Trinity Consultants
9400 Holly Ave NE, Bldg 3, Ste 300, Albuquerque, NM 87122 / P 505.266.6611 / **trinityconsultants.com**

July 6, 2021

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

Application for Title V Significant Modification– Durango Midstream, LLC – Maljamar Gas Plant

Permit Programs Manager:

Durango Midstream, LLC is submitting this application for a Title V Significant Modification for its existing Maljamar Gas Plant. This submittal will reflect the significant revision to NSR 0319-M12 which was issued by NMED on July 9, 2020. This submittal is pursuant to 20.2.70.404.C.(1)(a) NMAC.

The format and content of this application are consistent with the Bureau's current policy regarding Title V applications; it is a complete application package using the most current application forms. Enclosed is one hard copy and one working copy of the application, including an original certification page, one disk containing the electronic files, and an application check. Please feel free to contact me at (505) 266-6611 or by email at aerenstein@trinityconsultants.com if you have any questions regarding this application. Alternatively, you may contact Mary Taylor with Durango Midstream, LLC at (346) 224-2459 or by email at MTaylor@durangomidstream.com.

Sincerely,

Adam Erenstein
Manager of Consulting Services

Cc: Mary Taylor (Durango Midstream, LLC)
Trinity Project File 213201.0100

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		AIRS No.:

Universal Air Quality Permit Application

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

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

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

Acknowledgements:

☑ I acknowledge that a pre-application meeting is available to me upon request. ☐ Title V Operating, Title IV Acid Rain, and NPR applications have no fees.

☐ $500 NSR application Filing Fee enclosed OR ☐ The full permit fee associated with 10 fee points (required w/ streamline applications).

☐ Check No.: in the amount of

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

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

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

Citation: Please provide the **low level citation** under which this application is being submitted: **20.2.70.404.C.(1)(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 (see 1st 3 to 5 #s of permit IDEA ID No.): 565	Updating Permit/NOI #:P123-R3
1	Facility Name: Maljamar 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): 1001 Conoco Road, Maljamar, NM 88264		
2	Plant Operator Company Name: Frontier Field Services, LLC	Phone/Fax: (346) 224-2459	
a	Plant Operator Address: 10077 Grogans Mill Road, Suite 300, The Woodlands, Texas 77380		

b	Plant Operator's New Mexico Corporate ID or Tax ID: 2343077	
3	Plant Owner(s) name(s): Durango Midstream, LLC	Phone/Fax: (346) 224-2459
a	Plant Owner(s) Mailing Address(s): 10077 Grogans Mill Road, Suite 300, The Woodlands, Texas 77380	
4	Bill To (Company): Durango Midstream, LLC	Phone/Fax: (346) 224-2459
a	Mailing Address: 10077 Grogans Mill Road, Suite 300, The Woodlands, Texas 77380	E-mail: MTaylor@durangomidstream.com
5	☑ Preparer: Adam Erenstein ☑ Consultant: Trinity Consultants	Phone/Fax: (505) 266-6611
a	Mailing Address: 9400 Holly Ave., Building 3, Suite 300, Albuquerque, NM 87122	E-mail: aerenstein@trinityconsultants.com
6	Plant Operator Contact: John Prentiss	Phone/Fax: 575-677-5108
a	Address: 1001 Conoco Road, Maljamar, NM 88264	E-mail: JPrentiss@durangomidstream.com
7	Air Permit Contact: Mary Taylor	Title: Environmental Manager
a	E-mail: MTaylor@durangomidstream.com	Phone/Fax: (346) 224-2459
b	Mailing Address: 10077 Grogans Mill Road, Suite 300, The Woodlands, Texas 77380	
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-123-R3
7	Has this facility been issued a No Permit Required (NPR)? ☐ Yes ☑ No	If yes, the NPR No. is: N/A
8	Has this facility been issued a Notice of Intent (NOI)? ☐ Yes ☑ No	If yes, the NOI No. is: N/A
9	Does this facility have a construction permit (20.2.72/20.2.74 NMAC)? ☑ Yes ☐ No	If yes, the permit No. is: 0319-M12
10	Is this facility registered under a General permit (GCP-1, GCP-2, etc.)? ☐ Yes ☑ No	If yes, the register No. is: N/A

Section 1-C: Facility Input Capacity & Production Rate

1	What is the facility's maximum input capacity, specify units (reference here and list capacities in Section 20, if more room is required)			
a	Current	Hourly: 6.9 mmscf gas; 42 bbl condensate; 1,042 bbl NGL	Daily: 165 mmscf gas; 1,000 bbl condensate; 25,000 bbl NGL	Annually: 60,225 mmscf gas; 365,000 bbl condensate; 9,125,000 bbl NGL
b	Proposed	Hourly: 6.9 mmscf gas; 42 bbl condensate; 1,042 bbl NGL	Daily: 165 mmscf gas; 1,000 bbl condensate; 25,000 bbl NGL	Annually: 60,225 mmscf gas; 365,000 bbl condensate; 9,125,000 bbl NGL
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: 6.9 mmscf gas; 42 bbl condensate; 1,042 bbl NGL	Daily: 165 mmscf gas; 1,000 bbl condensate; 25,000 bbl NGL	Annually: 60,225 mmscf gas; 365,000 bbl condensate; 9,125,000 bbl NGL

b	Proposed	Hourly: 6.9 mmscf gas; 42 bbl condensate; 1,042 bbl NGL	Daily: 165 mmscf gas; 1,000 bbl condensate; 25,000 bbl NGL	Annually: 60,225 mmscf gas; 365,000 bbl condensate; 9,125,000 bbl NGL

