totals	100.000	7.177	100.000

Computed Real Characteristics Of Total Sample:

Specific Gravity	0.806	(Air=1)
Compressibility (Z)	0.9957	
Molecular Weight	23.24	
Gross Heating Value		
Dry Basis	1326	BTU/CF
Saturated Basis	1303	BTU/CF

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EXTENDED LIQUID REPORT
SUMMARY OF CHROMATOGRAPHIC ANALYSIS

Sample Name:	PRONTO MARLAN 2 STABALIZED CONDESNATE	**For code:**	28341L
Sample Date:	02/13/2026	**Identification:**	2026129589
Sampled By:	MIKE LONG	**Company:**	SAN MATEO
Time Sampled:	8:16	**Analysis Date:**	02/13/2026
Sample Temp:	69 F	**Analysis By:**	LC
Sample Press:	47 PSI	**Data File:**	LS2_1489.D

Component	Mole%	Wt%	L.V.%
H2S	0.000	0.000	0.000
Nitrogen	0.017	0.005	0.004
Methane	0.000	0.000	0.000
CO2	0.008	0.004	0.003
Ethane	0.012	0.004	0.008
Propane	0.110	0.052	0.073
Isobutane	0.439	0.272	0.345
N-Butane	2.790	1.734	2.118
Isopentane	3.947	3.037	3.468
N-Pentane	6.763	5.204	5.890
*Hexanes+	85.914	89.688	88.091
Total	100.000	100.000	100.000

CALCULATED PARAMETERS

TOTAL ANALYSIS SUMMARY

MOLE WT:	93.768
SP. GRAVITY (IDEAL):	0.714
API GRAVITY @ 60F	66.800
ABS. DENSITY (LBS/GAL)	5.950
ft3 VAPOR/GAL LIQUID:	24.03
VAPOR PRESSURE:	6.49
REPORTED BASIS:	14.73
UNNORMALIZED TOTAL:	62.90

HEATING VALUE

BTU/CUFT	5060.1
BTU/GAL	121569.8
BTU/LB	20431.9

RATIOS

C1 to C2	0.00 : 1
CO2 to C2	27.27 : 1

BTEX SUMMARY

WT% BENZENE	5.067
WT% TOLUENE	0.434
WT% E BENZENE	0.000
WT% XYLENES	0.064

LAB MANAGER

* Hexane+ portion calculated by Allocation Process

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Sample Name: PRONTO MARLAN 2 STABALIZED CONDESNATE **Data File:** LS2_1489.D
Company: SAN MATEO

ANALYSIS OF HEXANES PLUS

Component	MOLE%	WT%	L.V.%
2,2 DIMETHYL BUTANE	0.156	0.143	0.156
CYCLOPENTANE	1.625	1.354	1.365
2-METHYLPENTANE	6.431	5.910	6.413
3-METHYLPENTANE	4.136	3.801	4.055
HEXANE (C6)	12.038	11.063	11.893
DIMETHYLPENTANES	0.431	0.460	0.479
METHYLCYCLOPENTANE	7.729	6.937	6.571
2,2,3 TRIMETHYLBUTANE	0.043	0.046	0.047
BENZENE	4.469	3.723	3.005
CYCLOHEXANE	0.000	0.000	0.000
2-METHYLHEXANE	0.000	0.000	0.000
3-METHYLHEXANE	0.000	0.000	0.000
DIMETHYCYCLOPENTANES	3.286	3.441	3.244
OTHER HEPTANES	1.571	1.914	1.962
HEPTANE (C7)	7.711	8.240	8.547
METHYLCYCLOHEXANE	0.000	0.000	0.000
2,5 DIMETHYLHEXANE	0.000	0.000	0.000
TOLUENE	0.000	0.000	0.000
2-METHYLHEPTANE	0.000	0.000	0.000
OTHER OCTANES	29.216	32.844	31.249
OCTANE (C8)	0.196	0.239	0.241
ETHYLCYCLOHEXANE	0.000	0.000	0.000
ETHYL BENZENE	0.000	0.000	0.000
M,P-XYLENE	0.000	0.000	0.000
O-XYLENE	0.051	0.058	0.047
OTHER NONANES	4.289	5.765	5.414
NONANE (C-9)	0.000	0.000	0.000
IC3 BENZENE	0.160	0.206	0.170
CYCLOOCTANE	0.019	0.024	0.020
NC3 BENZENE	0.024	0.031	0.026
TM BENZENE(S)	0.208	0.299	0.273
IC4 BENZENE	0.000	0.000	0.000
NC4 BENZENE	0.000	0.000	0.000

HEXANES PLUS SUMMARY

AVG MOLE WT	97.887
SP GRAV @ 60F	0.727
API GRAVITY @ 60F	63.1
ABS. DENSITY (LBS/GAL)	6.063
VAPOR PRESSURE:	2.99

COMPONENT RATIOS

HEXANES (C6) MOLE%	28.384
HEPTANES (C7) MOLE%	29.378
OCTANES (C8) MOLE%	34.230
NONANES (C9) MOLE%	5.055
DECANES+ (C10+) MOLE%	2.953
HEXANES (C6) WT%	24.833
HEPTANES (C7) WT%	27.608
OCTANES (C8) WT%	36.887
NONANES (C9) WT%	6.493
DECANES+ (C10+) WT%	4.179
HEXANES (C6) LV%	27.111
HEPTANES (C7) LV%	27.078
OCTANES (C8) LV%	35.749
NONANES (C9) LV%	6.200
DECANES+ (C10+) LV%	3.862

G3606

NON-CURRENT

GAS COMPRESSION APPLICATION

GAS ENGINE SITE SPECIFIC TECHNICAL DATA

CATERPILLAR®

3606A3

ENGINE SPEED (rpm):	1000	RATING STRATEGY:	STANDARD
COMPRESSION RATIO:	9.2	RATING LEVEL:	CONTINUOUS
AFTERCOOLER TYPE:	SCAC	FUEL SYSTEM:	GAV WITH AIR FUEL RATIO CONTROL
AFTERCOOLER WATER INLET (°F):	130		
JACKET WATER OUTLET (°F):	190	**SITE CONDITIONS:**	
ASPIRATION:	TA	FUEL:	Nat Gas
COOLING SYSTEM:	JW, OC+AC	FUEL PRESSURE RANGE(psig):	42.8-47.0
CONTROL SYSTEM:	CIS/ADEM3	FUEL METHANE NUMBER:	84.7
EXHAUST MANIFOLD:	DRY	FUEL LHV (Btu/scf):	905
COMBUSTION:	LOW EMISSION	ALTITUDE(ft):	3565
NOx EMISSION LEVEL (g/bhp-hr NOx):	0.5	MAXIMUM INLET AIR TEMPERATURE(°F):	105
		STANDARD RATED POWER:	1775 bhp@1000rpm

				MAXIMUM RATING	SITE RATING AT MAXIMUM INLET AIR TEMPERATURE		
RATING		**NOTES**	**LOAD**	**100%**	**100%**	**75%**	**55%**
ENGINE POWER	(WITHOUT FAN)	(1)	bhp	1775	1606	1204	888
INLET AIR TEMPERATURE			°F	89	105	105	105
ENGINE DATA							
FUEL CONSUMPTION (LHV)		(2)	Btu/bhp-hr	6860	6952	7250	7620
FUEL CONSUMPTION (HHV)		(2)	Btu/bhp-hr	7610	7712	8043	8452
AIR FLOW (@inlet air temp, 14.7 psia)	(WET)	(3)(4)	ft3/min	4822	4536	3481	2587
AIR FLOW	(WET)	(3)(4)	lb/hr	20926	19115	14671	10902
FUEL FLOW (60ºF, 14.7 psia)			scfm	224	206	161	125
INLET MANIFOLD PRESSURE		(5)	in Hg(abs)	74.3	68.0	53.1	41.2
EXHAUST TEMPERATURE - ENGINE OUTLET		(6)	°F	847	856	889	937
EXHAUST GAS FLOW (@engine outlet temp, 14.5 psia)	(WET)	(7)(4)	ft3/min	12232	11251	8863	6833
EXHAUST GAS MASS FLOW	(WET)	(7)(4)	lb/hr	21541	19679	15112	11243
EMISSIONS DATA - ENGINE OUT							
NOx (as NO2)		(8)(9)	g/bhp-hr	0.50	0.50	0.50	0.50
CO		(8)(9)	g/bhp-hr	2.75	2.74	2.75	2.75
THC (mol. wt. of 15.84)		(8)(9)	g/bhp-hr	6.31	6.38	6.59	6.78
NMHC (mol. wt. of 15.84)		(8)(9)	g/bhp-hr	0.95	0.96	0.99	1.02
NMNEHC (VOCs) (mol. wt. of 15.84)		(8)(9)(10)	g/bhp-hr	0.63	0.64	0.66	0.68
HCHO (Formaldehyde)		(8)(9)	g/bhp-hr	0.26	0.27	0.29	0.31
CO2		(8)(9)	g/bhp-hr	442	448	470	495
EXHAUST OXYGEN		(8)(11)	% DRY	12.8	12.5	11.8	11.1
HEAT REJECTION							
HEAT REJ. TO JACKET WATER (JW)		(12)	Btu/min	18591	17693	15133	12926
HEAT REJ. TO ATMOSPHERE		(12)	Btu/min	7103	7009	6653	6199
HEAT REJ. TO LUBE OIL (OC)		(12)	Btu/min	9133	9082	8837	8453
HEAT REJ. TO AFTERCOOLER (AC)		(12)(13)	Btu/min	20131	20131	7911	2133

COOLING SYSTEM SIZING CRITERIA			
TOTAL JACKET WATER CIRCUIT (JW)	(13)	Btu/min	22495
TOTAL AFTERCOOLER CIRCUIT (OC+AC)	(13)(14)	Btu/min	35306
A cooling system safety factor of 10% has been added to the cooling system sizing criteria.			

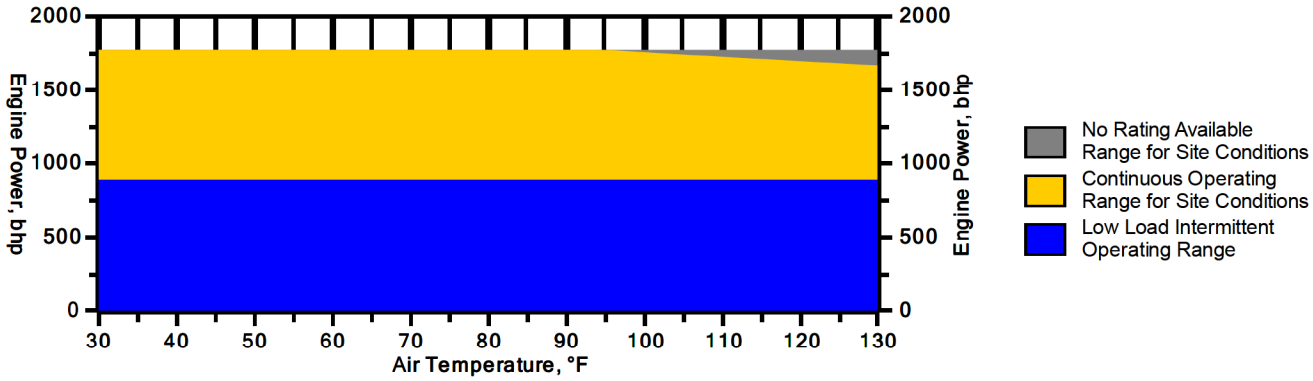
CONDITIONS AND DEFINITIONS

Engine rating obtained and presented in accordance with ISO 3046/1, adjusted for fuel, site altitude and site inlet air temperature. 100% rating at maximum inlet air temperature is the maximum engine capability for the specified fuel at site altitude and maximum site inlet air temperature. Maximum rating is the maximum capability at the specified aftercooler inlet temperature for the specified fuel at site altitude and reduced inlet air temperature. Lowest load point is the lowest continuous duty operating load allowed. No overload permitted at rating shown.

For notes information consult page three.

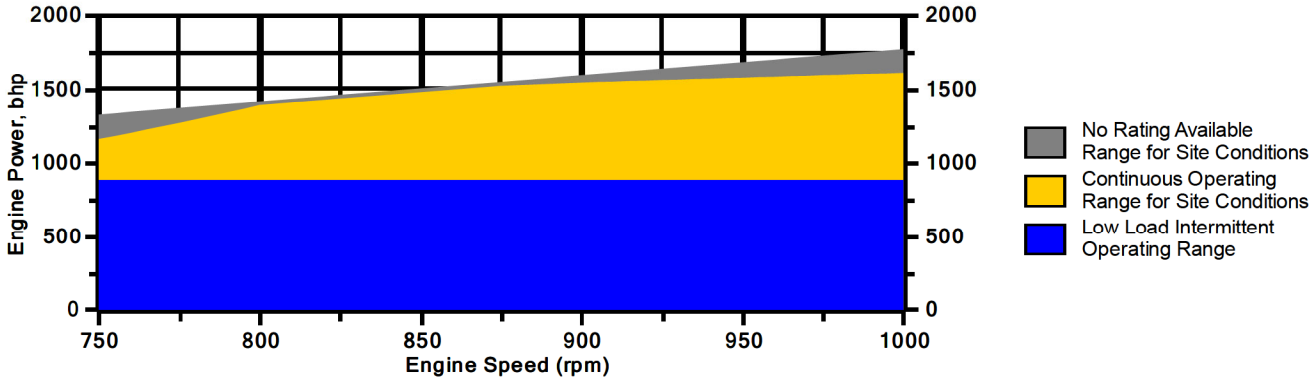
Engine Power vs. Inlet Air Temperature

Data represents temperature sweep at 3565 ft and 1000 rpm



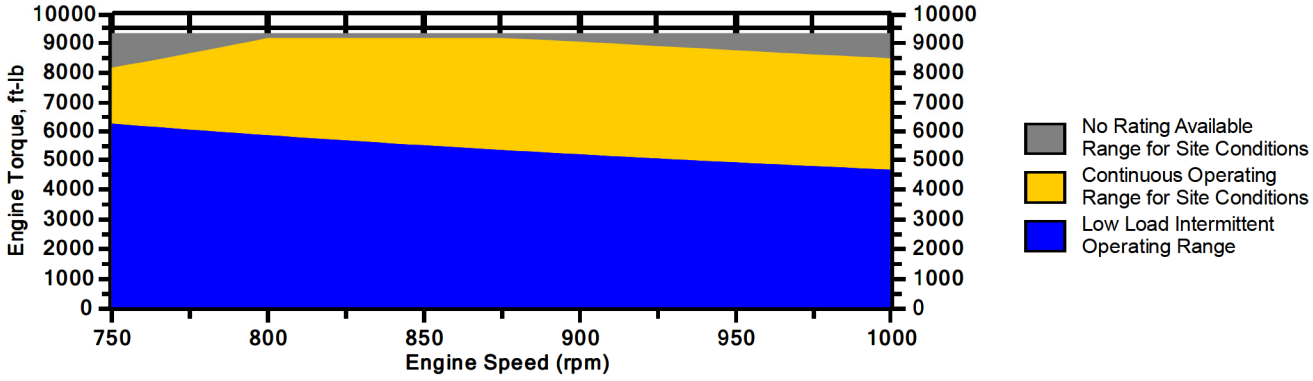
Engine Power vs. Engine Speed

Data represents speed sweep at 3565 ft and 105 ºF



Engine Torque vs. Engine Speed

Data represents speed sweep at 3565 ft and 105 ºF



Note: At site conditions of 3565 ft and 105°F inlet air temp., constant torque can be maintained down to 770 rpm. The minimum speed for loading at these conditions is 750 rpm.

NOTES

1. Engine rating is with two engine driven water pumps. Tolerance is ± 3% of full load.

2. Fuel consumption tolerance is ± 2.5% of full load data.

3. Air flow value is on a 'wet' basis. Flow is a nominal value with a tolerance of ± 5 %.

4. Inlet and Exhaust Restrictions must not exceed A&I limits based on full load flow rates from the standard technical data sheet.

5. Inlet manifold pressure is a nominal value with a tolerance of ± 5 %.

6. Exhaust temperature is a nominal value with a tolerance of (+)63°F, (-)54°F.

7. Exhaust flow value is on a "wet" basis. Flow is a nominal value with a tolerance of ± 6 %.

8. Emissions data is at engine exhaust flange prior to any after treatment.

9. Emission values are based on engine operating at steady state conditions. Fuel methane number cannot vary more than ± 3. Values listed are higher than nominal levels to allow for instrumentation, measurement, and engine-to-engine variations. They indicate "Not to Exceed" values. THC, NMHC, and NMNEHC do not include aldehydes. An oxidation catalyst may be required to meet Federal, State or local CO or HC requirements.

10. VOCs - Volatile organic compounds as defined in US EPA 40 CFR 60, subpart JJJJ

11. Exhaust Oxygen level is the result of adjusting the engine to operate at the specified NOx level. Tolerance is ± 0.5.

12. Heat rejection values are nominal. Tolerances, based on treated water, are ± 10% for jacket water circuit, ± 50% for radiation, ± 20% for lube oil circuit, and ± 5% for aftercooler circuit.

13. Aftercooler heat rejection includes an aftercooler heat rejection factor for the site elevation and inlet air temperature specified. Aftercooler heat rejection values at part load are for reference only. Do not use part load data for heat exchanger sizing.

14. Cooling system sizing criteria are maximum circuit heat rejection for the site, with applied factory tolerances and an additional cooling system factor of 10%.

Constituent	Abbrev	Mole %	Norm
Water Vapor	H2O	0.0000	0.0000
Methane	CH4	92.2700	92.2700
Ethane	C2H6	2.5000	2.5000
Propane	C3H8	0.5000	0.5000
Isobutane	iso-C4H1O	0.0000	0.0000
Norbutane	nor-C4H1O	0.2000	0.2000
Isopentane	iso-C5H12	0.0000	0.0000
Norpentane	nor-C5H12	0.1000	0.1000
Hexane	C6H14	0.0500	0.0500
Heptane	C7H16	0.0000	0.0000
Nitrogen	N2	3.4800	3.4800
Carbon Dioxide	CO2	0.9000	0.9000
Hydrogen Sulfide	H2S	0.0000	0.0000
Carbon Monoxide	CO	0.0000	0.0000
Hydrogen	H2	0.0000	0.0000
Oxygen	O2	0.0000	0.0000
Helium	HE	0.0000	0.0000
Neopentane	neo-C5H12	0.0000	0.0000
Octane	C8H18	0.0000	0.0000
Nonane	C9H20	0.0000	0.0000
Ethylene	C2H4	0.0000	0.0000
Propylene	C3H6	0.0000	0.0000
TOTAL (Volume %)		100.0000	100.0000

Fuel Makeup:	Nat Gas
Unit of Measure:	English

Calculated Fuel Properties

Caterpillar Methane Number:	84.7
Lower Heating Value (Btu/scf):	905
Higher Heating Value (Btu/scf):	1004
WOBBE Index (Btu/scf):	1168
THC: Free Inert Ratio:	21.83
Total % Inerts (% N2, CO2, He):	4.38%
RPC (%) (To 905 Btu/scf Fuel):	100%
Compressibility Factor:	0.998
Stoich A/F Ratio (Vol/Vol):	9.45
Stoich A/F Ratio (Mass/Mass):	15.75
Specific Gravity (Relative to Air):	0.600
Fuel Specific Heat Ratio (K):	1.313

CONDITIONS AND DEFINITIONS

Caterpillar Methane Number represents the knock resistance of a gaseous fuel. It should be used with the Caterpillar Fuel Usage Guide for the engine and rating to determine the rating for the fuel specified. A Fuel Usage Guide for each rating is included on page 2 of its standard technical data sheet.

RPC always applies to naturally aspirated (NA) engines, and turbocharged (TA or LE) engines only when they are derated for altitude and ambient site conditions.

Project specific technical data sheets generated by the Caterpillar Gas Engine Rating Pro program take the Caterpillar Methane Number and RPC into account when generating a site rating.

Fuel properties for Btu/scf calculations are at 60F and 14.696 psia.

Caterpillar shall have no liability in law or equity, for damages, consequently or otherwise, arising from use of program and related material or any part thereof.

FUEL LIQUIDS

Field gases, well head gases, and associated gases typically contain liquid water and heavy hydrocarbons entrained in the gas. To prevent detonation and severe damage to the engine, hydrocarbon liquids must not be allowed to enter the engine fuel system. To remove liquids, a liquid separator and coalescing filter are recommended, with an automatic drain and collection tank to prevent contamination of the ground in accordance with local codes and standards.

To avoid water condensation in the engine or fuel lines, limit the relative humidity of water in the fuel to 80% at the minimum fuel operating temperature.

Application Data Report

Proposal Information

Proposal Number:	RJ-10-1359D Rev(3)	Date:	**7/7/2017**
Project Reference:	5941-10KM Desoto		

Engine Information

Application:	Gas Compression	Engine Operation:	Gas Compression
Number of Engines:	1	Fuel Description:	Natural Gas
Engine Make:	Caterpillar	Type of Lube Oil:	0 sulfated ash or less
Engine Model:	G3606	Number of Exhaust Manifolds:	1
Rated Speed:	1000 RPM	Design Back Pressure:	6 In. of WC

Engine Cycle Data

Load	Speed	Power	Exhaust Flow	Exhaust Temp.	Fuel Cons.	O_2	H_2O
%		*bhp*	*acfm (cfm)*	*F*	*btu/bhp-hr*	*%*	*%*
100	Rated	1,775	12,136	847	7,561	12.8	17

Load	Speed	NO_x	CO	NMHC	NMNEHC	CH_2O	PM_{10}
%		*g/bhp-hr*	*g/bhp-hr*	*g/bhp-hr*	*g/bhp-hr*	*g/bhp-hr*	*g/bhp-hr*
100	Rated	0.5	2.75	0.95	0.63	0.4	0

Emission Data (100% Load)

Emission	Raw Engine Emissions						Target Outlet Emissions						Calculated Reduction
	g/bhp-hr	*tons/yr*	*ppmvd @ 15% O_2*	*ppmvd*	*lb/MW-hr*	*g/kW-hr*	*g/bhp-hr*	*tons/yr*	*ppmvd @ 15% O_2*	*ppmvd*	*lb/MW-hr*	*g/kW-hr*	
NO_x*	0.5	8.57	49	67	1.48	0.671							N/A
CO	2.75	47.13	442	606	8.13	3.688	0.19	3.3	31	42	0.57	0.258	90%
THC	6.3	107.98	1,766	2,424	18.63	8.448							N/A
NMNEHC**	0.63	10.8	177	242	1.86	0.845	0.3	5.14	84	115	0.89	0.402	50%
CH_2O	0.4	6.86	60	82	1.18	0.536	0.03	0.48	4	6	0.08	0.038	90%
PM_{10}	0	0	0	0	0	0							N/A

System Pressure Data***

Component	Flow	Flow Rate	Flow Velocity	Pressure Drop
MIRATECH Supplied System				**6.0 in WC**

System Specifications

NSCR (SP-RESIGA-54S2424x41-18/24-XH2B2)

Design Exhaust Flow Rate:	12,136 acfm (cfm)
Design Exhaust Temperature:	847°F
Housing Model Number:	SP-RESIGA-54S2424x41-18/24-HSG
Element Model Number:	SP-RXS-RE-S2424XH
Number of Catalyst Elements:	2
Number of Spare Catalyst Tracks:	2
Maximum Wind Loading:	90 mph
System Pressure Loss:	6.0 inches of WC (Clean)
Sound Attenuation:	50-50 dBA insertion loss
Exhaust Temperature Limits:	550 – 1250°F (catalyst inlet); 1350°F (catalyst outlet)

* MW referenced as NO_2
** MW referenced as CH_4. Assumed as 100% unsaturated HCs. Average at steady state per EPA 40CFR60 Method 25A for HC or mutually agreed test method.
*** Estimate Only

* NRU Inlet Pressure
** NRU Residue gas is the total blend for LP, IP and HP Compression of these streams is not included with this proposal

Option 2:

70 MMSCFD Recovery

Process Streams		NRU Inlet	LP Sales	IP Sales	HP Sales	NRU Residue Gas**	Nitrogen Vent
Composition							
Mole Fraction		%	%	%	%	%	%
N2		4.36	1.56	0.98	0.98	1.07	98.98
CO2		0.00	0.00	0.00	0.00	0.00	0.00
C1		94.61	97.46	97.94	97.94	97.86	1.02
C2		1.02	0.98	1.07	1.07	1.06	0.00
C3		0.00	0.00	0.00	0.00	0.00	0.00
Property	Units						
Temperature	°F	120	111	111	112		111
Pressure*	psig	370*	36.9	117.6	264.7		1.7
Std Vapor Volumetric Flow	MMSCFD	70.00	10.77	11.00	45.88	67.65	2.35

* NRU Inlet Pressure
** NRU Residue gas is the total blend for LP, IP and HP Compression of these streams is not included with this proposal

70MMSCFD Rejection

Process Streams		NRU Inlet	LP Sales	IP Sales	HP Sales	NRU Residue Gas**	Nitrogen Vent
Composition							
Mole Fraction		%	%	%	%	%	%
N2		3.83	1.76	1.20	1.20	1.27	98.89
CO2		0.01	0.01	0.01	0.01	0.01	0.00
C1		83.44	86.19	85.59	85.59	85.66	1.11
C2		12.39	11.73	12.86	12.86	12.72	0.00
C3		0.33	0.31	0.34	0.34	0.34	0.00
Property	Units						
Temperature	°F	120	109	109	109		109
Pressure*	psig	426.9*	36.9	105.2	313.4		1.7
Std Vapor Volumetric Flow	MMSCFD	70.00	8.37	12.00	47.79	68.16	1.84

* NRU Inlet Pressure
** NRU Residue gas is the total blend for LP, IP and HP Compression of these streams is not included with this proposal

• Burners
• Flares
• Incinerators
• Combustion Systems

22151 East 91st Street
Broken Arrow, OK 74014 USA
Phone: 918-258-8551
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September 27, 2017

Kahuna Ventures
11400 Westmoor Circle, Suite 325
Westminster, CO. 80021

Attention: Jeffrey Aspegren
jaspegren@kahunaventures.com

Reference: Moore Control Systems Lane Facility Thermal Oxidizer- Eddy County, NM
Zeeco Proposal No. 2017-04017IN-01 Rev 3

Dear Mr. Aspegren:

Thank you for your inquiry. We appreciate this opportunity to provide our **revised proposal incorporating the I&E Summit Specification SUMT-SP-260005 and clarifications as requested on 25-Sept-2017 and the updated DRE requirement** for the following equipment:

- One (1) Zeeco Standard, Direct Fired Horizontal Thermal Oxidizer Package

The attached proposal describes specific features and performance of Zeeco's standard thermal oxidizer system. Our design incorporates a proven thermal process to effectively treat the waste gas stream from your process. The design and materials of construction have been chosen to maximize on-line time and operational life.

Please note that the base of the thermal oxidizer is mounted on a pre-wired and pre-piped rectangular structural steel skid that will also house the fuel rack, control panel, and combustion air fan. This is intended to reduce installation time associated with interconnecting piping and wiring between the fuel rack/control panel and the thermal oxidizer.

Furthermore, the unit is ***NFPA 86 compliant*** to ensure personnel and equipment safety.

Again, we appreciate the opportunity to quote on your combustion equipment requirements. After you have had an opportunity to review our proposal, should you have any questions or require additional information, please contact me at (918)893-8416 or email me at sydney_levine@zeeco.com.

Best regards,

Sydney Levine
Applications Engineer

Cc: Ryan B. Tate, Zeeco- Broken Arrow

3.4 Shipment

The Zeeco standard, skid mounted horizontal thermal oxidizer package can ship ***16 weeks*** from the date of firm order commitment and release to proceed with procurement of raw materials. The above offer is based on using the Zeeco existing standard design and on current materials availability, drafting, and shop schedules. Expedited delivery is available if required. Please contact Zeeco for an updated proposal.

3.5 Preliminary Shipping Weights:

Base Scope- Skidded Horizontal Zeeco Standard Thermal Oxidizer

Item	Approximate Shipping Weight (lb)	Approximate Shipping Dimensions
Skid including thermal oxidizer base with refractory installed, fuel rack, and combustion air fan	10,200	8' W x 20' L x 8' H
Thermal Oxidizer Stack	6,000	3' W x 3' L x 22' H

3.6 Start-Up

Start-up and installation are not included in this proposal. If such assistance is required it will be charged in accordance with Zeeco's Standard Rate Schedule attached.

3.7 Limited Liability

Seller shall not be liable for any loss of profit, special, indirect, incidental or consequential damages whether arising under warranty, contract, strict liability, indemnification, or any other cause or combination of causes whatsoever. This limitation shall apply notwithstanding any failure of essential purpose of any limited remedy.

Seller's cumulative liability, inclusive of insurance proceeds paid to Agent under Seller's insurance policies and liquidated damages paid to Agent, shall in no event be in excess of the value of the purchase price, whether arising under warranty, contract, strict liability, indemnification, or any other cause or combination of causes whatsoever. These limitations shall prevail over any conflicting or inconsistent provisions stated elsewhere.

4.0 DESIGN BASIS

4.1 Site Conditions

Elevation, feet	3500 ft
Barometric Pressure, psi(a)	12.9
Temperature, °F (Min/Max)	10 / 100
Design Relative Humidity	90% (assumed)
Wind Design	ASCE 7-10, 90MPH

4.2 Waste Stream Summary

Component	Waste Gas (mol %)
Methane	0.2485
Ethane	0.0819
Propane	0.0394
i-Butane	0.0008
n-Butane	0.0079
i-Pentane	0.0006
n-Pentane	0.0012
Nitrogen	0.0013
Carbon Dioxide	93.0804
n-Hexane	0.0013
H2O	6.5367
Total Flowrate, (lb/hr)	**7018.45**
Temperature, °F	120
Pressure, psi(a)	26.2
Mol. Wt.	42.23

Waste stream is assumed to be in vapor phase, no liquid has been considered within this design.

4.3 Utilities

Electrical Power	460V / 3 Phase / 60 Hz
Instrument Air, SCFH	2000
Fuel Gas Required during Normal Operation, MMBtu/Hr	6

4.4 Flue Gas Summary at 1600°F

Component	Flue Gas (Mol %)
CO2	34.19
H2O	18.79
N2	43.82
O2	3.20
Total, lb/hr	***16,380.11***
Mol. Wt.	31.73

4.5 System Performance

Stack Parameter	Guaranteed Values
VOC Destruction Efficiency	**99.9 %**

These values are understood to apply only when the system is operated in accordance with the operating conditions stipulated in the design summary and for the waste(s) stipulated in the design basis sections of this proposal.

Customer: Veritas Gas Processing

Project: Thermal Oxidizer Package – H-504, J423

Purchase Order No.: 4232000187

ZEECO S.O. 42234

Installation, Operating & Maintenance Manual

REV: 0

Rev	Prepared By	Approved By	Date	Description
0	CAW	SN	10-JUL-20	ISSUED FOR APPROVAL

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2.1.6. System Performance

Stack Parameter	Guaranteed Values
VOC Destruction Efficiency	**>99%**
NOx, ppmvd @3% O2	**31 (0.08 lb/MMBtu)**

These values are understood to apply only when the system is operated in accordance with the operating conditions stipulated in the design summary and for the waste(s) stipulated in the design basis sections of this proposal. VOC is defined as non-methane non-ethane hydrocarbons.

Emissions factors given in lb/MMBtu are based on LHV heat release of the total heat release in the system, including heat release from waste and fuel gasses. The total maximum heat release (combined fuel and waste) in the unit is 12 MMBtu/hr.

2.2 Burner Design

Model:	GB-Series Gas Burner (1.2MM BTU/HR to 12MM BTU/HR operating range.)
Location / Firing:	Vertical
Combustion Air:	Forced draft – Ambient Air
Pilot:	HEI Igniter

For more information on the burner, refer to the burner drawing 42234-G006A-001 and capacity curves 42234-G009A-001 in Appendix B.



October 2000
RG-109 (Draft)

Air Permit Technical Guidance for Chemical Sources:

Flares and Vapor Oxidizers

printed on recycled paper

Air Permits Division

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Waste Stream	Destruction/Removal Efficiency (DRE)		
VOC	98 percent (generic) 99 percent for compounds containing no more than 3 carbons that contain no elements other than carbon and hydrogen in addition to the following compounds: methanol, ethanol, propanol, ethylene oxide and propylene oxide		
H_2S	98 percent		
NH_3	case by case		
CO	case by case		
Air Contaminants	**Emission Factors**		
thermal NO_x	steam-assist:	high Btu	0.0485 lb/MMBtu
		low Btu	0.068 lb/MMBtu
	other:	high Btu	0.138 lb/MMBtu
		low Btu	0.0641 lb/MMBtu
fuel NO_x	NO_x is 0.5 wt percent of inlet NH_3, other fuels case by case		
CO	steam-assist:	high Btu	0.3503 lb/MMBtu
		low Btu	0.3465 lb/MMBtu
	other:	high Btu	0.2755 lb/MMBtu
		low Btu	0.5496 lb/MMBtu
PM	none, required to be smokeless		
SO_2	100 percent S in fuel to SO_2		

*The only exeption ot this is if inorganics might be emitted from the flare. In the case of landfills, the AP-42 PM factor may be used. In other cases, the emissions should be based on the composition of the waste stream routed to the flare.

13.2.2 Unpaved Roads

13.2.2.1 General

When a vehicle travels an unpaved road, the force of the wheels on the road surface causes pulverization of surface material. Particles are lifted and dropped from the rolling wheels, and the road surface is exposed to strong air currents in turbulent shear with the surface. The turbulent wake behind the vehicle continues to act on the road surface after the vehicle has passed.

The particulate emission factors presented in the previous draft version of this section of AP-42, dated October 2001, implicitly included the emissions from vehicles in the form of exhaust, brake wear, and tire wear as well as resuspended road surface material[25]. EPA included these sources in the emission factor equation for unpaved public roads (equation 1b in this section) since the field testing data used to develop the equation included both the direct emissions from vehicles and emissions from resuspension of road dust.

This version of the unpaved public road emission factor equation only estimates particulate emissions from resuspended road surface material [23, 26]. The particulate emissions from vehicle exhaust, brake wear, and tire wear are now estimated separately using EPA's MOBILE6.2 [24]. This approach eliminates the possibility of double counting emissions. Double counting results when employing the previous version of the emission factor equation in this section and MOBILE6.2 to estimate particulate emissions from vehicle traffic on unpaved public roads. It also incorporates the decrease in exhaust emissions that has occurred since the unpaved public road emission factor equation was developed. The previous version of the unpaved public road emission factor equation includes estimates of emissions from exhaust, brake wear, and tire wear based on emission rates for vehicles in the 1980 calendar year fleet. The amount of PM released from vehicle exhaust has decreased since 1980 due to lower new vehicle emission standards and changes in fuel characteristics.

13.2.2.2 Emissions Calculation And Correction Parameters[1-6]

The quantity of dust emissions from a given segment of unpaved road varies linearly with the volume of traffic. Field investigations also have shown that emissions depend on source parameters that characterize the condition of a particular road and the associated vehicle traffic. Characterization of these source parameters allow for "correction" of emission estimates to specific road and traffic conditions present on public and industrial roadways.

Dust emissions from unpaved roads have been found to vary directly with the fraction of silt (particles smaller than 75 micrometers [μm] in diameter) in the road surface materials.[1] The silt fraction is determined by measuring the proportion of loose dry surface dust that passes a 200-mesh screen, using the ASTM-C-136 method. A summary of this method is contained in Appendix C of AP-42. Table 13.2.2-1 summarizes measured silt values for industrial unpaved roads. Table 13.2.2-2 summarizes measured silt values for public unpaved roads. It should be noted that the ranges of silt content vary over two orders of magnitude. Therefore, the use of data from this table can potentially introduce considerable error. Use of this data is strongly discouraged when it is feasible to obtain locally gathered data.

Since the silt content of a rural dirt road will vary with geographic location, it should be measured for use in projecting emissions. As a conservative approximation, the silt content of the parent soil in the area can be used. Tests, however, show that road silt content is normally lower than in the surrounding parent soil, because the fines are continually removed by the vehicle traffic, leaving a higher percentage of coarse particles.

Other variables are important in addition to the silt content of the road surface material. For example, at industrial sites, where haul trucks and other heavy equipment are common, emissions are highly correlated with vehicle weight. On the other hand, there is far less variability in the weights of cars and pickup trucks that commonly travel publicly accessible unpaved roads throughout the United States. For those roads, the moisture content of the road surface material may be more dominant in determining differences in emission levels between, for example a hot, desert environment and a cool, moist location.

The PM-10 and TSP emission factors presented below are the outcomes from stepwise linear regressions of field emission test results of vehicles traveling over unpaved surfaces. Due to a limited amount of information available for PM-2.5, the expression for that particle size range has been scaled against the result for PM-10. Consequently, the quality rating for the PM-2.5 factor is lower than that for the PM-10 expression.

Table 13.2.2-1. TYPICAL SILT CONTENT VALUES OF SURFACE MATERIAL ON INDUSTRIAL UNPAVED ROADS[a]

Industry	Road Use Or Surface Material	Plant Sites	No. Of Samples	Silt Content (%)	
				Range	Mean
Copper smelting	Plant road	1	3	16 - 19	17
Iron and steel production	Plant road	19	135	0.2 - 19	6.0
Sand and gravel processing	Plant road	1	3	4.1 - 6.0	4.8
	Material storage area	1	1	-	7.1
Stone quarrying and processing	Plant road	2	10	2.4 - 16	10
	Haul road to/from pit	4	20	5.0-15	8.3
Taconite mining and processing	Service road	1	8	2.4 - 7.1	4.3
	Haul road to/from pit	1	12	3.9 - 9.7	5.8
Western surface coal mining	Haul road to/from pit	3	21	2.8 - 18	8.4
	Plant road	2	2	4.9 - 5.3	5.1
	Scraper route	3	10	7.2 - 25	17
	Haul road (freshly graded)	2	5	18 - 29	24
Construction sites	Scraper routes	7	20	0.56-23	8.5
Lumber sawmills	Log yards	2	2	4.8-12	8.4
Municipal solid waste landfills	Disposal routes	4	20	2.2 - 21	6.4

[a]References 1,5-15.

The following empirical expressions may be used to estimate the quantity in pounds (lb) of size-specific particulate emissions from an unpaved road, per vehicle mile traveled (VMT):

For vehicles traveling on unpaved surfaces at industrial sites, emissions are estimated from the following equation:

$$E = k\,(s/12)^a (W/3)^b \quad (1a)$$

and, for vehicles traveling on publicly accessible roads, dominated by light duty vehicles, emissions may be estimated from the following:

$$E = \frac{k\,(s/12)^a (S/30)^d}{(M/0.5)^c} - C \quad (1b)$$

where k, a, b, c and d are empirical constants (Reference 6) given below and

E = size-specific emission factor (lb/VMT)
s = surface material silt content (%)
W = mean vehicle weight (tons)
M = surface material moisture content (%)
S = mean vehicle speed (mph)
C = emission factor for 1980's vehicle fleet exhaust, brake wear and tire wear.

The source characteristics s, W and M are referred to as correction parameters for adjusting the emission estimates to local conditions. The metric conversion from lb/VMT to grams (g) per vehicle kilometer traveled (VKT) is as follows:

1 lb/VMT = 281.9 g/VKT

The constants for Equations 1a and 1b based on the stated aerodynamic particle sizes are shown in Tables 13.2.2-2 and 13.2.2-4. The PM-2.5 particle size multipliers (k-factors) are taken from Reference 27.

Table 13.2.2-2. CONSTANTS FOR EQUATIONS 1a AND 1b

Constant	Industrial Roads (Equation 1a)			Public Roads (Equation 1b)		
	PM-2.5	PM-10	PM-30*	PM-2.5	PM-10	PM-30*
k (lb/VMT)	0.15	1.5	4.9	0.18	1.8	6.0
a	0.9	0.9	0.7	1	1	1
b	0.45	0.45	0.45	-	-	-
c	-	-	-	0.2	0.2	0.3
d	-	-	-	0.5	0.5	0.3
Quality Rating	B	B	B	B	B	B

*Assumed equivalent to total suspended particulate matter (TSP)
"-" = not used in the emission factor equation

Table 13.2.2-2 also contains the quality ratings for the various size-specific versions of Equation 1a and 1b. The equation retains the assigned quality rating, if applied within the ranges of source conditions, shown in Table 13.2.2-3, that were tested in developing the equation:

Table 13.2.2-3. RANGE OF SOURCE CONDITIONS USED IN DEVELOPING EQUATION 1a AND 1b

Emission Factor	Surface Silt Content, %	Mean Vehicle Weight		Mean Vehicle Speed		Mean No. of Wheels	Surface Moisture Content, %
		Mg	ton	km/hr	mph		
Industrial Roads (Equation 1a)	1.8-25.2	1.8-260	2-290	8-69	5-43	4-17[a]	0.03-13
Public Roads (Equation 1b)	1.8-35	1.4-2.7	1.5-3	16-88	10-55	4-4.8	0.03-13

[a] See discussion in text.

As noted earlier, the models presented as Equations 1a and 1b were developed from tests of traffic on unpaved surfaces. Unpaved roads have a hard, generally nonporous surface that usually dries quickly after a rainfall or watering, because of traffic-enhanced natural evaporation. (Factors influencing how fast a road dries are discussed in Section 13.2.2.3, below.) The quality ratings given above pertain to the mid-range of the measured source conditions for the equation. A higher mean vehicle weight and a higher than normal traffic rate may be justified when performing a worst-case analysis of emissions from unpaved roads.

The emission factors for the exhaust, brake wear and tire wear of a 1980's vehicle fleet (*C*) was obtained from EPA's MOBILE6.2 model [23]. The emission factor also varies with aerodynamic size range

as shown in Table 13.2.2-4

Table 13.2.2-4. EMISSION FACTOR FOR 1980'S VEHICLE FLEET EXHAUST, BRAKE WEAR AND TIRE WEAR

Particle Size Range[a]	*C*, Emission Factor for Exhaust, Brake Wear and Tire Wear[b] lb/VMT
$PM_{2.5}$	0.00036
PM_{10}	0.00047
PM_{30}[c]	0.00047

[a] Refers to airborne particulate matter (PM-x) with an aerodynamic diameter equal to or less than x micrometers.
[b] Units shown are pounds per vehicle mile traveled (lb/VMT).
[c] PM-30 is sometimes termed "suspendable particulate" (SP) and is often used as a surrogate for TSP.

It is important to note that the vehicle-related source conditions refer to the average weight, speed, and number of wheels for all vehicles traveling the road. For example, if 98 percent of traffic on the road are 2-ton cars and trucks while the remaining 2 percent consists of 20-ton trucks, then the mean weight is 2.4 tons. More specifically, Equations 1a and 1b are *not* intended to be used to calculate a separate emission factor for each vehicle class within a mix of traffic on a given unpaved road. That is, in the example, one should *not* determine one factor for the 2-ton vehicles and a second factor for the 20-ton trucks. Instead, only one emission factor should be calculated that represents the "fleet" average of 2.4 tons for all vehicles traveling the road.

Moreover, to retain the quality ratings when addressing a group of unpaved roads, it is necessary that reliable correction parameter values be determined for the road in question. The field and laboratory procedures for determining road surface silt and moisture contents are given in AP-42 Appendices C.1 and C.2. Vehicle-related parameters should be developed by recording visual observations of traffic. In some cases, vehicle parameters for industrial unpaved roads can be determined by reviewing maintenance records or other information sources at the facility.

In the event that site-specific values for correction parameters cannot be obtained, then default values may be used.In the absence of site-specific silt content information, an appropriate mean value from Table 13.2.2-1 may be used as a default value, but the quality rating of the equation is reduced by two letters. Because of significant differences found between different types of road surfaces and between different areas of the country, use of the default moisture content value of 0.5 percent in Equation 1b is discouraged. The quality rating should be downgraded two letters when the default moisture content value is used. (It is assumed that readers addressing industrial roads have access to the information needed to develop average vehicle information in Equation 1a for their facility.)

The effect of routine watering to control emissions from unpaved roads is discussed below in Section 13.2.2.3, “Controls”. However, all roads are subject to some natural mitigation because of rainfall and other precipitation. The Equation 1a and 1b emission factors can be extrapolated to annual

average uncontrolled conditions (but including natural mitigation) under the simplifying assumption that annual average emissions are inversely proportional to the number of days with measurable (more than 0.254 mm [0.01 inch]) precipitation:

$$E_{ext} = E\ [(365 - P)/365] \quad (2)$$

where:

E_{ext} = annual size-specific emission factor extrapolated for natural mitigation, lb/VMT

E = emission factor from Equation 1a or 1b

P = number of days in a year with at least 0.254 mm (0.01 in) of precipitation (see below)

Figure 13.2.2-1 gives the geographical distribution for the mean annual number of "wet" days for the United States.

Equation 2 provides an estimate that accounts for precipitation on an annual average basis for the purpose of inventorying emissions. It should be noted that Equation 2 does not account for differences in the temporal distributions of the rain events, the quantity of rain during any event, or the potential for the rain to evaporate from the road surface. In the event that a finer temporal and spatial resolution is desired for inventories of public unpaved roads, estimates can be based on a more complex set of assumptions. These assumptions include:

1. The moisture content of the road surface material is increased in proportion to the quantity of water added;
2. The moisture content of the road surface material is reduced in proportion to the Class A pan evaporation rate;
3. The moisture content of the road surface material is reduced in proportion to the traffic volume; and
4. The moisture content of the road surface material varies between the extremes observed in the area. The CHIEF Web site (http://www.epa.gov/ttn/chief/ap42/ch13/related/c13s02-2.html) has a file which contains a spreadsheet program for calculating emission factors which are temporally and spatially resolved. Information required for use of the spreadsheet program includes monthly Class A pan evaporation values, hourly meteorological data for precipitation, humidity and snow cover, vehicle traffic information, and road surface material information.

It is emphasized that the simple assumption underlying Equation 2 and the more complex set of assumptions underlying the use of the procedure which produces a finer temporal and spatial resolution have not been verified in any rigorous manner. For this reason, the quality ratings for either approach should be downgraded one letter from the rating that would be applied to Equation 1.

13.2.2.3 Controls[18-22]

A wide variety of options exist to control emissions from unpaved roads. Options fall into the following three groupings:

1. Vehicle restrictions that limit the speed, weight or number of vehicles on the road;

2. Surface improvement, by measures such as (a) paving or (b) adding gravel or slag to a dirt road; and
3. Surface treatment, such as watering or treatment with chemical dust suppressants.

Available control options span broad ranges in terms of cost, efficiency, and applicability. For example, traffic controls provide moderate emission reductions (often at little cost) but are difficult to enforce. Although paving is highly effective, its high initial cost is often prohibitive. Furthermore, paving is not feasible for industrial roads subject to very heavy vehicles and/or spillage of material in transport. Watering and chemical suppressants, on the other hand, are potentially applicable to most industrial roads at moderate to low costs. However, these require frequent reapplication to maintain an acceptable level of control. Chemical suppressants are generally more cost-effective than water but not in cases of temporary roads (which are common at mines, landfills, and construction sites). In summary, then, one needs to consider not only the type and volume of traffic on the road but also how long the road will be in service when developing control plans.

Vehicle restrictions. These measures seek to limit the amount and type of traffic present on the road or to lower the mean vehicle speed. For example, many industrial plants have restricted employees from driving on plant property and have instead instituted bussing programs. This eliminates emissions due to employees traveling to/from their worksites. Although the heavier average vehicle weight of the busses increases the base emission factor, the decrease in vehicle-miles-traveled results in a lower overall emission rate.

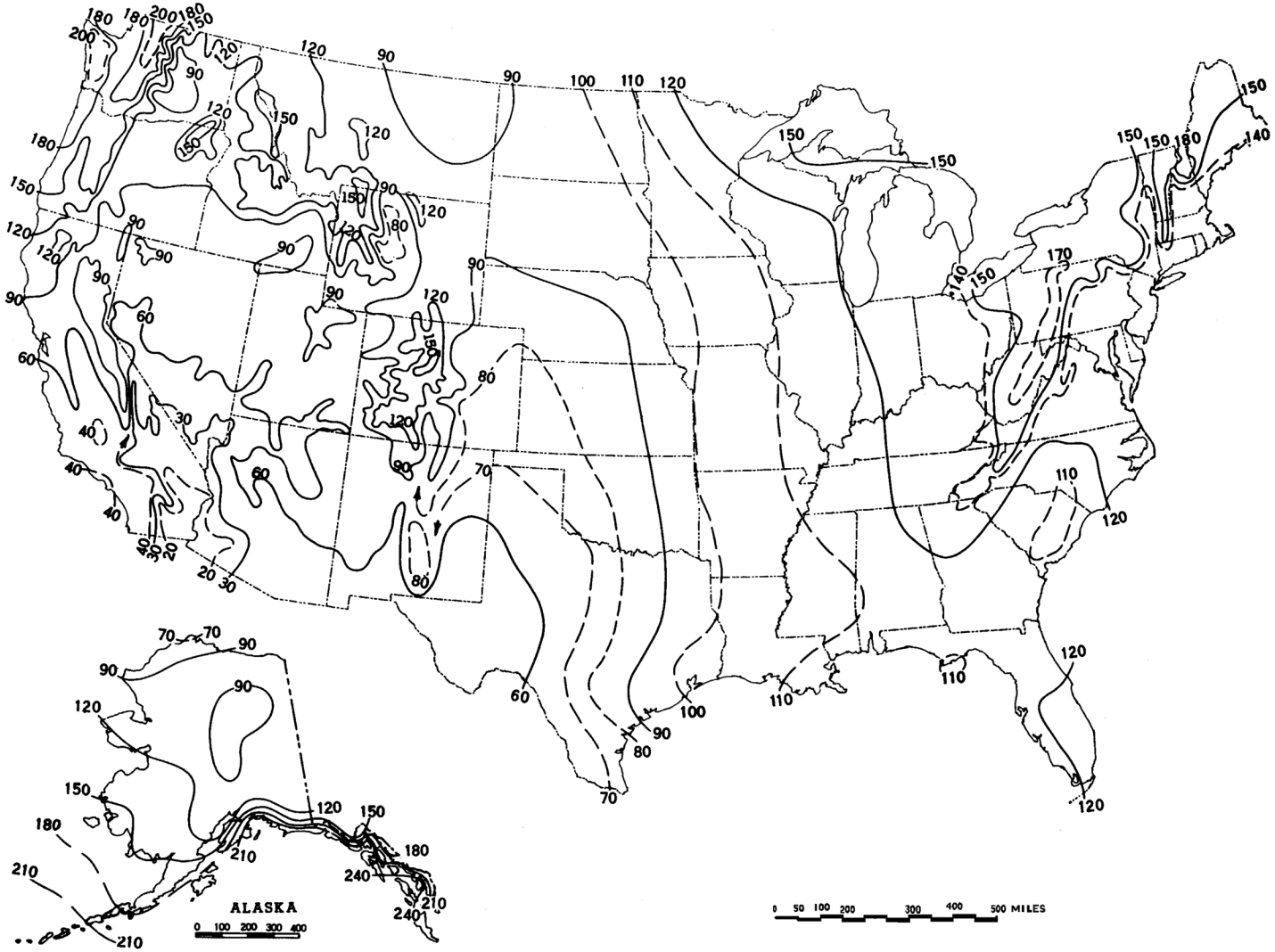


Figure 13.2.2-1. Mean number of days with 0.01 inch or more of precipitation in United States.

Surface improvements. Control options in this category alter the road surface. As opposed to the "surface treatments" discussed below, improvements are relatively "permanent" and do not require periodic retreatment.

The most obvious surface improvement is paving an unpaved road. This option is quite expensive and is probably most applicable to relatively short stretches of unpaved road with at least several hundred vehicle passes per day. Furthermore, if the newly paved road is located near unpaved areas or is used to transport material, it is essential that the control plan address routine cleaning of the newly paved road surface.

The control efficiencies achievable by paving can be estimated by comparing emission factors for unpaved and paved road conditions. The predictive emission factor equation for paved roads, given in Section 13.2.1, requires estimation of the silt loading on the traveled portion of the paved surface, which in turn depends on whether the pavement is periodically cleaned. Unless curbing is to be installed, the effects of vehicle excursion onto unpaved shoulders (berms) also must be taken into account in estimating the control efficiency of paving.

Other improvement methods cover the road surface with another material that has a lower silt content. Examples include placing gravel or slag on a dirt road. Control efficiency can be estimated by comparing the emission factors obtained using the silt contents before and after improvement. The silt content of the road surface should be determined after 3 to 6 months rather than immediately following placement. Control plans should address regular maintenance practices, such as grading, to retain larger aggregate on the traveled portion of the road.

Surface treatments refer to control options which require periodic reapplication. Treatments fall into the two main categories of (a) "wet suppression" (i. e., watering, possibly with surfactants or other additives), which keeps the road surface wet to control emissions and (b) "chemical stabilization/ treatment", which attempts to change the physical characteristics of the surface. The necessary reapplication frequency varies from several minutes for plain water under summertime conditions to several weeks or months for chemical dust suppressants.

Watering increases the moisture content, which conglomerates particles and reduces their likelihood to become suspended when vehicles pass over the surface. The control efficiency depends on how fast the road dries after water is added. This in turn depends on (a) the amount (per unit road surface area) of water added during each application; (b) the period of time between applications; (c) the weight, speed and number of vehicles traveling over the watered road during the period between applications; and (d) meteorological conditions (temperature, wind speed, cloud cover, etc.) that affect evaporation during the period.

Figure 13.2.2-2 presents a simple bilinear relationship between the instantaneous control efficiency due to watering and the resulting increase in surface moisture. The moisture ratio "M" (i.e., the x-axis in Figure 13.2.2-2) is found by dividing the surface moisture content of the watered road by the surface moisture content of the uncontrolled road. As the watered road surface dries, both the ratio M and the predicted instantaneous control efficiency (i.e., the y-axis in the figure) decrease. The figure shows that between the uncontrolled moisture content and a value twice as large, a small increase in moisture content results in a large increase in control efficiency. Beyond that, control efficiency grows slowly with increased moisture content.

Given the complicated nature of how the road dries, characterization of emissions from watered roadways is best done by collecting road surface material samples at various times between water truck passes. (Appendices C.1 and C.2 present the sampling and analysis procedures.) The moisture content measured can then be associated with a control efficiency by use of Figure 13.2.2-2. Samples that reflect average conditions during the watering cycle can take the form of either a series of samples between water applications or a single sample at the midpoint. It is essential that samples be collected during periods with active traffic on the road. Finally, because of different evaporation rates, it is recommended that samples be collected at various times during the year. If only one set of samples is to be collected, these must be collected during hot, summertime conditions.

When developing watering control plans for roads that do not yet exist, it is strongly recommended that the moisture cycle be established by sampling similar roads in the same geographic area. If the moisture cycle cannot be established by similar roads using established watering control plans, the more complex methodology used to estimate the mitigation of rainfall and other precipitation can be used to estimate the control provided by routine watering. An estimate of the maximum daytime Class A pan evaporation (based upon daily evaporation data published in the monthly Climatological Data for the state by the National Climatic Data Center) should be used to insure that adequate watering capability is available during periods of highest evaporation. The hourly precipitation values in the spreadsheet should be replaced with the equivalent inches of precipitation (where the equivalent of 1 inch of precipitation is provided by an application of 5.6 gallons of water per square yard of road). Information on the long term average annual evaporation and on the percentage that occurs between May and October was published in the Climatic Atlas (Reference 16). Figure 13.2.2-3 presents the geographical distribution for "Class A pan evaporation" throughout the United States. Figure 13.2.2-4 presents the geographical distribution of the percentage of this evaporation that occurs between May and October. The U. S. Weather Bureau Class A evaporation pan is a cylindrical metal container with a depth of 10 inches and a diameter of 48 inches. Periodic measurements are made of the changes of the water level.

The above methodology should be used only for prospective analyses and for designing watering programs for existing roadways. The quality rating of an emission factor for a watered road that is based on this methodology should be downgraded two letters. Periodic road surface samples should be collected and analyzed to verify the efficiency of the watering program.

As opposed to watering, chemical dust suppressants have much less frequent reapplication requirements. These materials suppress emissions by changing the physical characteristics of the existing road surface material. Many chemical unpaved road dust suppressants form a hardened surface that binds particles together. After several applications, a treated road often resembles a paved road except that the surface is not uniformly flat. Because the improved surface results in more grinding of small particles, the silt content of loose material on a highly controlled surface may be substantially higher than when the surface was uncontrolled. For this reason, the models presented as Equations 1a and 1b cannot be used to estimate emissions from chemically stabilized roads. Should the road be allowed to return to an

uncontrolled state with no visible signs of large-scale cementing of material, the Equation 1a and 1b emission factors could then be used to obtain conservatively high emission estimates.

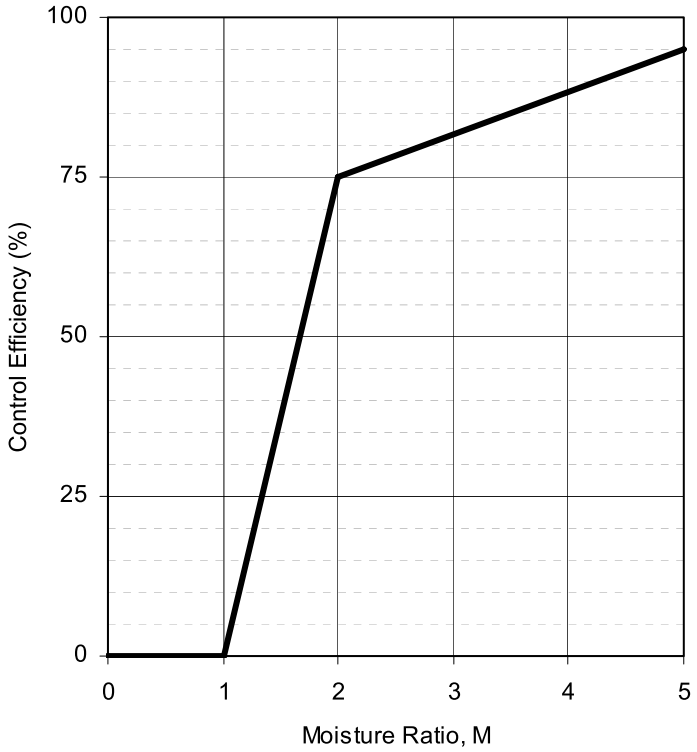


Figure 13.2.2-2. Watering control effectiveness for unpaved travel surfaces

The control effectiveness of chemical dust suppressants appears to depend on (a) the dilution rate used in the mixture; (b) the application rate (volume of solution per unit road surface area); (c) the time between applications; (d) the size, speed and amount of traffic during the period between applications; and (e) meteorological conditions (rainfall, freeze/thaw cycles, etc.) during the period. Other factors that affect the performance of dust suppressants include other traffic characteristics (e. g., cornering, track-on from unpaved areas) and road characteristics (e. g., bearing strength, grade). The variabilities in the above factors and differences between individual dust control products make the control efficiencies of chemical dust suppressants difficult to estimate. Past field testing of emissions from controlled unpaved roads has shown that chemical dust suppressants provide a PM-10 control efficiency of about 80 percent when applied at regular intervals of 2 weeks to 1 month.

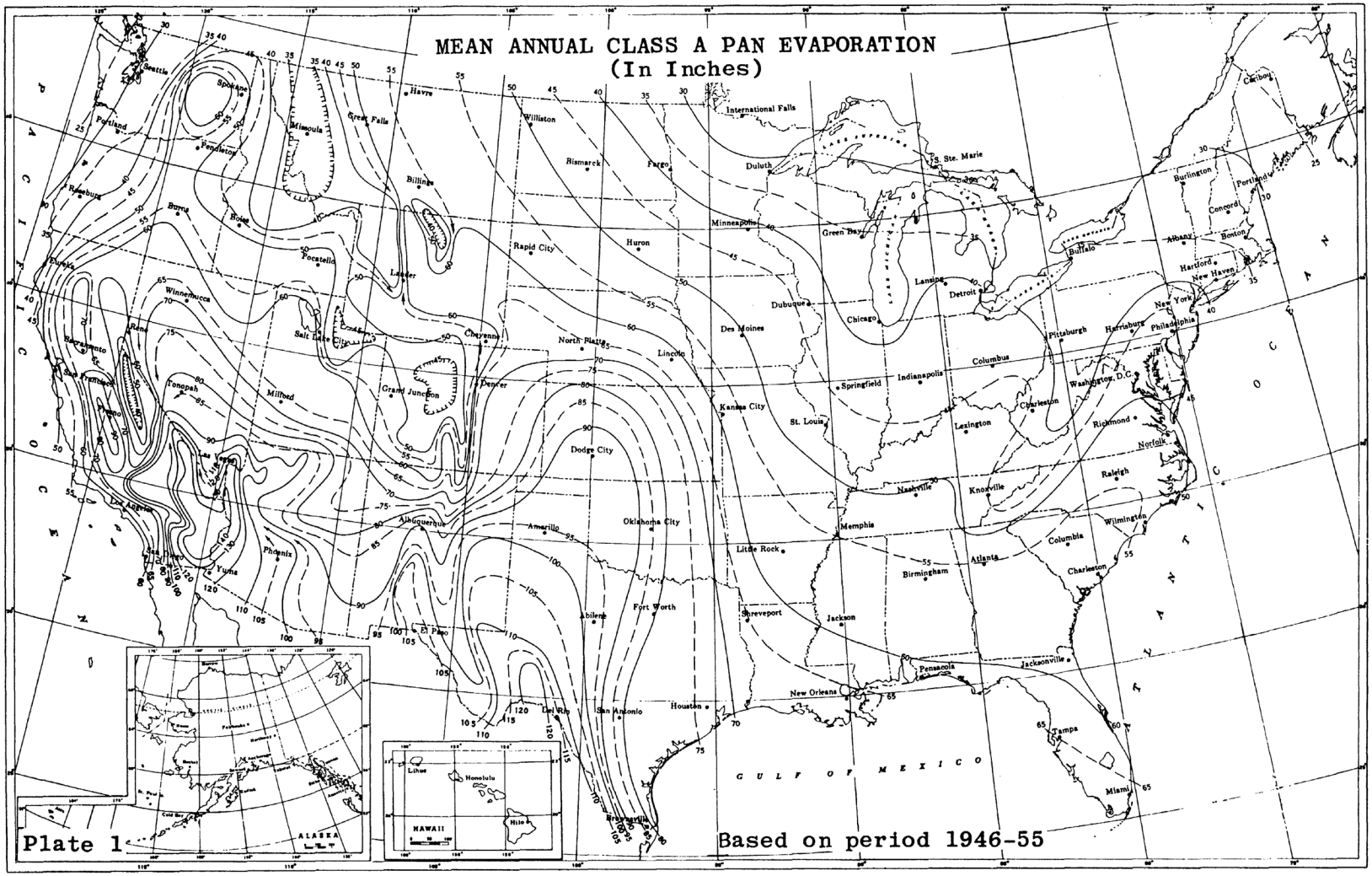


Figure 13.2.2-3. Annual evaporation data.

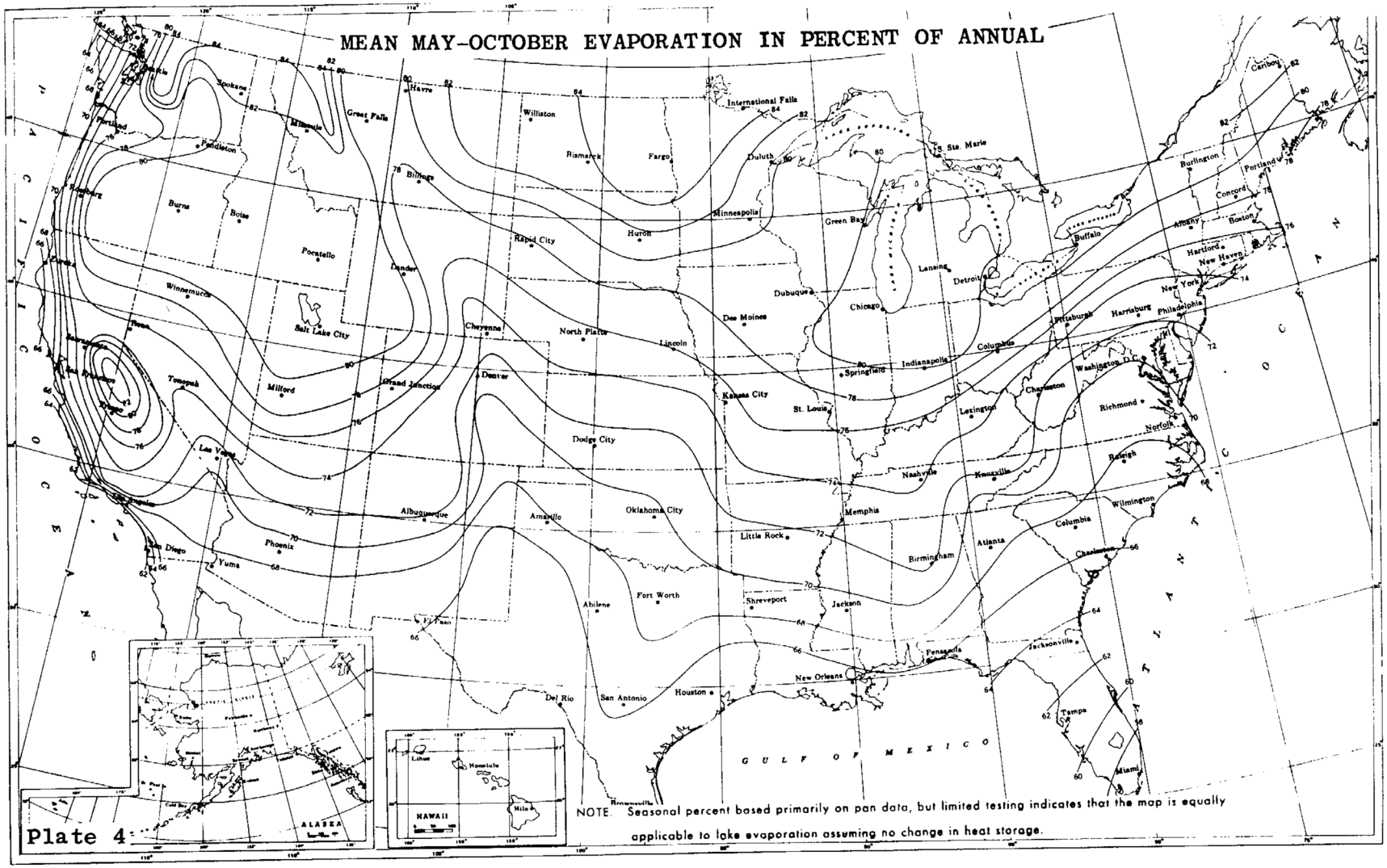


Figure 13.2.2-4. Geographical distribution of the percentage of evaporation occurring between May and October.

Petroleum resin products historically have been the dust suppressants (besides water) most widely used on industrial unpaved roads. Figure 13.2.2-5 presents a method to estimate average control efficiencies associated with petroleum resins applied to unpaved roads.[20] Several items should be noted:

1. The term "ground inventory" represents the total volume (per unit area) of petroleum resin concentrate (*not solution*) applied since the start of the dust control season.

2. Because petroleum resin products must be periodically reapplied to unpaved roads, the use of a time-averaged control efficiency value is appropriate. Figure 13.2.2-5 presents control efficiency values averaged over two common application intervals, 2 weeks and 1 month. Other application intervals will require interpolation.

3. Note that zero efficiency is assigned until the ground inventory reaches 0.05 gallon per square yard (gal/yd^2). Requiring a minimum ground inventory ensures that one must apply a reasonable amount of chemical dust suppressant to a road before claiming credit for emission control. Recall that the ground inventory refers to the amount of petroleum resin concentrate rather than the total solution.

As an example of the application of Figure 13.2.2-5, suppose that Equation 1a was used to estimate an emission factor of 7.1 lb/VMT for PM-10 from a particular road. Also, suppose that, starting on May 1, the road is treated with 0.221 gal/yd^2 of a solution (1 part petroleum resin to 5 parts water) on the first of each month through September. Then, the average controlled emission factors, shown in Table 13.2.2-5, are found.

Table 13.2-2-5. EXAMPLE OF AVERAGE CONTROLLED EMISSION FACTORS FOR SPECIFIC CONDITIONS

Period	Ground Inventory, gal/yd^2	Average Control Efficiency, %[a]	Average Controlled Emission Factor, lb/VMT
May	0.037	0	7.1
June	0.073	62	2.7
July	0.11	68	2.3
August	0.15	74	1.8
September	0.18	80	1.4

[a] From Figure 13.2.2-5, ≤10 µm. Zero efficiency assigned if ground inventory is less than 0.05 gal/yd^2. 1 lb/VMT = 281.9 g/VKT. 1 gal/yd^2 = 4.531 L/m^2.

Besides petroleum resins, other newer dust suppressants have also been successful in controlling emissions from unpaved roads. Specific test results for those chemicals, as well as for petroleum resins and watering, are provided in References 18 through 21.

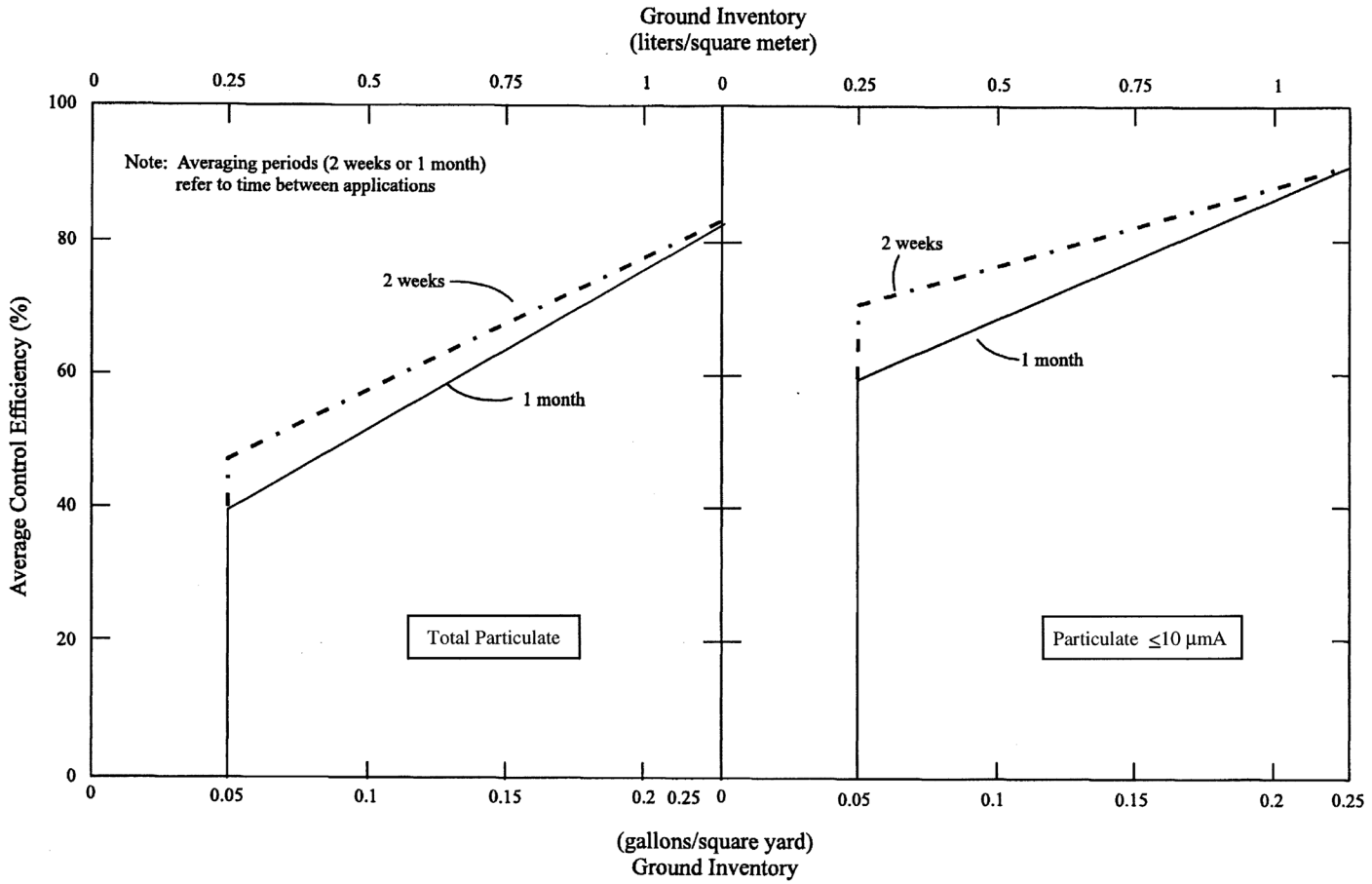


Figure 13.2.2-5. Average control efficiencies over common application intervals.

13.2.2.4 Updates Since The Fifth Edition

The Fifth Edition was released in January 1995. Revisions to this section since that date are summarized below. For further detail, consult the background report for this section (Reference 6).

October 1998 (Supplement E)– This was a major revision of this section. Significant changes to the text and the emission factor equations were made.

October 2001 – Separate emission factors for unpaved surfaces at industrial sites and publicly accessible roads were introduced. Figure 13.2.2-2 was included to provide control effectiveness estimates for watered roads.

December 2003 – The public road emission factor equation (equation 1b) was adjusted to remove the component of particulate emissions from exhaust, brake wear, and tire wear. The parameter C in the new equation varies with aerodynamic size range of the particulate matter. Table 13.2.2-4 was added to present the new coefficients.

January 2006 – The PM-2.5 particle size multipliers (i.e., factors) in Table 13.2.2-2 were modified and the quality ratings were upgraded from C to B based on the wind tunnel studies of a variety of dust emitting surface materials.

References For Section 13.2.2

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13. *Chicago Area Particulate Matter Emission Inventory — Sampling And Analysis*, EPA Contract No. 68-02-4395, Work Assignment 1, Midwest Research Institute, Kansas City, MO, May 1988.

14. *PM-10 Emissions Inventory Data For The Maricopa And Pima Planning Areas*, EPA Contract No. 68-02-3888, Engineering-Science, Pasadena, CA, January 1987.

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ZEECO PROPOSAL



CLIENT: Applied Fundamentals, LLC

END USER: Pronto Midstream, LLC

ZEECO QUOTE #: 2024-08771RA-01

QUOTE REV #: 1

DATE OF ISSUE: 10/2/2024

APPLICATION ENGINEER: Wes Kirk

BURNERS | FLARES | THERMAL OXIDIZERS
VAPOR CONTROL | RENTALS | AFTERMARKET

Contact Information:

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Zeeco Sales Contact:	Ignacio Aurrecoechea	918.893.8406	Ignacio_Aurrecoechea@zeeco.com
Zeeco Applications Engineer:	Wes Kirk	918.893.8389	wes_kirk@zeeco.com

Design Information (Estimated):

Source	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Gas MW	54.8	44.9	54.1	44.3	16.7
Gas LHV (Btu/Scf)	2808	2326	2774	2293	873
Max Flow Rate (lb/hr)*	8060.8	7590	8034.4	7561.4	795.3
Available Pressure (psig)	0.38	0.43	0.38	0.43	0.55
Temperature (°F)	97	48	97	48	90
Heat Release (MMBtu/hr)	156.8	149.1	156.3	148.6	15.8

**Flow Rates shown include a 110% design factor.*

Scope of Supply:

Qty	Equipment
1	Self-Supported Enclosure – 13’ Dia. x 50’ Tall (167 MMBtu/hr Max Capacity)
1	Air Assisted Tip (AF)
1	Air Assist Blower (VFD Compatible)
2	HSLF Pilot w/ Flame Scanner
1	Automatic Ignition/Monitoring Panel (Z-Purge)
1	Shutdown Monitoring & Controls (VCU-AD)
1	Shutdown Valve (Pneumatic) – 10” Dia.
1	Group D Deflagration Arrester – 10” Dia.
1	Burnback Thermocouple

CONTROLS TO BE ALLEN-BRADLEY WITH ETHERNET COMMUNICATION CAPABILITY

Required Utilities:

Consumer	Utility Type	Consumption	Supply
EGF Pilot Gas	Fuel Gas	180 Scfh	10 psig
Purge Gas*	Fuel Gas	90 Scfh	15 psig
Z-Purge	Instrument air	3.5 Scfh	60 psig
Blower	Electricity	15 hp (21 A)	480 VAC / 3 Ph / 60 Hz

**Purge gas to be oxygen free and not go to dew point at operating temperatures.*

Customer Connections (Estimated, TBC by customer):

Service	Size	Type	Rating
Waste Gas	10"	RF	150#
Pilot Gas	1/2"	NPT	3000#

Equipment Description:

Self-Supported Enclosure	The enclosure prevents flame from being seen by personnel while also increasing residence time to ensure high destruction efficiencies. The stack is mounted on a customer supplied foundation to secure the system and prevent it from blowing over in high winds.
Air Assisted Tip (AF)	The tips use multi-jet technology to break up the exiting gas to allow for more fuel and air interaction to increase smokeless combustion. An air plenum is utilized to direct low pressure air into the combustion zone for turbulent mixing. Components located in the high heat zone will be made of 310SS or equivalent casting material. The tip will provide a VOC destruction efficiency of at least 98 wt%.
Air Assist Blower (VFD Compatible)	For low pressure applications and/or heavy gas compositions, an air assist blower is required for smokeless operation. The blower utilizes ambient air to increase air and gas mixing in the combustion zone, which eliminates any smoke that may form in the flames. A VFD is recommended for fine tuning of the performance of the system. VFD and flow or pressure transmitter for automated VFD control are by others.
HSLF Pilot w/ Flame Scanner	The premix pilot is proven to stay lit in hurricane force weather conditions. Testing has shown that a stable flame is present even in wind speeds greater than 150 mph in addition to rainfall of over 10 inches per hour. The pilot is paired with UV flame scanner for continuous monitoring of the pilot status. The pilot also meets or exceeds API 537 design requirements.
Automatic Ignition/Monitoring Panel (Z-Purge)	The automatic pilot ignition and monitoring panel will continuously monitor the pilot and attempt to relight if a pilot failure signal is received. The control panel will require customer supplied electricity and also be skid mounted. A Z-Purge is included for installation in a Cl 1 Div 2 area.
Shutdown Monitoring & Controls (VCU-AD)	The burner management and high temperature shutdown systems ensure that the unit will operate in a safe manner to protect both personnel and equipment while controlling emissions efficiently. Operating temperature is controlled via an automated damper to control the amount of air that enters into the combustion chamber. A shutdown will be initiated when either a high temperature or pilot failure is detected. All gas sources should be shut in indefinitely until personnel can check the system to ensure that there is not a build-up of combustible vapors or damage to the equipment.
Shutdown Valve (Pneumatic)	A butterfly valve is installed upstream of the system to shutdown in the event of an unsafe condition.
Group D Deflagration Arrester	If a potential for having combustible levels of oxygen in the waste exists, an arrester is recommended to ensure that any flashback from the tip is stopped before it can enter into the upstream piping system.
Burnback Thermocouple	A thermocouple is installed on the downstream side of the arrester to alarm if a sustained flame flashback is achieved at the arrester element.