Section 1-D: Facility Location Information

1	Section: 21	Range: 32E	Township: 17S	County: Lea	Elevation (ft): 4,020
2	UTM Zone: ☐ 12 or ☑ 13			Datum: ☐ NAD 27 ☐ NAD 83 ☑ WGS 84	
a	UTM E (in meters, to nearest 10 meters): 615,020 m E			UTM N (in meters, to nearest 10 meters): 3,631,380 m N	
b	**AND** Latitude (deg., min., sec.): 32°48'52" N			Longitude (deg., min., sec.): 103°46'17"W	
3	Name and zip code of nearest New Mexico town: Maljamar, NM 88264				
4	Detailed Driving Instructions from nearest NM town (attach a road map if necessary):				
5	The facility is 2.8 miles southwest of Maljamar.				
6	Status of land at facility (check one): ☑ Private ☐ Indian/Pueblo ☐ Federal BLM ☐ Federal Forest Service ☐ Other				
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: Lea County, Eddy County, Maljamar, and Loco Hills				
8	**20.2.72** NMAC applications **only**: Will the property on which the facility is proposed to be constructed or operated be closer than 50 km (31 miles) to other states, Bernalillo County, or a Class I area (see www.env.nm.gov/aqb/modeling/class1areas.html)? ☐ 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): 89.6 km				
11	Distance (meters) from the perimeter of the Area of Operations (AO is defined as the plant site inclusive of all disturbed lands, including mining overburden removal areas) to nearest residence, school or occupied structure: 4,000 m				
12	Method(s) used to delineate the Restricted Area: Fence, security personnel, and locking gates. "**Restricted Area**" is an area to which public entry is effectively precluded. Effective barriers include continuous fencing, continuous walls, or other continuous barriers approved by the Department, such as rugged physical terrain with steep grade that would require special equipment to traverse. If a large property is completely enclosed by fencing, a restricted area within the property may be identified with signage only. Public roads cannot be part of a Restricted Area.				
13	Does the owner/operator intend to operate this source as a portable stationary source as defined in 20.2.72.7.X NMAC? ☐ Yes ☑ No A portable stationary source is not a mobile source, such as an automobile, but a source that can be installed permanently at one location or that can be re-installed at various locations, such as a hot mix asphalt plant that is moved to different job sites.				
14	Will this facility operate in conjunction with other air regulated parties on the same property? ☒ No ☐ Yes If yes, what is the name and permit number (if known) of the other facility?				

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

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

Section 1-F: Other Facility Information

1	Are there any current Notice of Violations (NOV), compliance orders, or any other compliance or enforcement issues related to this facility? ☐ Yes ☑ No If yes, specify: N/A		
a	If yes, NOV date or description of issue: N/A		NOV Tracking No: N/A
b	Is this application in response to any issue listed in 1-F, 1 or 1a above? ☐ Yes ☑ No If Yes, provide the 1c & 1d info below:		
c	Document Title: N/A	Date: N/A	Requirement # (or page # and paragraph #): N/A
d	Provide the required text to be inserted in this permit: N/A		
2	Is air quality dispersion modeling or modeling waiver being submitted with this application? ☐ Yes ☑ No		
3	Does this facility require an "Air Toxics" permit under 20.2.72.400 NMAC & 20.2.72.502, Tables A and/or B? ☐ Yes ☑ No		
4	Will this facility be a source of federal Hazardous Air Pollutants (HAP)? ☑ Yes ☐ No		
a	If Yes, what type of source? ☐ **Major** (☐ ≥10 tpy of any single HAP **OR** ☐ ≥25 tpy of any combination of HAPS) **OR** ☑ **Minor** (☑ <10 tpy of any single HAP **AND** ☑<25 tpy of any combination of HAPS)		
5	Is any unit exempt under 20.2.72.202.B.3 NMAC? ☐ Yes ☑ No		
a	If yes, include the name of company providing commercial electric power to the facility: _____ 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): Darin B. Kennard	Phone:346-351-2790
a	R.O. Title: Vice President & GM	R.O. e-mail: DKennard@durangomidstream.com
b	R. O. Address: 10077 Grogans Mill Road, Suite 300, The Woodlands, Texas 77380	
2	Alternate Responsible Official (20.2.70.300.D.2 NMAC): N/A	Phone: N/A
a	A. R.O. Title: N/A	A. R.O. e-mail: N/A
b	A. R. O. Address: N/A	
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.): N/A	
a	Address of Parent Company: N/A	
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: Mary Taylor – (346) 224-2459 Darin Kennard – (346) 351-2790	

7	Affected Programs to include Other States, local air pollution control programs (i.e. Bernalillo) and Indian tribes: Will the property on which the facility is proposed to be constructed or operated be closer than 80 km (50 miles) from other states, local pollution control programs, and Indian tribes and pueblos (20.2.70.402.A.2 and 20.2.70.7.B)? If yes, state which ones and provide the distances in kilometers: Texas State Line – 66 km

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_____

Email_____

Phone number _____

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

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

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

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

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

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

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

2) The documents should also be submitted in Microsoft Office compatible file format (Word, Excel, etc.) allowing us to access the text and formulas in the documents (copy & paste). Any documents that cannot be submitted in a Microsoft Office compatible

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

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

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

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Table 2-A: Regulated Emission Sources

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

Unit Number[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.
12	Hot Oil Heater	Born Inc.	N/A	2354	11 MMBtu/hr	11 MMBtu/hr	1981 1981	N/A 12	31000404	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
13	Mole Sieve Regeneration Heater	Radco	N/A	87197	3.05 MMBtu/hr	3.05 MMBtu/hr	1994 1994	N/A 13	31000404	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
14	Mole Sieve Regeneration Heater	Radco	N/A	87196	3.05 MMBtu/hr	3.05 MMBtu/hr	1994 1994	N/A 14	31000404	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
17	Acid Gas Flare	Aeron	N/A	N/A	Pilot/Purge 400 scfh; Acid gas 80 Mscfh	Pilot/Purge 400 scfh; Acid gas 80 Mscfh	1980 1980	AGI W 17	31000216	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
18	Low Pressure Flare	NFF-CG	Unknown	N/A	700.2 Mscfh	700.2 Mscfh	1980 1980	N/A 18	31000215	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
19	High Pressure Flare	NFF-CG	Unknown	N/A	1.2 MMscfh	1.2 MMscfh	1980 1980	N/A 19	31000215	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
20	Natural Gas Reciprocating Engine	White Superior	6G825	17970	495 hp	495 hp	8/1/1972 2001	C-601 C-601	20200253	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	4SRB	N/A
21	Natural Gas Reciprocating Engine	White Superior	6G825	15727	495 hp	495 hp	~ 1964 2001	C-602 C-602	20200253	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	4SRB	N/A
23	Cyrogenic Skid #1	Dickson & Tryer	N/A	N/A	25 MMscf/day	25 MMscf/day	1987 1987	N/A 23	31088801	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
24	Cryogenic Skid #2	Armellini Engineering	N/A	N/A	25 MMscf/day	25 MMscf/day	1991 1991	N/A 24	31088801	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
25	Electric Driven Inlet Gas Compression	Ariel	JGU-6	F19966	4,500 hp	4,500 hp	2004 2005	N/A N/A	31000309	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
26	Electric Driven Inlet Gas Compression	Ariel	JGU-6	F19967	4,500 hp	4,500 hp	2004 2004	N/A N/A	31000309	☑ 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.
29	Skimmer Flash Tank	N/A	N/A	N/A	1000 bbl	1000 bbl	1981 1981	N/A 29	40400311	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
30	Natural Gas Reciprocating Engine (C-11.20 A)	Caterpillar	G3612 LE	BKE00614	3,550 hp	3,550 hp	7/9/2012 2014	R-210 R-210	20200254	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	4SLB	N/A
31	Natural Gas Reciprocating Engine (C-11.20 B)	Caterpillar	G3612 LE	BKE00618	3,550 hp	3,550 hp	7/23/2012 2014	R-211 R-211	20200254	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	4SLB	N/A
32	Natural Gas Reciprocating Engine (C-11.21 A)	Caterpillar	G3516B	JEF01437	1,380 hp	1,380 hp	12/7/2011 2014	R-212 R-212	20200254	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	4SLB	N/A
33	Natural Gas Reciprocating Engine (C-11.21 B)	Caterpillar	G3516B	JEF01821	1,380 hp	1,380 hp	6/19/2012 2014	In-112 In-112	20200254	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	4SLB	N/A
34	Natural Gas Reciprocating Engine (C-11.21 C)	Caterpillar	G3516B	JEF01818	1,380 hp	1,380 hp	6/18/2012 2014	In-111 In-111	20200254	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	4SLB	N/A
35	Natural Gas Reciprocating Engine (C-11.21 D)	Caterpillar	G3516B	JEF01797	1,380 hp	1,380 hp	6/11/2012 2014	In-110 In-110	20200254	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	4SLB	N/A
37	Amine Heater (HT 25.11)	Volcanic	NA	1400SB.1111 .1542	21.2 MMBtu/hr	21.2 MMBtu/hr	11/28/2011 2014	N/A 37	31000404	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
39	Cryogenic Skid #3	Various	N/A	N/A	65 MMscf/day	65 MMscf/day	2012 2013	N/A 39	31088801	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
40	Cyrogenic Skid #4	Various	N/A	N/A	35 MMscf/day	35 MMscf/day	2012 2014	N/A 40	31088801	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
38	Regen Gas Heater	Heatec	N/A	HI11-293	5.5 MMBtu/hr	5.5 MMBtu/hr	May-12 TBD	N/A 38	31000404	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
41	Regen Gas Heater	Devco	H-770	3899-001	9.35 MMBtu/hr	9.35 MMBtu/hr	12/7/2011 2014	N/A 41	31000404	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
44	Propane Refrigeration Engine	Caterpillar	G3512B	TBD	1,035 HP	1,035 HP	TBD TBD	R-213 R-213	20200253	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	4SLB	N/A
AU	Amine Unit (Trains 1 and 2)	N/A	N/A	N/A	65 MMscf/day	65 MMscf/day	~1964 ~ 1964	AGI,17 AGI,17	40400311	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
AU T3	Amine Unit (Train 3)	Exterran	N/A	BK-STK2-54	65 MMscf/day	65 MMscf/day	2013 2014	AGI,17 AGI,17	40400311	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
AU T4	Amine Unit (Train 4)	AmeriFab	N/A	DB292 (contactor)	35 MMscf/day	35 MMscf/day	2014 2014	AGI,17 AGI,17	40400311	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
Load	Hose disconnect, pressurized load out								40400250	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
FUG	Process Fugitive Emissions	N/A	N/A	N/A	N/A	N/A	N/A N/A	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 http://www.env.nm.gov/aqb/forms/InsignificantListTitleV.pdf . TV sources may elect to enter both TV Insignificant Activities and Part 72 Exemptions on this form.