Commercial:

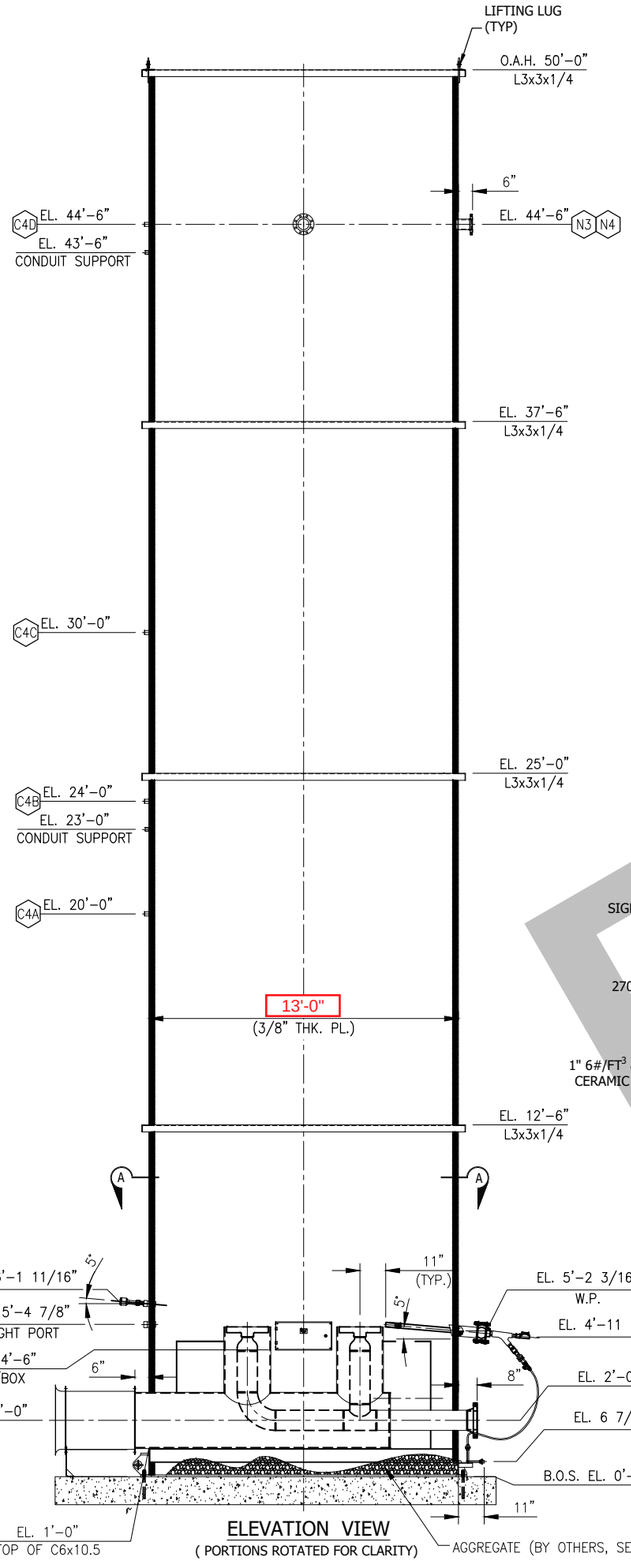
Description	Model #
Self-Supported 13’ Dia. x 50’ Tall Vapor Combustor	VCU-13-50-BL
Optional Equipment:	
Motor Control Panel	*VFD*

Schedule	Equipment will be ready for shipment within 16-20 weeks ARO* *If you require a quicker delivery schedule, please contact Zeeco.* *Schedule based on Zeeco Standard Documentation (Information Only): GA, P&ID and Wiring Schematic Drawings IOM and Quick Start Installation Manuals (Digital Copies Only) Miscellaneous Equipment Cut Sheets
Freight	Prepaid and added to our invoice at cost + 15%
Shipping	Ex-Works (Point of Manufacture) per Incoterms 2020
Payment Terms	Net 15 20% on order placement 30% on drawing submittal 40% on start of fabrication 10% on readiness to ship
Warranty	Length; 18 months from date of shipment or 12 months after startup, whichever condition occurs first. Refer to Zeeco terms and conditions of sale for further clarifications.
Storage	Zeeco will provide space for storage of each unit up to 2 months after notification of readiness to ship free of charge. If you require storage periods longer than 2 months, a fee of 1% of the equipment value will be charged per month until the equipment is moved off site.
Quote Validity	30 days
Terms & Conditions	This proposal is contingent upon acceptance of Zeeco, Inc Standard Terms and Conditions of Sale (attached).

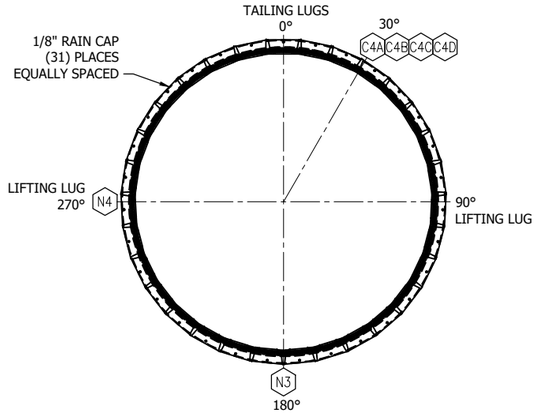
Notes

- Field erection and/or assembly are not included in our scope of supply but can be quoted separately.
- Commissioning or startup assistance can be provided but are not included in our proposal.
- No foundation design or civil engineering services are included in our scope.
- Document/drawing approval has not been considered. Only standard documents as listed above (information only) are applicable.
- Design is based solely on process conditions, any other specifications have not been considered.
- System is to be designed in accordance with ASME STS-1 with elastic foundation considered and to be fabricated per ASME code. Stack is open to atmosphere therefore hydrotesting is not considered.
- Minimum structural design per ASCE 7-16 (105 mph, Risk Category II, Site Class D).
- External carbon steel to be prepared per SSPC-SP6. Prime coat Inorganic Zinc (2.5 MILS DFT Min). One Coat High Temp Aluminum (1 MIL DFT MIN) silver finish.
- Zeeco may charge additional fees to recover any vendor management services required by the Customer.
- NFPA 86 has not been considered on the offered scope.

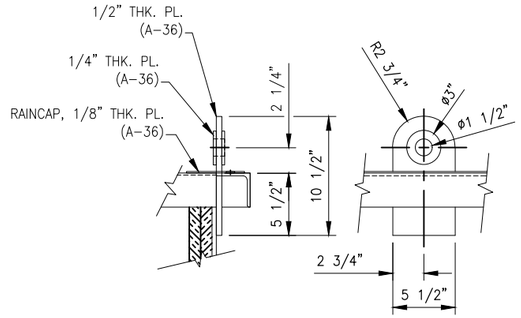
Draft



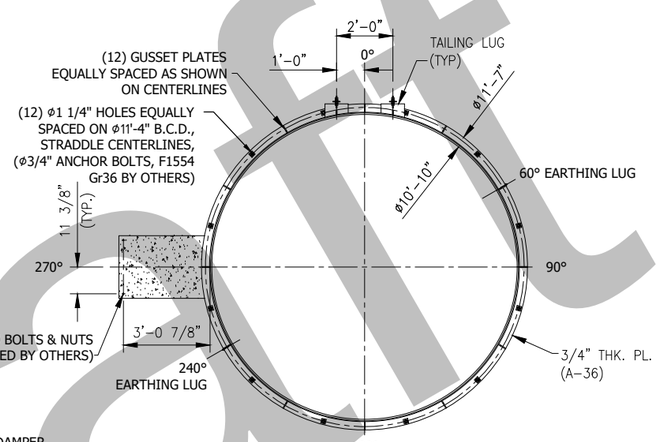
ELEVATION VIEW
(PORTIONS ROTATED FOR CLARITY)



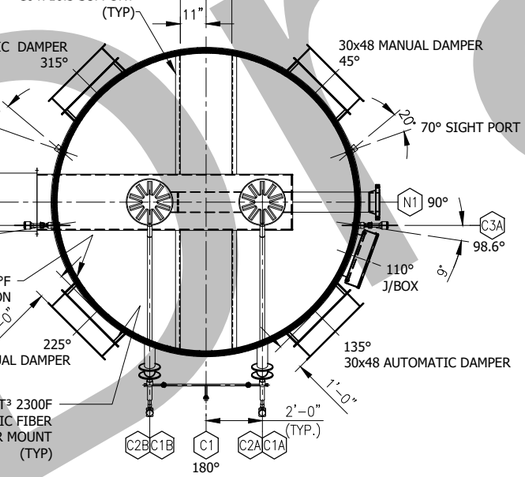
PLAN VIEW



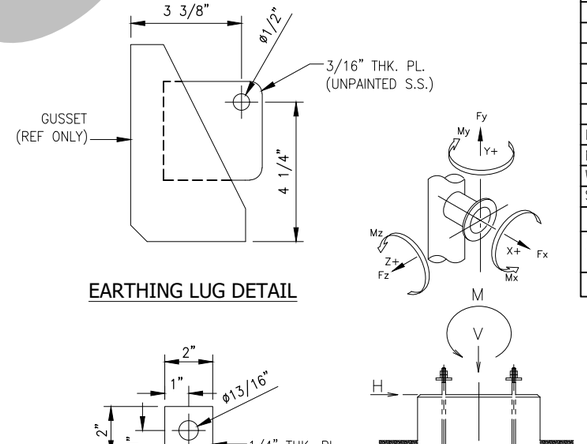
LIFTING LUG AND RAIN CAP DETAIL



BASEPLATE PLAN

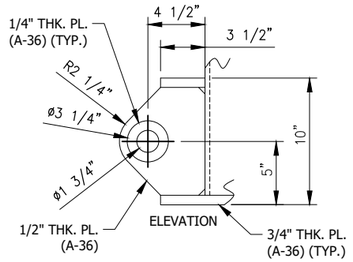


SECTION A-A



EARTHING LUG DETAIL

PLATE WASHER DETAIL



TAILING LUG DETAIL

–MATERIAL SPECIFICATIONS–		–DESIGN DATA–	
STACK	A36	STACK TYPE	SELF SUPPORTED
BURNER	CS/SS	FOUNDATION TYPE	NOTE: 8
FLANGE	CS	DESIGN CODE	ASME & ASCE
STUD BOLT/NUT	A193-B7/A194-2H	WIND DESIGN	119 mph(ASCE 7-16)
GASKET-SPIRAL WOUND	CS/SS	SEISMIC LOAD	SITE CLASS "D", I.F.=1.0 S_1=0.022, S_S=0.059
EARTHING LUG	304 SS		
NAME PLATE	304 SS	FLUID	FLARE GAS
LIFTING LUG	A36	DESIGN PRESS.	50 psig
TAILING LUG	A36	DESIGN TEMP.	-20°F ~ 400°F
BASE PLATE	A36	OPERATING PRESS.	0.10 psig
ANCHOR BOLT	F1554 Gr.36	OPERATING TEMP.	0° ~ 120° °F
CONDUIT	CS (GALV.)/LFMC	P.W.H.T.	(NO)
		RADIOGRAPH	AS PER ITP, (SPOT)
		CORROSION ALLOWANCE	C.S.=1/16", S.S.=0"
		SYSTEM WEIGHT	33891 LBS.
		AGGREGATE NOT INCLUDED	

–NOZZLE LEGEND–

ITEM	SERVICE	SIZE	RATING	TYPE	SCH/BORE	FLG. MAT'L
N1	FLARE GAS INLET	10"	150#	RFSO	S/40	A-105
N2	BLOWER INLET	24"	PLATE	N/A	N/A	A36
N3,4	SAMPLE PORT	4"	150#	RFSO	S/40	A105
C1	PILOT GAS INLET	1/2"	3000#	FNPT	N/A	A105
C2A/B	HEI CONDUIT CONNECTION	3/4"	N/A	FNPT	N/A	A105
C3A/B	FLAME SCANNER	1"	3000#	FNPT	N/A	N/A
C4A~D	THERMOCOUPLE CONNECTION	1/2"	N/A	FNPT	N/A	A105
C5A/B	SIGHT PORT	2"	3000#	FNPT	N/A	N/A

– NOTES –

1. PILOT MIXER ORIFICE DRILLED: 1/16"ø
2. PILOT GAS CONSUMPTION: 90 SCFH @ 10.5 PSIG (NAT. GAS) OR 42 SCFH @ 5 PSIG (PROPANE) PER PILOT.
3. PILOT ORIFICE DRILLING BASED ON 1000 BTU/SCF (LHV) GAS WITH 0.6 SP. GR.
4. ALL FLANGE BOLTING TO STRADDLE NORMAL CENTERLINES.
5. ALL EXTERNAL CARBON STEEL SURFACES TO BE PREPARED PER SSPC-SP6. PRIME WITH ONE COAT INORGANIC ZINC (2 1/2 MILS DFT MIN.) PAINT ONE COAT HIGH TEMP ALUMINUM (1 MIL DFT MIN.) SILVER FINISH. STAINLESS STEEL: NONE.
6. MINIMUM 6" OF AGGREGATE (OR TO BOTTOM OF DAMPER) TO BE INSTALLED INSIDE BASE OF STACK (BY OTHERS). IGNEOUS OR METAMORPHIC PREFERRED – NO SEDIMENTARY. SIZE OF 3/4" – 1".
7. FLAME ARRESTOR DEVICE SHALL BE MOUNTED DIRECTLY TO GAS INLET NOZZLE, NO PIPING ALLOWED BETWEEN ARRESTOR AND GAS INLET NOZZLE.
8. FOUNDATION SUPPORT ELASTIC TYPE PER ASME STS-1-2016.
9. THE FLARE REQUIRES A CONTINUOUS PURGE OF 45 SCFH OF AN OXYGEN FREE GAS THAT WILL NOT GO TO DEW POINT AT OPERATING TEMPERATURES IF NO FLASHBACK PROTECTION DEVICE IS PRESENT.
10. WRAP ALL CARBON STEEL INTERIOR PIPING WITH CERAMIC FIBER BLANKET.

– STACK FOUNDATION LOADS–

LOAD CASE	VERTICAL (lb)	SHEAR (lb)	MOMENT (lb-FT)
DL: DEAD LOAD	33891	0.0	1430
NL: NOZZLE LOAD	660	738	2662
WL: WIND LOAD	0.0	9801	285912
SL: SEISMIC LOAD	0.0	1067	35442

– MAX. ALLOWABLE INLET NOZZLE LOAD 1 X API 537 –

PIPE SIZE (IN)	Fx	Fy	Fz	Mx	My	Mz
	lb	lb	lb	ft-lb	ft-lb	ft-lb
8"	300	600	600	860	650	650

NO.	DATE	REVISION DESCRIPTION	BY	CKD.	APP.
0	18MAY23	INITIAL ISSUE	MSC	TC	WK

JOBSITE: KENEDY, TX
END USER: ENERGY TRANSFER
S.O. NO.: 62213 | P.O. NO.: 4560009602 | APP WK

ZEECO, INC.
22151 EAST 91st STREET
BROKEN ARROW, OK 74014
PHONE: (918) 258-8551
FAX: (918) 251-5519
www.zeeco.com
sales@zeeco.com

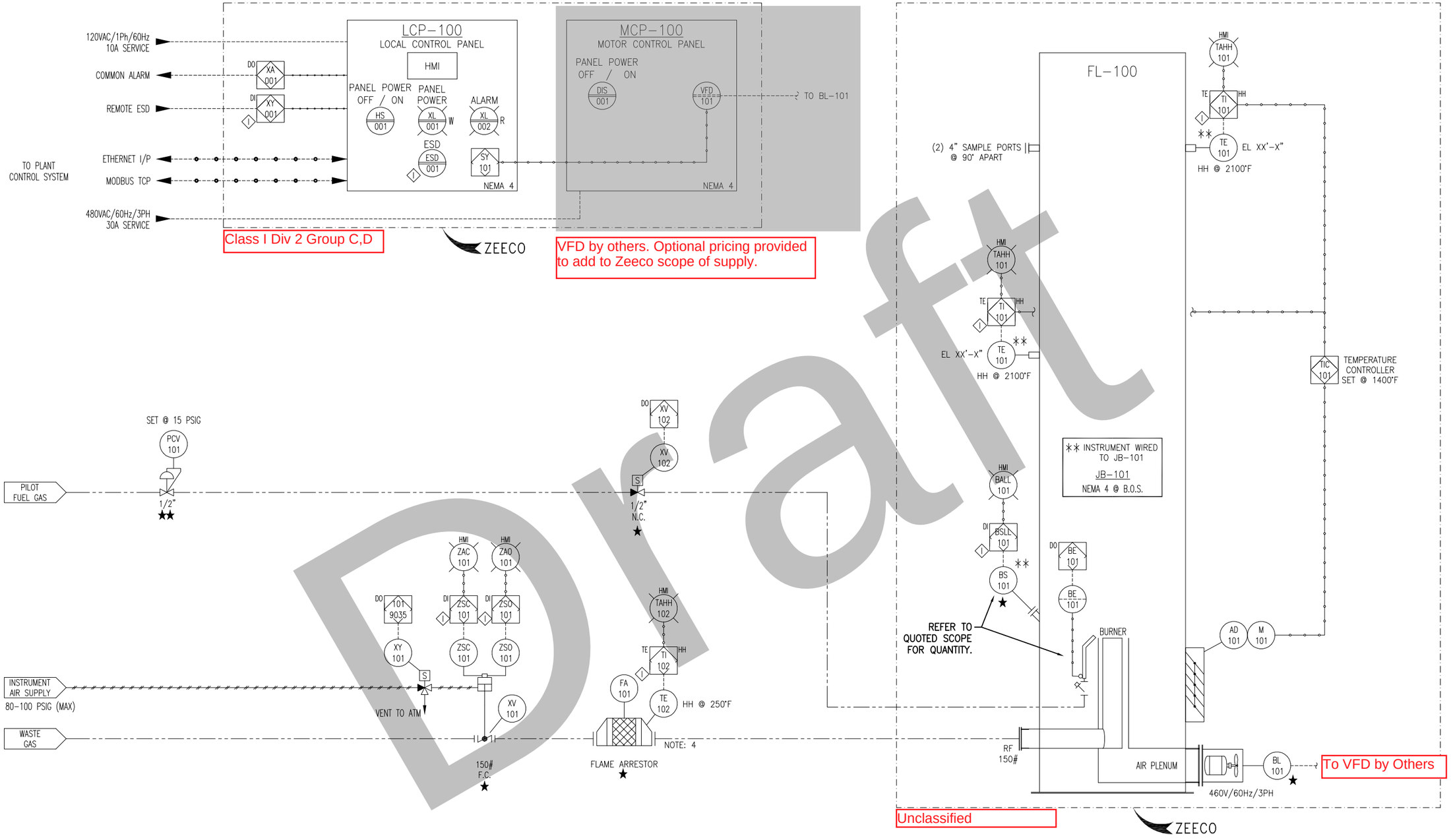
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GENERAL ARRANGEMENT FOR
FOR
VCU-11-50

FOR: ENERGY TRANSFER

DRAWN MSC | DATE 18MAY23
CHK TC | APP WK
SCALE NONE | REV 0
DRAWING NUMBER SE-3325
SHT. 1 OF 1

Russell Lowe 7/26/2023 3:37:41 PM Q:\Job-Information\Flares\62000\62213 Energy Transfer\Drafting\Layout\62213 SE-3325 S1R0 (VCU-11-50-BL GA).dwg
Russell_Lowe 7/26/2023 3:30:53 PM



LEGEND:

- PIPING
- PIPING BY OTHERS
- FIELD WIRING BY OTHERS
- WIRING BY ZEECO
- SOFTWARE / COMMUNICATIONS
- SKID LIMITS
- 316SS TUBING & FITTINGS
- ★ ITEMS SHIPPED LOOSE
- ★★ ITEMS FURNISHED AND INSTALLED BY OTHERS

- INSTRUMENT (LOCALLY MOUNTED)
- INSTRUMENT (MOUNTED ON LCP)
- INSTRUMENT (MOUNTED INSIDE LCP)
- INSTRUMENT (MOUNTED INSIDE JB)

- LIGHT
- DCS-DISTRIBUTED CONTROL SYSTEM
- PLC-PROGRAMMABLE LOGIC CONTROL

NOTES:

1. INTERCONNECTING WIRING/HARD PIPING/HARD CONDUIT (AS REQUIRED) BETWEEN THE FLARE CONTROL PANEL AND THE FLARE STACK IS BY OTHERS.
2. FLARE CONTROL PANEL TO BE 30' (MIN.) AWAY FROM FLARE STACK.
3. THE PRIMARY IGNITION SOURCE FOR PILOTS ARE ELECTRIC SPARK IGNITORS LOCATED ON EACH PILOT.
4. INSTALL THE ARRESTOR DEVICE DIRECTLY TO THE FLARE INLET. IF A SPOOL IS NEEDED, IT SHOULD BE OF MINIMUM LENGTH.

NO.	DATE	REVISION DESCRIPTION	BY	CKD.	APP.

JOBSITE:

END USER:

S.O. NO.: | P.O. NO.: | APP

ZEECO, INC.
22151 EAST 91st STREET
BROKEN ARROW, OK 74014
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P&ID
VCU-X-XX-AD-BL
(TEMP CONTROL WITH BLOWER)
FL-XXX

FOR:

DRAWN	DATE 26JUL18
CHK	APP JTO
SCALE NTS	REV 0
DRAWING NUMBER	YA-XXXX SHT. 1 OF 1

Draft



BURNERS FLARES THERMAL OXIDIZERS VAPOR CONTROL RENTALS AFTERMARKET

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+1.918.258.8551 | zeeco.com

DO YOU NEED TO SHUTDOWN YOUR FLARE?

ZEECO® Combustion Rentals span the scope and capacity to keep any facility's essential operations online during both planned and emergency flare outages. Our rental flare systems are supported entirely by ZEECO Turnkey Combustion Services and can keep specific processes online or eliminate the need to fully de-inventory plants - shortening turnarounds by days. Go with the industry's largest, most dependable combustion rental fleet. Go Zeeco.

ZEECO COMBUSTION RENTAL CAPABILITIES



100% PLANT CAPACITY

» Keep entire facilities online at design capacity to maintain revenues
» Flare options up to 300-feet-tall and 50-inch-diameter
» Flare capacity: 0 to 3 MM lb/Hr
» Smokeless, steam, air, and unassisted available
» Multiple installation and support options
» Rapid deployment and installation
» Self-contained operation and controls



PARTIAL PLANT OR IDLE RELIEF CAPACITY

» Leave relief gathering systems intact
» Reduce required isolation
» Lower capacity required for plant during reduced / idle operation
» Allows full service of main flare while keeping critical systems online
» Reduce outages by days by eliminating purge-out
» Mobile units ensure rapid deployment and installation



SINGLE PROCESS AREA MAINTENANCE CAPACITY

» Service a single system during maintenance activity
» Installation can be in close proximity to emissions point
» Enclosed flare option shields visible flames from community view
» Mobile units ensure rapid deployment and installation

GO ZEECO®

FLARE SYSTEMS

22151 East 91st Street | Broken Arrow, OK 74014 USA | +1 (918) 258 8551 | zeeco.com



INSTALLATION, CONSTRUCTION, & ERECTION SERVICES

Managing an array of system engineers and contractors and dealing with unpleasant surprises can result in significant downtime for installations and lead to business losses. Let Zeeco's Global Field Services eliminate the hassles, reduce costs, and save time and resources by assuming single-point responsibility for your project. With Zeeco, there are no contractual layers between the customer, the OEM supplier, and the contractors. You're guaranteed a single team with a single vision and singular commitment to your success – all backed by the world leader's engineering experience in combustion and environmental solutions.



FLAREGUARDIAN™

The award-winning ZEECO® FlareGuardian flare monitor is a revolutionary instrument utilizing patented Video Imaging Spectro-Radiometry (VISR) technology. The innovative device allows operators to directly, continuously, and autonomously measure flare performance – including Combustion Effeciency (CE), smoke index levels, flame stability, flame footprint, heat release, and pilot presence – in real-time. Eliminate the tedious aiming, data reduction, and ongoing operation and maintenance costs associated with other flare monitoring methods while staying in compliance with the most stringent EPA or other environmental regulations.



PARTS

It doesn't matter if your equipment was manufactured by Zeeco or another combustion equipment supplier. We have what you need to restore or improve your equipment's safety, efficiency, functionality, and environmental performance at a competitive price. Plus, our experts understand the complexities of your system, not just the replacement parts. If you need custom components made specifically for your project, Zeeco can engineer a solution to fit seamlessly into your system and have it operating like new or better.



FLARE TIP ENGINEERED SOLUTIONS

There are many reasons why flare tips shouldn't be replaced like-in-kind, especially if a failure is being replicated. Regardless of the original equipment manufacturer, let Zeeco's Engineered Solutions team evaluate the root cause of your flare tip failure or revised process requirements. Whether the need for change is due to mechanical failures, operational struggles, or updated environmental rules, our team of engineers is ready to provide the optimal technology for your plant moving forward.

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THE SALE OF EQUIPMENT, PARTS, MATERIALS, SUPPLIES, SOFTWARE AND OTHER GOODS (THE "GOODS") OR SERVICES (THE "SERVICES"), AS DESCRIBED IN SELLER'S QUOTATION OR PROPOSAL (THE "PROPOSAL"), ARE EXPRESSLY CONDITIONED UPON BUYER'S AGREEMENT TO THESE TERMS & CONDITIONS. ANY ADDITIONAL OR DIFFERENT TERMS PROPOSED BY BUYER ARE EXPRESSLY OBJECTED TO AND WILL NOT BE BINDING UPON SELLER UNLESS AGREED TO IN WRITING BY SELLER. ANY PURCHASE ORDER (THE "ORDER") ISSUED BY BUYER FOR THE PURCHASE OF GOODS OR SERVICES SHALL CONSTITUTE BUYER'S AGREEMENT TO THESE TERMS & CONDITIONS. UNLESS OTHERWISE SPECIFIED IN THE PROPOSAL OR THE ORDER, ANY PROPOSAL BY SELLER SHALL EXPIRE THIRTY (30) DAYS FROM ITS DATE AND MAY BE MODIFIED OR WITHDRAWN BY SELLER BEFORE RECEIPT OF BUYER'S ACCEPTANCE. THE GOODS AND SERVICES ARE COLLECTIVELY REFERRED TO AS THE "WORK." UNLESS OTHERWISE STATED, THE SELLER SHALL BE ZEECO, INC., 22151 EAST 91ST STREET, BROKEN ARROW, OKLAHOMA 74014 (USA), AND THE BUYER SHALL BE THE PARTY IDENTIFIED AS SUCH ON THE ORDER.

1. PRICE: Unless otherwise stated in the Proposal, the price of the Order (the "Price") is fixed and firm and is exclusive of all taxes, duties, fees, charges or assessments of any nature levied by any governmental authority. Additionally, unless otherwise stated in the Proposal, the Price is contingent upon the use of sub-contractors and sub-suppliers listed on Seller's Approved Manufacturers List ("AML") as may be amended from time-to-time, and the manufacture of Goods pursuant to Seller's standard painting procedures. Payment terms shall be as stated in the Proposal and Seller's acceptance of the Order is subject to credit approval that may include payment by means of an irrevocable documentary letter of credit issued by a first-class U.S. bank acceptable to Seller with funds payable upon delivery of customary presentation documents. The form of the letter of credit shall be negotiated by the parties and submitted to Seller for approval prior to issuance. All costs and fees of the letter of credit shall be to Buyer's account. Seller shall not be required to obtain any form of payment or performance security in favor of the Buyer, including but not limited to, bank guarantees, standby letters of credit, or surety bonds. Buyer's breach of agreed payment terms may result in: (a) Seller's suspension of the Work; (b) Seller's termination of the Order due to Buyer's default; (c) Buyer's liability for Seller's mobilization and demobilization costs in the event of suspension or termination by Seller, in addition to other damages; (d) Seller's demand for further assurances of performance by Buyer which may include, without limitation: (i) alteration of payment terms or milestones; (ii) full payment prior to shipment; (iii) additional payment security; (iv) or a delay in shipment that may exceed the length of Buyer's delay in payment.

2. CHANGES: Order changes by Buyer may significantly and disproportionately affect both the Price and completion or delivery date(s) (the "Delivery Schedule"). If Buyer desires to make a modification to the quantity, place, Delivery Schedule, or method of delivery, or the drawings, designs, or specifications of the Work (a "Change"), then Buyer shall so notify Seller in writing and provide sufficient details and descriptions of the proposed Change so that Seller may evaluate the impact of the Change on the Price, Delivery Schedule, or both. Under no circumstances shall Seller be obligated to perform a Change without an agreement concerning modifications to the Price, Delivery Schedule, or both.

3. DELAYS BY BUYER: If Buyer delays delivery for any reason, including but not limited to technical modifications or Changes, suspension, failure to review drawings submitted by Seller within the time specified, or any other cause (whether or not within Buyer's control), such delays may significantly and disproportionately affect both the Price and Delivery Schedule, which shall then be subject to a reasonable adjustment. The impact of Buyer caused delays on the Delivery Schedule may, in some cases, be more significant or of a longer duration than the actual period of Buyer's delay. In the event of Buyer's delay for any reason Seller shall be entitled to invoice Buyer, and Buyer agrees to pay timely, for materials on hand, fabrication completed or in process, and services provided. Unless specified in the Order, or otherwise by written agreement, where the Order requires submission of certain documents (including but not limited to drawings, manuals, or other documents related to the Goods) by Seller to Buyer for approval, then Buyer shall respond to such submission with approval or rejection within fourteen (14) days after Seller's issuance of such document(s) to Buyer. The failure of Buyer to approve or reject the document(s) by such time shall result in the document(s) being deemed approved and accepted.

4. LIMITED WARRANTY FOR GOODS: Seller warrants the Goods will operate substantially in conformance with Seller's specifications stated the Proposal and will be free from defects in material and workmanship for a period of twelve (12) months from the date of initial operation, or eighteen (18) months from the date of shipment, whichever is earlier (the "Warranty Period") when subjected to normal, proper and intended usage by properly trained personnel. Seller agrees during the Warranty Period, to repair or replace, at Seller's option, defective Goods so as to cause the Goods to operate in substantial conformance with Seller's specifications; provided that Buyer shall: (a) promptly notify Seller in writing upon the discovery of any defect and specify details of the warranty claim; (b) provide Seller with all operating data that Seller may reasonably request in order for Seller to evaluate the warranty claim; and (c) after Seller's review of the warranty claim, return the defective Goods to Seller with costs prepaid by Buyer if required to do so by Seller. Replacement parts may be new or refurbished. Shipment to Buyer of repaired or replaced Goods shall be in accordance with the delivery terms of the Order. Notwithstanding any other provision of this warranty, Seller may at its option, elect to send a service technician to Buyer's site to inspect, repair or replace (if applicable) warranted Goods, or otherwise to determine whether the Goods should be returned to Seller for repair or replacement. Goods or components thereof that are obtained by Seller from an original manufacturer or third party supplier are not warranted by Seller, but Seller will, to the extent possible, assign to Buyer any warranty rights in such Goods or components that Seller received from the original manufacturer or third party supplier. Consumables such as, but not limited to, bulbs, fuses, thermocouples, gaskets, and similar items are outside the scope of this warranty. Seller's warranty assumes the Goods are "at grade," and all responsibility for and costs of removal and/or reinstallation of warranted parts or Goods as well as the cost of and responsibility for gaining access to the warranted parts or Goods, are excluded from this warranty. If the Goods are not placed into service within six (6) months after shipment, in order to validate the warranty, the Goods shall be inspected by Seller at the time of commissioning and refurbished, if necessary, to like new condition at the Buyer's expense. For any extended time of storage at the jobsite without assembly/installation, the Goods shall be stored and protected in accordance with Seller's instructions and industry standard long-term storage methods. This warranty shall be void if the Goods have been: (w) exposed to corrosion, erosion, or chemical attack; (x) operated contrary to Seller's instructions or accepted industry practices; (y) improperly maintained or operated, or subjected to accident, abuse, or vandalism; or (z) operated in conditions other than those stated in Buyer's written specifications. Additionally, this warranty shall be void if the Buyer is not in compliance with its payment obligations to Seller pursuant to the Order. Seller shall have no obligation to make repairs, replacements or corrections resulting from normal wear and tear to the Goods. If Seller determines that a warranty claim is not valid, then Buyer shall pay or reimburse Seller for all costs of investigating and responding to such claim, including non-warranty parts sold or installed, at Seller's then prevailing daily service rates and materials rates. ANY INSTALLATION, MAINTENANCE, REPAIR, SERVICE, RELOCATION OR ALTERATION OR OTHER TAMPERING WITH THE GOODS, THAT IS PERFORMED BY ANY PERSON OR ENTITY OTHER THAN SELLER WITHOUT SELLER'S PRIOR WRITTEN APPROVAL, OR ANY USE OF REPLACEMENT PARTS NOT SUPPLIED BY SELLER, SHALL IMMEDIATELY VOID AND CANCEL ALL WARRANTIES WITH RESPECT TO THE GOODS. IF THE WARRANTY BECOMES VOID, THE BUYER MAY PURCHASE FROM SELLER, IF AVAILABLE, A SERVICE AGREEMENT OR ONE-TIME SERVICE AT THEN CURRENT RATES. THE OBLIGATIONS CREATED BY THIS WARRANTY TO REPAIR OR REPLACE DEFECTIVE GOODS SHALL BE THE SOLE REMEDY OF BUYER IN THE EVENT OF A WARRANTY CLAIM. SELLER MAKES NO WARRANTY, EITHER EXPRESS OR IMPLIED, OTHER THAN AS STATED HEREIN. SELLER DISCLAIMS ALL IMPLIED WARRANTIES.

5. LIMITED WARRANTY FOR SERVICES: Seller warrants the Services will conform to the specifications stated in the Proposal and will be performed in a workmanlike manner. The warranty on Services shall be for a period of three (3) months following completion of the Services (the "Service Warranty Period"). Seller agrees during the Service Warranty Period, to re-perform any defective Services; provided that Buyer shall promptly notify Seller in writing upon the discovery of any defect and specify details of the warranty claim. THE OBLIGATIONS CREATED BY THIS WARRANTY TO REPERFORM DEFECTIVE SERVICES SHALL BE THE SOLE REMEDY OF BUYER IN THE EVENT OF A WARRANTY CLAIM. SELLER MAKES NO WARRANTY, EITHER EXPRESS OR IMPLIED, OTHER THAN AS STATED HEREIN. SELLER DISCLAIMS ALL IMPLIED WARRANTIES.

6. BACKCHARGES: No backcharges will be paid or allowed by Seller unless Seller is notified in writing of any claim of defect in the Goods or Services and Seller is given a minimum of thirty (30) days within which to begin remediation of such defect. All backcharges must be approved in writing by Seller before

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any Services are reperformed or any Goods are repaired, replaced, or altered in any manner by Buyer or returned to Seller.

7. CANCELLATION FEE: Buyer may cancel the Order for convenience prior to delivery upon written notice to Seller, in which case Seller will cease activity (except that related to the cancellation) and promptly terminate all related subcontracts. In such event, Buyer shall pay the greater of: (a) Seller's total costs incurred in performing the Order up to the date of receipt of notice of cancellation and all costs associated with the cancellation, including but not limited to, costs of canceling related subcontracts and any currency hedge(s) maintained by Seller relative to the Order, plus reasonable overhead and profit; or (b) a cancellation fee of twenty-five percent (25%) of the Price. However, the amount payable to Seller for cancellation will not exceed the Price.

8. TERMINATION FOR DEFAULT: Buyer may declare Seller in default only if: (a) Seller breaches a material provision of the Order; (b) Buyer provides Seller thirty (30) days written notice specifying Seller's alleged breach in detail; and (c) Seller fails to reasonably cure such alleged breach with the thirty (30) day period following Seller's receipt of Buyer's written notice. In the event of Seller's uncured default, Buyer's sole remedy shall be to terminate the Order and recover any payments made to Seller for the Order.

9. INTELLECTUAL PROPERTY INFRINGEMENT & INDEMNITY: Seller warrants the Goods do not infringe any United States patent. Seller shall, subject to the limitations herein, indemnify Buyer for reasonable damages if the Goods are held to constitute infringement of a United States patent. This indemnity shall not apply: (a) to Goods or parts thereof manufactured pursuant to Buyer's design, or to changes in Seller's design requested by Buyer; and (b) if the infringement is a result of Buyer's operation of the Goods. Buyer shall promptly notify Seller in writing of any alleged claim of infringement, permit Seller to control the defense or compromise of any such claim, and render such assistance as Seller may require. Seller shall have no indemnity obligations to Buyer under this Section if the Buyer is not in compliance with its payment obligations to Seller pursuant to the Order.

10. INDEMNITY: Seller shall be responsible for any illness, injury or death, of the employees of the Seller, its subsidiaries, and their officers, directors, employees, agents, and contractors (collectively, the "Seller Group") and for the loss or damage to the property of any member of the Seller Group, arising out of or relating to the performance of this Order and REGARDLESS OF WHETHER CAUSED OR BROUGHT ABOUT BY THE NEGLIGENCE (INCLUDING ACTIVE, PASSIVE, SOLE, JOINT OR CONCURRENT NEGLIGENCE) OF THE BUYER, ITS SUBSIDIARIES AND ITS CUSTOMER OR ULTIMATE RECIPIENT OR USER OF THE GOODS OR SERVICES AND THEIR OFFICERS, DIRECTORS, EMPLOYEES, AGENTS AND CONTRACTORS (COLLECTIVELY, THE "BUYER GROUP") OR ANY OTHER THEORY OF LEGAL LIABILITY, and Seller shall release, defend, protect, indemnify and hold harmless all members of the Buyer Group from and against any loss, cost, claim, suit, judgment, award or damage (including reasonable attorney's fees) on account of such illness, injury or death, loss or damage. In exchange, Buyer shall be responsible for any illness, injury or death, of the employees of any member of the Buyer Group and for the loss or damage to the property of any member of the Buyer Group, arising out of or relating to the performance of this Order and REGARDLESS OF WHETHER CAUSED OR BROUGHT ABOUT BY THE NEGLIGENCE (INCLUDING ACTIVE, PASSIVE, SOLE, JOINT OR CONCURRENT NEGLIGENCE) OF ANY MEMBER OF THE SELLER GROUP OR ANY OTHER THEORY OF LEGAL LIABILITY, and Buyer shall release, defend, protect, indemnify and hold harmless all members of the Seller Group from and against any loss, cost, claim, suit, judgment, award or damage (including reasonable attorney's fees) on account of such illness, injury or death, loss or damage. Seller and Buyer shall each release, defend, protect, indemnify and hold harmless each other, and the applicable members of the Seller Group or Buyer Group, from and against any loss, cost, claim, suit, judgment, award or damage (including reasonable attorney's fees) for illness, injury, death, or damage to property of third parties (not included within the definitions of Seller Group or Buyer Group) but only to the extent caused by the negligent acts or omissions of such party. Seller shall have no indemnity obligations to Buyer under this Section if the Buyer is not in compliance with its payment obligations to Seller pursuant to the Order. Should any of the preceding indemnities be judged unenforceable or be limited by applicable law, then each party's indemnity obligations to the other shall be limited to the extent that liability for any such illness, injury, death or damage to property is caused by the negligent acts or omissions of such party.

11. GOVERNING LAW: To the maximum extent permissible, this Order shall be governed and construed in accordance with the laws of the State of Oklahoma (U.S.A.), exclusive of any principles of conflicts of laws that would require application of the substantive laws of another jurisdiction. The exclusive venue for all legal actions under this Order shall be the State or Federal Courts sitting in Tulsa, Oklahoma (U.S.A.), and the parties submit to the personal jurisdiction thereof and waive any other venue that may be applicable to such action. This Order excludes the application of the United Nations Convention on Contracts for the International Sale of Goods.

12. FORCE MAJEURE: Except for Buyer's obligations to pay sums to Seller when due, neither party shall be liable for its failure to perform obligations under the Order if such failure results from fire, flood, earthquake, storm, hurricane or other natural disaster, war, invasion, act of foreign enemies, rebellion, terrorist activities, nationalization, government sanction, blockage, embargo, or interruption or failure of electricity, water, telephone or utility service.

13. ASSIGNMENT: Buyer shall not assign the Order without the prior written consent of Seller, and such consent shall not be unreasonably withheld; however, any assignment shall not relieve Buyer of its payment and indemnity obligations to Seller.

14. ENFORCEABILITY: Should a court of competent jurisdiction rule that any provision herein is invalid or unenforceable, such ruling shall not affect the validity or enforceability of any other provision.

15. WAIVER: Seller's failure to enforce any provisions herein shall not constitute a waiver of such rights, or preclude their later enforcement.

16. WAIVER OF CONSEQUENTIAL DAMAGES: SELLER SHALL NOT BE LIABLE FOR PUNITIVE, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING, BUT NOT LIMITED TO, LIABILITY FOR REMOVAL AND REINSTALLATION COSTS, LOSS OF USE, LOSS OF BUSINESS OPPORTUNITY, LOSS OF PROFIT OR REVENUE, LOSS OF PRODUCT OR OUTPUT, OR BUSINESS INTERRUPTION.

17. LIMITATION OF LIABILITY: ANYTHING TO THE CONTRARY CONTAINED IN THIS ORDER NOTWITHSTANDING, SELLER'S CUMULATIVE LIABILITY ARISING OUT OF OR IN ANY MANNER RELATED TO ITS PERFORMANCE SHALL NOT EXCEED, IN THE AGGREGATE, ONE HUNDRED PERCENT (100%) OF THE MONIES RECEIVED BY SELLER UNDER THIS ORDER. THE REMEDIES PROVIDED TO BUYER UNDER THIS ORDER ARE IN LIEU OF ALL OTHER REMEDIES WHICH MAY BE OR BECOME AVAILABLE TO BUYER AT LAW OR IN EQUITY. THE LIMITATIONS SET FORTH HEREIN APPLY WHETHER CLAIMS ARISE PURSUANT TO CONTRACT, TORT, INDEMNITY, STATUTE, EQUITY OR ANY OTHER THEORY OF LAW, INCLUDING, BUT NOT LIMITED TO, THE BREACH OF ANY LEGAL DUTY OR THE FAULT, NEGLIGENCE, PROFESSIONAL LIABILITY OR STRICT LIABILITY OF SELLER. THIS LIMITATION SHALL BE INCLUSIVE OF ALL INSURANCE, BOND, AND LETTER OF CREDIT PROCEEDS, WHICH MAY BE PAID TO THE BUYER BY THE INSURERS, SURETIES OR BANKS OF SELLER. SHOULD THESE REMEDIES BE FOUND INADEQUATE OR TO HAVE FAILED IN THEIR ESSENTIAL PURPOSE FOR ANY REASON WHATSOEVER, THEN THE BUYER AGREES THAT THE SELLER'S RETURN TO THE BUYER OF NO GREATER THAN ONE HUNDRED PERCENT (100%) OF THE MONIES RECEIVED BY SELLER UNDER THIS ORDER SHALL PREVENT THE REMEDIES FROM FAILING THEIR ESSENTIAL PURPOSE AND SHALL BE CONSIDERED BY BUYER AS A FAIR AND ADEQUATE REMEDY.