Unit Number	Source Description	Manufacturer	Model No. / 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 Onc
910	Amine Tank	N/A	N/A	250 bbl	20.2.72.202.B.2	1981	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	250 bbl	IA List Item #5	1981	
2012	Lube Oil Tank	N/A	N/A	619 bbl	20.2.72.202.B.2	1981	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	619 bbl	IA List Item #5	1981	
2067	Amine Tank	N/A	N/A	24 bbl	20.2.72.202.B.2	1981	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	24 bbl	IA List Item #5	1981	
2069	Diesel Tank	N/A	N/A	8 bbl	20.2.72.202.B.2	1981	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	8 bbl	IA List Item #5	1981	
3802	Diesel Tank	N/A	N/A	24 bbl	20.2.72.202.B.2	1981	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	24 bbl	IA List Item #5	1981	
Amine	Amine Tank	N/A	N/A	214 bbl	20.2.72.202.B.2	1981	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	214 bbl	IA List Item #5	1981	
Engine Oil No. 2	Lube Oil Tank	N/A	N/A	238 bbl	20.2.72.202.B.2	1981	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	238 bbl	IA List Item #5	14.67	
Clark Engine Oil	Lube Oil Tank	N/A	N/A	286 bbl	20.2.72.202.B.2	14.67	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	286 bbl	IA List Item #5	1981	
Comp. Oil	Lube Oil Tank	N/A	N/A	155 bbl	20.2.72.202.B.2	1981	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	155 bbl	IA List Item #5	1981	
Mineral Spirits	Mineral Spirits Tank	N/A	N/A	18 bbl	20.2.72.202.B.5	1981	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	18 bbl	IA List Item #5	1981	
Antifreeze	Antifreeze Tank	N/A	N/A	29 bbl	20.2.72.202.B.2	1981	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	29 bbl	IA List Item #5	1981	
Antifreeze	Antifreeze Tank	N/A	N/A	14 bbl	20.2.72.202.B.2	1981	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	14 bbl	IA List Item #5	1981	
Methanol	Methanol Tank	N/A	N/A	24 bbl	20.2.72.202.B.5	1981	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	24 bbl	IA List Item #1.a	1981	
Methanol	Methanol Tank	N/A	N/A	24 bbl	20.2.72.202.B.5	1981	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	24 bbl	IA List Item #1.a	1981	

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 Onc
Kerosene	Kerosene Tank	N/A	N/A	14 bbl	20.2.72.202.B.2	1981	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	14 bbl	IA List Item #5	1981	
Fire Pump	Fire Pump	TBD	TBD	TBD	20.2.72.202.A.4	TBD	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			TBD	TBD	IA List Item #6	TBD	
Load	Truck Loadout	N/A	N/A	N/A	20.2.72.202.B.5	Unknown	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	N/A	IA List Item #1.a	Unknown	
Engine Oil No. 3, 4	Lube Oil Tanks	N/A	TBD	500	20.2.72.202.B.2	Unknown	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			TBD	gal	IA List Item #5	Unknown	

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

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

Table 2-C: Emissions Control Equipment

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

Control Equipment Unit No.	Control Equipment Description	Date Installed	Controlled Pollutant(s)	Controlling Emissions for Unit Number(s)[1]	Efficiency (% Control by Weight)	Method used to Estimate Efficiency
C-601	Non-Selective Catalytic Reduction	2001	NOx	20	87%	Mfg. Data
C-602	Non-Selective Catalytic Reduction	2001	NOx	21	87%	Mfg. Data
17	Acid Gas Flare	1980	VOC, H2S	AGI W, AU, AU T3	98%	Eng. Estimate
18	Emergency Flare (Low Pressure)	2013	VOC, H2S	LP Inlet	98%	Eng. Estimate
R-210	Catalytic Oxidation	2014	CO, VOC, HCHO	30	90% CO, 65% VOC, 90% HCHO	Mfg. Data
R-211	Catalytic Oxidation	2014	CO, VOC, HCHO	31	90% CO, 65% VOC, 90% HCHO	Mfg. Data
R-212	Catalytic Oxidation	2014	CO, VOC, HCHO	32	90% CO, 65% VOC, 90% HCHO	Mfg. Data
In-112	Catalytic Oxidation	2014	CO, VOC, HCHO	33	90% CO, 65% VOC, 90% HCHO	Mfg. Data
In-111	Catalytic Oxidation	2014	CO, VOC, HCHO	34	90% CO, 65% VOC, 90% HCHO	Mfg. Data
In-110	Catalytic Oxidation	2014	CO, VOC, HCHO	35	90% CO, 65% VOC, 90% HCHO	Mfg. Data
AGI W	Acid Gas Injection Well	2014	VOC, H2S, SO2	AU, AU-T3, AU-T4	~ 97% (annual basis)	Eng. Estimate
19	Emergency Flare (High Pressure)	1980	VOC, H2S	HP Inlet	98%	Eng. Estimate
AGI W2	Acid Gas Injection Well	2017	VOC, H2S, SO2	AU, AU-T3, AU-T4	~ 97% (annual basis)	Eng. Estimate
R-213	Catalytic Oxidation	2020	CO, VOC, HCHO	44	93% CO, 52% VOC, 93% HCHO	Mfg. Data

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

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

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

Maximum Emissions are the emissions at maximum capacity and prior to (in the absence of) pollution control, emission-reducing process equipment, or any other emission reduction. Calculate the hourly emissions using the worst case hourly emissions for each pollutant. For each pollutant, calculate the annual emissions as if the facility were operating at maximum plant capacity without pollution controls for 8760 hours per year, unless otherwise approved by the Department. List Hazardous Air Pollutants (HAP) & Toxic Air Pollutants (TAPs) in Table 2-I. Unit & stack numbering must be consistent throughout the application package. Fill all cells in this table with the emission numbers or a "-" symbol. A "-" symbol indicates that emissions of this pollutant are not expected. Numbers shall be expressed to at least 2 decimal points (e.g. 0.41, 1.41, or 1.41E-4).

Unit No.	NOx		CO		VOC		SOx		PM[1]		PM10[1]		PM2.5[1]		H_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
12	1.08	4.72	0.91	3.97	0.06	0.26	0.16	0.69	0.08	0.36	0.08	0.36	0.08	0.36	-	-	-	-
13	0.30	1.31	0.25	1.10	0.016	0.072	0.044	0.19	0.023	0.10	0.023	0.10	0.023	0.10	-	-	-	-
14	0.30	1.31	0.25	1.10	0.016	0.072	0.044	0.19	0.023	0.10	0.023	0.10	0.023	0.10	-	-	-	-
17*	0.11	0.48	0.22	0.97	-	-	0.0057	0.025	-	-	-	-	-	-	0.00	0.00	-	-
18*	0.055	0.24	0.11	0.48	-	-	0.0029	0.013	-	-	-	-	-	-	0.00	0.00	-	-
19*	0.055	0.24	0.11	0.48	-	-	0.0029	0.013	-	-	-	-	-	-	0.00	0.00	-	-
20	16.369	71.70	3.27	14.34	1.09	4.78	0.0586	0.257	0.04	0.18	0.04	0.18	0.04	0.18	-	-	-	-
21	16.369	71.70	3.27	14.34	1.09	4.78	0.0586	0.257	0.04	0.18	0.04	0.18	0.04	0.18	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	-	-	-	-	0.87	3.80	-	-	-	-	-	-	-	-	-	-	-	-
24	-	-	-	-	0.87	3.80	-	-	-	-	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	-	-	-	-	0.27	1.17	-	-	-	-	-	-	-	-	-	-	-	-
30	5.48	24.00	19.57	85.70	6.81	29.82	0.38	1.67	0.27	1.16	0.27	1.16	0.27	1.16	-	-	-	-
31	5.48	24.00	19.57	85.70	6.81	29.82	0.38	1.67	0.27	1.16	0.27	1.16	0.27	1.16	-	-	-	-
32	3.042	13.33	8.52	37.31	2.37	10.39	0.16	0.69	0.11	0.48	0.11	0.48	0.11	0.48	-	-	-	-
33	3.042	13.33	8.52	37.31	2.37	10.39	0.16	0.69	0.11	0.48	0.11	0.48	0.11	0.48	-	-	-	-
34	3.042	13.33	8.52	37.31	2.37	10.39	0.16	0.69	0.11	0.48	0.11	0.48	0.11	0.48	-	-	-	-
35	3.042	13.33	8.52	37.31	2.37	10.39	0.16	0.69	0.11	0.48	0.11	0.48	0.11	0.48	-	-	-	-
37	2.12	9.2856	2.65	11.607	0.00061	0.0027	0.30	1.33	0.16	0.69	0.16	0.69	0.16	0.69	-	-		
39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	0.55	2.41	0.69	3.011	0.00016	0.00070	0.039	0.17	0.041	0.18	0.041	0.18	0.041	0.18	-	-	-	-
41	0.94	4.10	1.17	5.12	0.00027	0.0012	0.067	0.29	0.070	0.31	0.070	0.31	0.070	0.31	-	-	-	-
44	1.14	4.99	0.36	1.58	0.54	2.37	0.12	0.53	0.080	0.35	0.080	0.35	0.080	0.35	-	-	-	-
AU**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	993.27	4350.54	-	-
AU T3, T4**	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-
Load	-	-	-	-	0.0064	0.028	-	-	-	-	-	-	-	-	-	-	-	-
FUG	-	-	-	-	13.62	59.64	-	-	-	-	-	-	-	-	0.12	0.51	-	-
Totals	62.51	273.78	86.47	378.74	41.56	182.00	2.30	10.08	1.53	6.69	1.53	6.69	1.53	6.69	993.39	4351.05	-	-

[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).

* Emissions noted here are steady-state from pilot/purge gases.

** Emissions of off-gas from the amine units are routed to the either the AGI well (AGI W) or Acid Gas Flare (Unit 17). Since these emissions are not vented, uncontrolled emissions are shown for illustration purposes only.