18. ENTIRE AGREEMENT: This Order contains the entire agreement of the parties and supersedes any and all prior course of dealing, agreements, understandings and communications between Buyer and Seller related to the subject matter of this Order. No amendment or modification of this Order shall be binding unless it is in writing and is signed by an authorized representative of Buyer and Seller.

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The Zeeco Difference

Our only business is the combustion business. By concentrating on what we do best, Zeeco has grown into a worldwide leader in combustion solutions. We are a privately held company whose ownership stays highly involved in daily operations, with upper management comprised of the world's leading combustion experts.

When you call Zeeco, we answer. When you make a request, you get a quick, efficient response. We are lean and efficient, able to make decisions quickly, without bureaucracy and red tape. Our sales, engineering, and purchasing groups work hand-in-hand to deliver highly competitive quotes and heroic turnaround times. We stand ready and willing to travel anywhere in the world to discuss upcoming projects firsthand, and to ensure that every existing project runs seamlessly.



*Visit **zeeco.com/contact** for additional Global Location contact information*

GO ZEECO

Choose to work with our dedicated, flexible, and innovative team, and you won't be disappointed. Call or email us today to request a quote or to learn more about our proprietary combustion systems.

Combustion Rentals & Rapid Response Group
Flare Division
22151 E 91st St
Broken Arrow, OK 74014

Learn more at Zeeco.com
sales@zeeco.com
+1 (918) 258 8551

NSF REGISTERED ISO 9001: 2015
Certification applies to Zeeco Headquarters.

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ZEECO PROPOSAL



CLIENT: Applied Fundamentals, LLC

END USER: Pronto Midstream, LLC

ZEECO QUOTE #: 2024-08771RA-01

QUOTE REV #: 1

DATE OF ISSUE: 10/2/2024

APPLICATION ENGINEER: Wes Kirk

BURNERS | FLARES | THERMAL OXIDIZERS
VAPOR CONTROL | RENTALS | AFTERMARKET

Contact Information:

Customer:	Jason Hughes	210.514.2199	jhughes@appliedfundamentalsllc.com
Zeeco Sales Contact:	Ignacio Aurrecoechea	918.893.8406	Ignacio_Aurrecoechea@zeeco.com
Zeeco Applications Engineer:	Wes Kirk	918.893.8389	wes_kirk@zeeco.com

Design Information (Estimated):

Source	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Gas MW	54.8	44.9	54.1	44.3	16.7
Gas LHV (Btu/Scf)	2808	2326	2774	2293	873
Max Flow Rate (lb/hr)*	8060.8	7590	8034.4	7561.4	795.3
Available Pressure (psig)	0.38	0.43	0.38	0.43	0.55
Temperature (°F)	97	48	97	48	90
Heat Release (MMBtu/hr)	156.8	149.1	156.3	148.6	15.8

**Flow Rates shown include a 110% design factor.*

Scope of Supply:

Qty	Equipment
1	Self-Supported Enclosure – 13’ Dia. x 50’ Tall (167 MMBtu/hr Max Capacity)
1	Air Assisted Tip (AF)
1	Air Assist Blower (VFD Compatible)
2	HSLF Pilot w/ Flame Scanner
1	Automatic Ignition/Monitoring Panel (Z-Purge)
1	Shutdown Monitoring & Controls (VCU-AD)
1	Shutdown Valve (Pneumatic) – 10” Dia.
1	Group D Deflagration Arrester – 10” Dia.
1	Burnback Thermocouple

CONTROLS TO BE ALLEN-BRADLEY WITH ETHERNET COMMUNICATION CAPABILITY

Required Utilities:

Consumer	Utility Type	Consumption	Supply
EGF Pilot Gas	Fuel Gas	180 Scfh	10 psig
Purge Gas*	Fuel Gas	90 Scfh	15 psig
Z-Purge	Instrument air	3.5 Scfh	60 psig
Blower	Electricity	15 hp (21 A)	480 VAC / 3 Ph / 60 Hz

**Purge gas to be oxygen free and not go to dew point at operating temperatures.*

Customer Connections (Estimated, TBC by customer):

Service	Size	Type	Rating
Waste Gas	10"	RF	150#
Pilot Gas	1/2"	NPT	3000#

Equipment Description:

Self-Supported Enclosure	The enclosure prevents flame from being seen by personnel while also increasing residence time to ensure high destruction efficiencies. The stack is mounted on a customer supplied foundation to secure the system and prevent it from blowing over in high winds.
Air Assisted Tip (AF)	The tips use multi-jet technology to break up the exiting gas to allow for more fuel and air interaction to increase smokeless combustion. An air plenum is utilized to direct low pressure air into the combustion zone for turbulent mixing. Components located in the high heat zone will be made of 310SS or equivalent casting material. The tip will provide a VOC destruction efficiency of at least 98 wt%.
Air Assist Blower (VFD Compatible)	For low pressure applications and/or heavy gas compositions, an air assist blower is required for smokeless operation. The blower utilizes ambient air to increase air and gas mixing in the combustion zone, which eliminates any smoke that may form in the flames. A VFD is recommended for fine tuning of the performance of the system. VFD and flow or pressure transmitter for automated VFD control are by others.
HSLF Pilot w/ Flame Scanner	The premix pilot is proven to stay lit in hurricane force weather conditions. Testing has shown that a stable flame is present even in wind speeds greater than 150 mph in addition to rainfall of over 10 inches per hour. The pilot is paired with UV flame scanner for continuous monitoring of the pilot status. The pilot also meets or exceeds API 537 design requirements.
Automatic Ignition/Monitoring Panel (Z-Purge)	The automatic pilot ignition and monitoring panel will continuously monitor the pilot and attempt to relight if a pilot failure signal is received. The control panel will require customer supplied electricity and also be skid mounted. A Z-Purge is included for installation in a Cl 1 Div 2 area.
Shutdown Monitoring & Controls (VCU-AD)	The burner management and high temperature shutdown systems ensure that the unit will operate in a safe manner to protect both personnel and equipment while controlling emissions efficiently. Operating temperature is controlled via an automated damper to control the amount of air that enters into the combustion chamber. A shutdown will be initiated when either a high temperature or pilot failure is detected. All gas sources should be shut in indefinitely until personnel can check the system to ensure that there is not a build-up of combustible vapors or damage to the equipment.
Shutdown Valve (Pneumatic)	A butterfly valve is installed upstream of the system to shutdown in the event of an unsafe condition.
Group D Deflagration Arrester	If a potential for having combustible levels of oxygen in the waste exists, an arrester is recommended to ensure that any flashback from the tip is stopped before it can enter into the upstream piping system.
Burnback Thermocouple	A thermocouple is installed on the downstream side of the arrester to alarm if a sustained flame flashback is achieved at the arrester element.

Commercial:

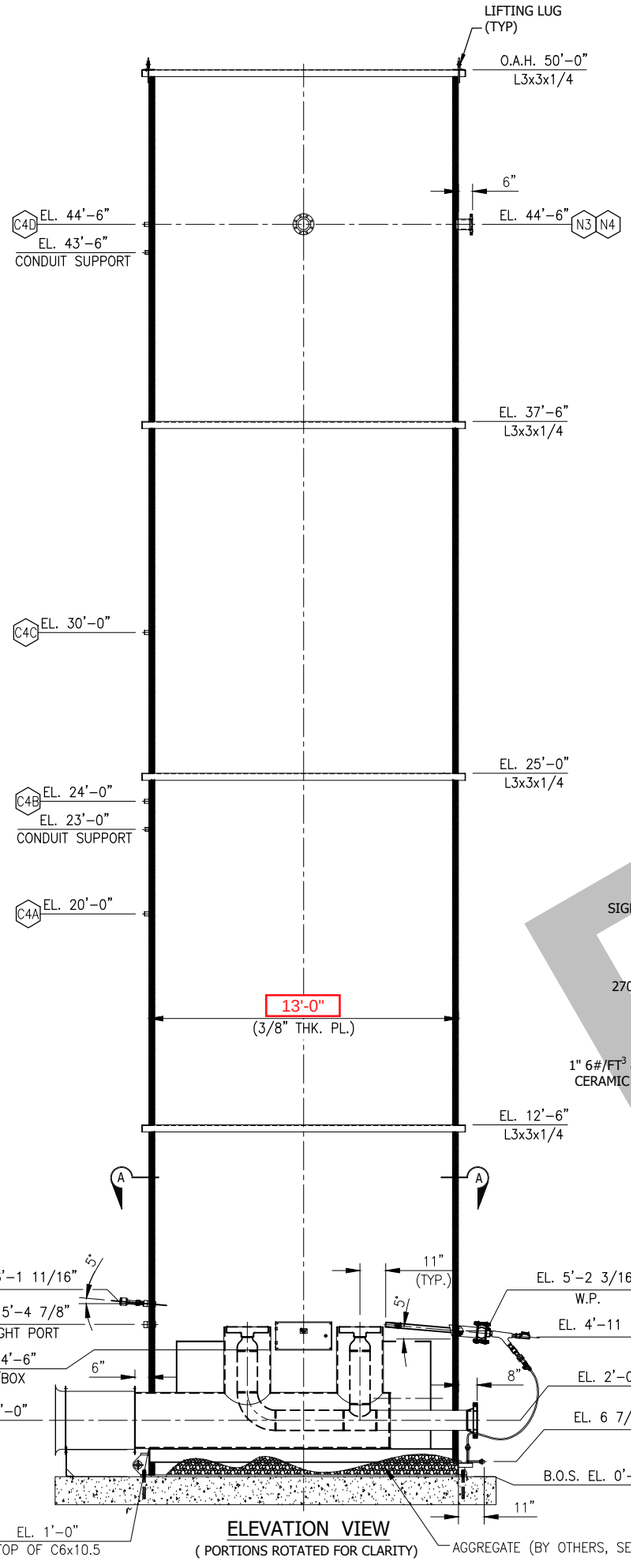
Description	Model #
Self-Supported 13’ Dia. x 50’ Tall Vapor Combustor	VCU-13-50-BL
Optional Equipment:	
Motor Control Panel	*VFD*

Schedule	Equipment will be ready for shipment within 16-20 weeks ARO* *If you require a quicker delivery schedule, please contact Zeeco.* *Schedule based on Zeeco Standard Documentation (Information Only): GA, P&ID and Wiring Schematic Drawings IOM and Quick Start Installation Manuals (Digital Copies Only) Miscellaneous Equipment Cut Sheets
Freight	Prepaid and added to our invoice at cost + 15%
Shipping	Ex-Works (Point of Manufacture) per Incoterms 2020
Payment Terms	Net 15 20% on order placement 30% on drawing submittal 40% on start of fabrication 10% on readiness to ship
Warranty	Length; 18 months from date of shipment or 12 months after startup, whichever condition occurs first. Refer to Zeeco terms and conditions of sale for further clarifications.
Storage	Zeeco will provide space for storage of each unit up to 2 months after notification of readiness to ship free of charge. If you require storage periods longer than 2 months, a fee of 1% of the equipment value will be charged per month until the equipment is moved off site.
Quote Validity	30 days
Terms & Conditions	This proposal is contingent upon acceptance of Zeeco, Inc Standard Terms and Conditions of Sale (attached).

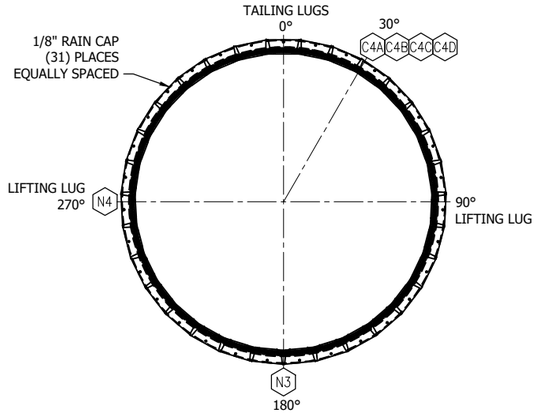
Notes

- Field erection and/or assembly are not included in our scope of supply but can be quoted separately.
- Commissioning or startup assistance can be provided but are not included in our proposal.
- No foundation design or civil engineering services are included in our scope.
- Document/drawing approval has not been considered. Only standard documents as listed above (information only) are applicable.
- Design is based solely on process conditions, any other specifications have not been considered.
- System is to be designed in accordance with ASME STS-1 with elastic foundation considered and to be fabricated per ASME code. Stack is open to atmosphere therefore hydrotesting is not considered.
- Minimum structural design per ASCE 7-16 (105 mph, Risk Category II, Site Class D).
- External carbon steel to be prepared per SSPC-SP6. Prime coat Inorganic Zinc (2.5 MILS DFT Min). One Coat High Temp Aluminum (1 MIL DFT MIN) silver finish.
- Zeeco may charge additional fees to recover any vendor management services required by the Customer.
- NFPA 86 has not been considered on the offered scope.

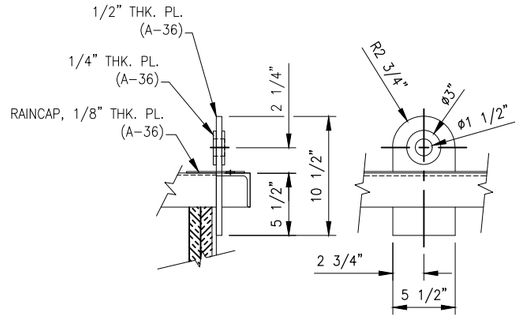
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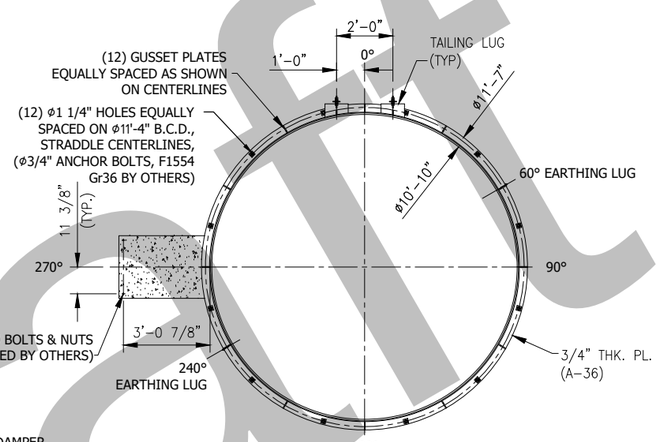
ELEVATION VIEW
(PORTIONS ROTATED FOR CLARITY)



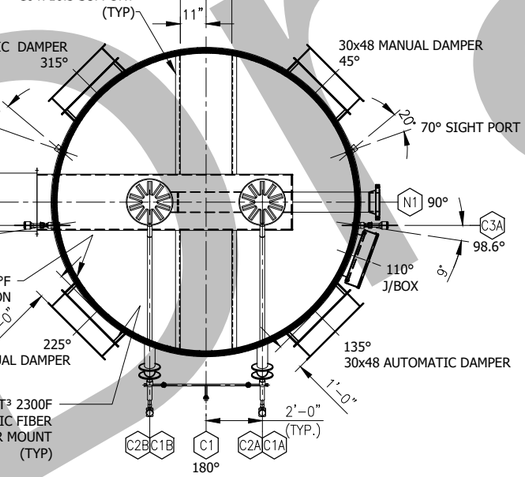
PLAN VIEW



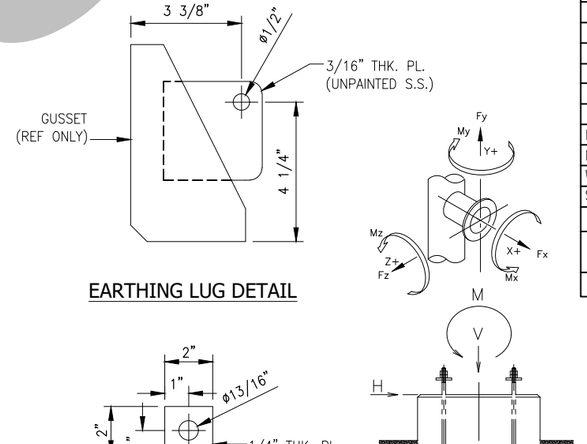
LIFTING LUG AND RAIN CAP DETAIL



BASEPLATE PLAN

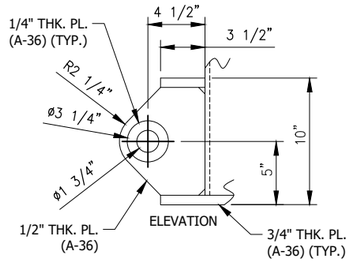


SECTION A-A



EARTHING LUG DETAIL

PLATE WASHER DETAIL



TAILING LUG DETAIL

–MATERIAL SPECIFICATIONS–		–DESIGN DATA–	
STACK	A36	STACK TYPE	SELF SUPPORTED
BURNER	CS/SS	FOUNDATION TYPE	NOTE: 8
FLANGE	CS	DESIGN CODE	ASME & ASCE
STUD BOLT/NUT	A193-B7/A194-2H	WIND DESIGN	119 mph(ASCE 7-16)
GASKET-SPIRAL WOUND	CS/SS	SEISMIC LOAD	SITE CLASS "D", I.F.=1.0 S_1=0.022, S_S=0.059
EARTHING LUG	304 SS		
NAME PLATE	304 SS	FLUID	FLARE GAS
LIFTING LUG	A36	DESIGN PRESS.	50 psig
TAILING LUG	A36	DESIGN TEMP.	-20°F ~ 400°F
BASE PLATE	A36	OPERATING PRESS.	0.10 psig
ANCHOR BOLT	F1554 Gr.36	OPERATING TEMP.	0° ~ 120° °F
CONDUIT	CS (GALV.)/LFMC	P.W.H.T.	(NO)
		RADIOGRAPH	AS PER ITP, (SPOT)
		CORROSION ALLOWANCE	C.S.=1/16", S.S.=0"
		SYSTEM WEIGHT	33891 LBS.
		AGGREGATE NOT INCLUDED	

–NOZZLE LEGEND–

ITEM	SERVICE	SIZE	RATING	TYPE	SCH/BORE	FLG. MAT'L
N1	FLARE GAS INLET	10"	150#	RFSO	S/40	A-105
N2	BLOWER INLET	24"	PLATE	N/A	N/A	A36
N3,4	SAMPLE PORT	4"	150#	RFSO	S/40	A105
C1	PILOT GAS INLET	1/2"	3000#	FNPT	N/A	A105
C2A/B	HEI CONDUIT CONNECTION	3/4"	N/A	FNPT	N/A	A105
C3A/B	FLAME SCANNER	1"	3000#	FNPT	N/A	N/A
C4A~D	THERMOCOUPLE CONNECTION	1/2"	N/A	FNPT	N/A	A105
C5A/B	SIGHT PORT	2"	3000#	FNPT	N/A	N/A

– NOTES –

1. PILOT MIXER ORIFICE DRILLED: 1/16"ø
2. PILOT GAS CONSUMPTION: 90 SCFH @ 10.5 PSIG (NAT. GAS) OR 42 SCFH @ 5 PSIG (PROPANE) PER PILOT.
3. PILOT ORIFICE DRILLING BASED ON 1000 BTU/SCF (LHV) GAS WITH 0.6 SP. GR.
4. ALL FLANGE BOLTING TO STRADDLE NORMAL CENTERLINES.
5. ALL EXTERNAL CARBON STEEL SURFACES TO BE PREPARED PER SSPC-SP6. PRIME WITH ONE COAT INORGANIC ZINC (2 1/2 MILS DFT MIN.) PAINT ONE COAT HIGH TEMP ALUMINUM (1 MIL DFT MIN.) SILVER FINISH. STAINLESS STEEL: NONE.
6. MINIMUM 6" OF AGGREGATE (OR TO BOTTOM OF DAMPER) TO BE INSTALLED INSIDE BASE OF STACK (BY OTHERS). IGNEOUS OR METAMORPHIC PREFERRED – NO SEDIMENTARY. SIZE OF 3/4" – 1".
7. FLAME ARRESTOR DEVICE SHALL BE MOUNTED DIRECTLY TO GAS INLET NOZZLE, NO PIPING ALLOWED BETWEEN ARRESTOR AND GAS INLET NOZZLE.
8. FOUNDATION SUPPORT ELASTIC TYPE PER ASME STS-1-2016.
9. THE FLARE REQUIRES A CONTINUOUS PURGE OF 45 SCFH OF AN OXYGEN FREE GAS THAT WILL NOT GO TO DEW POINT AT OPERATING TEMPERATURES IF NO FLASHBACK PROTECTION DEVICE IS PRESENT.
10. WRAP ALL CARBON STEEL INTERIOR PIPING WITH CERAMIC FIBER BLANKET.

– STACK FOUNDATION LOADS–

LOAD CASE	VERTICAL (lb)	SHEAR (lb)	MOMENT (lb-FT)
DL: DEAD LOAD	33891	0.0	1430
NL: NOZZLE LOAD	660	738	2662
WL: WIND LOAD	0.0	9801	285912
SL: SEISMIC LOAD	0.0	1067	35442

– MAX. ALLOWABLE INLET NOZZLE LOAD 1 X API 537 –

PIPE SIZE (IN)	Fx	Fy	Fz	Mx	My	Mz
	lb	lb	lb	ft-lb	ft-lb	ft-lb
8"	300	600	600	860	650	650

NO.	DATE	REVISION DESCRIPTION	BY	CKD.	APP.
0	18MAY23	INITIAL ISSUE	MSC	TC	WK

JOBSITE: KENEDY, TX
END USER: ENERGY TRANSFER
S.O. NO.: 62213 | P.O. NO.: 4560009602 | APP WK

ZEECO, INC.
22151 EAST 91st STREET
BROKEN ARROW, OK 74014
PHONE: (918) 258-8551
FAX: (918) 251-5519
www.zeeco.com
sales@zeeco.com

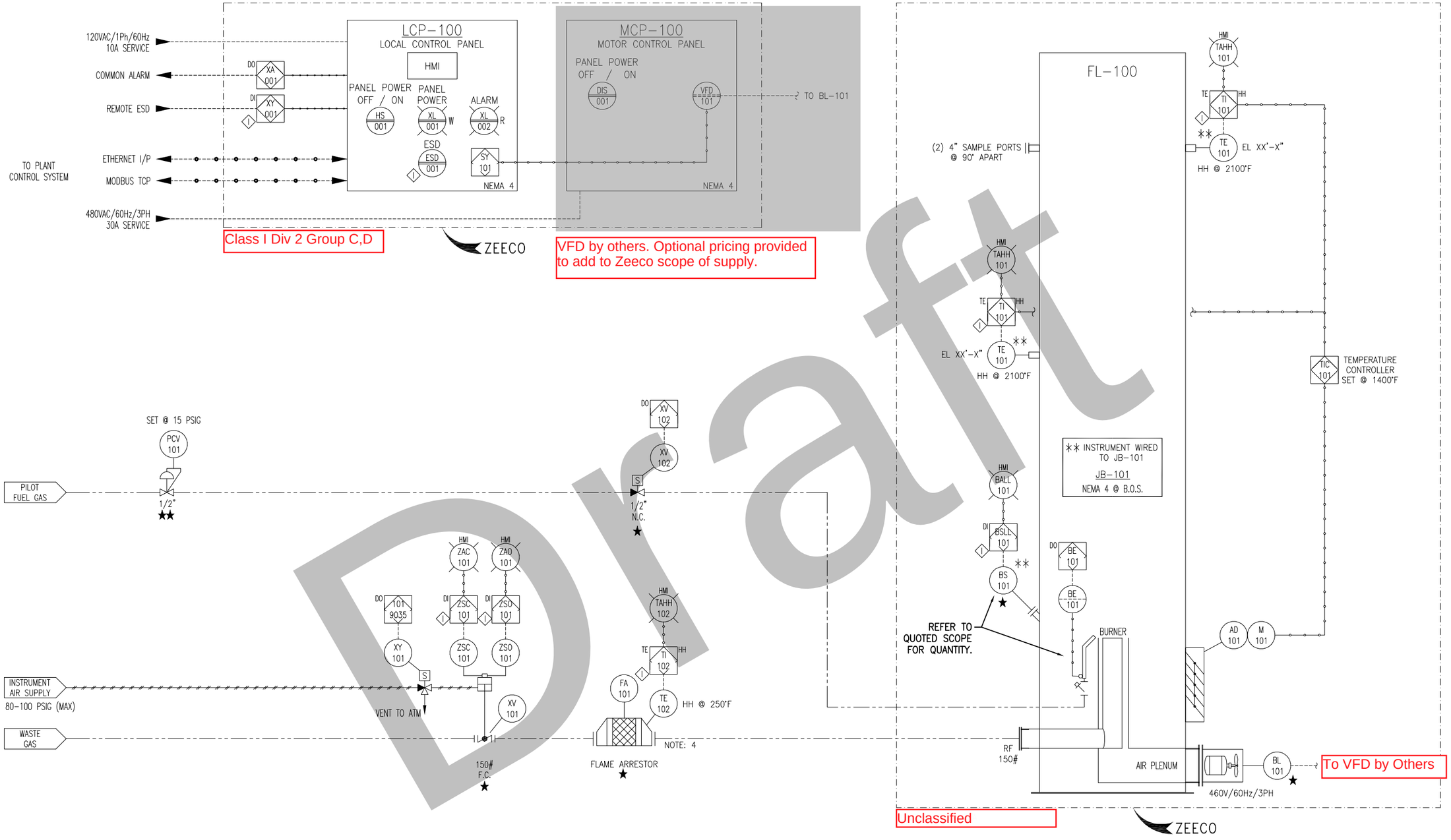
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GENERAL ARRANGEMENT FOR
FOR
VCU-11-50

FOR: ENERGY TRANSFER

DRAWN MSC | DATE 18MAY23
CHK TC | APP WK
SCALE NONE | REV 0
DRAWING NUMBER SE-3325
SHT. 1 OF 1

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LEGEND:

- PIPING
- PIPING BY OTHERS
- FIELD WIRING BY OTHERS
- WIRING BY ZEECO
- SOFTWARE / COMMUNICATIONS
- SKID LIMITS
- 316SS TUBING & FITTINGS
- ★ ITEMS SHIPPED LOOSE
- ★★ ITEMS FURNISHED AND INSTALLED BY OTHERS

- INSTRUMENT (LOCALLY MOUNTED)
- INSTRUMENT (MOUNTED ON LCP)
- INSTRUMENT (MOUNTED INSIDE LCP)
- INSTRUMENT (MOUNTED INSIDE JB)

- LIGHT
- DCS-DISTRIBUTED CONTROL SYSTEM
- PLC-PROGRAMMABLE LOGIC CONTROL

NOTES:

1. INTERCONNECTING WIRING/HARD PIPING/HARD CONDUIT (AS REQUIRED) BETWEEN THE FLARE CONTROL PANEL AND THE FLARE STACK IS BY OTHERS.
2. FLARE CONTROL PANEL TO BE 30' (MIN.) AWAY FROM FLARE STACK.
3. THE PRIMARY IGNITION SOURCE FOR PILOTS ARE ELECTRIC SPARK IGNITORS LOCATED ON EACH PILOT.
4. INSTALL THE ARRESTOR DEVICE DIRECTLY TO THE FLARE INLET. IF A SPOOL IS NEEDED, IT SHOULD BE OF MINIMUM LENGTH.

NO.	DATE	REVISION DESCRIPTION	BY	CKD.	APP.

JOBSITE:

END USER:

S.O. NO.: | P.O. NO.: | APP

ZEECO, INC.
22151 EAST 91st STREET
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P&ID
VCU-X-XX-AD-BL
(TEMP CONTROL WITH BLOWER)
FL-XXX

FOR:

DRAWN	DATE 26JUL18
CHK	APP JTO
SCALE NTS	REV 0
DRAWING NUMBER	YA-XXXX SHT. 1 OF 1

Draft



BURNERS FLARES THERMAL OXIDIZERS VAPOR CONTROL RENTALS AFTERMARKET

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+1.918.258.8551 | zeeco.com

DO YOU NEED TO SHUTDOWN YOUR FLARE?

ZEECO® Combustion Rentals span the scope and capacity to keep any facility's essential operations online during both planned and emergency flare outages. Our rental flare systems are supported entirely by ZEECO Turnkey Combustion Services and can keep specific processes online or eliminate the need to fully de-inventory plants - shortening turnarounds by days. Go with the industry's largest, most dependable combustion rental fleet. Go Zeeco.

ZEECO COMBUSTION RENTAL CAPABILITIES



100% PLANT CAPACITY

» Keep entire facilities online at design capacity to maintain revenues
» Flare options up to 300-feet-tall and 50-inch-diameter
» Flare capacity: 0 to 3 MM lb/Hr
» Smokeless, steam, air, and unassisted available
» Multiple installation and support options
» Rapid deployment and installation
» Self-contained operation and controls



PARTIAL PLANT OR IDLE RELIEF CAPACITY

» Leave relief gathering systems intact
» Reduce required isolation
» Lower capacity required for plant during reduced / idle operation
» Allows full service of main flare while keeping critical systems online
» Reduce outages by days by eliminating purge-out
» Mobile units ensure rapid deployment and installation



SINGLE PROCESS AREA MAINTENANCE CAPACITY

» Service a single system during maintenance activity
» Installation can be in close proximity to emissions point
» Enclosed flare option shields visible flames from community view
» Mobile units ensure rapid deployment and installation

GO ZEECO®

FLARE SYSTEMS

22151 East 91st Street | Broken Arrow, OK 74014 USA | +1 (918) 258 8551 | zeeco.com



INSTALLATION, CONSTRUCTION, & ERECTION SERVICES

Managing an array of system engineers and contractors and dealing with unpleasant surprises can result in significant downtime for installations and lead to business losses. Let Zeeco's Global Field Services eliminate the hassles, reduce costs, and save time and resources by assuming single-point responsibility for your project. With Zeeco, there are no contractual layers between the customer, the OEM supplier, and the contractors. You're guaranteed a single team with a single vision and singular commitment to your success – all backed by the world leader's engineering experience in combustion and environmental solutions.



FLAREGUARDIAN™

The award-winning ZEECO® FlareGuardian flare monitor is a revolutionary instrument utilizing patented Video Imaging Spectro-Radiometry (VISR) technology. The innovative device allows operators to directly, continuously, and autonomously measure flare performance – including Combustion Effeciency (CE), smoke index levels, flame stability, flame footprint, heat release, and pilot presence – in real-time. Eliminate the tedious aiming, data reduction, and ongoing operation and maintenance costs associated with other flare monitoring methods while staying in compliance with the most stringent EPA or other environmental regulations.



PARTS

It doesn't matter if your equipment was manufactured by Zeeco or another combustion equipment supplier. We have what you need to restore or improve your equipment's safety, efficiency, functionality, and environmental performance at a competitive price. Plus, our experts understand the complexities of your system, not just the replacement parts. If you need custom components made specifically for your project, Zeeco can engineer a solution to fit seamlessly into your system and have it operating like new or better.



FLARE TIP ENGINEERED SOLUTIONS

There are many reasons why flare tips shouldn't be replaced like-in-kind, especially if a failure is being replicated. Regardless of the original equipment manufacturer, let Zeeco's Engineered Solutions team evaluate the root cause of your flare tip failure or revised process requirements. Whether the need for change is due to mechanical failures, operational struggles, or updated environmental rules, our team of engineers is ready to provide the optimal technology for your plant moving forward.

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THE SALE OF EQUIPMENT, PARTS, MATERIALS, SUPPLIES, SOFTWARE AND OTHER GOODS (THE "GOODS") OR SERVICES (THE "SERVICES"), AS DESCRIBED IN SELLER'S QUOTATION OR PROPOSAL (THE "PROPOSAL"), ARE EXPRESSLY CONDITIONED UPON BUYER'S AGREEMENT TO THESE TERMS & CONDITIONS. ANY ADDITIONAL OR DIFFERENT TERMS PROPOSED BY BUYER ARE EXPRESSLY OBJECTED TO AND WILL NOT BE BINDING UPON SELLER UNLESS AGREED TO IN WRITING BY SELLER. ANY PURCHASE ORDER (THE "ORDER") ISSUED BY BUYER FOR THE PURCHASE OF GOODS OR SERVICES SHALL CONSTITUTE BUYER'S AGREEMENT TO THESE TERMS & CONDITIONS. UNLESS OTHERWISE SPECIFIED IN THE PROPOSAL OR THE ORDER, ANY PROPOSAL BY SELLER SHALL EXPIRE THIRTY (30) DAYS FROM ITS DATE AND MAY BE MODIFIED OR WITHDRAWN BY SELLER BEFORE RECEIPT OF BUYER'S ACCEPTANCE. THE GOODS AND SERVICES ARE COLLECTIVELY REFERRED TO AS THE "WORK." UNLESS OTHERWISE STATED, THE SELLER SHALL BE ZEECO, INC., 22151 EAST 91ST STREET, BROKEN ARROW, OKLAHOMA 74014 (USA), AND THE BUYER SHALL BE THE PARTY IDENTIFIED AS SUCH ON THE ORDER.

1. PRICE: Unless otherwise stated in the Proposal, the price of the Order (the "Price") is fixed and firm and is exclusive of all taxes, duties, fees, charges or assessments of any nature levied by any governmental authority. Additionally, unless otherwise stated in the Proposal, the Price is contingent upon the use of sub-contractors and sub-suppliers listed on Seller's Approved Manufacturers List ("AML") as may be amended from time-to-time, and the manufacture of Goods pursuant to Seller's standard painting procedures. Payment terms shall be as stated in the Proposal and Seller's acceptance of the Order is subject to credit approval that may include payment by means of an irrevocable documentary letter of credit issued by a first-class U.S. bank acceptable to Seller with funds payable upon delivery of customary presentation documents. The form of the letter of credit shall be negotiated by the parties and submitted to Seller for approval prior to issuance. All costs and fees of the letter of credit shall be to Buyer's account. Seller shall not be required to obtain any form of payment or performance security in favor of the Buyer, including but not limited to, bank guarantees, standby letters of credit, or surety bonds. Buyer's breach of agreed payment terms may result in: (a) Seller's suspension of the Work; (b) Seller's termination of the Order due to Buyer's default; (c) Buyer's liability for Seller's mobilization and demobilization costs in the event of suspension or termination by Seller, in addition to other damages; (d) Seller's demand for further assurances of performance by Buyer which may include, without limitation: (i) alteration of payment terms or milestones; (ii) full payment prior to shipment; (iii) additional payment security; (iv) or a delay in shipment that may exceed the length of Buyer's delay in payment.

2. CHANGES: Order changes by Buyer may significantly and disproportionately affect both the Price and completion or delivery date(s) (the "Delivery Schedule"). If Buyer desires to make a modification to the quantity, place, Delivery Schedule, or method of delivery, or the drawings, designs, or specifications of the Work (a "Change"), then Buyer shall so notify Seller in writing and provide sufficient details and descriptions of the proposed Change so that Seller may evaluate the impact of the Change on the Price, Delivery Schedule, or both. Under no circumstances shall Seller be obligated to perform a Change without an agreement concerning modifications to the Price, Delivery Schedule, or both.

3. DELAYS BY BUYER: If Buyer delays delivery for any reason, including but not limited to technical modifications or Changes, suspension, failure to review drawings submitted by Seller within the time specified, or any other cause (whether or not within Buyer's control), such delays may significantly and disproportionately affect both the Price and Delivery Schedule, which shall then be subject to a reasonable adjustment. The impact of Buyer caused delays on the Delivery Schedule may, in some cases, be more significant or of a longer duration than the actual period of Buyer's delay. In the event of Buyer's delay for any reason Seller shall be entitled to invoice Buyer, and Buyer agrees to pay timely, for materials on hand, fabrication completed or in process, and services provided. Unless specified in the Order, or otherwise by written agreement, where the Order requires submission of certain documents (including but not limited to drawings, manuals, or other documents related to the Goods) by Seller to Buyer for approval, then Buyer shall respond to such submission with approval or rejection within fourteen (14) days after Seller's issuance of such document(s) to Buyer. The failure of Buyer to approve or reject the document(s) by such time shall result in the document(s) being deemed approved and accepted.

4. LIMITED WARRANTY FOR GOODS: Seller warrants the Goods will operate substantially in conformance with Seller's specifications stated the Proposal and will be free from defects in material and workmanship for a period of twelve (12) months from the date of initial operation, or eighteen (18) months from the date of shipment, whichever is earlier (the "Warranty Period") when subjected to normal, proper and intended usage by properly trained personnel. Seller agrees during the Warranty Period, to repair or replace, at Seller's option, defective Goods so as to cause the Goods to operate in substantial conformance with Seller's specifications; provided that Buyer shall: (a) promptly notify Seller in writing upon the discovery of any defect and specify details of the warranty claim; (b) provide Seller with all operating data that Seller may reasonably request in order for Seller to evaluate the warranty claim; and (c) after Seller's review of the warranty claim, return the defective Goods to Seller with costs prepaid by Buyer if required to do so by Seller. Replacement parts may be new or refurbished. Shipment to Buyer of repaired or replaced Goods shall be in accordance with the delivery terms of the Order. Notwithstanding any other provision of this warranty, Seller may at its option, elect to send a service technician to Buyer's site to inspect, repair or replace (if applicable) warranted Goods, or otherwise to determine whether the Goods should be returned to Seller for repair or replacement. Goods or components thereof that are obtained by Seller from an original manufacturer or third party supplier are not warranted by Seller, but Seller will, to the extent possible, assign to Buyer any warranty rights in such Goods or components that Seller received from the original manufacturer or third party supplier. Consumables such as, but not limited to, bulbs, fuses, thermocouples, gaskets, and similar items are outside the scope of this warranty. Seller's warranty assumes the Goods are "at grade," and all responsibility for and costs of removal and/or reinstallation of warranted parts or Goods as well as the cost of and responsibility for gaining access to the warranted parts or Goods, are excluded from this warranty. If the Goods are not placed into service within six (6) months after shipment, in order to validate the warranty, the Goods shall be inspected by Seller at the time of commissioning and refurbished, if necessary, to like new condition at the Buyer's expense. For any extended time of storage at the jobsite without assembly/installation, the Goods shall be stored and protected in accordance with Seller's instructions and industry standard long-term storage methods. This warranty shall be void if the Goods have been: (w) exposed to corrosion, erosion, or chemical attack; (x) operated contrary to Seller's instructions or accepted industry practices; (y) improperly maintained or operated, or subjected to accident, abuse, or vandalism; or (z) operated in conditions other than those stated in Buyer's written specifications. Additionally, this warranty shall be void if the Buyer is not in compliance with its payment obligations to Seller pursuant to the Order. Seller shall have no obligation to make repairs, replacements or corrections resulting from normal wear and tear to the Goods. If Seller determines that a warranty claim is not valid, then Buyer shall pay or reimburse Seller for all costs of investigating and responding to such claim, including non-warranty parts sold or installed, at Seller's then prevailing daily service rates and materials rates. ANY INSTALLATION, MAINTENANCE, REPAIR, SERVICE, RELOCATION OR ALTERATION OR OTHER TAMPERING WITH THE GOODS, THAT IS PERFORMED BY ANY PERSON OR ENTITY OTHER THAN SELLER WITHOUT SELLER'S PRIOR WRITTEN APPROVAL, OR ANY USE OF REPLACEMENT PARTS NOT SUPPLIED BY SELLER, SHALL IMMEDIATELY VOID AND CANCEL ALL WARRANTIES WITH RESPECT TO THE GOODS. IF THE WARRANTY BECOMES VOID, THE BUYER MAY PURCHASE FROM SELLER, IF AVAILABLE, A SERVICE AGREEMENT OR ONE-TIME SERVICE AT THEN CURRENT RATES. THE OBLIGATIONS CREATED BY THIS WARRANTY TO REPAIR OR REPLACE DEFECTIVE GOODS SHALL BE THE SOLE REMEDY OF BUYER IN THE EVENT OF A WARRANTY CLAIM. SELLER MAKES NO WARRANTY, EITHER EXPRESS OR IMPLIED, OTHER THAN AS STATED HEREIN. SELLER DISCLAIMS ALL IMPLIED WARRANTIES.