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		PM10		PM2.5		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
12	1.078	4.72	0.91	3.97	0.059	0.26	0.16	0.69	0.082	0.36	0.082	0.36	0.082	0.36	-	-	-	-
13	0.30	1.31	0.25	1.10	0.016	0.072	0.044	0.19	0.023	0.10	0.023	0.10	0.023	0.10	-	-	-	-
14	0.30	1.31	0.25	1.10	0.016	0.072	0.044	0.19	0.023	0.10	0.023	0.10	0.023	0.10	-	-	-	-
17 (Pilot)	0.11	0.48	0.22	0.97	-	-	0.006	0.025	-	-	-	-	-	-	0.00	0.00	-	-
18 (Pilot)	0.055	0.24	0.11	0.48	-	-	0.00	0.013	-	-	-	-	-	-	0.00	0.00	-	-
19 (Pilot)	0.055	0.24	0.11	0.48	-	-	0.00	0.013	-	-	-	-	-	-	0.00	0.00	-	-
20	2.18	9.56	3.27	14.34	1.09	4.78	0.0586	0.26	0.040	0.18	0.040	0.18	0.040	0.18	-	-	-	-
21	2.18	9.56	3.27	14.34	1.09	4.78	0.0586	0.26	0.040	0.18	0.040	0.18	0.040	0.18	_	_	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	_	_	-	-
23	-	-	-	-	0.87	3.80	-	-	-	-	-	-	-	-	_	_	-	-
24	-	-	-	-	0.87	3.80	-	-	-	-	-	-	-	-	_	_	-	-
25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	_	_	-	-
26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	_	_	-	-
29	-	-	-	-	0.27	1.17	-	-	-	-	-	-	-	-	_	_	-	-
30	5.48	24.00	1.96	8.57	2.38	10.44	0.38	1.67	0.27	1.16	0.27	1.16	0.27	1.16	_	_	-	-
31	5.48	24.00	1.96	8.57	2.38	10.44	0.38	1.67	0.27	1.16	0.27	1.16	0.27	1.16	_	_	-	-
32	3.042	13.33	0.85	3.73	0.83	3.64	0.16	0.69	0.11	0.48	0.11	0.48	0.11	0.48	_	_	-	-
33	3.04	13.33	0.85	3.73	0.83	3.64	0.16	0.69	0.11	0.48	0.11	0.48	0.11	0.48	_	_	-	-
34	3.04	13.33	0.85	3.73	0.83	3.64	0.16	0.69	0.11	0.48	0.11	0.481	0.11	0.48	_	_	-	-
35	3.04	13.33	0.85	3.73	0.83	3.64	0.16	0.69	0.11	0.48	0.110	0.48	0.11	0.48	_	_	-	-
37	2.12	9.29	2.65	11.61	0.00	0.00	0.30	1.33	0.16	0.69	0.16	0.692	0.16	0.69	_	_		
38	0.55	2.41	0.69	3.01	0.00	0.00	0.0394	0.17	0.041	0.18	0.041	0.18	0.041	0.18	_	_	-	-
39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	_	_	-	-
LOAD	-	-	-	-	0.01	0.03	-	-	-	-	-	-	-	-	_	_	-	-
41	0.94	4.10	1.17	5.12	0.00027	0.00119	0.067	0.294	0.070	0.31	0.070	0.31	0.070	0.31	_	_	-	-
AU	-	-	-	-	-	-	-	-	-	-	-	-	-	-	_	_	-	-
AU T3, T4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	_	_	-	-
FUG	-	-	-	-	13.62	59.64	-	-	-	-	-	-	-	-	0.12	0.51	-	-
44	1.14	4.99	1.00	4.50	0.54	2.37	0.1200	0.530	0.080	0.35	0.080	0.35	0.080	0.35	_	_	-	-
Totals	34.13	149.50	21.22	93.08	26.53	116.21	2.30	10.08	1.53	6.69	1.53	6.69	1.53	6.69	0.12	0.51	-	-

[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
17	2.36	0.26	20.20	2.22	2.20	0.24	1869.69	205.44	-	-	-	-	-	-	19.87	2.18	-	-
18	116.82	6.19	291.54	15.57	177.89	9.43	292.46	15.50	-	-	-	-	-	-	3.11	0.16	-	-
19	451.58	13.21	1126.89	32.96	501.99	11.77	1154.51	8.74	-	-	-	-	-	-	12.27	0.093	-	-
Malfunction	451.58	10.00	1126.89	10.00	501.99	10.00	1869.69	10.00	-	-	-	-	-	-	19.87	5.00		
Totals	570.75	29.66	1438.64	60.75	682.07	31.44	3316.66	239.68	-	-	-	-	-	-	35.24	7.44	-	-

[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).

[3] SO2 emissions were increased from the last permit by only 40 tpy instead of 177.38, for a total of 65.2 tpy. See Requested SSM totals in Section 7: Calculations.

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

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

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

Stack No.	Serving Unit Number(s) from Table 2-A	NOx		CO		VOC		SOx		PM		PM10		PM2.5		☐ 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

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)			
12	12	V	No	91	400	53	-	-	49.6	1.17
13	13	V	No	64	800	26	-	-	25.0	1.15
14	14	V	No	64	800	26	-	-	25.0	1.15
17	17	V	No	155	1832	52	-	-	65.6	1.00
18	18	V	No	75	1832	116	-	-	65.6	1.50
19	19	V	No	75	1832	116	-	-	65.6	1.50
20	20	V	No	25	800	30	-	-	86.3	0.67
21	21	V	No	25	800	30	-	-	86.3	0.67
30	30	V	No	45	858	397	-	-	224.5	1.50
31	31	V	No	45	858	397	-	-	224.5	1.50
32	32	V	No	45	990	145	-	-	82.1	1.50
33	33	V	No	45	990	145	-	-	82.1	1.50
34	34	V	No	45	990	145	-	-	82.1	1.50
35	35	V	No	45	990	145	-	-	82.1	1.50
37	37	V	No	30	782.8	130	-	-	13.8	3.46
38	38	V	No	20	642.6	49	-	-	15.5	2.00
41	41	V	No	20	782.8	75.1	-	-	90.9	1.0
44	44	V	No	22.7	523.89	112.0	-	-	143	1