5. LIMITED WARRANTY FOR SERVICES: Seller warrants the Services will conform to the specifications stated in the Proposal and will be performed in a workmanlike manner. The warranty on Services shall be for a period of three (3) months following completion of the Services (the "Service Warranty Period"). Seller agrees during the Service Warranty Period, to re-perform any defective Services; provided that Buyer shall promptly notify Seller in writing upon the discovery of any defect and specify details of the warranty claim. THE OBLIGATIONS CREATED BY THIS WARRANTY TO REPERFORM DEFECTIVE SERVICES SHALL BE THE SOLE REMEDY OF BUYER IN THE EVENT OF A WARRANTY CLAIM. SELLER MAKES NO WARRANTY, EITHER EXPRESS OR IMPLIED, OTHER THAN AS STATED HEREIN. SELLER DISCLAIMS ALL IMPLIED WARRANTIES.

6. BACKCHARGES: No backcharges will be paid or allowed by Seller unless Seller is notified in writing of any claim of defect in the Goods or Services and Seller is given a minimum of thirty (30) days within which to begin remediation of such defect. All backcharges must be approved in writing by Seller before

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any Services are reperformed or any Goods are repaired, replaced, or altered in any manner by Buyer or returned to Seller.

7. CANCELLATION FEE: Buyer may cancel the Order for convenience prior to delivery upon written notice to Seller, in which case Seller will cease activity (except that related to the cancellation) and promptly terminate all related subcontracts. In such event, Buyer shall pay the greater of: (a) Seller's total costs incurred in performing the Order up to the date of receipt of notice of cancellation and all costs associated with the cancellation, including but not limited to, costs of canceling related subcontracts and any currency hedge(s) maintained by Seller relative to the Order, plus reasonable overhead and profit; or (b) a cancellation fee of twenty-five percent (25%) of the Price. However, the amount payable to Seller for cancellation will not exceed the Price.

8. TERMINATION FOR DEFAULT: Buyer may declare Seller in default only if: (a) Seller breaches a material provision of the Order; (b) Buyer provides Seller thirty (30) days written notice specifying Seller's alleged breach in detail; and (c) Seller fails to reasonably cure such alleged breach with the thirty (30) day period following Seller's receipt of Buyer's written notice. In the event of Seller's uncured default, Buyer's sole remedy shall be to terminate the Order and recover any payments made to Seller for the Order.

9. INTELLECTUAL PROPERTY INFRINGEMENT & INDEMNITY: Seller warrants the Goods do not infringe any United States patent. Seller shall, subject to the limitations herein, indemnify Buyer for reasonable damages if the Goods are held to constitute infringement of a United States patent. This indemnity shall not apply: (a) to Goods or parts thereof manufactured pursuant to Buyer's design, or to changes in Seller's design requested by Buyer; and (b) if the infringement is a result of Buyer's operation of the Goods. Buyer shall promptly notify Seller in writing of any alleged claim of infringement, permit Seller to control the defense or compromise of any such claim, and render such assistance as Seller may require. Seller shall have no indemnity obligations to Buyer under this Section if the Buyer is not in compliance with its payment obligations to Seller pursuant to the Order.

10. INDEMNITY: Seller shall be responsible for any illness, injury or death, of the employees of the Seller, its subsidiaries, and their officers, directors, employees, agents, and contractors (collectively, the "Seller Group") and for the loss or damage to the property of any member of the Seller Group, arising out of or relating to the performance of this Order and REGARDLESS OF WHETHER CAUSED OR BROUGHT ABOUT BY THE NEGLIGENCE (INCLUDING ACTIVE, PASSIVE, SOLE, JOINT OR CONCURRENT NEGLIGENCE) OF THE BUYER, ITS SUBSIDIARIES AND ITS CUSTOMER OR ULTIMATE RECIPIENT OR USER OF THE GOODS OR SERVICES AND THEIR OFFICERS, DIRECTORS, EMPLOYEES, AGENTS AND CONTRACTORS (COLLECTIVELY, THE "BUYER GROUP") OR ANY OTHER THEORY OF LEGAL LIABILITY, and Seller shall release, defend, protect, indemnify and hold harmless all members of the Buyer Group from and against any loss, cost, claim, suit, judgment, award or damage (including reasonable attorney's fees) on account of such illness, injury or death, loss or damage. In exchange, Buyer shall be responsible for any illness, injury or death, of the employees of any member of the Buyer Group and for the loss or damage to the property of any member of the Buyer Group, arising out of or relating to the performance of this Order and REGARDLESS OF WHETHER CAUSED OR BROUGHT ABOUT BY THE NEGLIGENCE (INCLUDING ACTIVE, PASSIVE, SOLE, JOINT OR CONCURRENT NEGLIGENCE) OF ANY MEMBER OF THE SELLER GROUP OR ANY OTHER THEORY OF LEGAL LIABILITY, and Buyer shall release, defend, protect, indemnify and hold harmless all members of the Seller Group from and against any loss, cost, claim, suit, judgment, award or damage (including reasonable attorney's fees) on account of such illness, injury or death, loss or damage. Seller and Buyer shall each release, defend, protect, indemnify and hold harmless each other, and the applicable members of the Seller Group or Buyer Group, from and against any loss, cost, claim, suit, judgment, award or damage (including reasonable attorney's fees) for illness, injury, death, or damage to property of third parties (not included within the definitions of Seller Group or Buyer Group) but only to the extent caused by the negligent acts or omissions of such party. Seller shall have no indemnity obligations to Buyer under this Section if the Buyer is not in compliance with its payment obligations to Seller pursuant to the Order. Should any of the preceding indemnities be judged unenforceable or be limited by applicable law, then each party's indemnity obligations to the other shall be limited to the extent that liability for any such illness, injury, death or damage to property is caused by the negligent acts or omissions of such party.

11. GOVERNING LAW: To the maximum extent permissible, this Order shall be governed and construed in accordance with the laws of the State of Oklahoma (U.S.A.), exclusive of any principles of conflicts of laws that would require application of the substantive laws of another jurisdiction. The exclusive venue for all legal actions under this Order shall be the State or Federal Courts sitting in Tulsa, Oklahoma (U.S.A.), and the parties submit to the personal jurisdiction thereof and waive any other venue that may be applicable to such action. This Order excludes the application of the United Nations Convention on Contracts for the International Sale of Goods.

12. FORCE MAJEURE: Except for Buyer's obligations to pay sums to Seller when due, neither party shall be liable for its failure to perform obligations under the Order if such failure results from fire, flood, earthquake, storm, hurricane or other natural disaster, war, invasion, act of foreign enemies, rebellion, terrorist activities, nationalization, government sanction, blockage, embargo, or interruption or failure of electricity, water, telephone or utility service.

13. ASSIGNMENT: Buyer shall not assign the Order without the prior written consent of Seller, and such consent shall not be unreasonably withheld; however, any assignment shall not relieve Buyer of its payment and indemnity obligations to Seller.

14. ENFORCEABILITY: Should a court of competent jurisdiction rule that any provision herein is invalid or unenforceable, such ruling shall not affect the validity or enforceability of any other provision.

15. WAIVER: Seller's failure to enforce any provisions herein shall not constitute a waiver of such rights, or preclude their later enforcement.

16. WAIVER OF CONSEQUENTIAL DAMAGES: SELLER SHALL NOT BE LIABLE FOR PUNITIVE, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING, BUT NOT LIMITED TO, LIABILITY FOR REMOVAL AND REINSTALLATION COSTS, LOSS OF USE, LOSS OF BUSINESS OPPORTUNITY, LOSS OF PROFIT OR REVENUE, LOSS OF PRODUCT OR OUTPUT, OR BUSINESS INTERRUPTION.

17. LIMITATION OF LIABILITY: ANYTHING TO THE CONTRARY CONTAINED IN THIS ORDER NOTWITHSTANDING, SELLER'S CUMULATIVE LIABILITY ARISING OUT OF OR IN ANY MANNER RELATED TO ITS PERFORMANCE SHALL NOT EXCEED, IN THE AGGREGATE, ONE HUNDRED PERCENT (100%) OF THE MONIES RECEIVED BY SELLER UNDER THIS ORDER. THE REMEDIES PROVIDED TO BUYER UNDER THIS ORDER ARE IN LIEU OF ALL OTHER REMEDIES WHICH MAY BE OR BECOME AVAILABLE TO BUYER AT LAW OR IN EQUITY. THE LIMITATIONS SET FORTH HEREIN APPLY WHETHER CLAIMS ARISE PURSUANT TO CONTRACT, TORT, INDEMNITY, STATUTE, EQUITY OR ANY OTHER THEORY OF LAW, INCLUDING, BUT NOT LIMITED TO, THE BREACH OF ANY LEGAL DUTY OR THE FAULT, NEGLIGENCE, PROFESSIONAL LIABILITY OR STRICT LIABILITY OF SELLER. THIS LIMITATION SHALL BE INCLUSIVE OF ALL INSURANCE, BOND, AND LETTER OF CREDIT PROCEEDS, WHICH MAY BE PAID TO THE BUYER BY THE INSURERS, SURETIES OR BANKS OF SELLER. SHOULD THESE REMEDIES BE FOUND INADEQUATE OR TO HAVE FAILED IN THEIR ESSENTIAL PURPOSE FOR ANY REASON WHATSOEVER, THEN THE BUYER AGREES THAT THE SELLER'S RETURN TO THE BUYER OF NO GREATER THAN ONE HUNDRED PERCENT (100%) OF THE MONIES RECEIVED BY SELLER UNDER THIS ORDER SHALL PREVENT THE REMEDIES FROM FAILING THEIR ESSENTIAL PURPOSE AND SHALL BE CONSIDERED BY BUYER AS A FAIR AND ADEQUATE REMEDY.

18. ENTIRE AGREEMENT: This Order contains the entire agreement of the parties and supersedes any and all prior course of dealing, agreements, understandings and communications between Buyer and Seller related to the subject matter of this Order. No amendment or modification of this Order shall be binding unless it is in writing and is signed by an authorized representative of Buyer and Seller.

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The Zeeco Difference

Our only business is the combustion business. By concentrating on what we do best, Zeeco has grown into a worldwide leader in combustion solutions. We are a privately held company whose ownership stays highly involved in daily operations, with upper management comprised of the world's leading combustion experts.

When you call Zeeco, we answer. When you make a request, you get a quick, efficient response. We are lean and efficient, able to make decisions quickly, without bureaucracy and red tape. Our sales, engineering, and purchasing groups work hand-in-hand to deliver highly competitive quotes and heroic turnaround times. We stand ready and willing to travel anywhere in the world to discuss upcoming projects firsthand, and to ensure that every existing project runs seamlessly.



*Visit **zeeco.com/contact** for additional Global Location contact information*

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Combustion Rentals & Rapid Response Group
Flare Division
22151 E 91st St
Broken Arrow, OK 74014

Learn more at Zeeco.com
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+1 (918) 258 8551

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Certification applies to Zeeco Headquarters.

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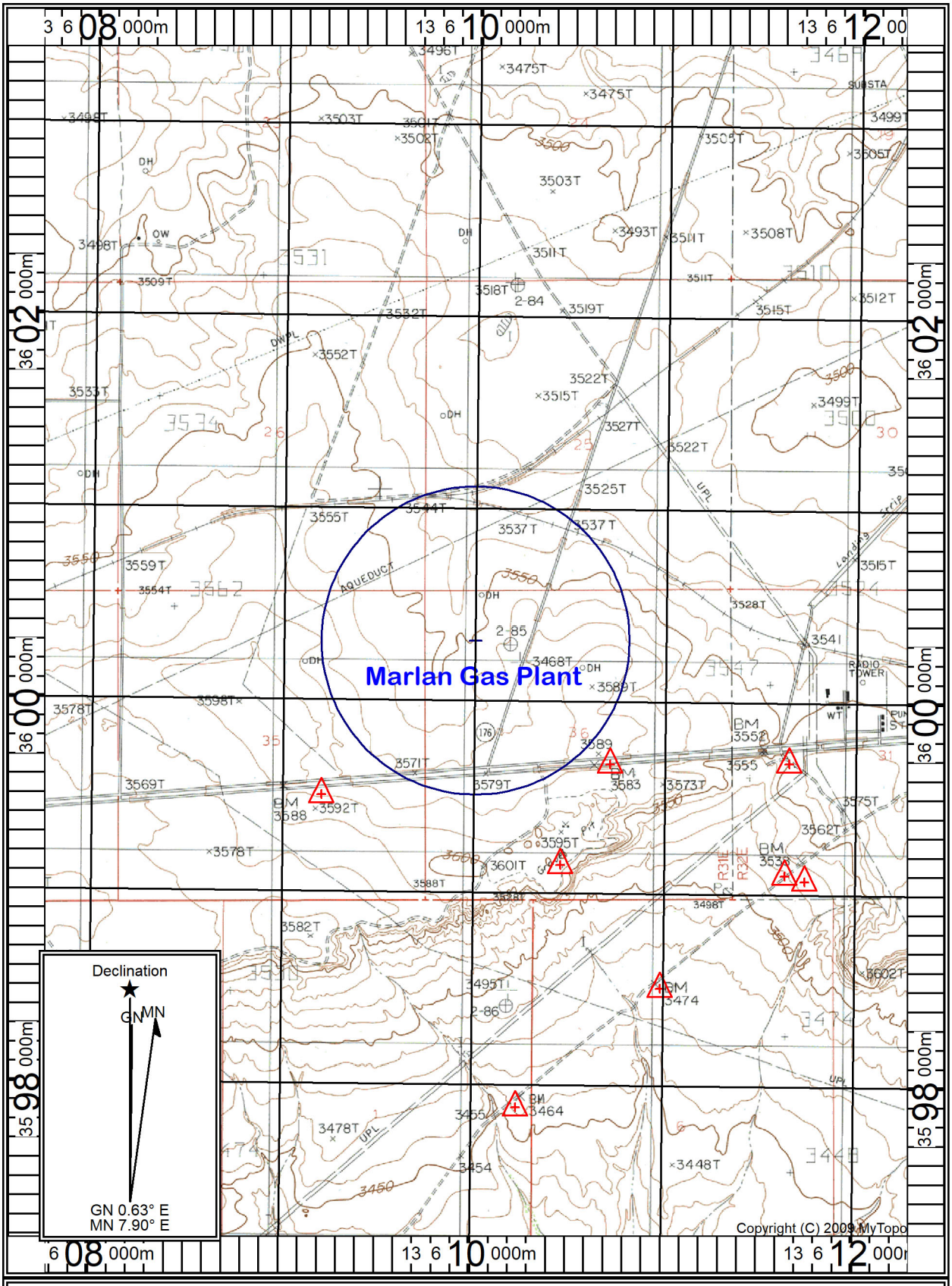
Section 8

Map(s)

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

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

A map is attached to this section.



Map Name: WILLIAMS SINK (NM) Scale: 1 inch = 2,500 ft. Horizontal Datum: NAD83
Print Date: 09/17/23 Map Center: 13 0610000 E 3600311

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.

9589 0710 5270 3646 2997 74

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Domestic Mail Only

For delivery information, visit our website at *www.usps.com®*.

Santa Fe, NM 87508

OFFICIAL USE

Certified Mail Fee	$5.30
Extra Services & Fees (check box, add fee as appropriate)	
☐ Return Receipt (hardcopy)	$0.00
☐ Return Receipt (electronic)	$0.00
☐ Certified Mail Restricted Delivery	$0.00
☐ Adult Signature Required	$0.00
☐ Adult Signature Restricted Delivery	$
Postage	$0.78
Total Postage and Fees	$6.08

0070 2

Postmark Here
APR 14 2026
04/14/2026

Sent To: Bureau of Land Management
Street and Apt. No., or PO Box No.: 301 Dinosaur Trail
City, State, ZIP+4®: Santa Fe, NM 87508

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

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Carlsbad, NM 88220

OFFICIAL USE

Certified Mail Fee	$5.30
Extra Services & Fees (check box, add fee as appropriate)	
☐ Return Receipt (hardcopy)	$0.00
☐ Return Receipt (electronic)	$0.00
☐ Certified Mail Restricted Delivery	$0.00
☐ Adult Signature Required	$0.00
☐ Adult Signature Restricted Delivery	$
Postage	$0.78
Total Postage and Fees	$6.08

0070 2

Postmark Here
APR 14 2026
04/14/2026

Sent To: Eddy County Manager
Street and Apt. No., or PO Box No.: 101 Greene St.
City, State, ZIP+4®: Carlsbad, NM 88220

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

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Lovington, NM 88260

OFFICIAL USE

Certified Mail Fee	$5.30
Extra Services & Fees (check box, add fee as appropriate)	
☐ Return Receipt (hardcopy)	$0.00
☐ Return Receipt (electronic)	$0.00
☐ Certified Mail Restricted Delivery	$0.00
☐ Adult Signature Required	$0.00
☐ Adult Signature Restricted Delivery	$
Postage	$0.78
Total Postage and Fees	$6.08

0070 2

Postmark Here
APR 14 2026
04/14/2026

Sent To: Lea County Manager
Street and Apt. No., or PO Box No.: 100 North Main
City, State, ZIP+4®: Lovington, NM 88260

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

9589 0710 5270 3646 2997 98

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Loving, NM 88256

OFFICIAL USE

Certified Mail Fee	$5.30
Extra Services & Fees (check box, add fee as appropriate)	
☐ Return Receipt (hardcopy)	$0.00
☐ Return Receipt (electronic)	$0.00
☐ Certified Mail Restricted Delivery	$0.00
☐ Adult Signature Required	$0.00
☐ Adult Signature Restricted Delivery	$
Postage	$0.78
Total Postage and Fees	$6.08

0070 2

Postmark Here
APR 14 2026
04/14/2026

Sent To: Mayor of Carlsbad
Street and Apt. No., or PO Box No.: P.O. Box 56
City, State, ZIP+4®: Loving, NM 88256

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

9589 0710 5270 3646 2997 43

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For delivery information, visit our website at *www.usps.com®*.

Spring, TX 77389

OFFICIAL USE

Certified Mail Fee	$5.30
Extra Services & Fees (check box, add fee as appropriate)	
☐ Return Receipt (hardcopy)	$0.00
☐ Return Receipt (electronic)	$0.00
☐ Certified Mail Restricted Delivery	$0.00
☐ Adult Signature Required	$0.00
☐ Adult Signature Restricted Delivery	$
Postage	$0.78
Total Postage and Fees	$6.08

0070 2

Postmark Here
APR 14 2026
04/14/2026

Sent To: XTO Holdings, LLC
Street and Apt. No., or PO Box No.: 22777 Springwoods Village Pkwy
City, State, ZIP+4®: Spring, TX 77389

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

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Santa Fe, NM 87504

OFFICIAL USE

Certified Mail Fee	$5.30
Extra Services & Fees (check box, add fee as appropriate)	
☐ Return Receipt (hardcopy)	$0.00
☐ Return Receipt (electronic)	$0.00
☐ Certified Mail Restricted Delivery	$0.00
☐ Adult Signature Required	$0.00
☐ Adult Signature Restricted Delivery	$
Postage	$0.78
Total Postage and Fees	$6.08

0070 2

Postmark Here
APR 14 2026
04/14/2026

Sent To: State of New Mexico
Street and Apt. No., or PO Box No.: 310 Old Santa Fe Trail
City, State, ZIP+4®: Santa Fe, NM 87501

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

9589 0710 5270 3646 2997 81

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at *www.usps.com®*.

Lubbock, TX 79401 OFFICIAL USE

Certified Mail Fee $	$5.30
Extra Services & Fees *(check box, add fee as appropriate)*	
☐ Return Receipt (hardcopy) $	$0.00
☐ Return Receipt (electronic) $	$0.00
☐ Certified Mail Restricted Delivery $	$0.00
☐ Adult Signature Required $	$0.00
☐ Adult Signature Restricted Delivery $	
Postage $	$0.78
Total Postage and Fees $	$6.08

0070 3

Postmark Here

APR 14 2026

04/14/2026

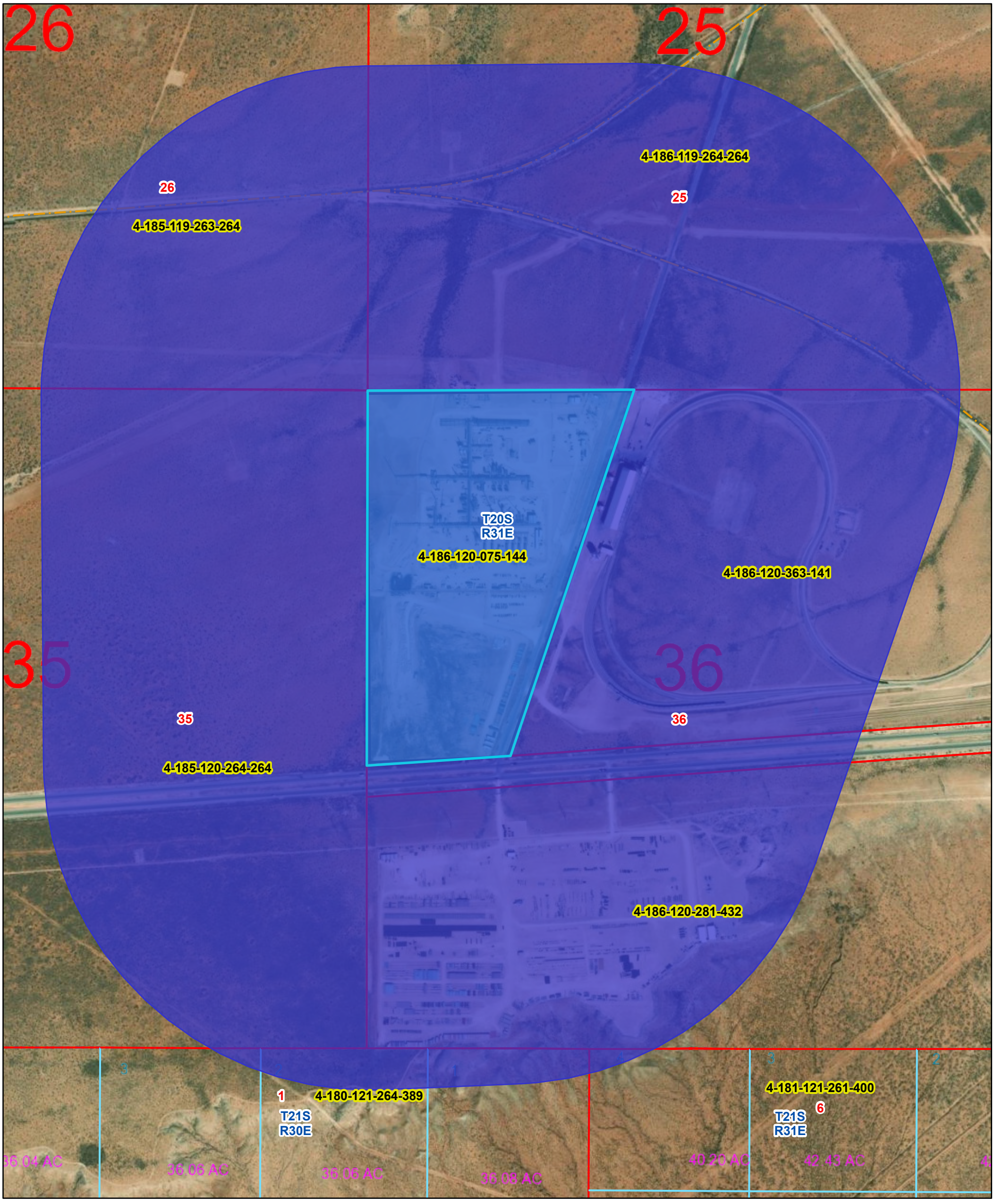
Sent To: Titan Lansing Transloading, LLC

Street and Apt. No., or PO Box No.: 3802 M.L.K. Jr. Blvd

City, State, ZIP+4®: Lubbock, TX 79404

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

ArcGIS Web Map



3/31/2026, 4:49:22 PM

Cartography
- Dim Tic
- Leader Line
- Misc Carto
- Owner Hook
- Sub Corner
- Other

- Railroads
- Water

Coincident Boundaries
- Govt Lot Line
- Parcel Line
- Sub Line
- Unknown Linear

- Other
- Geographic
- Section
- Subdivision
- Parcel

World Imagery
- Low Resolution 15m Imagery
- High Resolution 60cm Imagery
- High Resolution 30cm Imagery
- Citations
- 2.4m Resolution Metadata

1:10,439

0 0.1 0.2 0.4 mi

0 0.15 0.3 0.6 km

Vantor

Account: R037313 *Mill Levy does not include Special District Rates such as Penasco, Carlsbad Soil & Water, Central Valley, Eagle Draw, PVC, Cottonwood, and Hackberry

1 of 176 Results Next->

Location	Owner Information	Assessment History
Account Number R037313	**Owner Name** COUNTY OF EDDY	**Actual Value** (2026) $1,230,009
Situs Address 55 BUFFALO GRASS ROAD	**Owner Address** 101 W GREENE ST	**Primary Taxable** $410,003
Tax Area CO_NR - CARLSBAD-OUT (Nonresidential)	CARLSBAD, NM 88220	Exempt -$410,003
Parcel Number 4-186-120-075-144		**Adjusted Taxable Total** $0
Legal Summary Quarter: NW S: 36 T: 20S R: 31E BEG AT NW COR SEC 36, N89°44'32"E-2161.62', S18°31'51"W-3115.89', S85°40'41"W-1160.66', N00°11'38"W-377.58', N00°16'26"W-2654.92' TO POB. THIS ALSO INCLUDE A PORTION IN THE SW Quarter: SW S: 36 T: 20S R: 31E LEGAL IS DESCRIBED IN THE NW		**Tax Area:** CO_NR **Mill Levy**: 22.562000
Map Number 174-36-1		
Parcel Size 114 AC		

Type	Actual	Assessed	Acres
Exempt Land	$700,349	$233,450	114.000
Exempt Improvement	$529,660	$176,553	

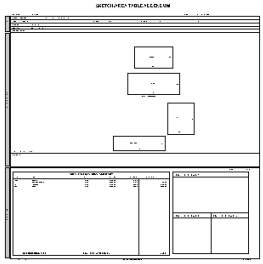
Tax History

Tax Year	Taxes
*2026	$0.00
2025	$0.00

* Estimated

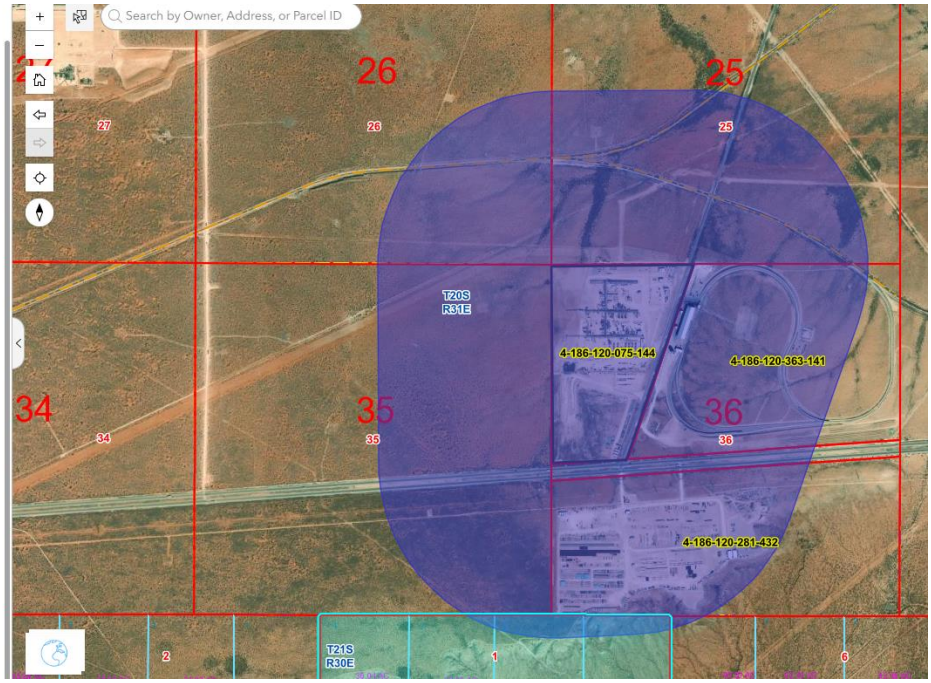
Images

Sketch | GIS



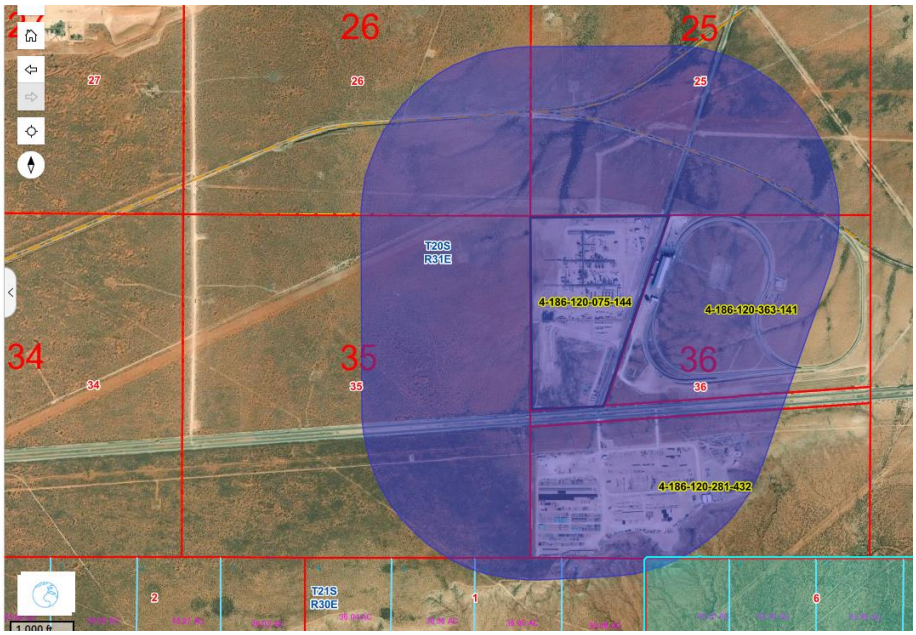
Assessor Property Information

UPC	4-180-121-264-389
Map Number	
Owner Name	BUREAU OF LAND MANAGEMENT
Owner Address	
Owner City	
Owner State	
Owner ZIP	
Site Address	
Legal Summary	Quarter: NE S: 1 T: 21S R: 30E Quarter: NW S: 1 T: 21S R: 30E Quarter: SW S: 1 T: 21S R: 30E Quarter: SE S: 1 T: 21S R: 30E SEC 1,3-15,17-21,23-27,29-31,33-35 ALL SECTIONS 1,3,4,5,6,7,9,10,11,12 15,17,18,19,25,26,29,30 ,31,33,34,35 E2NW, S/2, NE, SWNW SEC 8 N/2 SEC 13 N2SW, NW, SWNE, N2NE SEC 14 N/2, SW/4, W/2SE, SESE SEC 20 W/2 SEC 21 S/2 SEC 23 ALL (LESS NW) SEC 24 S/2 SEC 27 EXEMPT
Model Type	Land
Land Actual	4263
Actual Area	947
Tax Area	CO_NR
Land Code	141_4_5
Book	
Page	



Assessor Property Information

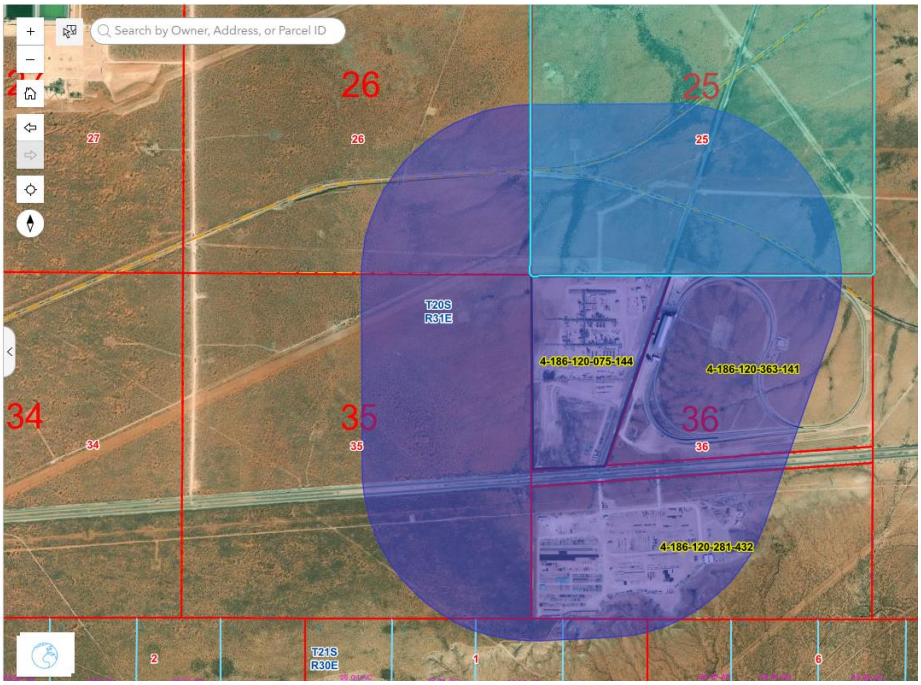
UPC	4-181-121-261-400
Map Number	
Owner Name	BUREAU OF LAND MANAGEMENT
Owner Address	
Owner City	
Owner State	
Owner ZIP	
Site Address	
Legal Summary	Quarter: NE S: 6 T: 21S R: 31E Quarter: NW S: 6 T: 21S R: 31E Quarter: SW S: 6 T: 21S R: 31E Quarter: SE S: 6 T: 21S R: 31E ALL MAP# 208-6 LOC E OF CARLSBAD EXEMPT
Model Type	Land
Land Actual	4323
Actual Area	960.6
Tax Area	CO_NR
Land Code	141_4_5
Book	
Page	



Parcel Information

Assessor Property Information

UPC	4-186-119-264-264
Map Number	
Owner Name	BUREAU OF LAND MANAGEMENT
Owner Address	
Owner City	
Owner State	
Owner ZIP	
Site Address	
Legal Summary	Quarter: NE S: 25 T: 20S R: 31E Quarter: NW S: 25 T: 20S R: 31E Quarter: SW S: 25 T: 20S R: 31E Quarter: SE S: 25 T: 20S R: 31E NE LESS 14.83 AC, NW LESS .4 AC, SE LESS 6.8 AC, SW LESS 22.29 AC MAP# 174-25 LOC BUFFALO GRASS RD EXEMPT
Model Type	Land
Land Actual	2682
Actual Area	595.68
Tax Area	CO_NR
Land Code	141_4_5
Book	
Page	



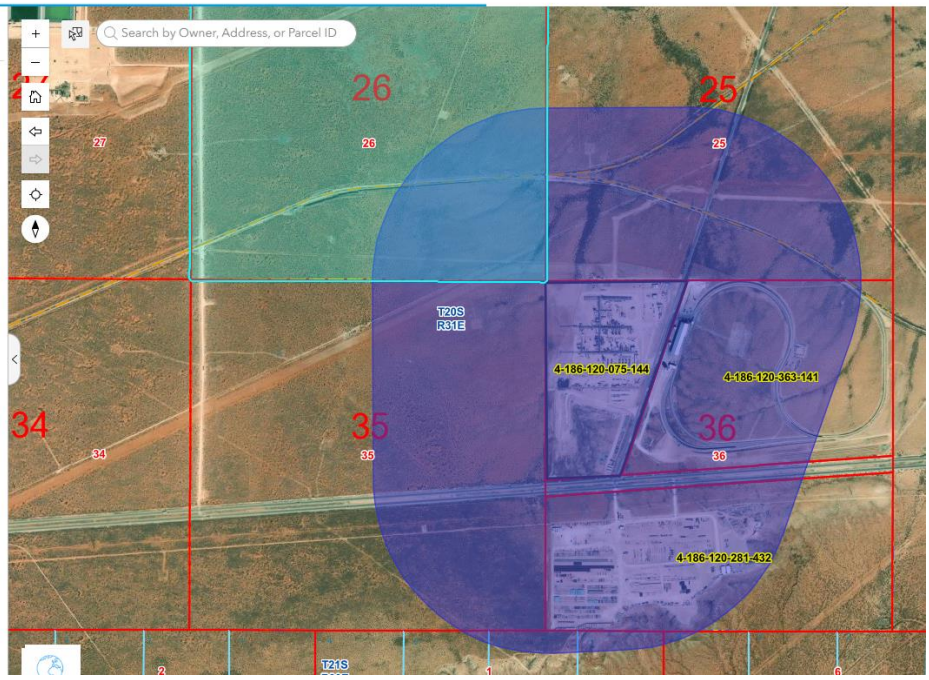
Results

Parcel

arcel Information

Assessor Property Information

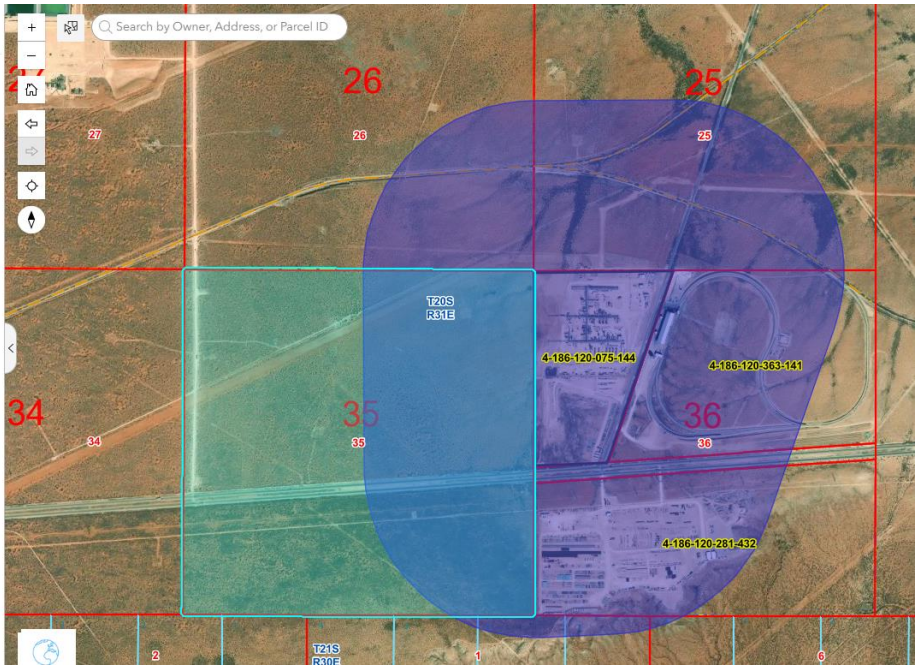
UPC	4-185-119-263-264
Map Number	
Owner Name	BUREAU OF LAND MANAGEMENT
Owner Address	
Owner City	
Owner State	
Owner ZIP	
Site Address	
Legal Summary	Quarter: NE S: 26 T: 20S R: 31E Quarter: NW S: 26 T: 20S R: 31E Quarter: SW S: 26 T: 20S R: 31E Quarter: SE S: 26 T: 20S R: 31E NE, NW, SE LESS 12.17 AC, SW LESS 12.88 AC MAP# 174-26 LOC N OF HWY 62-180 EXEMPT
Model Type	Land
Land Actual	2766
Actual Area	614.95
Tax Area	CO_NR
Land Code	141_4_5
Book	
Page	



Parcel Information

Assessor Property Information

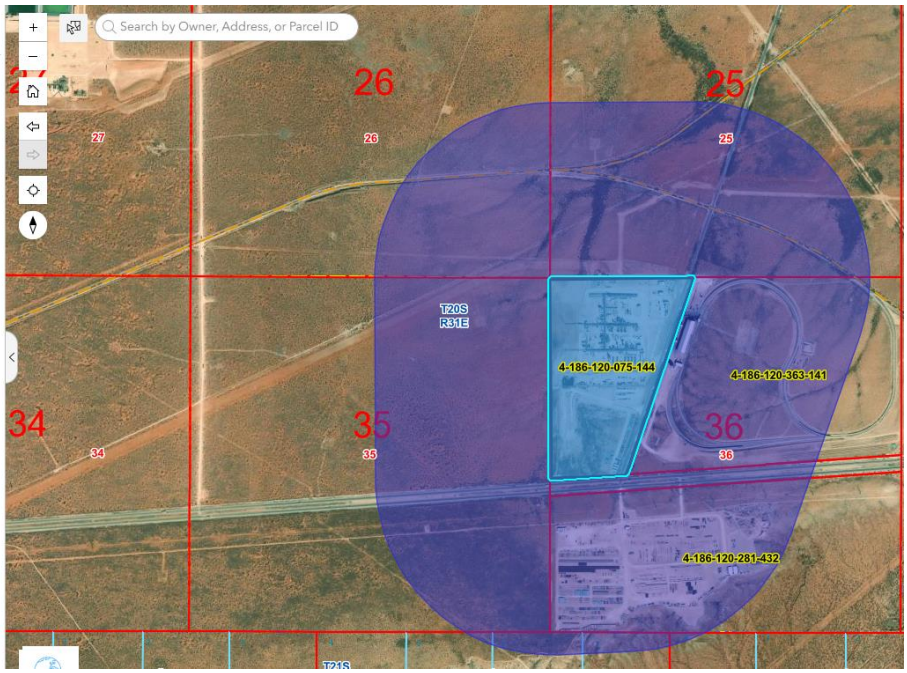
UPC	4-185-120-264-264
Map Number	
Owner Name	BUREAU OF LAND MANAGEMENT
Owner Address	
Owner City	
Owner State	
Owner ZIP	
Site Address	
Legal Summary	Quarter: NE S: 35 T: 20S R: 31E Quarter: NW S: 35 T: 20S R: 31E Quarter: SW S: 35 T: 20S R: 31E Quarter: SE S: 35 T: 20S R: 31E ALL MAP# 174-35 LOC MM 61 HWY 62-180 EXEMPT
Model Type	Land
Land Actual	2880
Actual Area	640
Tax Area	CO_NR
Land Code	141_4_5
Book	
Page	