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

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

Stack No.	Unit No.(s)	Total HAPs		Formaldehyde ☑ HAP or ☐ TAP		Acetaldehyde ☑ HAP or ☐ TAP		Acrolein ☑ HAP or ☐ TAP		n-Hexane X HAP or ☐ TAP		Pollutant ☐ HAP or ☐ TAP		Pollutant ☐ HAP or ☐ TAP		Pollutant ☐ HAP or ☐ TAP		Pollutant ☐ HAP or ☐ TAP	
		lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr										
12	12	0.017	0.076	0.0093	0.041	0.0081	0.036	-	-										
13	13	0.0048	0.021	0.0026	0.011	0.0023	0.010	-	-										
14	14	0.0048	0.021	0.0026	0.011	0.0023	0.010	-	-										
17	17	-	-	-	-	-	-	-	-										
18	18	-	-	-	-	-	-	-	-										
19	19	-	-	-	-	-	-	-	-										
20	20	0.10	0.45	0.084	0.37	0.010	0.044	0.0095	0.042										
21	21	0.10	0.45	0.084	0.37	0.010	0.044	0.0095	0.042										
22	22	-	-	-	-	-	-	-	-										
23	23	-	-	-	-	-	-	-	-										
24	24	-	-	-	-	-	-	-	-										
25	25	-	-	-	-	-	-	-	-										
26	26	-	-	-	-	-	-	-	-										
29	29	-	-	-	-	-	-	-	-										
30	30	0.56	2.47	0.20	0.89	0.22	0.98	0.14	0.60										
31	31	0.56	2.47	0.20	0.89	0.22	0.98	0.14	0.60										
32	32	0.27	1.18	0.12	0.53	0.092	0.40	0.057	0.25										
33	33	0.27	1.18	0.12	0.53	0.092	0.40	0.057	0.25										
34	34	0.27	1.18	0.12	0.53	0.092	0.40	0.057	0.25										
35	35	0.27	1.18	0.12	0.53	0.092	0.40	0.057	0.25										
37	37	0.023	0.10	0.012	0.054	0.011	0.048	-	-										
38	38	0.0087	0.038	0.0046	0.020	0.0041	0.018	-	-										
39	39	-	-	-	-	-	-	-	-										
40	40	-	-	-	-	-	-	-	-										
41	41	-	-	-	-	-	-	-	-										
44	44	0.190	0.83	0.080	0.35	0.07	0.31	4.00E-02	1.80E-01										
AU	AU	-	-	-	-	-	-	-	-										
AU T3,T4	AU T3,T4	-	-	-	-	-	-	-	-										
FUG	FUG	0.01	0.05	-	-	-	-	-	-	0.010	0.050								
Totals:		2.68	11.72	1.17	5.14	0.93	4.09	0.56	2.46	0.010	0.050								

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 (scf/hr)	Annual Usage (MMscf/yr)	% Sulfur (gr/100scf)	% Ash
12	Pipeline Quality Natural Gas	Purchased Fuel Gas	996 Btu/scf	11044.18	96.75	-	-
13	Pipeline Quality Natural Gas	Purchased Fuel Gas	996 Btu/scf	3062.25	26.83	-	-
14	Pipeline Quality Natural Gas	Purchased Fuel Gas	996 Btu/scf	3062.25	26.83	-	-
17	Pipeline Quality Natural Gas	Purchased Fuel Gas	996 Btu/scf	400.00	3.50	-	-
18	Pipeline Quality Natural Gas	Purchased Fuel Gas	996 Btu/scf	200.00	1.75	-	-
19	Pipeline Quality Natural Gas	Purchased Fuel Gas	996 Btu/scf	200.00	1.75	-	-
20	Pipeline Quality Natural Gas	Purchased Fuel Gas	996 Btu/scf	4100.15	35.92	-	-
21	Pipeline Quality Natural Gas	Purchased Fuel Gas	996 Btu/scf	4100.15	35.92	-	-
30	Pipeline Quality Natural Gas	Purchased Fuel Gas	996 Btu/scf	26625.00	234.17	-	-
31	Pipeline Quality Natural Gas	Purchased Fuel Gas	996 Btu/scf	26625.00	234.17	-	-
32	Pipeline Quality Natural Gas	Purchased Fuel Gas	996 Btu/scf	11002.74	96.77	-	-
33	Pipeline Quality Natural Gas	Purchased Fuel Gas	996 Btu/scf	11002.74	96.77	-	-
34	Pipeline Quality Natural Gas	Purchased Fuel Gas	996 Btu/scf	11002.74	96.77	-	-
35	Pipeline Quality Natural Gas	Purchased Fuel Gas	996 Btu/scf	11002.74	96.77	-	-
37	Pipeline Quality Natural Gas	Purchased Fuel Gas	996 Btu/scf	21285.14	186.46	-	-
41	Pipeline Quality Natural Gas	Purchased Fuel Gas	996 Btu/scf	9387.55	82.23	-	-
38	Pipeline Quality Natural Gas	Purchased Fuel Gas	996 Btu/scf	5522.09	48.37	-	-
44	Pipeline Quality Natural Gas	Purchased Fuel Gas	996 Btu/scf	8500	74.49	-	-