Parcel Information

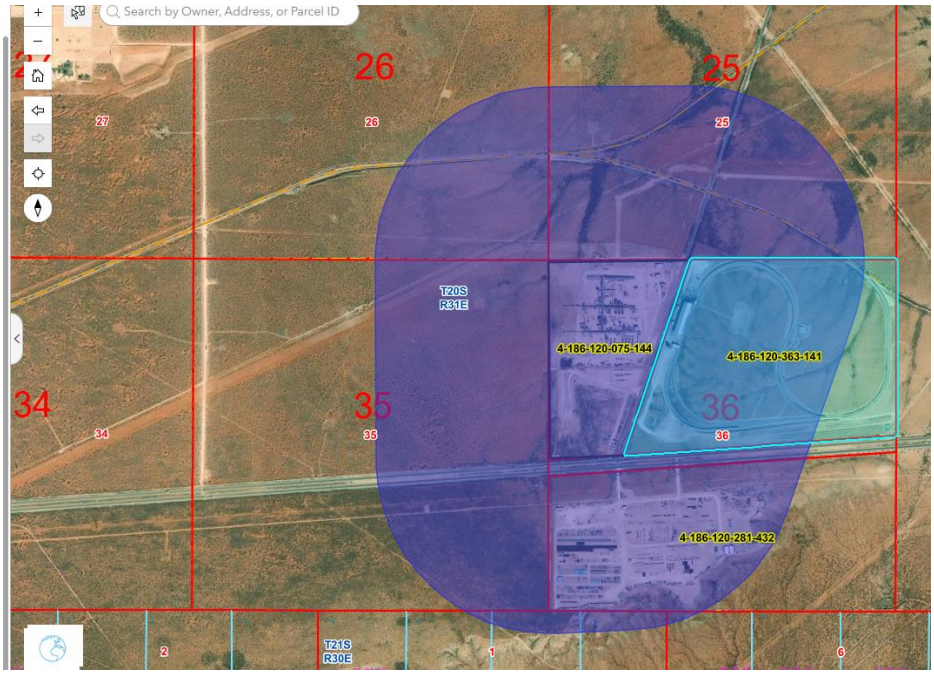
Assessor Property Information

UPC	4-186-120-075-144
Map Number	174-36-1
Owner Name	COUNTY OF EDDY
Owner Address	101 W GREENE ST CARLSBAD, NM 88220
Owner City	CARLSBAD
Owner State	NM
Owner ZIP	88220
Site Address	55 BUFFALO GRASS ROAD
Legal Summary	Quarter: NW S: 36 T: 20S R: 31E BEG AT NW COR SEC 36, N89°44'32"E-2161.62', S18°31'15"W-3115.89', S85°40'41"W-1160.66', N00°11'38"W-377.58', N00°16'26"W-2654.92' TO POB. THIS ALSO INCLUDE A PORTION IN THE SW4 Quarter: SW S: 36 T: 20S R: 31E LEGAL IS DESCRIBED IN THE NW4
Model Type	Land
Land Actual	233999
Actual Area	20
Tax Area	CO_NR
Land Code	160_450
Book	
Page	



Assessor Property Information

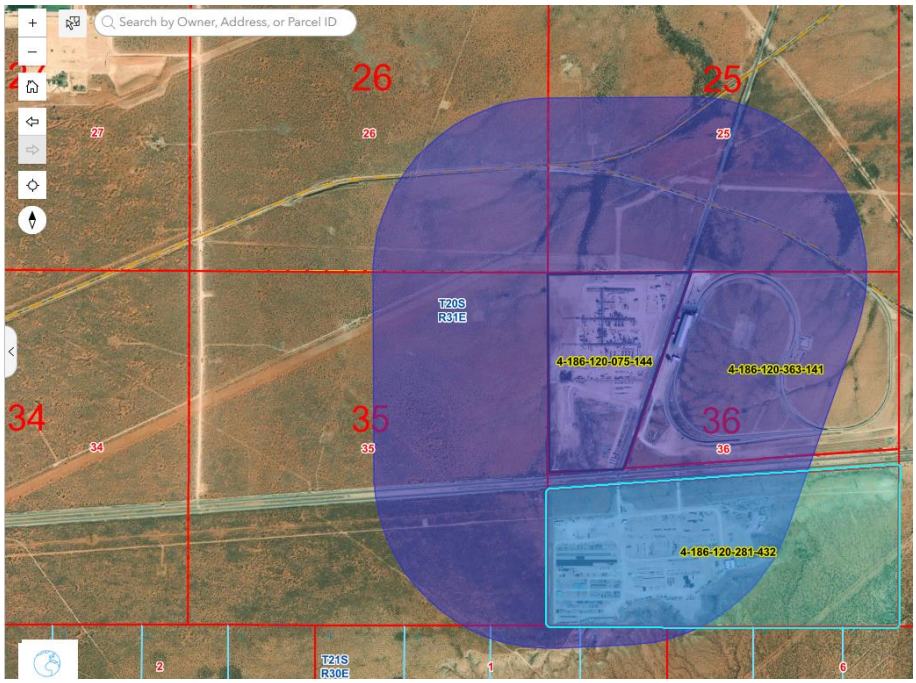
UPC	4-186-120-363-141
Map Number	
Owner Name	TITAN LANSING TRANSLOADING LLC
Owner Address	6923 INDIANA AVE LUBBOCK, TX 79413-6111
Owner City	LUBBOCK
Owner State	TX
Owner ZIP	794136111
Site Address	44 BUFFALO GRASS ROAD
Legal Summary	Quarter: NE S: 36 T: 20S R: 31E Quarter: NW S: 36 T: 20S R: 31E Quarter: SW S: 36 T: 20S R: 31E Quarter: SE S: 36 T: 20S R: 31E BEG AT NE COR SEC 36, S00°15'42" E-2655.23', S85°40'59"W-4140.77', N18°31'58"E-3116.06', N89°44'41" E-482.02', N89°46'38"E-2644.47' TO POB MAP# 174-36-2 B/S CAB# 5-697-1 LOC 44 BUFFALO GRASS ROAD ODD SHAPE
Model Type	Land
Land Actual	579498
Actual Area	231.8
Tax Area	CO_NR
Land Code	111_2499_99
Book	
Page	



Parcel Information

Assessor Property Information

UPC	4-186-120-281-432
Map Number	174-36-3 , B/S 7-203, B/S 7-0328
Owner Name	XTO HOLDINGS LLC
Owner Address	22777 SPRINGWOODS VILLAGE PKWY SPRING, TX 77389
Owner City	SPRING
Owner State	TX
Owner ZIP	77389
Site Address	6169 HOBBS HIGHWAY
Legal Summary	Quarter: SW S: 36 T: 20S R: 31E SEE DESC IN SE Quarter: SE S: 36 T: 20S R: 31E BEG SE COR SEC 36, S89°45'49"W-2647.03', S89°44'43"W-2638.05', N00°16'07"W-2027.04', N85°41'33"E ALONG S R/W OF HWY 62/180 5299.50', S00°14'19"E-2402.42' ALONG E LINE SEC 36 TO POB ,
Model Type	Land
Land Actual	26677
Actual Area	266.8
Tax Area	CO_NR
Land Code	192_99_99
Book	
Page	



9.4. Letters sent to the Owners of Record

April 14, 2026

CERTIFIED MAIL XXXX XXXX XXXX XXXX
RETURN RECEIPT REQUESTED *(certified mail is required,* ***return receipt is optional****)*

Dear **Titan Lansing Transloading, LLC,**

Pronto Midstream, LLC announces its application submittal to the New Mexico Environment Department for an air quality permit for the **modification** of its **natural gas processing** facility. The expected date of application submittal to the Air Quality Bureau is **April 3, 2026.**

The exact location for the proposed facility known as the **Marlan Gas Plant**, is at latitude **32.533199** dec deg North and longitude **-103.828021** dec deg West. The approximate location of this facility is **23** miles **northeast** of **Loving** in **Eddy County**.

The proposed **modification** consists of adding another process train (Train 3) to the facility and modifying the routing of process liquids and gas throughout the site. This will include the installation of the following units: one (1) Amine Unit (AMINE-03), one (1) Dehydrator Unit (DEHY-02), one (1) Stabilizer Heater (HT-08), two (2) Amine Hot Oil Heaters (HT-09 & HT-10), one (1) Molecular Sieve Regenerator Heater (HT-11), one (1) Cry HMO Heater (HT-12), one (1) Dehy Reboiler (REB-02), one (1) Vapor Combustor (ECD-03), one (1) Plant Flare (FL-03), one (1) Acid Gas Flare (FL-04), two (2) Thermal Oxidizers (TO-02a & TO-03), as well as fugitive (FUG-03) and startup, shutdown, and maintenance emissions (SSM).

The estimated maximum quantities of any regulated air contaminants will be as follows in pound per hour (pph) and tons per year (tpy). These reported emissions could change slightly during the course of the Department's review:

Pollutant:	Pounds per hour	Tons per year
PM_{10}	7	25
$PM_{2.5}$	5	21
Sulfur Dioxide (SO_2)	44	124
Nitrogen Oxides (NO_x)	1,560	194
Carbon Monoxide (CO)	2,830	248
Volatile Organic Compounds (VOC)	2,986	246
Hydrogen Sulfide (H_2S)	0.4	1
Total sum of all Hazardous Air Pollutants (HAPs)	135	24
Toxic Air Pollutant (TAP)	N/A	N/A
Green House Gas Emissions as Total CO_2e	N/A	512,575

The facility will operate 24 hours a day, 7 days a week, and 52 weeks per year.

The owner and/or operator of the Facility is:
Pronto Midstream, LLC;
5400 LBJ Freeway, Suite 1500
Dallas, TX 75240

If you have any comments about the construction or operation of this facility, and you want your comments to be made as part of the permit review process, you must submit your comments in writing to this address: Permit Programs Manager; New Mexico Environment Department; Air Quality Bureau; 525 Camino de los

Marquez, Suite 1; Santa Fe, New Mexico; 87505-1816. Other comments and questions may be submitted verbally. (505) 476-4300; 1 800 224-7009.

Please refer to the company name and facility name, or send a copy of this notice along with your comments, since the Department may have not yet received the permit application. Please include a legible return mailing address with your comments. Once the Department has performed a preliminary review of the application and its air quality impacts, the Department's notice will be published in the legal section of a newspaper circulated near the facility location.

Attención
Este es un aviso de la oficina de Calidad del Aire del Departamento del Medio Ambiente de Nuevo México, acerca de las emisiones producidas por un establecimiento en esta área. Si usted desea información en español, por favor comuníquese con esa oficina al teléfono 505-629-7748.

Sincerely,
Pronto Midstream, LLC
5400 LBJ Freeway, Suite 1500
Dallas, TX 75240

Notice of Non-Discrimination
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April 14, 2026

CERTIFIED MAIL XXXX XXXX XXXX XXXX
RETURN RECEIPT REQUESTED *(certified mail is required,* ***return receipt is optional****)*

Dear **XTO Holdings, LLC,**

Pronto Midstream, LLC announces its application submittal to the New Mexico Environment Department for an air quality permit for the **modification** of its **natural gas processing** facility. The expected date of application submittal to the Air Quality Bureau is **April 3, 2026.**

The exact location for the proposed facility known as the **Marlan Gas Plant**, is at latitude **32.533199** dec deg North and longitude **-103.828021** dec deg West. The approximate location of this facility is **23** miles **northeast** of **Loving** in **Eddy County**.

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Nitrogen Oxides (NO_x)	1,560	194
Carbon Monoxide (CO)	2,830	248
Volatile Organic Compounds (VOC)	2,986	246
Hydrogen Sulfide (H_2S)	0.4	1
Total sum of all Hazardous Air Pollutants (HAPs)	135	24
Toxic Air Pollutant (TAP)	N/A	N/A
Green House Gas Emissions as Total CO_2e	N/A	512,575

The facility will operate 24 hours a day, 7 days a week, and 52 weeks per year.

The owner and/or operator of the Facility is:
Pronto Midstream, LLC;
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Dallas, TX 75240

If you have any comments about the construction or operation of this facility, and you want your comments to be made as part of the permit review process, you must submit your comments in writing to this address: Permit Programs Manager; New Mexico Environment Department; Air Quality Bureau; 525 Camino de los

Marquez, Suite 1; Santa Fe, New Mexico; 87505-1816. Other comments and questions may be submitted verbally. (505) 476-4300; 1 800 224-7009.

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Dallas, TX 75240

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April 14, 2026

CERTIFIED MAIL XXXX XXXX XXXX XXXX
RETURN RECEIPT REQUESTED *(certified mail is required,* ***return receipt is optional****)*

Dear **Bureau of Land Management,**

Pronto Midstream, LLC announces its application submittal to the New Mexico Environment Department for an air quality permit for the **modification** of its **natural gas processing** facility. The expected date of application submittal to the Air Quality Bureau is **April 3, 2026.**

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Nitrogen Oxides (NO_x)	1,560	194
Carbon Monoxide (CO)	2,830	248
Volatile Organic Compounds (VOC)	2,986	246
Hydrogen Sulfide (H_2S)	0.4	1
Total sum of all Hazardous Air Pollutants (HAPs)	135	24
Toxic Air Pollutant (TAP)	N/A	N/A
Green House Gas Emissions as Total CO_2e	N/A	512,575

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Dallas, TX 75240

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Dallas, TX 75240

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April 14, 2026

CERTIFIED MAIL XXXX XXXX XXXX XXXX
RETURN RECEIPT REQUESTED *(certified mail is required,* ***return receipt is optional****)*

Dear **State of New Mexico,**

Pronto Midstream, LLC announces its application submittal to the New Mexico Environment Department for an air quality permit for the **modification** of its **natural gas processing** facility. The expected date of application submittal to the Air Quality Bureau is **April 3, 2026.**

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Carbon Monoxide (CO)	2,830	248
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Green House Gas Emissions as Total CO_2e	N/A	512,575

The facility will operate 24 hours a day, 7 days a week, and 52 weeks per year.

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Dallas, TX 75240

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9.5. Letters sent to Counties, Municipalities, and Indian Tribes

April 14, 2026

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Dear **Eddy County Manager,**

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CERTIFIED MAIL XXXX XXXX XXXX XXXX
RETURN RECEIPT REQUESTED *(certified mail is required,* ***return receipt is optional****)*

Dear **Lea County Manager,**

Pronto Midstream, LLC announces its application submittal to the New Mexico Environment Department for an air quality permit for the **modification** of its **natural gas processing** facility. The expected date of application submittal to the Air Quality Bureau is **April 3, 2026.**

The exact location for the proposed facility known as the **Marlan Gas Plant**, is at latitude **32.533199** dec deg North and longitude **-103.828021** dec deg West. The approximate location of this facility is **23** miles **northeast** of **Loving** in **Eddy County**.

The proposed **modification** consists of adding another process train (Train 3) to the facility and modifying the routing of process liquids and gas throughout the site. This will include the installation of the following units: one (1) Amine Unit (AMINE-03), one (1) Dehydrator Unit (DEHY-02), one (1) Stabilizer Heater (HT-08), two (2) Amine Hot Oil Heaters (HT-09 & HT-10), one (1) Molecular Sieve Regenerator Heater (HT-11), one (1) Cry HMO Heater (HT-12), one (1) Dehy Reboiler (REB-02), one (1) Vapor Combustor (ECD-03), one (1) Plant Flare (FL-03), one (1) Acid Gas Flare (FL-04), two (2) Thermal Oxidizers (TO-02a & TO-03), as well as fugitive (FUG-03) and startup, shutdown, and maintenance emissions (SSM).

The estimated maximum quantities of any regulated air contaminants will be as follows in pound per hour (pph) and tons per year (tpy). These reported emissions could change slightly during the course of the Department's review:

Pollutant:	Pounds per hour	Tons per year
PM_{10}	7	25
$PM_{2.5}$	5	21
Sulfur Dioxide (SO_2)	44	124
Nitrogen Oxides (NO_x)	1,560	194
Carbon Monoxide (CO)	2,830	248
Volatile Organic Compounds (VOC)	2,986	246
Hydrogen Sulfide (H_2S)	0.4	1
Total sum of all Hazardous Air Pollutants (HAPs)	135	24
Toxic Air Pollutant (TAP)	N/A	N/A
Green House Gas Emissions as Total CO_2e	N/A	512,575

The facility will operate 24 hours a day, 7 days a week, and 52 weeks per year.

The owner and/or operator of the Facility is:
Pronto Midstream, LLC;
5400 LBJ Freeway, Suite 1500
Dallas, TX 75240

If you have any comments about the construction or operation of this facility, and you want your comments to be made as part of the permit review process, you must submit your comments in writing to this address: Permit Programs Manager; New Mexico Environment Department; Air Quality Bureau; 525 Camino de los

Marquez, Suite 1; Santa Fe, New Mexico; 87505-1816. Other comments and questions may be submitted verbally. (505) 476-4300; 1 800 224-7009.

Please refer to the company name and facility name, or send a copy of this notice along with your comments, since the Department may have not yet received the permit application. Please include a legible return mailing address with your comments. Once the Department has performed a preliminary review of the application and its air quality impacts, the Department's notice will be published in the legal section of a newspaper circulated near the facility location.

Attención
Este es un aviso de la oficina de Calidad del Aire del Departamento del Medio Ambiente de Nuevo México, acerca de las emisiones producidas por un establecimiento en esta área. Si usted desea información en español, por favor comuníquese con esa oficina al teléfono 505-629-7748.

Sincerely,
Pronto Midstream, LLC
5400 LBJ Freeway, Suite 1500
Dallas, TX 75240

Notice of Non-Discrimination
NMED does not discriminate on the basis of race, color, national origin, disability, age or sex in the administration of its programs or activities, as required by applicable laws and regulations. NMED is responsible for coordination of compliance efforts and receipt of inquiries concerning non-discrimination requirements implemented by 40 C.F.R. Part 7, including Title VI of the Civil Rights Act of 1964, as amended; Section 504 of the Rehabilitation Act of 1973; the Age Discrimination Act of 1975, Title IX of the Education Amendments of 1972, and Section 13 of the Federal Water Pollution Control Act Amendments of 1972. If you have any questions about this notice or any of NMED's non-discrimination programs, policies or procedures, or if you believe that you have been discriminated against with respect to a NMED program or activity, you may contact: Non-Discrimination Coordinator, NMED, 1190 St. Francis Dr., Suite N4050, P.O. Box 5469, Santa Fe, NM 87502, (505) 827-2855, nd.coordinator@env.nm.gov. You may also visit our website at https://www.env.nm.gov/non-employee-discrimination-complaint-page/ to learn how and where to file a complaint of discrimination.

April 14, 2026

CERTIFIED MAIL XXXX XXXX XXXX XXXX
RETURN RECEIPT REQUESTED *(certified mail is required,* ***return receipt is optional****)*

Dear **Mayor of Carlsbad,**

Pronto Midstream, LLC announces its application submittal to the New Mexico Environment Department for an air quality permit for the **modification** of its **natural gas processing** facility. The expected date of application submittal to the Air Quality Bureau is **April 3, 2026.**

The exact location for the proposed facility known as the **Marlan Gas Plant**, is at latitude **32.533199** dec deg North and longitude **-103.828021** dec deg West. The approximate location of this facility is **23** miles **northeast** of **Loving** in **Eddy County**.

The proposed **modification** consists of adding another process train (Train 3) to the facility and modifying the routing of process liquids and gas throughout the site. This will include the installation of the following units: one (1) Amine Unit (AMINE-03), one (1) Dehydrator Unit (DEHY-02), one (1) Stabilizer Heater (HT-08), two (2) Amine Hot Oil Heaters (HT-09 & HT-10), one (1) Molecular Sieve Regenerator Heater (HT-11), one (1) Cry HMO Heater (HT-12), one (1) Dehy Reboiler (REB-02), one (1) Vapor Combustor (ECD-03), one (1) Plant Flare (FL-03), one (1) Acid Gas Flare (FL-04), two (2) Thermal Oxidizers (TO-02a & TO-03), as well as fugitive (FUG-03) and startup, shutdown, and maintenance emissions (SSM).

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Pollutant:	Pounds per hour	Tons per year
PM_{10}	7	25
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Sulfur Dioxide (SO_2)	44	124
Nitrogen Oxides (NO_x)	1,560	194
Carbon Monoxide (CO)	2,830	248
Volatile Organic Compounds (VOC)	2,986	246
Hydrogen Sulfide (H_2S)	0.4	1
Total sum of all Hazardous Air Pollutants (HAPs)	135	24
Toxic Air Pollutant (TAP)	N/A	N/A
Green House Gas Emissions as Total CO_2e	N/A	512,575

The facility will operate 24 hours a day, 7 days a week, and 52 weeks per year.

The owner and/or operator of the Facility is:
Pronto Midstream, LLC;
5400 LBJ Freeway, Suite 1500
Dallas, TX 75240

If you have any comments about the construction or operation of this facility, and you want your comments to be made as part of the permit review process, you must submit your comments in writing to this address: Permit Programs Manager; New Mexico Environment Department; Air Quality Bureau; 525 Camino de los

Marquez, Suite 1; Santa Fe, New Mexico; 87505-1816. Other comments and questions may be submitted verbally. (505) 476-4300; 1 800 224-7009.

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Dallas, TX 75240

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Marlan Gas Plant
Nearby Property Owners

Notified Landowners (within 0.5 miles of facility)				
Owner Name	**Owner Mailing Address**	**City**	**State**	**ZIP**
Titan Lansing Transloading, LLC	3802 M.L.K. Jr Blvd	Lubbock	TX	79404
Bureau of Land Management	301 Dinosaur Trail	Santa Fe	NM	87508
State of New Mexico	310 Old Santa Fe Trail	Santa Fe	NM	87504
Eddy County	101 W Greene St	Carlsbad	NM	88220
XTO Holdings, LLC	22777 Springwoods Village Parkway	Spring	TX	77389

Counties, Municipalities, & Indian Tribes (within 10 miles of facility)				
Owner Name	**Owner Mailing Address**	**City**	**State**	**ZIP**
Eddy County Manager	101 W Greene St	Carlsbad	NM	88220
Lea County Manager	100 North Main	Lovington	NM	88260
Mayor, City of Carlsbad	P.O. Box 56	Loving	NM	88256

General Posting of Notices – Certification

I, __Arsenio Jones_____, the undersigned, certify that on **April 9, 2026,** posted a true and correct copy of the attached Public Notice in the following publicly accessible and conspicuous places in **Carlsbad** of **Eddy** County, State of New Mexico on the following dates:

1. Facility entrance 4/9/2026
2. Carlsbad Munincipal Building and Mayors Office, Carlsbad New Mexico 4/9/2026
3. Carlsbad Public Library, Carlsbad New Mexico 4/9/2026
4. Eddy County Clerk's Office, Carlsbad New Mexico 4/9/2026

Signed this 9th day of April, 2026,

_____ 4/9/2026

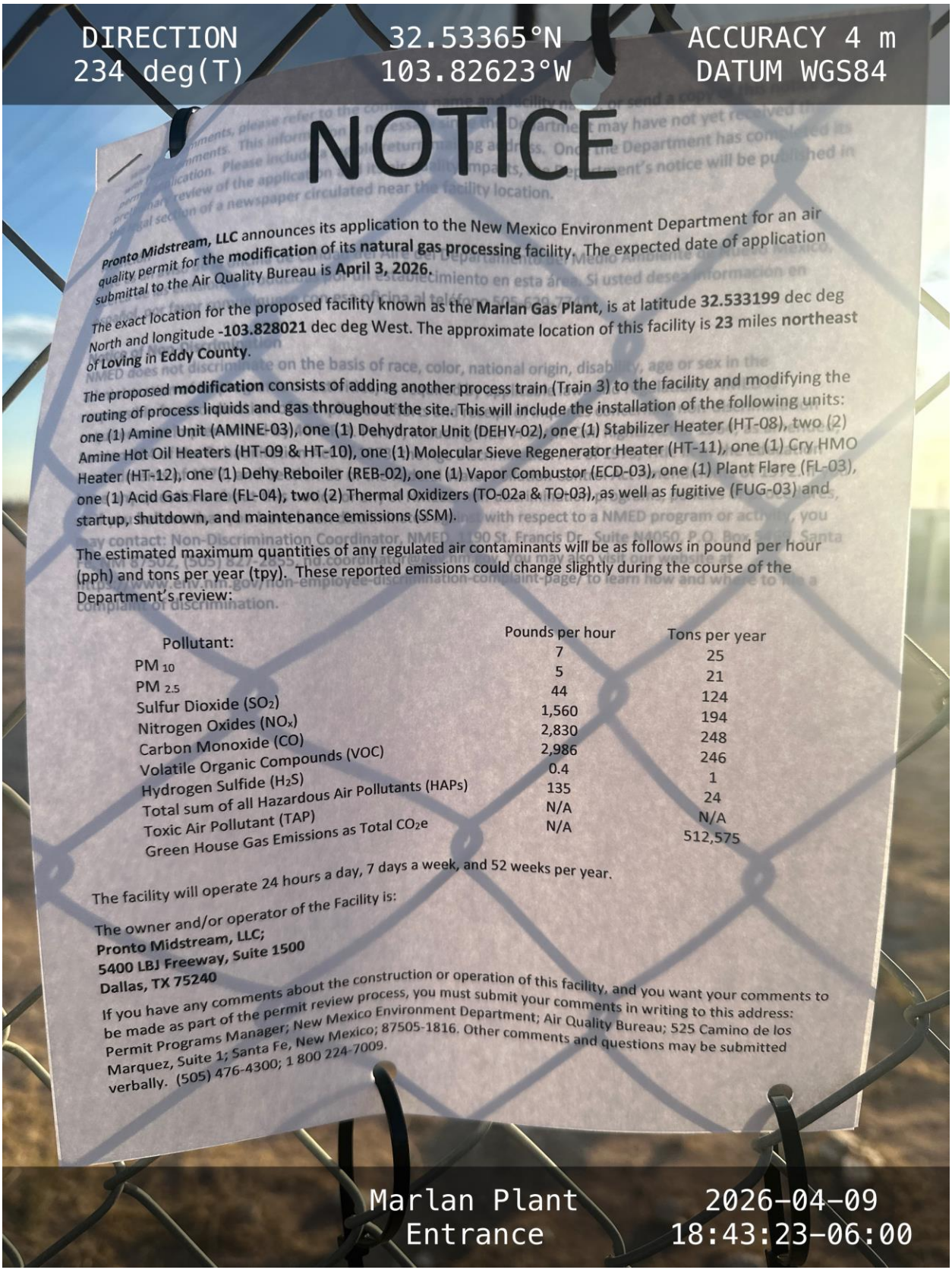
Signature Date

Arsenio T. Jones

Printed Name

EHS Field Supervisor

Title {APPLICANT OR RELATIONSHIP TO APPLICANT}


DIRECTION
234 deg(T)
32.53365°N
103.82623°W
ACCURACY 4 m
DATUM WGS84
NOTICE
Pronto Midstream, LLC announces its application to the New Mexico Environment Department for an air quality permit for the modification of its natural gas processing facility. The expected date of application submittal to the Air Quality Bureau is April 3, 2026.
The exact location for the proposed facility known as the Marlan Gas Plant, is at latitude 32.533199 dec deg North and longitude -103.828021 dec deg West. The approximate location of this facility is 23 miles northeast of Loving in Eddy County.
The proposed modification consists of adding another process train (Train 3) to the facility and modifying the routing of process liquids and gas throughout the site. This will include the installation of the following units: one (1) Amine Unit (AMINE-03), one (1) Dehydrator Unit (DEHY-02), one (1) Stabilizer Heater (HT-08), two (2) Amine Hot Oil Heaters (HT-09 & HT-10), one (1) Molecular Sieve Regenerator Heater (HT-11), one (1) Cry HMO Heater (HT-12), one (1) Dehy Reboiler (REB-02), one (1) Vapor Combustor (ECD-03), one (1) Plant Flare (FL-03), one (1) Acid Gas Flare (FL-04), two (2) Thermal Oxidizers (TO-02a & TO-03), as well as fugitive (FUG-03) and startup, shutdown, and maintenance emissions (SSM).
The estimated maximum quantities of any regulated air contaminants will be as follows in pound per hour (pph) and tons per year (tpy). These reported emissions could change slightly during the course of the Department's review:
Pollutant: | Pounds per hour | Tons per year
PM 10 | 7 | 25
PM 2.5 | 5 | 21
Sulfur Dioxide (SO_2) | 44 | 124
Nitrogen Oxides (NO_x) | 1,560 | 194
Carbon Monoxide (CO) | 2,830 | 248
Volatile Organic Compounds (VOC) | 2,986 | 246
Hydrogen Sulfide (H_2S) | 0.4 | 1
Total sum of all Hazardous Air Pollutants (HAPs) | 135 | 24
Toxic Air Pollutant (TAP) | N/A | N/A
Green House Gas Emissions as Total CO_2e | N/A | 512,575
The facility will operate 24 hours a day, 7 days a week, and 52 weeks per year.
The owner and/or operator of the Facility is:
Pronto Midstream, LLC;
5400 LBJ Freeway, Suite 1500
Dallas, TX 75240
If you have any comments about the construction or operation of this facility, and you want your comments to be made as part of the permit review process, you must submit your comments in writing to this address: Permit Programs Manager; New Mexico Environment Department; Air Quality Bureau; 525 Camino de los Marquez, Suite 1; Santa Fe, New Mexico; 87505-1816. Other comments and questions may be submitted verbally. (505) 476-4300; 1 800 224-7009.
Marlan Plant Entrance
2026-04-09 18:43:23-06:00

DIRECTION 357 deg(T)
32.41704°N 104.22680°W
ACCURACY 5 m
DATUM WGS84

NOTICE

Pronto Midstream, LLC announces its application to the New Mexico Environment Department for an air quality permit for the **modification** of its **natural gas processing** facility. The expected date of application submittal to the Air Quality Bureau is **April 3, 2026.**

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Dallas, TX 75240

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Eddy County Clerk's Office
2026-04-09 16:44:19-06:00

DIRECTION 184 deg(T)
32.41928°N 104.23006°W
ACCURACY 8 m DATUM WGS84

NOTICE

Pronto Midstream, LLC announces its application to the New Mexico Environment Department for an air quality permit for the **modification** of its **natural gas processing** facility. The expected date of application submittal to the Air Quality Bureau is **April 3, 2026.**

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Carlsbad Mayor Office
2026-04-09 16:19:47-06:00

DIRECTION 190 deg(T)
32.41996°N 104.23076°W
ACCURACY 27 m DATUM WGS84

NOTICE

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The exact location for the proposed facility known as the **Marlan Gas Plant**, is at latitude **32.533199** dec deg North and longitude **-103.828021** dec deg West. The approximate location of this facility is **23** miles **northeast** of **Loving** in **Eddy County**.

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Carlsbad Library
2026-04-09 16:12:36-06:00

Submittal of Public Service Announcement – Certification

I, ___Jaimy Karacaoglu__, the undersigned, certify that on **04/14/2026** submitted a public service announcement to **Radio 92.1 KATK-FM** that serves the City\Town\Village of **Loving**, **Eddy** County, New Mexico, in which the source is or is proposed to be located and that **Radio 92.1 KATK-FM DID NOT RESPOND.**

Signed this _14_ day of _April_, _2026_,



_____ _04/14/2026_____
Signature Date

_____Jaimy Karacaoglu_____
Printed Name

____Senior Consultant_____
Title {APPLICANT OR RELATIONSHIP TO APPLICANT}

Jaimy Karacaoglu

From: Jaimy Karacaoglu
Sent: Tuesday, April 14, 2026 1:40 PM
To: 'don@carlsbadradio.com'
Subject: Marlan Gas Plant Public Service Announcement

Dear Radio 92.1 KATK-FM,

Per New Mexico Administrative Code 20.2.72.203.B NMAC and according to the Guidance for Public Notice for Air Quality Permit Applications – **(5) Notifications: Submittal of Public Service Announcement (PSA):** A public service announcement required for permits and significant permit revisions must be submitted to at least one radio or television station, which services the municipality, or county which the facility is or will be located. **Therefore, based on the above, we respectfully ask you to air the information shown below as a Public Service Announcement.**

The public service announcement request must contain the following information about the facility or proposed facility (20.2.72.203.D NMAC).

a. The name: **Marlan Gas Plant**, location: **latitude 32.533199 dec deg North and longitude -103.828021 dec deg West** and type of business: **Natural Gas Processing**.
b. The name and principle owner or operator: **Pronto Midstream, LLC**
c. The type of process or change for which the permit is sought: **Initial NSR - addition of another process train (Train 3) to the facility and modifying the routing of process liquids and gas throughout the site. This will include the installation of the following units: one (1) Amine Unit (AMINE-03), one (1) Dehydrator Unit (DEHY-02), one (1) Stabilizer Heater (HT-08), two (2) Amine Hot Oil Heaters (HT-09 & HT-10), one (1) Molecular Sieve Regenerator Heater (HT-11), one (1) Cry HMO Heater (HT-12), one (1) Dehy Reboiler (REB-02), one (1) Vapor Combustor (ECD-03), one (1) Plant Flare (FL-03), one (1) Acid Gas Flare (FL-04), two (2) Thermal Oxidizers (TO-02a & TO-03), as well as fugitive (FUG-03) and startup, shutdown, and maintenance emissions (SSM).**
d. Locations where the notices have been posted in Carlsbad, NM 88220:
(1) Marlan Gas Plant Facility Entrance
(2) Carlsbad Public Library
(3) Carlsbad Municipal Building
(4) Eddy County Clerk's Office, Carlsbad NM
e. The Department's address or telephone number to which comments may be directed: **Permits Program manager; New Mexico Environment Department; Air Quality Bureau; 525 Camino de los Marquez; Suite 1, Santa Fe, New Mexico, 87505-1816; (505) 476-4300; 1(800) 224-7009.**

Regards,

Jaimy Karacaoglu
Senior Consultant

M 410.903.0750
1999 Broadway, Suite 820 | Denver, Colorado 80202
Email: jaimy.karacaoglu@trinityconsultants.com



Connect with us: LinkedIn / YouTube / trinityconsultants.com (UPDATED WEBSITE!)

View our capabilities in the Environmental Consulting, Built Environment, Life Sciences, and Water & Ecology markets.

Upcoming Events
Apr 22 – Air Quality Permitting in Colorado – Denver, CO

Apr 23 – Colorado Title V Permitting and Ozone NAA Workshop – Denver, CO (half day)
Apr 29 – Air Quality Permitting in Montana – Helena, MT
Apr 29 – Power Generation Permitting in Texas – Austin, TX
Apr 30 – Complimentary Webinar: Colorado Air Toxics Reporting: What's New for RY2025 and RY2026 – 11:30am-1pm MT **FREE**
May 5-7 – Webinar: Air Quality Permitting in Wyoming – 11:00-1:30pm MT each day
May 14 – Understanding Engines: Their Emissions and Your Compliance Requirements – Albuquerque, NM
Jul 15 & 16 – NSR/PSD Compliance Workshop – Beaver Creek, CO
Jul 17 – Title V Compliance Workshop – Beaver Creek, CO
Aug 10-12 – Introduction to Environmental Regulations - 3-Day (Multimedia) – Glacier, MT
Aug 13-14 – Introduction to Environmental Reporting and Recordkeeping Requirements – Glacier, MT


Book time to meet with me

Affidavit of Publication

No. 96130

State of New Mexico

County of Eddy:

Adrian Hedden

being duly sworn, sayes that he is the **Publisher**

of the Artesia Daily Press, a weekly newspaper of General circulation, published in English at Artesia,

said county and state, and that the hereto attached

Legal Ad

was published in a regular and entire issue of the said Artesia Daily Press, a weekly newspaper duly qualified for that purpose within the meaning of Chapter 167 of the 1937 Session Laws of the state of New Mexico for

1 Consecutive weeks/day on the same day as follows:

First Publication	April 9, 2026
Second Publication	
Third Publication	
Fourth Publication	
Fifth Publication	
Sixth Publication	
Seventh Publication	
Eighth Publication	

Subscribed ans sworn before me this

9th day of April 2026

LATISHA ROMINE
Notary Public, State of New Mexico
Commission No. 1076338
My Commission Expires
05-12-2027

Latisha Romine

Latisha Romine

Notary Public, Eddy County, New Mexico

Copy of Publication:

NOTICE OF AIR QUALITY PERMIT APPLICATION

Pronto Midstream, LLC announces its application submittal to the New Mexico Environment Department for an air quality permit for the **modification** of its **natural gas processing** facility. The expected date of application submittal to the Air Quality Bureau is **April 3, 2026.**

The exact location for the proposed facility known as the **Marlan Gas Plant,** is at latitude **32.533199** dec deg North and longitude **-103.828021** dec deg West. The approximate location of this facility is **23** miles **northeast** of **Loving** in **Eddy County.**

The proposed **modification** consists of adding another process train (Train 3) to the facility and modifying the routing of process liquids and gas throughout the site. This will include the installation of the following units: one (1) Amine Unit (AMINE-03), one (1) Dehydrator Unit (DEHY-02), one (1) Stabilizer Heater (HT-08), two (2) Amine Hot Oil Heaters (HT-09 & HT-10), one (1) Molecular Sieve Regenerator Heater (HT-11), one (1) Cry HMO Heater (HT-12), one (1) Dehy Reboiler (REB-02), one (1) Vapor Combustor (ECD-03), one (1) Plant Flare (FL-03), one (1) Acid Gas Flare (FL-04), two (2) Thermal Oxidizers (TO-02a & TO-03), as well as fugitive (FUG-03) and start-up, shutdown, and maintenance emissions (SSM).

The estimated maximum quantities of any regulated air contaminants will be as follows in pound per hour (pph) and tons per year (tpy). These reported emissions could change slightly during the course of the Department's review:

Pollutant:	Pounds per hour	Tons per year
PM_{10}	7	25
$PM_{2.5}$	5	21
Sulfur Dioxide (SO_2)	44	124
Nitrogen Oxides (NO_x)	1,560	194
Carbon Monoxide (CO)	2,830	248
Volatile Organic Compounds (VOC)	2,986	246
Hydrogen Sulfide (H_2S)	0.4	1
Total sum of all Hazardous Air Pollutants (HAPs)	135	24
Toxic Air Pollutant (TAP)	N/A	N/A
Green House Gas Emissions as Total CO_2e	N/A	512,575

The facility will operate 24 hours a day, 7 days a week, and 52 weeks per year.

The owner and/or operator of the Facility is:
Pronto Midstream, LLC;
5400 LBJ Freeway, Suite 1500
Dallas, TX 75240

If you have any comments about the construction or operation of this facility, and you want your comments to be made as part of the permit review process, you must submit your comments in writing to this address: Permit Programs Manager; New Mexico Environment Department; Air Quality Bureau; 525 Camino de los Marquez, Suite 1; Santa Fe, New Mexico; 87505-1816. Other comments and questions may be submitted verbally. (505) 476-4300; 1 800 224-7009.

Please refer to the company name and site name, or send a copy of this notice along with your comments, since the Department may have not yet received the permit application. Please include a legible return mailing address with

LATISHA ROMINE
Notary Public, State of New Mexico
Commission No. 1076338
My Commission Expires
05-12-2027

Latisha Romine

Latisha Romine

Notary Public, Eddy County, New Mexico

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General information about air quality and the permitting process, and links to the regulations can be found at the Air Quality Bureau's website: www.env.nm.gov/air-quality/permitting-section-home-page/. The regulation dealing with public participation in the permit review process is 20.2.72.206 NMAC.

Atención
Este es un aviso de la oficina de Calidad del Aire del Departamento del Medio Ambiente de Nuevo México, acerca de las emisiones producidas por un establecimiento en esta área. Si usted desea información en español, por favor comuníquese con esa oficina al teléfono 505-629-7748.

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NMED does not discriminate on the basis of race, color, national origin, disability, age or sex in the administration of its programs or activities, as required by applicable laws and regulations. NMED is responsible for coordination of compliance efforts and receipt of inquiries concerning non-discrimination requirements implemented by 40 C.F.R. Part 7, including Title VI of the Civil Rights Act of 1964, as amended; Section 504 of the Rehabilitation Act of 1973; the Age Discrimination Act of 1975, Title IX of the Education Amendments of 1972, and Section 13 of the Federal Water Pollution Control Act Amendments of 1972. If you have any questions about this notice or any of NMED's non-discrimination programs, policies or procedures, or if you believe that you have been discriminated against with respect to a NMED program or activity, you may contact: Non-Discrimination Coordinator, NMED, 1190 St. Francis Dr., Suite N4050, P.O. Box 5469, Santa Fe, NM 87502, (505) 827-2855, nd.coordinator@env.nm.gov. You may also visit our website at https://www.env.nm.gov/non-employee-discrimination-complaint-page/ to learn how and where to file a complaint of discrimination.
96130-Published in Artesia Daily Press April 9, 2026.

Affidavit of Publication

No.

State of New Mexico

County of Eddy:

Adrian Hedden

being duly sworn, sayes that he is the **Publisher**

of the Artesia Daily Press, a weekly newspaper of General circulation, published in English at Artesia,

said county and state, and that the hereto attached

Display Ad

was published in a regular and entire issue of the said Artesia Daily Press, a weekly newspaper duly qualified for that purpose within the meaning of Chapter 167 of the 1937 Session Laws of the state of New Mexico for

1 Consecutive weeks/day on the same day as follows:

First Publication April 9, 2026

Second Publication

Third Publication

Fourth Publication

Fifth Publication

Sixth Publication

Seventh Publication

Eighth Publication

Subscribed ans sworn before me this

9th day of April 2026

LATISHA ROMINE
Notary Public, State of New Mexico
Commission No. 1076338
My Commission Expires
05-12-2027

Latisha Romine

Latisha Romine

Notary Public, Eddy County, New Mexico

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Section 10

Written Description of the Routine Operations of the Facility

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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.

The Marlan Gas Plant is an existing natural gas processing plant located in Eddy County. The primary function of the plant is to remove CO_2, water, and natural gas liquids from sweet field gas so that the gas can meet pipeline specifications. The plant has been designated a primary Standard Industrial Classification (SIC) Code of 1321. There are three gas treatment trains at this facility.

TRAIN 1

Inlet Slug Catcher and Stabilizer

Train 1 Inlet gas goes to a slug catcher and separates the inlet stream into gas and condensate/hydrocarbon liquids. The gas is routed to amine treating, and the liquids are routed to the stabilizer.

The stabilizer system is a distillation process to lower the Reid Vapor Pressure (RVP) of field condensate/ pipeline hydrocarbon liquids that are swept into the plant slug catchers from the gas pipeline. This process uses heat from a hot oil system (HT-01) to drive off volatile components in the condensate and reduce the RVP to less than 9. The liquid in the tank is then stable and thus does not give off significant vapors. The stabilizer is equipped with a fuel gas blanket for further protection. Produced water is routed to the storage tanks (PWTANK-01 through PWTANK-04). Condensate from the stabilizer is routed to the tanks at Train 2 (OILTANK-03 through OILTANK-06).

Amine Treating

The amine units are designed to remove CO_2 and H_2S from the natural gas stream to meet pipeline specifications. In addition, carbon dioxide can freeze in the cryogenic unit, forming dry ice and forcing the shutdown of the facility. Amine treating is an exothermic chemical reaction process. This aqueous mixture is regenerated and reused. Lean amine solution is pumped to the top of the contactor and allowed to flow downward. Wet gas is fed into the bottom of the contactor and flows upward. As the lean amine solution flows down through the contactor, it comes into contact with the wet gas. The CO_2 and H_2S react with the amine to form an amine carbonate. The reacted amine, known as “sour” or “rich” amine is returned to a regeneration unit, and the processed (“sweet”) gas is sent to the cryogenic system. The regeneration unit is heated by the amine regenerator gas heater HT-03.

Acid gas from the amine unit’s (AMINE-01) regenerator is controlled by the thermal oxidizer unit, TO-1. Flash gas from AMINE-01’s flash tank is captured and routed to process. Emissions from HT-03 exhaust are routed to the atmosphere.

Compression (Engines)

The Train 1 compressor engines CE-01 through CE-03 run their associated compressors to compress gas. Compressed gas is routed to the Train 1 cryogenic units.

Combustion emissions from the engines are controlled by oxidation catalysts.

Cryogenic Unit

The cryogenic unit is designed to liquefy natural gas components from the sweet, dehydrated inlet gas by removing work (heat) from the gas by means of the turbo expander. The cryogenic unit recovers natural gas liquids (NGL) by cooling the gas stream to extremely cold temperatures (-150°F and lower) and condensing components such as ethane, propane, butanes and heavier. The gas is cooled by a series of heat exchangers and by rapidly lowering the pressure of the gas from around 1000 PSIG to approximately 300 PSIG. Once the gas has passed through the system of heat exchangers and expansion, it is

recompressed using the energy obtained from expanding the gas. The gas is sent to residue compressors and pipelined out of the facility. The cryogenic hot oil heater HT-02 operates as part of this process.

Storage and Loading Operations

The natural gas liquids are transferred to a third-party pipeline. Reject condensate tanks OILTANK-01 and OILTANK-02 are used to store condensate that does not meet the standard at the LACT. Reject condensate is either routed back to the process or trucked offsite. Produced water from Train 1, Train 2, and Train 3 are stored in produced water tanks PWTANK-01 through PWTANK-04. Produced water tanks and reject condensate tanks are controlled by the enclosed combustion device ECD-01, with a 98% DRE. During ECD-01 downtime (up to 25% of the year), emissions are vented to atmosphere.

Both condensate and produced water loadout operations, OILLOAD-01 & PWLOAD-01, are controlled by the enclosed combustion device ECD-01 with 70% capture efficiency and 98% DRE. Haul road, ROAD-01 is uncontrolled, but the facility maintains a maximum speed limit of 25 mph, providing a 44% emissions reduction.

Flares

Flare FLARE-01 is used as control equipment during TO-01 downtime and during startup, shutdown, maintenance and upset conditions. TO-01 downtime occurs when the thermal oxidizer is not operating at the conditions required to combust emissions. During TO-01 downtime, acid gas from AMINE-01 and assist gas are alternatively routed to FLARE-01.

The only steady state operations associated with FLARE-02 are from the pilot and purge gas streams. SSM emissions routed to the plant flares result from maintenance activities per manufacturer-recommended or other preventative maintenance schedules. These maintenance activities include, but are not limited to compressor catalyst changes, blowdowns for associated maintenance throughout the facility, instrument calibrations, and process safety device maintenance.

TRAIN 2

Inlet Slug Catcher and Stabilizer

The stabilizer system is a distillation process to lower the Reid Vapor Pressure (RVP) of field condensate/ pipeline hydrocarbon liquids that are swept into the plant slug catchers from the gas pipeline. This process uses heat from a hot oil system (HT-04) to drive off volatile components in the condensate and reduce the RVP to less than 9. The liquid in the tank is then stable and thus does not give off significant vapors. Stabilized condensate is routed to the storage tanks and produced water is routed to the Train 1 storage tanks, both of which are equipped with a blanket gas system.

Amine Treating

The amine units are designed to remove CO_2 and H_2S from the natural gas stream to meet pipeline specifications. In addition, carbon dioxide can freeze in the cryogenic unit, forming dry ice and forcing the shutdown of the facility. Amine treating is an exothermic chemical reaction process. This aqueous mixture is regenerated and reused. Lean amine solution is pumped to the top of the contactor and allowed to flow downward. Wet gas is fed into the bottom of the contactor and flows upward. As the lean amine solution flows down through the contactor, it comes into contact with the wet gas. The CO_2 and H_2S react with the amine to form an amine carbonate. The reacted amine, known as “sour” or “rich” amine is returned to a regeneration unit, and the processed (“sweet”) gas continues to the dehydration system (DEHY-01). The regeneration unit is heated by the trim reboiler (HT-05).

Acid gas from the amine unit (AMINE-02) regenerator is controlled by the thermal oxidizer units (TO-2 and TO-2a). Flash gas from AMINE-02’s flash tank is captured and routed to the process. The amine/cryo hot oil heater (HT-04) and the train 2 hot oil heater (HT-07) are associated with this process, with exhaust emissions routed to the atmosphere.

Glycol Dehydration

Triethylene glycol (TEG) dehydration removes water from the natural gas stream. This is accomplished by reducing the inlet water dew point (temperature at which vapor begins to condense into a liquid) to the outlet dew point temperature which will contain a specified amount of water. The wet gas is brought into contact with dry “lean” glycol in a countercurrent contactor tower. Water vapor is absorbed in the TEG solution and consequently, its dew point reduces. Wet gas passing through the contactor tower is dehydrated and then passed to the mole sieve beds. The wet (or “rich”) glycol then flows from the absorber to a regeneration system in which it is partially decompressed, and then heated to remove water vapor, resulting in “lean” glycol that is reintroduced to the contactor tower. The glycol regenerator system is heated by the TEG reboiler (REB-01). Overheads from the regeneration system are condensed in a BTEX condenser, with uncondensable overheads controlled by thermal oxidizer TO-02.

Condenser overhead and flash tank gas from glycol dehydrator unit, DEHY-1, are controlled by thermal oxidizer TO-02. Emissions from the glycol reboiler REB-01 exhaust to the atmosphere.

Molecular Sieve Dehydration
Molecular sieve dehydration is used upstream of the cryogenic units to achieve a gas stream dew point of -150°F. The process uses three molecular sieve vessels with one vessel in service absorbing moisture from the gas stream, one vessel in regeneration mode, and one vessel in standby. During the regeneration mode, hot, dry gas (regen gas) is passed up through the vessel to drive off the absorbed moisture from the molecular sieve. The gas comes from the discharge of the regen compressor, and it is passed through a direct fired heater to achieve a temperature of approximately 500°F. After the gas passes through the bed, it is cooled in an air-cooled exchanger. The water in the gas condenses and is separated from the gas stream in a separator. The regen gas is routed back to the mol sieve bed for further processing. The mole-sieve heater (HT-06) operates as part of this process.

Cryogenic Unit and Nitrogen Rejection Unit
The cryogenic unit is designed to liquefy natural gas components from the sweet, dehydrated inlet gas by removing work (heat) from the gas by means of the turbo expander. The cryogenic unit recovers natural gas liquids (NGL) by cooling the gas stream to extremely cold temperatures (-150°F and lower) and condensing components such as ethane, propane, butanes and heavier. The gas is cooled by a series of heat exchangers and by rapidly lowering the pressure of the gas from around 1000 PSIG to approximately 300 PSIG. Once the gas has passed through the system of heat exchangers and expansion, it is recompressed using the energy obtained from expanding the gas. The gas is sent to residue compressors and pipelined out of the facility. The trim reboiler HT-05 operates as part of this process.

The nitrogen rejection unit (NRU-01) separates and removes nitrogen from sweet, dehydrated gas stream during the cryogenic process. The separated nitrogen stream is vented to the atmosphere.

Storage and Loading Operations
The natural gas liquids are transferred to a third-party pipeline. Stabilized condensate from Train 1, Train 2, and Train 3 is stored in condensate tanks (OILTANK-03 through OILTANK-06). The condensate tanks are controlled by the enclosed combustion device (ECD-02), with a 98% DRE. During ECD-02 downtime (up to 9.4% of the year), emissions are vented to atmosphere. Condensate routed to the LACT that does not meet pipeline standards is sent to the reject condensate tanks at Train 1. Produced water from the stabilizer is routed to the Train 1 storage tanks.

Condensate loadout operations (OILLOAD-02) are controlled by the enclosed combustion device ECD-02 with 70% capture efficiency and 98% DRE. Haul road, ROAD-02 is uncontrolled, but the facility maintains a maximum speed limit of 25 mph, providing a 44% emissions reduction.

Flares
Flare FLARE-02b is used as control equipment during TO-02 and TO-02a downtime. TO-02 and TO-02a downtime occurs when the thermal oxidizer is not operating at the conditions required to combust emissions. During TO-02 and TO-02a downtime, acid gas from AMINE-01, assist gas, and DEHY-01 flash gas and BTEX condenser overheads are alternatively routed to FLARE-02b.

Flare FLARE-02a is used to control startup, shutdown, maintenance, and upset conditions. SSM emissions routed to the plant flares result from maintenance activities per manufacturer-recommended or other preventative maintenance schedules. These maintenance activities include, but are not limited to, blowdowns for associated maintenance throughout the facility, instrument calibrations, and process safety device maintenance.

The only steady state operations associated with FLARE-02b and FLARE-02a are from the pilot and purge gas streams.

TRAIN 3

Inlet Slug Catcher and Stabilizer
The stabilizer system is a distillation process to lower the Reid Vapor Pressure (RVP) of field condensate/ pipeline hydrocarbon liquids that are swept into the plant slug catchers from the gas pipeline. This process uses heat from a hot oil system (HT-08) to drive off volatile components in the condensate and reduce the RVP to less than 9. The liquid in the tank is then stable and thus does not give off significant vapors. The stabilizer is equipped with a fuel gas blanket for further protection. Stabilized condensate is routed to the Train 2 storage tanks and produced water is routed to the Train 1 storage tanks.

Amine Treating

The amine units are designed to remove CO_2 and H_2S from the natural gas stream to meet pipeline specifications. In addition, carbon dioxide can freeze in the cryogenic unit, forming dry ice and forcing the shutdown of the facility. Amine treating is an exothermic chemical reaction process. This aqueous mixture is regenerated and reused. Lean amine solution is pumped to the top of the contactor and allowed to flow downward. Wet gas is fed into the bottom of the contactor and flows upward. As the lean amine solution flows down through the contactor, it comes into contact with the wet gas. The CO_2 and H_2S react with the amine to form an amine carbonate. The reacted amine, known as "sour" or "rich" amine is returned to a regeneration unit, and the processed ("sweet") gas continues to the dehydration system (DEHY-02). The regeneration unit is heated by the hot oil heaters (HT-09 and HT-10).

Regenerator overheads from amine unit AMINE-03's is controlled by the thermal oxidizer unit (TO-03). Flash Gas from AMINE-03's flash tank is captured and routed to the process. Emissions from the amine hot oil heater HT-09 and HT-10 exhaust are routed to the atmosphere.

Glycol Dehydration

Triethylene glycol (TEG) dehydration removes water from the natural gas stream. This is accomplished by reducing the inlet water dew point (temperature at which vapor begins to condense into a liquid) to the outlet dew point temperature which will contain a specified amount of water. The wet gas is brought into contact with dry "lean" glycol in a countercurrent contactor tower. Water vapor is absorbed in the TEG solution and consequently, its dew point reduces. Wet gas passing through the contactor tower is dehydrated, and then passed to the mole sieve beds. The wet (or "rich") glycol then flows from the absorber to a regeneration system in which it is partially decompressed, and then heated to remove water vapor, resulting in "lean" glycol that is reintroduced to the contactor tower. The glycol regenerator system is heated by the TEG reboiler (REB-02). Overheads from the regeneration system are condensed in a BTEX condenser, with uncondensable overheads controlled by the BTEX combustor (ECD-03).

Condenser overhead from glycol dehydrator unit, DEHY-02, are controlled by ECD-03. Emissions from the glycol reboiler REB-02 exhaust to the atmosphere.

Molecular Sieve Dehydration

Molecular sieve dehydration is used upstream of the cryogenic units to achieve a gas stream dew point of -150°F. The process uses three molecular sieve vessels with one vessel in service absorbing moisture from the gas stream, one vessel in regeneration mode, and one vessel in standby. During the regeneration mode, hot, dry gas (regen gas) is passed up through the vessel to drive off the absorbed moisture from the molecular sieve. The gas comes from the discharge of the residue compressors, and it is passed through a direct fired heater to achieve a temperature of approximately 500°F. After the gas passes through the bed, it is cooled in an air-cooled exchanger. The water in the gas condenses and is separated from the gas stream in a separator. The regen gas is routed back to the mol sieve bed for further processing. The mole-sieve heater (HT-11) operates as part of this process.

Cryogenic Unit

The cryogenic unit is designed to liquefy natural gas components from the sweet, dehydrated inlet gas by removing work (heat) from the gas by means of the turbo expander. The cryogenic unit recovers natural gas liquids (NGL) by cooling the gas stream to extremely cold temperatures (-150°F and lower) and condensing components such as ethane, propane, butanes and heavier. The gas is cooled by a series of heat exchangers and by rapidly lowering the pressure of the gas from around 1000 PSIG to approximately 300 PSIG. Once the gas has passed through the system of heat exchangers and expansion, it is recompressed using the energy obtained from expanding the gas. The gas is sent to residue compressors and pipelined out of the facility. Cryogenic heater HT-12 operates as part of this process.

The nitrogen rejection unit (NRU-02) separates and removes nitrogen from sweet, dehydrated gas stream during the cryogenic process. The separated nitrogen stream is vented to the atmosphere.

Flares

Flare FLARE-04 is used as control equipment during TO-03 downtime and during startup, shutdown, maintenance and upset conditions. TO-03 downtime occurs when the thermal oxidizer is not operating at the conditions required to combust emissions to the degree needed. During TO-03 downtime, acid gas from AMINE-03 and assist gas are alternatively routed to FLARE-04.

The only steady state operations associated with FLARE-04 are from the pilot and purge gas streams. SSM emissions routed to the plant flares result from maintenance activities per manufacturer-recommended or other preventative maintenance schedules. These maintenance activities include, but are not limited to, blowdowns for associated maintenance throughout the facility, instrument calibrations, and process safety device maintenance.

Flare FLARE-03 controls flash gas from AMINE-03 when vapors from the flash tank cannot be routed back to process.

Section 11

Source Determination

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

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

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

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

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

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

☒ **Yes** ☐ **No**

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

☒ **Yes** ☐ **No**

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

☒ **Yes** ☐ **No**

C. Make a determination:

☒ The source, as described in this application, constitutes the entire source for 20.2.70, 20.2.72, 20.2.73, or 20.2.74 NMAC applicability purposes. If in "A" above you evaluated only the source that is the subject of this application, all "**YES**" boxes should be checked. If in "A" above you evaluated other sources as well, you must check **AT LEAST ONE** of the boxes "**NO**" to conclude that the source, as described in the application, is the entire source for 20.2.70, 20.2.72, 20.2.73, and 20.2.74 NMAC applicability purposes.

☐ The source, as described in this application, **does not** constitute the entire source for 20.2.70, 20.2.72, 20.2.73, or 20.2.74 NMAC applicability purposes (A permit may be issued for a portion of a source). The entire source consists of the following facilities or emissions sources (list and describe):

Section 12

Section 12.A

PSD Applicability Determination for All Sources

(Submitting under 20.2.72, 20.2.74 NMAC)

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

A. This facility is:

- ☑ **a minor PSD source before and after this modification (if so, delete C and D below).**
- ☐ **a major PSD source before this modification. This modification will make this a PSD minor source.**
- ☐ **an existing PSD Major Source that has never had a major modification requiring a BACT analysis.**
- ☐ **an existing PSD Major Source that has had a major modification requiring a BACT analysis**
- ☐ **a new PSD Major Source after this modification.**

B. **This facility [is not] one of the listed 20.2.74.501 Table I – PSD Source Categories. The "project" emissions** for this modification are **[not significant] [as they are below PSD Major Source Thresholds] The "project" emissions listed below [do] only result from changes described in this permit application, thus no emissions from other [revisions or modifications, past or future were included] to this facility. Also, specifically discuss whether this project results in "de-bottlenecking", or other associated emissions resulting in higher emissions. The project emissions (before netting) for this project are as follows [see Table 2 in 20.2.74.502 NMAC for a complete list of significance levels]:**

a. **NOx: 168.87 TPY**
b. **CO: 245.33 TPY**
c. **VOC: 206.19 TPY**
d. **SOx: 107.54 TPY**
e. **PM: 25.12 TPY**
f. **PM10: 20.05 TPY**
g. **PM2.5: 18.48 TPY**
h. **Fluorides: 0 TPY**
i. **Lead: 0 TPY**
j. **Sulfur compounds (listed in Table 2): 0.68 TPY**
k. **GHG: 368,552.85 TPY**

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 RELEVENT 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/

To save paper and to standardize the application format, delete this sentence, and begin your submittal for this attachment on this page.

Table for State Regulations:

State Regulation Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification: (You may delete instructions or statements that do not apply in the justification column to shorten the document.)
20.2.1 NMAC	General Provisions	Yes	Facility	General Provisions apply to Notice of Intent, Construction, and Title V permit applications.
20.2.3 NMAC	Ambient Air Quality Standards NMAAQS	Yes	Facility	20.2.3 NMAC is a State Implementation Plan (SIP) approved regulation that limits the maximum allowable concentration of, Sulfur Compounds, Carbon Monoxide and Nitrogen Dioxide. This facility is an affected facility.
20.2.7 NMAC	Excess Emissions	Yes	Facility	The entire facility is subject to emissions limits of both federal and state regulations. Thus, the facility is subject to this regulation.
20.2.23 NMAC	Fugitive Dust Control	No	N/A	This regulation does not apply as the facility has no need for fugitive dust control measures. This facility does not fall under applicability facility listed mentioned in this regulation.
20.2.33 NMAC	Gas Burning Equipment - Nitrogen Dioxide	No	N/A	This regulation applies to facilities that have gas-burning external combustion sources with more than 1,000,000 MMBtu/hr capacity. None of the external combustion equipment of this facility has a capacity greater than 1,000,000 MMBtu/hr. Therefore, this regulation does not apply to this facility.
20.2.34 NMAC	Oil Burning Equipment: NO_2	No	N/A	This regulation applies to facilities that have oil-burning external combustion sources with more than 1,000,000 MMBtu/hr capacity. This facility does not have any oil-burning external combustion equipment.
20.2.35 NMAC	Natural Gas Processing Plant – Sulfur	Yes	Facility	This regulation establishes sulfur emission standards for natural gas processing plants. The proposed facility meets the definition of a new natural gas processing plant under this regulation and is subject to the requirements of this regulation [20.2.35.7 (B) NMAC]. The facility will comply with all requirements under 20.2.35 NMAC as applicable.
20.2.37 and 20.2.36 NMAC	Petroleum Processing Facilities and Petroleum Refineries	N/A	N/A	**These regulations were repealed by the Environmental Improvement Board. If you had equipment subject to 20.2.37 NMAC before the repeal, your combustion emission sources are now subject to 20.2.61 NMAC.**
20.2.38 NMAC	Hydrocarbon Storage Facility	No	**N/A**	This regulation could apply to storage tanks at petroleum production facilities, processing facilities, tanks batteries, or hydrocarbon storage facilities. The condensate storage tanks meet the applicable threshold for the capacity of each tank. However, all tanks are equipped with control devices that minimize hydrocarbons and hydrogen sulfide loss to the atmosphere. Therefore, this regulation does not apply to this facility.
20.2.39 NMAC	Sulfur Recovery Plant - Sulfur	No	**N/A**	This regulation could apply to sulfur recovery plants that are not part of petroleum or natural gas processing facilities. This facility is a natural gas processing plant. Thus, the facility is not subject to this regulation.
20.2.50 NMAC	Oil and Gas Sector – Ozone Precursor Pollutants	Yes	CE-01 through CE-03, COMP-1 through COMP-36, FUG-01 through FUG-03, HT-01, HT-04 through HT-10, HT-12	This regulation establishes emission standards for volatile organic compounds (VOC) and oxides of nitrogen (NOx) for oil and gas production, processing, compression, and transmission sources. 20.2.50 NMAC subparts below: Include the construction status of applicable units as “New”, “Existing”, “Relocation of Existing”, or “Reconstructed” as defined by this Part in your justification: Check the box for the subparts that are applicable: ☒113 – Engines and Turbines: This facility has natural gas-fired spark ignition engines (CE-01 through CE-03) subject to the emission standards in 20.2.50.113.B Table 2. The facility will comply with this regulation. **(CE-01 through CE-03) [New]** ☒114 – Compressor Seals: This facility has reciprocating compressors (CE-01 through CE-03). Thus, this facility is subject to this subpart and will comply with this subpart as stated in the 20.2.50.114.B(4). (**COMP-1 through COMP-36) (New)**

State Regulation Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification: (You may delete instructions or statements that do not apply in the justification column to shorten the document.)
				☐115 – Control Devices and Closed Vent Systems: The control devices and closed vent systems at this facility are not used to comply with the requirements of this rule; therefore, the facility is not subject to the requirements of this rule. ☒116 – Equipment Leaks and Fugitive Emissions: This facility has equipment leaks and fugitive emissions (FUG-01 through FUG-03) subject to 20.2.50.116.B. Thus, the facility will comply with this regulation. **(FUG-01 through FUG-03) [New]** ☐ 117 – Natural Gas Well Liquid Unloading: This facility is a natural gas processing plant and liquid unloading operations do not result in the venting of natural gas. Thus, the facility is not subject to this rule. ☐ 118 – Glycol Dehydrators: Dehydrators (DEHY-01 & DEHY-02) have federally enforceable control that reduces VOC PTE to less than 2 tpy. Therefore, this regulation does not apply. **(DEHY-01 & DEHY-02) (New)** ☒ 119 – Heaters: Select heaters and reboilers (HT-01, HT-04, HT-07, HT-08, HT-09, HT-10, HT-12) have a capacity greater than 20 MMbtu/hr. Thus, this facility is subject to this subpart and the emissions standards in 20.2.50.119.B Table 1. **(HT-01, HT-04, HT-07, HT-08, HT-09, HT-10, HT-12) (New).** ☐ 120 – Hydrocarbon Liquid Transfers - This facility is connected to a pipeline that routinely transfers liquids. Therefore, this facility is not subject to this subpart. ☐121 – Pig Launching and Receiving: This facility does not have pig launching and receiving VOC emissions above the 1 tpy VOC threshold. Therefore, this facility is not subject to this subpart. ☐122 – Pneumatic Controllers and Pumps: All pneumatic controllers at this facility are compressed air-driven. Thus, this regulation does not apply to this facility. ☐ 123 – Storage Vessels: The storage vessels of this facility have federally enforceable control with VOC PTE less than 3 tpy. Thus, the facility is not subject to this subpart. ☐124 – Well Workovers: No applicable activities for this facility. Thus, the facility is not subject to this regulation. ☐ 125 – Small Business Facilities: This facility is not defined as a small business facility. Thus, this regulation does not apply to this facility. ☐126 – Produced Water Management Unit: No applicable activities for this facility. Thus, the facility is not subject to this regulation. ☐127 – Flowback Vessels and Preproduction Operations: No applicable activities for this facility. Thus, the facility is not subject to this regulation.
20.2.61.109 NMAC	Smoke & Visible Emissions	Yes	CE-01 through CE-03, HT-01 through	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

State Regulation Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification: (You may delete instructions or statements that do not apply in the justification column to shorten the document.)
			HT-12, REB-01 & REB-02, TO-01 through TO-03, ECD-01 through ECD-03, FLARE-01 through FLARE-04	such as 20.2.19 NMAC (see 20.2.61.109 NMAC). The facility will comply with this regulation.
20.2.70 NMAC	Operating Permits	Yes	Facility	This regulation establishes requirements for obtaining a major source operating permit. The facility is a Title V major source and has submitted an initial Title V permit application within one (1) year of commencing operations per 20.2.70.300.B(1) NMAC.
20.2.71 NMAC	Operating Permit Fees	Yes	Facility	This facility is subject to 20.2.70 NMAC and will therefore comply with the fee requirements of this regulation.
20.2.72 NMAC	Construction Permits	Yes	Facility	This regulation establishes the requirement for obtaining a construction permit. This facility is currently permitted under NSR #6567-M8 and complies with all the requirements of this regulation.
20.2.73 NMAC	NOI & Emissions Inventory Requirements	Yes	Facility	This regulation establishes emission inventory requirements. The facility meets the applicability requirements of 20.2.73.300 NMAC. The facility will meet all applicable reporting requirements under 20.2.73.300.B.1 NMAC.
20.2.74 NMAC	Permits – Prevention of Significant Deterioration (PSD)	No	N/A	This regulation establishes requirements for obtaining a prevention of significant deterioration permit. This facility is not a major source with respect to PSD and is therefore not subject to 20.2.74 NMAC.
20.2.75 NMAC	Construction Permit Fees	No	Facility	This regulation establishes a schedule of operating permit emission fees. This facility is subject to 20.2.72 NMAC and in turn subject to 20.2.75 NMAC. The facility is exempt from annual fees under this part (20.2.75.11.E NMAC) as it is subject to fees pursuant to 20.2.71 NMAC.
20.2.77 NMAC	New Source Performance	Yes	CE-01 through CE-03, FUG-01 through FUG-03, AMINE-01 through AMINE-03, COMP-01 through COMP-36, OILTANK-01 through OILTANK-06, PWTANK-01 through PWTANK-04	The following equipment of this facility are subject under the subparts of 40 CFR Part 60: • 40 CFR 60, Subpart JJJJ: Compressor engines at this facility (CE-01 through CE-03) • 40 CFR 60, Subpart OOOOa: Fugitives (FUG-01), Amine Unit (AMINE-01), reciprocating compressors (COMP-01 through COMP-03), and storage tanks (OILTANK-01 and OILTANK-02, PWTANK-01 through PWTANK-04) • 40 CFR 60, Subpart OOOOb: Fugitives (FUG-02 and FUG-03), reciprocating compressors (COMP-04 through COMP-36) and Amine Units (AMINE-02 and AMINE-03). • 40 CFR 60, Subpart KC: Storage tanks (OILTANK-03 through OILTANK-06)

State Regulation Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification: (You may delete instructions or statements that do not apply in the justification column to shorten the document.)
20.2.78 NMAC	Emission Standards for HAPS	No	N/A	This regulation establishes state authority to implement emission standards for hazardous air pollutants subject to 40 CFR Part 61. This facility does not emit hazardous air pollutants which are subject to the requirements of 40 CFR Part 61 and is therefore not subject to this regulation.
20.2.79 NMAC	Permits – Nonattainment Areas	No	Facility	This regulation establishes the requirements for obtaining a nonattainment area permit. The facility is not located in a non-attainment area and therefore is not subject to this regulation.
20.2.80 NMAC	Stack Heights	No	N/A	This regulation establishes requirements for the evaluation of stack heights and other dispersion techniques. This regulation does not apply as all stacks at the facility follow good engineering practice.
20.2.82 NMAC	MACT Standards for source categories of HAPS	Yes	CE-01 through CE-03, DEHY-01 through DEHY-03	The following equipment are subject to the requirements of 40 CFR 63: • 40 CFR 63, Subpart HH: Dehydrator units (DEHY-01 & DEHY-02) • 40 CFR 63, Subpart ZZZZ: CE-01 through CE-03

Table for Applicable Federal Regulations:

Federal Regulation Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
40 CFR 50	NAAQS	Yes	Facility	This regulation defines national ambient air quality standards. The facility meets all applicable national ambient air quality standards for NO_X, CO, SO_2, H_2S, PM_{10}, and $PM_{2.5}$ under this regulation.
NSPS 40 CFR 60, Subpart A	General Provisions	Yes	CE-01 through CE-03, FUG-01 through FUG-03, AMINE-01 through AMINE-03, OILTANK-01 through OILTANK-06, PWTANK-01 through PWTANK-04, COMP-01 through COMP-36,	The following equipment of this facility are subject under the subparts of 40 CFR Part 60: • 40 CFR 60, Subpart JJJJ: Compressor engine at this facility (CE-01 through CE-03) • 40 CFR 60, Subpart OOOOa: Fugitives (FUG-01), Amine Unit (AMINE-01), reciprocating compressors (COMP-01 through COMP-03), and storage tanks (OILTANK-01 and OILTANK-02, PWTANK-01 through PWTANK-04) • 40 CFR 60, Subpart OOOOb: Fugitives (FUG-02 and FUG-03), reciprocating compressors (COMP-04 through COMP-36) and Amine Units (AMINE-02 and AMINE-03). • 40 CFR 60, Subpart KC: Storage tanks (OILTANK-03 through OILTANK-06)

Federal Regulation Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
NSPS 40 CFR60.40a, Subpart Da	Subpart Da, Performance Standards for **Electric Utility Steam Generating Units**	No	N/A	This regulation establishes standards of performance for fossil-fuel-fired steam generators. This regulation does not apply as the facility does not have any fossil fuel-fired steam-generating units with a heat input rate of 250 MMBtu/hr [60.40(a)(1)].
NSPS 40 CFR60.40b Subpart Db	**Electric Utility Steam Generating Units**	No	N/A	This regulation establishes standards of performance for industrial-commercial-institutional steam generating units. This regulation does not apply because the facility does not operate any industrial-commercial-institutional steam generating units with a heat capacity greater than 100 MMBtu/hr.
40 CFR 60.40c, Subpart Dc	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units	No	N/A	This regulation does not apply as the facility does not have any steam generating units which meet the applicability criteria of a heat input greater than or equal to 10 MMBtu/hr.
NSPS 40 CFR 60, Subpart Ka	Standards of Performance for **Storage Vessels for Petroleum Liquids** for which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and **Prior** to July 23, 1984	No	N/A	This regulation establishes performance standards for storage vessels for petroleum liquids for which construction, reconstruction, or modification commenced after May 18, 1978, and prior to July 23, 1984. The facility was not constructed prior to July 23, 1984. Thus, this rule does not apply to this facility.
NSPS 40 CFR 60, Subpart Kb	Standards of Performance for **Volatile Organic Liquid Storage Vessels** (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced **After** July 23, 1984	No	N/A	This facility has storage vessels, emission units OILTANK-01 through OILTANK-02 and PWTANK-01 through PWTANK-04 are below the capacity of 75 cubic meters (m^3). Thus, this rule does not apply to this facility.
40 CFR 60, Subpart Kc	**Volatile Organic Liquid Storage Vessels** (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After October 4, 2023	Yes	OILTANK-03 through OILTANK-06	This facility has storage vessels, emission units OILTANK-03 through OILTANK-06 that store volatile organic liquids after the point of custody transfer. Therefore, the storage vessels are subject to NSPS Kc and will comply.

Federal Regulation Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
NSPS 40 CFR 60.330 Subpart GG	**Stationary Gas Turbines**	No	N/A	The facility does not have any applicable units. Therefore, the facility is not subject to this regulation.
NSPS 40 CFR 60, Subpart KKK	Leaks of VOC from **Onshore Gas Plants**	No	N/A	This regulation defines standards of performance for equipment leaks of VOC emissions from onshore natural gas processing plants for which construction, reconstruction, or modification commenced after January 20, 1984, and on or before August 23, 2011. The was constructed after August 23, 2011. Therefore, this regulation does not apply to this facility.
NSPS 40 CFR Part 60 Subpart LLL	Standards of Performance for **Onshore Natural Gas Processing**: SO_2 Emissions	No	N/A	This regulation establishes standards of performance for SO2 emissions from onshore natural gas processing for which construction, reconstruction, or modification of the amine sweetening unit commenced after January 20, 1984, and on or before August 23, 2011. The facility is not subject to this regulation as the amine sweetening unit was constructed after August 23, 2011.
NSPS 40 CFR Part 60 Subpart OOOO	Standards of Performance for Crude Oil and Natural Gas Production, Transmission, and Distribution for which construction, modification or reconstruction commenced after August 23, 2011 and before September 18, 2015	No	N/A	The rule applies to "affected" facilities that are constructed, modified, or reconstructed after Aug 23, 2011 (40 CFR 60.5365): gas wells, including fractured and hydraulically refractured wells, centrifugal compressors, reciprocating compressors, pneumatic controllers, certain equipment at natural gas processing plants, sweetening units at natural gas processing plants, and storage vessels. The facility is not subject to this regulation as the facility was constructed after September 18, 2015.
NSPS 40 CFR Part 60 Subpart OOOOa	Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced **After** September 18, 2015	Yes	FUG-01, CRYO-01 & CRYO-02, AMINE-01, COMP-01 through COMP-03, OILTANK-01 and OILTANK-02, PWTANK-01 through PWTANK-04	The train 1 amine recovery units (AMINE-01) is constructed within the applicable period but have a design capacity of less than 2 long tons/yr H2S. Therefore, AMINE-01 is not subject to this regulation per 40 CFR 60.5365a(g). The Train 1 compressors (COMP-01 through COMP-03) are reciprocating compressors and are potentially subject to this regulation per 40 CFR 60.5365a(c). This facility will comply with the applicable requirements per 40 CFR 60.5385a, 40 CFR 60.5410a, and 40 CFR 60.5415a. The fugitive components (FUG-0)) are subject to this regulation per 40 CFR 60.5365a(j). This facility will comply with the emission standards per 40 CFR 60.5400a. The storage tanks (OILTANK-01 and OILTANK-02, PWTANK-01 through PWTANK-04) are potentially affected facilities under NSPS OOOOa; however, the tanks have a federally enforceable PTE < 6 tpy VOC per tank. Therefore, the tanks are not subject to NSPS OOOOa per 40 CFR 60.5365(a)(e)(3)(v).
NSPS 40 CFR Part 60 Subpart OOOOb	Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or	Yes	FUG-02 and FUG-03, AMINE-02 and AMINE-03,	The fugitive components (FUG-02 and FUG-03) are subject to this regulation per 40 CFR 60.5365b(i). This facility will comply with the emission standards per 40 CFR 60.5400b. The amine recovery units (AMINE-02 and AMINE-03) are constructed within the applicable period and but have a design capacity of less than 2 long tons/yr H2S.

Federal Regulation Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
	Reconstruction Commenced **After** November 15, 2021		COMP-04 through COMP-36	Therefore, AMINE-02 and AMINE-03 are not subject to this regulation per 40 CFR 60.5365b(g). The electric compressors (COMP-04 through COMP-36) are reciprocating compressors and are potentially subject to this regulation per 40 CFR 60.5365b(c). This facility will comply with the applicable requirements per 40 CFR 60.5397b, 40 CFR 60.5410b(k), and 40 CFR 60.5415b(l).
NSPS 40 CFR 60 Subpart IIII	Standards of performance for Stationary Compression Ignition Internal Combustion Engines	No	N/A	This regulation establishes standards of performance for stationary compression ignition combustion engines. The engines at this facility are not compression ignition combustion engines. This regulation does not apply.
NSPS 40 CFR Part 60 Subpart JJJJ	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines	Yes	CE-01 through CE-03	This regulation establishes standards of performance for stationary spark ignition internal combustion engines. The internal combustion engines (CE-01 through CE-03) at this facility commenced operation after June 12, 2006 and were manufactured on or after July 1, 2007. Therefore, CE-01 through CE-03 are subject to this regulation and will comply with the emission standards presented in Table 1 to Subpart JJJJ of Part 60.
NSPS 40 CFR 60 Subpart TTTT	Standards of Performance for Greenhouse Gas Emissions for Electric Generating Units	No	N/A	This regulation establishes standards of performance for greenhouse gas emissions for electric generating units. This facility does not have electric generating units. This regulation does not apply.
NSPS 40 CFR 60 Subpart UUUU	Emissions Guidelines for Greenhouse Gas Emissions and Compliance Times for Electric Utility Generating Units	No	N/A	This regulation establishes emissions guidelines for greenhouse gas emissions and compliance times for electric generating units. This facility does not have electric generating units. This regulation does not apply.
NSPS 40 CFR 60, Subparts WWW, XXX, Cc, and Cf	Standards of performance for Municipal Solid Waste (MSW) Landfills	No	N/A	This facility is not a municipal solid waste landfill. This regulation does not apply.
NESHAP 40 CFR 61 Subpart A	General Provisions	No	N/A	NSPS 40 CFR 61 does not apply to the facility because the facility does not emit or have the triggering substances on site and/or the facility is not involved in the triggering activity. The facility is not subject to this regulation. None of the subparts of Part 61 apply to the facility.
NESHAP 40 CFR 61 Subpart E	National Emission Standards for **Mercury**	No	N/A	The provisions of this subpart are applicable to those stationary sources that 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
NESHAP 40 CFR 61 Subpart V	National Emission Standards for **Equipment Leaks** (Fugitive Emission Sources)	No	N/A	This regulation establishes national emission standards for equipment leaks (fugitive emission sources). The facility does not have equipment that operates in volatile hazardous air pollutant (VHAP) service [40 CFR Part 61.240]. The regulated activities subject to this regulation do not take place at this facility. The facility is not subject to this regulation.
MACT 40 CFR 63, Subpart A	General Provisions	Yes	DEHY-01 & DEHY-02, CE-01	This regulation defines general provisions for relevant standards that have been set under this part. This regulation applies because 40 CFR Part 63, Subparts HH and ZZZZ apply to dehydrator units DEHY-01 & DEHY-02 and spark-ignited internal combustion engines CE-01 through CE-03, respectively.

Federal Regulation Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
			through CE-03	
MACT 40 CFR 63.760 Subpart HH	**Oil and Natural Gas Production Facilities**	Yes	DEHY-01 & DEHY-02	This regulation establishes national emission standards for hazardous air pollutants from oil and natural gas production facilities. The facility is a minor source of HAPs with TEG dehydrators and meets the definition of a natural gas processing plant. The dehydrator will have a natural gas flow rate equal to or greater than 85 thousand standard cubic feet. The dehydrator vents have a federally enforceable control to reduce to less than 0.90 megagrams of benzene per year to the atmosphere and is therefore subject to the emissions control requirements of MACT HH per 63.764(e)(1)(ii). The facility will comply with this regulation.
MACT 40 CFR 63 Subpart HHH		No	N/A	This regulation establishes national emission standards for hazardous air pollutants from natural gas transmission and storage facilities. This regulation does not apply because this facility is not a natural gas transmission or storage facility as defined in this regulation [40 CFR Part 63.1270(a)].
MACT 40 CFR 63 Subpart DDDDD	National Emission Standards for Hazardous Air Pollutants for Major Industrial, Commercial, and Institutional Boilers & Process Heaters	No	N/A	This regulation establishes national emission standards for a major source of HAPs for industrial, commercial, and institutional boilers and process heaters. This facility is not a major source of HAPs. Therefore, this regulation does not apply to this facility.
MACT 40 CFR 63 Subpart UUUUU	National Emission Standards for Hazardous Air Pollutants Coal & Oil Fire Electric Utility Steam Generating Unit	No	N/A	This regulation establishes national emission standards for hazardous air pollutants from coal and oil-fired electric utility steam generating units. The facility does not contain the affected units. This regulation does not apply.
MACT 40 CFR 63 Subpart ZZZZ	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (**RICE MACT**)	Yes	CE-01 through CE-03	This regulation defines national emissions standards for HAPs from stationary reciprocating Internal Combustion Engines. The internal spark ignition compressor engines (CE-01 through CE-03) are subject to MACT ZZZZ and comply by following the requirements of NSPS JJJJ.

Federal Regulation Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
40 CFR 64	**Compliance Assurance Monitoring**	Yes	Facility	The facility will have units subject to compliance assurance monitoring requirements pursuant to 40 CFR 64. Applicability will be determined during the Title V application process and required CAM plans will be developed and submitted to the NMED.
40 CFR 68	**Chemical Accident Prevention**	Yes	Facility	The facility is an affected facility, as it uses flammable process chemicals such as propane at quantities greater than the applicability thresholds. The facility will develop and maintain an RMP for these chemicals.
Title IV – Acid Rain 40 CFR 72	**Acid Rain**	No	N/A	The facility does not operate an affected source under this subpart.
Title IV – Acid Rain 40 CFR 73	**Sulfur Dioxide** Allowance Emissions	No	N/A	This regulation establishes sulfur dioxide allowance emissions for certain types of facilities. This facility is not an acid rain source. This regulation does not apply.
Title IV-Acid Rain 40 CFR 75	**Continuous Emissions Monitoring**	No	N/A	The facility is not an acid rain source and is therefore not subject to this regulation.
Title IV – Acid Rain 40 CFR 76	**Acid Rain** Nitrogen Oxides **Emission Reduction Program**	No	N/A	This regulation establishes an acid rain nitrogen oxide emission reduction program. This regulation applies to each coal-fired utility unit that is subject to an acid rain emissions limitation or reduction requirement for SO2. This part does not apply because the facility does not operate any coal-fired units [40 CFR Part 76.1].
Title VI – 40 CFR 82	Protection of **Stratospheric Ozone**	No	N/A	This regulation establishes a regulation for the protection of the stratospheric ozone. The regulation is not applicable because the facility does not “service”, “maintain” or “repair” class I or class II appliances nor “dispose” of the appliances [40 CFR Part 82.1(a)].

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.

- The Marlan Gas Plant has multiple residue gas and NGL outlets planned to ensure offloading of the process streams. In the event that the 3rd party pipeline offloads have issues or outages and they cannot take the residue gas or NGL, the inlet gas will be appropriately curtailed to ensure that gas is not flared.
- The Amine flash gas is consumed as facility fuel gas instead of flaring to reduce the consumption of natural gas. Amine regenerator overheads are controlled by a thermal oxidizers with secondary control via flare to ensure continuous combustion of the waste stream.
- The Train 2 glycol dehydrator is controlled by a thermal oxidizer (or enclosed combustion device) with secondary control via flare to ensure continuous combustion of the waste stream. The regenerator overheads are first routed through a condenser before non-condensable emissions are combusted by the Thermal Oxidizer or the flare (during TO downtime).
- The proposed Train 3 glycol dehydrator is controlled by an enclosed combustion device for combustion of the waste gas stream. The regenerator overheads are first routed through a condenser before non-condensable emissions are combusted by the vapor combustor.
- Emissions from the storage tanks and product loadout are controlled by enclosed combustion devices to minimize VOC emissions.
- Compressor and miscellaneous vessel blowdown SSM activities are routed to the flare to reduce VOC emissions.
- The facility has an LDAR program in place to ensure leaks are found and the components are repaired in a timely manner.
- Designated personnel will watch for visible emissions during startup and shutdown operations and for a period following maintenance events.
- Coordination with upstream operations will be maintained to reduce gas entering the plant as much as possible during significant maintenance events.
- Maintenance events will be coordinated to occur simultaneously, if possible, to minimize the number of startups and shutdowns.

- All required documentation is kept onsite and will be made available to the department upon request.

Section 15

Alternative Operating Scenarios

(Submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

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

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

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

Construction Scenarios for Unit FLARE-02b

Two construction scenarios exist for the Train 2 Facility Flare, unit FLARE-02b. The flare controls TO-02 and TO-02a downtime, including amine regenerator and flash tank emissions (AMINE-02) and dehydrator flash tank and condenser overheads (DEHY-01). In both construction scenarios, the operation of the flare, the streams routed to it, and emissions profiles are identical. Pronto is currently identifying the best location for the flare and presents two possibilities within this application.

Location 1, Flare Option 1: In scenario 1, the flare will be located at 609810.6 m E, 3600230.21 m N. It will have a stack height of 154 feet and will be constructed as a piggy back to the existing FLARE-02a.

Location 2, Flare Option 2: In scenario 2, the flare will be located at 609810.6 m E, 3600214.97 m N. It will have a stack height of 75 feet and will be constructed as a standalone flare, separate from FLARE-02a.

Both of the above scenarios were included in the modeling submitted for this application as part of the SIL analysis. The scenario that resulted in the worst results between the two was used for further cumulative analyses.

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.	X
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.	
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.

Universal Application 4

Air Dispersion Modeling Report

Refer to and complete Section 16 of the Universal Application form (UA3) to assist your determination as to whether modeling is required. If, after filling out Section 16, you are still unsure if modeling is required, e-mail the completed Section 16 to the AQB Modeling Manager for assistance in making this determination. If modeling is required, a modeling protocol would be submitted and approved prior to an application submittal. The protocol should be emailed to the modeling manager. A protocol is recommended but optional for minor sources and is required for new PSD sources or PSD major modifications. Fill out and submit this portion of the Universal Application form (UA4), the "Air Dispersion Modeling Report", only if air dispersion modeling is required for this application submittal. This serves as your modeling report submittal and should contain all the information needed to describe the modeling. No other modeling report or modeling protocol should be submitted with this permit application.

16-A: Identification

1	Name of facility:	Marlan Gas Plant
2	Name of company:	Pronto Midstream, LLC
3	Current Permit number:	GCP-O&G 7426-M5
4	Name of applicant's modeler:	Jaimy Karacaoglu
5	Phone number of modeler:	410-903-0750
6	E-mail of modeler:	Jaimy.Karacaoglu@trinityconsultants.com

16-B: Brief

1	Was a modeling protocol submitted and approved? A modeling protocol was approved on 3/31/2026.	Yes☒	No☐
2	Why is the modeling being done?	Adding New Equipment	
3	Describe the permit changes relevant to the modeling.		
	Pronto will be adding an additional process train (Train 3) to the facility and modifying the routing of process liquids and gas throughout the site. The following new units will be installed at this facility with the addition of Train 3: • One (1) Amine Unit (AMINE-03) • One (1) Dehydrator Unit (DEHY-02) • One (1) Stabilizer Heater (HT-08) • Two (2) Amine Hot Oil Heaters (HT-09 & HT-10)		

	• One (1) Molecular Sieve Regenerator Heater (HT-11) • One (1) Cry HMO Heater (HT-12) • One (1) Dehy Reboiler (REB-02) • One (1) Vapor Combustor (ECD-03) • One (1) Facility Flare (FLARE-03) • One (1) Acid Gas Flare (FLARE-04) • Two (2) Thermal Oxidizers (TO-02a & TO-03) • One (1) Nitrogen Rejection Unit (NRU-02) • Additional Facility Fugitives (FUG-03) Pronto proposes to install an additional Thermal Oxidizer, unit TO-02a, to control surplus emissions from AMINE-02. Existing unit FLARE-02 will now consist of two units, FLARE-02a and FLARE-02b, with FLARE-02b controlling thermal oxidizer downtime from both TO-02 and TO-02a. FLARE-02a will control facility SSM from train 2. Two construction scenarios, detailed in Section 15 of the application, are requested for FLARE-02b. Additionally, Pronto will revise the storage tanks on trains 1 and 2. Train 1 will convert two (2) of the existing oil tanks to produced water tanks. As a result, there will now be four (4) 400 bbl produced water tanks that will handle all process produced water at Train 1. The remaining two (2) oil tanks will contain reject condensate from the LACT unit. The two (2) existing produced water tanks at Train 2 will be converted to condensate tanks. The four (4) condensate tanks at Train 2 will handle all process condensate at the facility. Process emissions from additional units at the site will be updated in this application due to changes in analyses and throughputs. Fugitives and SSM emissions will be updated as well. The units below are considered to be modified with this application: • CE-01 through CE-03 • AMINE-01 and AMINE-02 • DEHY-01 • HT-01 through HT-07 • OILTANK-01 through OILTANK-06 • PWTANK-01 through PWTANK-04 • ECD-01 and ECD-02 • FLARE-01 • TO-01 and TO-02 • OILLOAD-01 • ROAD-01 and ROAD-02 • FUG-1 and FUG-2 • MSS-01 and MSS-02 See section 3 of the application for more details.		
4	What geodetic datum was used in the modeling?	WGS84	
5	How long will the facility be at this location?	Longer than 1 year.	
6	Is the facility a major source with respect to Prevention of Significant Deterioration (PSD)?	Yes☐	No☒
7	Identify the Air Quality Control Region (AQCR) in which the facility is located	155	
8	List the PSD baseline dates for this region (minor or major, as appropriate).		

	NO2	3/16/1988
	SO2	7/28/1978
	PM10	2/20/1979
	PM2.5	11/13/2013
9	Provide the name and distance to Class I areas within 50 km of the facility (300 km for PSD permits).	
	There are no Class I areas within 50 km of the facility.	
10	Is the facility located in a non-attainment area? If so describe below	Yes☐ No☒
	N/A	
11	Describe any special modeling requirements, such as streamline permit requirements.	
	N/A	

16-C: Modeling History of Facility

Describe the modeling history of the facility, including the air permit numbers, the pollutants modeled, the National Ambient Air Quality Standards (NAAQS), New Mexico AAQS (NMAAQS), and PSD increments modeled. (Do not include modeling waivers).

1

Pollutant	Latest permit and modification number that modeled the pollutant facility-wide.	Date of Permit	Comments
CO	N/A – Facility not previously modeled.		
NO_2	N/A – Facility not previously modeled.		
SO_2	N/A – Facility not previously modeled.		
H_2S	N/A – Facility not previously modeled.		
PM2.5	N/A – Facility not previously modeled.		
PM10	N/A – Facility not previously modeled.		
Lead	N/A – Facility not previously modeled.		
Ozone (PSD only)	N/A – Facility not previously modeled.		
NM Toxic Air Pollutants (20.2.72.402 NMAC)	N/A – Facility not previously modeled.		

16-D: Modeling performed for this application

For each pollutant, indicate the modeling performed and submitted with this application.

1	Choose the most complicated modeling applicable for that pollutant, i.e., culpability analysis assumes ROI and cumulative analysis were also performed.					
	Pollutant	ROI	Cumulative analysis	Culpability analysis	Waiver approved	Pollutant not emitted or not changed.
	CO	☒	☐	☐	☐	☐
	NO_2	☐	☒	☐	☐	☐
	SO_2	☐	☒	☐	☐	☐
	H_2S	☒	☐	☐	☐	☐
	PM2.5	☐	☒	☐	☐	☐
	PM10	☐	☒	☐	☐	☐
	Lead	☐	☐	☐	☐	☒
	Ozone	☐	☐	☐	☐	☒
	State air toxic(s) (20.2.72.402 NMAC)	☐	☐	☐	☐	☒

16-E: New Mexico toxic air pollutants modeling

1	List any New Mexico toxic air pollutants (NMTAPs) from Tables A and B in 20.2.72.502 NMAC that are modeled for this application. N/A

2	List any NMTAPs that are emitted but not modeled because stack height correction factor. Add additional rows to the table below, if required.					
	Pollutant	Emission Rate (pounds/hour)	Emission Rate Screening Level (pounds/hour)	Stack Height (meters)	Correction Factor	Emission Rate/ Correction Factor

16-F: Modeling options

1	Was the latest version of AERMOD used with regulatory default options? If not explain below.	Yes☒	No☐

16-G: Surrounding source modeling

1	Date of surrounding source retrieval	12/3/2025

2	If the surrounding source inventory provided by the Air Quality Bureau was believed to be inaccurate, describe how the sources modeled differ from the inventory provided. If changes to the surrounding source inventory were made, use the table below to describe them. Add rows as needed. N/A	
	AQB Source ID	Description of Corrections

16-H: Building and structure downwash

1	How many buildings are present at the facility?	5 buildings are present within the facility boundary. Based on google imagery, 4 buildings outside of the facility boundary were also included.		
2	How many above ground storage tanks are present at the facility?	12		
3	Was building downwash modeled for all buildings and tanks? If not explain why below.		Yes☒	No☐
4	Building comments	Nearby buildings located outside of the facility fenceline were conservatively included in the modeling analysis. Google imagery was used to approximate their locations and their heights were estimated.		

Bottom of Form

16-I: Receptors and modeled property boundary

1	"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 a 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. A Restricted Area is required in order to exclude receptors from the facility property. If the facility does not have a Restricted Area, then receptors shall be placed within the property boundaries of the facility. Describe the fence or other physical barrier at the facility that defines the restricted area.			
	Continuous fencing.			
2	Receptors must be placed along publicly accessible roads in the restricted area. Are there public roads passing through the restricted area?		Yes☐	No☒
3	Are restricted area boundary coordinates included in the modeling files?		Yes☒	No☐

4 Describe the receptor grids and their spacing. The table below may be used, adding rows as needed.

Grid Type	Shape	Spacing	Start distance from restricted area or center of facility	End distance from restricted area or center of facility	Comments
Variable Density	Square	100 m	0	1,055 m	
Variable Density	Square	500 m	1,055 m	5,555 m	
Variable Density	Square	1,000 m	5,555 m	20,555 m	

	Variable Density	Square	1,250 m	20,555 m	50,000 m	

5	Describe receptor spacing along the fence line.
	Spacing along the fence line is 25 m or less.
6	Describe the PSD Class I area receptors.
	N/A – There are no Class I areas within 50 km.

16-J: Sensitive areas

1	Are there schools or hospitals or other sensitive areas near the facility? If so describe below. This information is optional (and purposely undefined) but may help determine issues related to public notice.	Yes☐	No☒
3	The modeling review process may need to be accelerated if there is a public hearing. Are there likely to be public comments opposing the permit application?	Yes☐	No☒

16-K: Modeling Scenarios

1	Identify, define, and describe all modeling scenarios. Examples of modeling scenarios include using different production rates, times of day, times of year, simultaneous or alternate operation of old and new equipment during transition periods, etc. Alternative operating scenarios should correspond to all parts of the Universal Application and should be fully described in Section 15 of the Universal Application (UA3).
	There are two alternative construction scenarios for the unit FLARE-02b. This scenario affects NO_2, SO_2, CO, and H_2S pollutant modeling. - Scenario 1 (S1): FLARE-02b will be located at 609810.6 m E, 3600230.21 m N. It will have a stack height of 154 feet and will be constructed as a piggy back to existing FLARE-02a. This scenario is represented by the model ID FL_02B_1. - Scenario 2 (S2): FLARE-O2b will be located at 609810.6 m E, 3600214.97 m N. It will have a stack height of 75 feet and be constructed as a standalone flare. This scenario is represented by the model ID FL_02B_2. FL_02B_1 and FL_02B_2 are identical in emission rate and parameters (aside from height and location). In the SO_2, CO, and H_2S Significant Impact Limit (SIL) models, scenarios were modeled by creating two source groups which contained all modeled sources except for either FL_02B_1 or FL_02B_2, depending on the scenario. For NO_2 modeling, a separate model was created for each scenario. Only the scenario which produced the highest concentrations in the SIL models was modeled in cumulative modeling for pollutants that required it.
2	Which scenario produces the highest concentrations? Why?
	Scenario 2 produces the highest concentrations for all affected pollutants (NO_2, SO_2, CO, and H_2S) due to a lower stack height and closer proximity to ambient air; both of which resulted in increased impacts.

3	Were emission factor sets used to limit emission rates or hours of operation? (This question pertains to the "SEASON", "MONTH", "HROFDY" and related factor sets, not to the factors used for calculating the maximum emission rate.)	Yes☐	No☒

4 If so, describe factors for each group of sources. List the sources in each group before the factor table for that group. (Modify or duplicate table as necessary. It's ok to put the table below section 16-K if it makes formatting easier.)
Sources: N/A

5

Hour of Day	Factor	Hour of Day	Factor
1		13	
2		14	
3		15	
4		16	
5		17	
6		18	
7		19	
8		20	
9		21	
10		22	
11		23	
12		24	

If hourly, variable emission rates were used that were not described above, describe them below.

N/A

6	Were different emission rates used for short-term and annual modeling? If so describe below.	Yes☒	No☐

Annual average emission rates were calculated for annual standards by taking the total annual emissions and dividing by 8,760 hours.

16-L: NO_2 Modeling

1 Which types of NO_2 modeling were used?
Check all that apply.

☒	ARM2
☐	100% NO_X to NO_2 conversion
☐	PVMRM
☐	OLM
☐	Other:

2 Describe the NO_2 modeling.

The ARM2 methodology was used with the default maximum and minimum ambient ratios.

3	Were default NO_2/NO_X ratios (0.5 minimum, 0.9 maximum or equilibrium) used? If not describe and justify the ratios used below.	Yes☒	No☐

4	Describe the design value used for each averaging period modeled.
	1-hour: High eighth high Annual: One Year Annual Average

16-M: Particulate Matter Modeling

1	Select the pollutants for which plume depletion modeling was used.			
	☐	PM2.5		
	☐	PM10		
	☒	None		
2	Describe the particle size distributions used. Include the source of information.			
	N/A			
3	Does the facility emit at least 40 tons per year of NO_X or at least 40 tons per year of SO_2? Sources that emit at least 40 tons per year of NO_X or at least 40 tons per year of SO_2 are considered to emit significant amounts of precursors and must account for secondary formation of PM2.5.		Yes☒	No☐
4	Was secondary PM modeled for PM2.5?		Yes☒	No☐
5	If MERPs were used to account for secondary PM2.5 fill out the information below. If another method was used describe below.			

NO_X (ton/yr)	SO_2 (ton/yr)	$[PM2.5]_{annual}$	$[PM2.5]_{24\text{-hour}}$
168.83	107.54	0.0027	0.093

16-N: Setback Distances

1	Portable sources or sources that need flexibility in their site configuration requires that setback distances be determined between the emission sources and the restricted area boundary (e.g. fence line) for both the initial location and future locations. Describe the setback distances for the initial location.
	N/A – There are no portable sources at this facility.
2	Describe the requested, modeled, setback distances for future locations, if this permit is for a portable stationary source. Include a haul road in the relocation modeling.
	N/A – There are no portable sources at this facility.

16-O: PSD Increment and Source IDs

1	The unit numbers in the Tables 2-A, 2-B, 2-C, 2-E, 2-F, and 2-I should match the ones in the modeling files. Do these match? If not, provide a cross-reference table between unit numbers if they do not match below.	Yes☐	No☒

	Unit Number in UA-2	Unit Number in Modeling Files		
	CE-01	CE_01		
	CE-02	CE_02		
	CE-03	CE_03		
	HT-01	HT_01		
	HT-02	HT_02		
	HT-03	HT_03		
	ECD-01	ECD_01		
	TO-01	TO_01		
	FLARE-01	FLARE_01		
	FUG-01, OILTANK-01 – 02, PWTANK-01 – 04	FUG_01		
	REB-01	REB_01		
	HT-04	HT_04		
	HT-05	HT_05		
	HT-06	HT_06		
	HT-07	HT_07		
	ECD-02	ECD_02		
	TO-02	TO_02		
	TO-02a	TO_02a		
	FLARE-02a	FL_02A		
	FLARE-02b	FL_02B_1, FL_02B_2 (for construction scenarios 1 and 2)		
	FUG-02, OILLOAD-02	FUG_02		
	HT-08	HT_08		
	HT-09	HT_09		
	HT-10	HT_10		
	HT-11	HT_11		
	HT-12	HT_12		
	REB-02	RE_02		
	ECD-03	ECD_03		
	FLARE-03	FL_03		
	FLARE-04	FL_04		
	TO-03	TO_03		
	FUG-03	FUG_03		
	ROAD-01	HR_01 through HR_32		
	ROAD-02	HR_01 through HR_32		
2	The emission rates in the Tables 2-E and 2-F should match the ones in the modeling files. Do these match? If not, explain why below.		Yes☐	No☒
	ROAD-1 and ROAD-2 emissions were distributed amongst the volume sources representing the haul routes. Annual models utilized annual average emission rates.			
3	Have the minor NSR exempt sources or Title V Insignificant Activities" (Table 2-B) sources been modeled?		Yes☐	No☒
4	Which units consume increment for which pollutants?			

	Unit ID	NO_2	SO_2	PM10	PM2.5
	CE_01	X	X	X	X
	CE_02	X	X	X	X
	CE_03	X	X	X	X
	HT_01	X	X	X	X
	HT_02	X	X	X	X
	HT_03	X	X	X	X
	ECD_01	X	X	X	X
	TO_01	X	X	X	X
	FLARE_01	X	X		
	FUG_01				
	REB_01	X	X	X	X
	HT_04	X	X	X	X
	HT_05	X	X	X	X
	HT_06	X	X	X	X
	HT_07	X	X	X	X
	ECD_02	X	X	X	X
	TO_02	X	X	X	X
	TO_02a	X	X	X	X
	FL_02A	X	X		
	FL_02B_1/FL_02B_2	X	X		
	FUG_02				
	HT_08	X	X	X	X
	HT_09	X	X	X	X
	HT_10	X	X	X	X
	HT_11	X	X	X	X
	HT_12	X	X	X	X
	RE_02	X	X	X	X
	ECD_03	X	X	X	X
	FL_03	X	X		
	FL_04	X	X		
	TO_03	X	X	X	X
	FUG_03				
	HR_01 through HR_32			X	X

5	PSD increment description for sources. (for unusual cases, i.e., baseline unit expanded emissions after baseline date).	All sources at the facility, both existing and planned, are expected to consume increment for the pollutants identified above.

6	Are all the actual installation dates included in Table 2A of the application form, as required? This is necessary to verify the accuracy of PSD increment modeling. If not please explain how increment consumption status is determined for the missing installation dates below.	Yes☒	No☐
	All units that have been installed have actual installation dates represented in Table 2A. For units that have not yet been installed, it was assumed they would consume increment.		

16-P: Flare Modeling

1	For each flare or flaring scenario, complete the following			
	Flare ID (and scenario)	Average Molecular Weight	Gross Heat Release (cal/s)	Effective Flare Diameter (m)

	FLARE_01	43.04	64,099,275	6.63
	FL_02A	23.48	522,086,947	20.02
	FL_02B_1 (Scenario 1)	36.17	1,331,610	0.97
	FL_02B_2 (Scenario 2)	36.17	1,331,610	0.97
	FL_03	25.06	839,118,503	25.25
	FL_04	21.23	13,687,110	3.26

16-Q: Volume and Related Sources

1	Were the dimensions of volume sources different from standard dimensions in the Air Quality Bureau (AQB) Modeling Guidelines? If not please explain how increment consumption status is determined for the missing installation dates below.	Yes☐	No☒
	Haul road volume source parameters were determined in accordance with the NMED AQB Modeling Guideline instructions for haul road sources.		
2	Describe the determination of sigma-Y and sigma-Z for fugitive sources.		
	NMED AQB Modeling Guidelines standard dimensions were used.		
3	Describe how the volume sources are related to unit numbers. Or say they are the same.		
	Haul roads ROAD-01 and ROAD-02 are represented by volume sources HR_01 through HR_32. Volume source FUG_01 represents the sum of fugitive emissions from components and tanks from units FUG-01, OILTANK-01 – 02 and PWTANK-01 – 04. FUG_02 represents the sum of fugitive emissions from components and loading from units FUG-02 and OILLOAD-02. FUG_03 represents the fugitive emissions from components from unit FUG-03.		
4	Describe any open pits.		
	N/A – There are no open pits.		
5	Describe emission units included in each open pit.		
	N/A – There are no open pits.		

16-R: Background Concentrations

1	Were NMED provided background concentrations used? Identify the background station used below. If non-NMED provided background concentrations were used describe the data that was used.	Yes☐	No☒
	CO: El Paso Chamizal (481410044)		
	NO_2: Outside Carlsbad (350151005)		

	PM2.5: Hobbs-Jefferson (350450019)			
	PM10: Hobbs-Jefferson (350250008)			
	SO_2: N/A			
	Other:			
	Comments:	NMED background concentrations were used for all pollutants and averaging periods except for $PM_{2.5}$ Annual background, which was a value of 6.5 µg/m^3 taken from EPA Air Design Quality Values $PM_{2.5}$ Annual Design Values 2024 for Hobbs-Jefferson (350250008).		
2	Were background concentrations refined to monthly or hourly values? If so describe below.		Yes☐	No☒

16-S: Meteorological Data

1	Was NMED provided meteorological data used? If so select the station used. Carlsbad	Yes☒	No☐
2	If NMED provided meteorological data was not used describe the data set(s) used below. Discuss how missing data were handled, how stability class was determined, and how the data were processed.		
	N/A – NMED provided data was used.		

16-T: Terrain

1	Was complex terrain used in the modeling? If not, describe why below.	Yes☒	No☐
2	What was the source of the terrain data?		
	1/3 arc-second terrain data was downloaded from USGS TNM Download (v2.0) on 11/14/2025		

16-U: Modeling Files

1	Describe the modeling files: Significant Impact Models - Input file name format "Marlan_Poll AvgPer_SIL_Sc Input.inp" - Output file name format "Marlan_Poll AvgPer_SIL_Sc Output.out" - "Poll" = NO_2 (nitrogen oxides), CO (carbon monoxide), PM10 (particulate matter, PM_{10}), PM2.5 (particulate matter, $PM_{2.5}$), SO2 (sulfur dioxide), H2S (hydrogen sulfide) - "AvgPer" = averaging period. 1hr = 1 hour, etc. Ann = annual - "SIL" – SIL Designator - "Sc" – Construction scenario designator. S1 = FL_02B_1 operating (flare piggyback to FL_02A), S2 = FL_02B_2 operating (separate flare from FL_02A) - Files may contain multiple SIL for short-term, annual and increment averaging periods and multiple scenarios.

NM/NAAQS and Increment Models

- Input file name format "Marlan_Poll AvgPer_Standard_Sc Input.inp"
- Output file name format "Marlan_Poll AvgPer_Standard_Sc Output.out"
- "Poll" = NO_2 (nitrogen oxides), CO (carbon monoxide), PM10 (particulate matter, PM_{10}), PM2.5 (particulate matter, $PM_{2.5}$), SO2 (sulfur dioxide), H2S (hydrogen sulfide)
- "AvgPer" = averaging period. 1hr = 1 hour, etc. Ann = annual
- "Standard" = air quality standard. PSD = PSD Increment Class II, NAAQS = NAAQS
- "Sc" – Construction scenario designator. S1 = FL_02B_1 operating (flare piggyback to FL_02A), S2 = FL_02B_2 operating (separate flare from FL_02A)

BPIP and AERMAP files have also been included with this submittal. Pronto is providing three sets of AERMAP files; all elevations for sources, buildings, and receptors in the modeled files are based on these sets of files.

File name (or folder and file name)	Pollutant(s)	Purpose (ROI/SIA, cumulative, culpability analysis, other)
Marlan_CO 1hr 8hr_SIL Input.inp	CO	ROI/SIA
Marlan_H2S 1hr_SIL Input.inp	H_2S	ROI/SIA
Marlan_NO2 Ann_SIL_S1 Input.inp	NO_2	ROI/SIA
Marlan_NO2 Ann_SIL_S2 Input.inp	NO_2	ROI/SIA
Marlan_NO2 24hr_SIL_S1 Input.inp	NO_2	ROI/SIA
Marlan_NO2 24hr_SIL_S2 Input.inp	NO_2	ROI/SIA
Marlan_NO2 1hr_SIL_S1 Input.inp	NO_2	ROI/SIA
Marlan_NO2 1hr_SIL_S2 Input.inp	NO_2	ROI/SIA
Marlan_PM2.5 Ann_SIL Input.inp	NO_2	ROI/SIA
Marlan_PM2.5 24hr_SIL Input.inp	NO_2	ROI/SIA
Marlan_PM10 Ann_SIL Input.inp	NO_2	ROI/SIA
Marlan_PM10 24hr_SIL Input.inp	NO_2	ROI/SIA
Marlan_SO2 Ann_SIL Input.inp	SO_2	ROI/SIA
Marlan_SO2 24hr_SIL Input.inp	SO_2	ROI/SIA
Marlan_SO2 3hr_SIL Input.inp	SO_2	ROI/SIA
Marlan_SO2 1hr_SIL Input.inp	SO_2	ROI/SIA
Marlan_NO2 Ann_NMAAQS PSD_S2 Input.inp	NO_2	Cumulative – Annual PSD Increment Class II and Annual NMAAQS
Marlan_NO2 1hr_NAAQS_S2 Input.inp	NO_2	Cumulative – 1-hour NAAQS
Marlan_PM2.5 Ann_NAAQS Input.inp	$PM_{2.5}$	Cumulative – Annual NAAQS
Marlan_PM2.5 Ann_PSD Input.inp	$PM_{2.5}$	Cumulative – Annual PSD Increment Class II
Marlan_PM2.5 24hr_NAAQS Input.inp	$PM_{2.5}$	Cumulative – 24-hour NAAQS
Marlan_PM2.5 24hr_PSD Input.inp	$PM_{2.5}$	Cumulative – 24-hour PSD Increment Class II
Marlan_PM10 Ann_PSD Input.inp	PM_{10}	Cumulative – Annual PSD Increment Class II
Marlan_PM10 24hr_NAAQS PSD Input.inp	PM_{10}	Cumulative – 24-hour PSD Increment Class II and 24-hour NAAQS
Marlan_SO2 Ann_PSD Input.inp	SO_2	Cumulative – Annual PSD Increment Class II
Marlan_SO2 24hr_PSD Input.inp	SO_2	Cumulative – 24-hour PSD Increment Class II
Marlan_SO2 1hr_NAAQS Input.inp	SO_2	Cumulative – 1-hour NAAQS

	Marlan_CO 1hr 8hr_SIL Output.out	CO	ROI/SIA
	Marlan_H2S 1hr_SIL Output.out	H_2S	ROI/SIA
	Marlan_NO2 Ann_SIL_S1 Output.out	NO_2	ROI/SIA
	Marlan_NO2 Ann_SIL_S2 Output.out	NO_2	ROI/SIA
	Marlan_NO2 24hr_SIL_S1 Output.out	NO_2	ROI/SIA
	Marlan_NO2 24hr_SIL_S2 Output.out	NO_2	ROI/SIA
	Marlan_NO2 1hr_SIL_S1 Output.out	NO_2	ROI/SIA
	Marlan_NO2 1hr_SIL_S2 Output.out	NO_2	ROI/SIA
	Marlan_PM2.5 Ann_SIL Output.out	NO_2	ROI/SIA
	Marlan_PM2.5 24hr_SIL Output.out	NO_2	ROI/SIA
	Marlan_PM10 Ann_SIL Output.out	NO_2	ROI/SIA
	Marlan_PM10 24hr_SIL Output.out	NO_2	ROI/SIA
	Marlan_SO2 Ann_SIL Output.out	SO_2	ROI/SIA
	Marlan_SO2 24hr_SIL Output.out	SO_2	ROI/SIA
	Marlan_SO2 3hr_SIL Output.out	SO_2	ROI/SIA
	Marlan_SO2 1hr_SIL Output.out	SO_2	ROI/SIA
	Marlan_NO2 Ann_NMAAQS PSD_S2 Output.out	NO_2	Cumulative – Annual PSD Increment Class II and Annual NMAAQS
	Marlan_NO2 1hr_NAAQS_S2 Output.out	NO_2	Cumulative – 1-hour NAAQS
	Marlan_PM2.5 Ann_NAAQS Output.out	$PM_{2.5}$	Cumulative – Annual NAAQS
	Marlan_PM2.5 Ann_PSD Output.out	$PM_{2.5}$	Cumulative – Annual PSD Increment Class II
	Marlan_PM2.5 24hr_NAAQS Output.out	$PM_{2.5}$	Cumulative – 24-hour NAAQS
	Marlan_PM2.5 24hr_PSD Output.out	$PM_{2.5}$	Cumulative – 24-hour PSD Increment Class II
	Marlan_PM10 Ann_PSD Output.out	PM_{10}	Cumulative – Annual PSD Increment Class II
	Marlan_PM10 24hr_NAAQS PSD Output.out	PM_{10}	Cumulative – 24-hour PSD Increment Class II and 24-hour NAAQS
	Marlan_SO2 Ann_PSD Output.out	SO_2	Cumulative – Annual PSD Increment Class II
	Marlan_SO2 24hr_PSD Output.out	SO_2	Cumulative – 24-hour PSD Increment Class II
	Marlan_SO2 1hr_NAAQS Output.out	SO_2	Cumulative – 1-hour NAAQS

16-V: PSD New or Major Modification Applications – N/A

1	A new PSD major source or a major modification to an existing PSD major source requires additional analysis. Was preconstruction monitoring done (see 20.2.74.306 NMAC and PSD Preapplication Guidance on the AQB website)?	Yes☐	No☐
2	If not, did AQB approve an exemption from preconstruction monitoring?	Yes☐	No☐
3	Describe how preconstruction monitoring has been addressed or attach the approved preconstruction monitoring or monitoring exemption.		

4	Describe the additional impacts analysis required at 20.2.74.304 NMAC.		
5	If required, have ozone and secondary PM2.5 ambient impacts analyses been completed? If so describe below.	Yes☐	No☐

16-W: Modeling Results

1	If ambient standards are exceeded because of surrounding sources, a culpability analysis is required for the source to show that the contribution from this source is less than the significance levels for the specific pollutant. Was culpability analysis performed? If so describe below.	Yes☐	No☒
2	Identify the maximum concentrations from the modeling analysis. Rows may be modified, added and removed from the table below as necessary. The results of the scenario resulting in the highest concentrations are reported below.		

Pollutant, Time Period and Standard	Modeled Facility Concentration (µg/m3)	Modeled Concentration with Surrounding Sources (µg/m3)	Secondary PM (µg/m3)	Background Concentration (µg/m3)	Cumulative Concentration (µg/m3)	Value of Standard (µg/m3)	Percent of Standard	Location		
								UTM E (m)	UTM N (m)	Elevation (ft)
CO 8-hr SIL	264.21	-	-	-	264.21	500	52.8%	609750.7	3599919	1085.87
CO 1-hr SIL	1,583.63	-	-	-	1,583.63	2,000	79.2%	609750.7	3599919	1085.87
H2S ½-hr SIL	1.57	-	-	-	1.57	5	31.3%	609992.7	3600522	1082.13
NO_2 Annual NMAAQS	-	-	-	9.3	12.78	94.02	13.6%	609748.4	3600418	1082.84
NO_2 Annual PSD Class II Increment	-	-	-	9.3	12.78	25	48.7%	609748.4	3600418	1082.84
NO_2 24-hr SIL	38.55	-	-	-	38.55	5	771.0%	609750.7	3599919	1085.87
NO_2 1-hr NAAQS	-	-	-	54.5	97.51	188.03	51.9%	610287.2	3600368.5	1087.79
$PM_{2.5}$ Annual NAAQS	-	1.35	0.0027	6.5	7.85	9	87.2%	610287.2	3600368.5	1087.79
$PM_{2.5}$ Annual PSD Class II Increment	-	1.04	0.0027	-	1.04	4	26.1%	610279.5	3600344.7	1087.96
$PM_{2.5}$ 24-hr NAAQS	-	2.96	0.093	16.5	19.55	35	55.9%	610287.2	3600368.5	1087.79
$PM_{2.5}$ 24-hr PSD Class II Increment	-	3.34	0.093	-	3.44	9	38.2%	610186.6	3600059.5	1086.89
PM_{10} Annual PSD Class II Increment	-	4.82	-	-	4.82	17	28.4%	610159.8	3600534	1084.69
PM_{10} 24-hr NAAQS	-	14.67	-	37.3	51.97	150	34.6%	610271.7	3600321	1088.07

Pollutant, Time Period and Standard	Modeled Facility Concentration (µg/m3)	Modeled Concentration with Surrounding Sources (µg/m3)	Secondary PM (µg/m3)	Background Concentration (µg/m3)	Cumulative Concentration (µg/m3)	Value of Standard (µg/m3)	Percent of Standard	Location		
								UTM E (m)	UTM N (m)	Elevation (ft)
PM_{10} 24-hr PSD Class II Increment	--	16.97	-	-	16.97	30	28.4%	610279.5	3600344.7	1087.96
SO_2 annual PSD Class II Increment	--	1.98	-	-	1.98	20	9.9%	609748.4	3600418	1082.84
SO_2 24-hr PSD Class II Increment	--	6.76	-	-	6.76	91	7.4%	609751.9	3600563.1	1082.77
SO_2 3-hr SIL	23.90	-	-	-	23.90	25	95.6%	610067.3	3600566	1082.72
SO_2 1-hr NAAQS	--	42.14	-	-	42.14	196.4	21.5%	609959.1	3600521.5	1081.62

16-X: Summary/conclusions

1	A statement that modeling requirements have been satisfied and that the permit can be issued.
	Pronto has demonstrated that the proposed changes to Permit No.7426M5 would neither cause nor contribute to an exceedance of any applicable standards for CO, H_2S, NO_2, $PM_{2.5}$, PM_{10}, and SO_2.

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.

HT - 03	Tested in accordance with EPA test methods for NOx and CO as required by NMOPR and GCP-O&G 7426M5	10/7/2025
HT - 04	Tested in accordance with EPA test methods for NOx and CO as required by NMOPR and GCP-O&G 7426M5	10/7/2025
HT - 06	Tested in accordance with EPA test methods for NOx and CO as required by NMOPR and GCP-O&G 7426M5	10/7/2025
CE-01	Tested in accordance with EPA test methods for NOx and CO as required by JJJJ and GCP-O&G 7426M5	8/24/2025
CE-02	Tested in accordance with EPA test methods for NOx and CO as required by JJJJ and GCP-O&G 7426M5	8/24/2025
CE-03	Tested in accordance with EPA test methods for NOx and CO as required by JJJJ and GCP-O&G 7426M5	8/24/2025

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.

There is no other relevant information to provide for this facility.

Section 22: Certification

Company Name: Pronto Midstream, LLC

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

Signed this 9th day of April, 2026 upon my oath or affirmation, before a notary of the State of Texas.

*Signature — 4-9-26 Date

Casey Snow Printed Name — SVP HES Title

Scribed and sworn before me on this 9th day of April, 2026.

My authorization as a notary of the State of Texas expires on the 27th day of September 2029.

Susan Pepin Notary's Signature — 04.09.2026 Date

Susan Pepin Notary's Printed Name

SUSAN K PEPIN
Notary Public, State of Texas
Comm. Expires 09-27-2029
Notary ID 133355037

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