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)
29	40400311	Scrubber Flash Liquids	Hydrocarbons (RVP 10), Water	5.6	66	72.26	6.54	86.25	8.42

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			
29	1981	Scrubber Flash Liquids	N/A	FX	1,000	159	6.55	2.45	OT	OT	Good	1,142,400	27.20

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)**
Field Natural Gas	Mixed Hydrocarbons, sulfur compounds	Gas	Approximately 165 MMSCFD	Natural Gas	Primarily Methane, with mixed hydrocarbons	Gas	165 MMSCFD
Natural Gas Liquids	Mixed Hydrocarbons	Liquid (gas entrained)	Approximately 25,000 bbld	Natural Gas Liquids	C3+ Hydrocarbons	Liquid	25,000 bbld
Condensate	Mixed Hydrocarbons	Liquid (gas entrained)	Approximately 1,000 bbld	Condensate	Mixed Hydrocarbons	Liquid	1,000 bbld

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
SRU	SO2	Hartman Braum	URAS 10 P2-3.4	3.200498.3	32 sec	1,3,8,24-hour 30-day	0-5,000 ppm	<± 3% per 10ºC	±2%

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
There is no PEM equipment present at the faciltiy.								

Table 2-P: Greenhouse Gas Emissions

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

		CO_2 ton/yr	N_2O ton/yr	CH_4 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**	**298**	**25**	**22,800**	**footnote 3**										
12	**mass GHG**	5,633	0.011	0.11											5633	-
	CO2e	5,633	3.17	2.66											-	5639
13	**mass GHG**	1,562	0.0029	0.029											1562	-
	CO2e	1,562	0.88	0.74											-	1563
14	**mass GHG**	1,562	0.0029	0.029											1562	-
	CO2e	1,562	0.88	0.74											-	1563
17	**mass GHG**	1,645	0.0000	1.93											1647	-
	CO2e	1,645	0.0010	48.29											-	1693
18	**mass GHG**	5,484	0.000	22.56											5506	-
	CO2e	5,484	0.028	563.99											-	6048
19	**mass GHG**	9,754	0.0018	53.71											9808	-
	CO2e	9,754	0.54	1342.76											-	11098
20	**mass GHG**	2,091	0.00	0.04											2091	-
	CO2e	2,091	0.10	0.99											-	2092
21	**mass GHG**	2,091	0.004	0.04											2091	-
	CO2e	2,091	0.10	0.99											-	2092
22	**mass GHG**	-	-	-											0	-
	CO2e	-	-	-											-	0
23	**mass GHG**	-	-	-											0	-
	CO2e	-	-	-											-	0
24	**mass GHG**	-	-	-											0	-
	CO2e	-	-	-											-	0
25	**mass GHG**	-	-	-											0	-
	CO2e	-	-	-											-	0
26	**mass GHG**	-	-	-											0	-
	CO2e	-	-	-											-	0
29	**mass GHG**	-	-	-											0	-
	CO2e	-	-	-											-	0
30	**mass GHG**	15,049	0.03	178.94											15228	-
	CO2e	15,049	7.66	4473.52											-	19530
31	**mass GHG**	15,049	0.026	178.94											15228	-
	CO2e	15,049	7.66	4473.52											-	19530
32	**mass GHG**	6,143	0.01	42.64											6186	-
	CO2e	6,143	3.17	1066.04											-	7212
33	**mass GHG**	6,143	0.011	42.64											6186	-
	CO2e	6,143	3.17	1066.04											-	7212
34	**mass GHG**	6,143	0.01	42.64											6186	-
	CO2e	6,143	3.17	1066.04											-	7212
35	**mass GHG**	6,143	0.011	42.64											6186	-
	CO2e	6,143	3.17	1066.04											-	7212

37	**mass GHG**	10,757	0.020	0.50											10758	-
	CO2e	10,757	6.10	12.39											-	10776
39, 40	**mass GHG**	-	-	-											0	-
	CO2e	-	-	-											-	0
38	**mass GHG**	2,791	0.01	0.18											2791	-
	CO2e	2,791	1.58	4.43											-	2797
41	**mass GHG**	4,744	0.009	0.30											4745	-
	CO2e	4,744	2.69	7.54											-	4755
44	**mass GHG**	4,339	0.01	0.09	-	-									4339	-
	CO2e	4,339	0.01	0.09	-	-									-	4344
AU	**mass GHG**	-	-	-											0	-
	CO2e	-	-	-											-	0
AU T3,T4	**mass GHG**	-	-	-											0	-
	CO2e	-	-	-											-	0
FUG	**mass GHG**	19,989	-	1.56	-	-									19991	-
	CO2e	19,989	-	1.56	-	-									-	20030
Total	**mass GHG**	127,111.97	0.17	609.52											127721.7	
	CO_2e	127,111.97	44.06	15,198.35												142398.1

ts must use the most current GWPs codified in Table A-1 of 40 CFR part 98. GWPs are subject to change, therefore, applicants nee

[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.

The Maljamar Gas Plant facility is currently permitted under NSR permit No. 0319-M12 and Title V Permit No. P-123-R3.

Durango Midstream, LLC (Durango) is submitting this application for a Significant Modification of Title V operating permit P-123-R3. The Significant Modification will reflect the significant revision to NSR 0319-M12 which was issued by NMED on July 9, 2020. This submittal is pursuant to 20.2.70.404.C.(1)(a) NMAC.

This application seeks to incorporate the following changes:

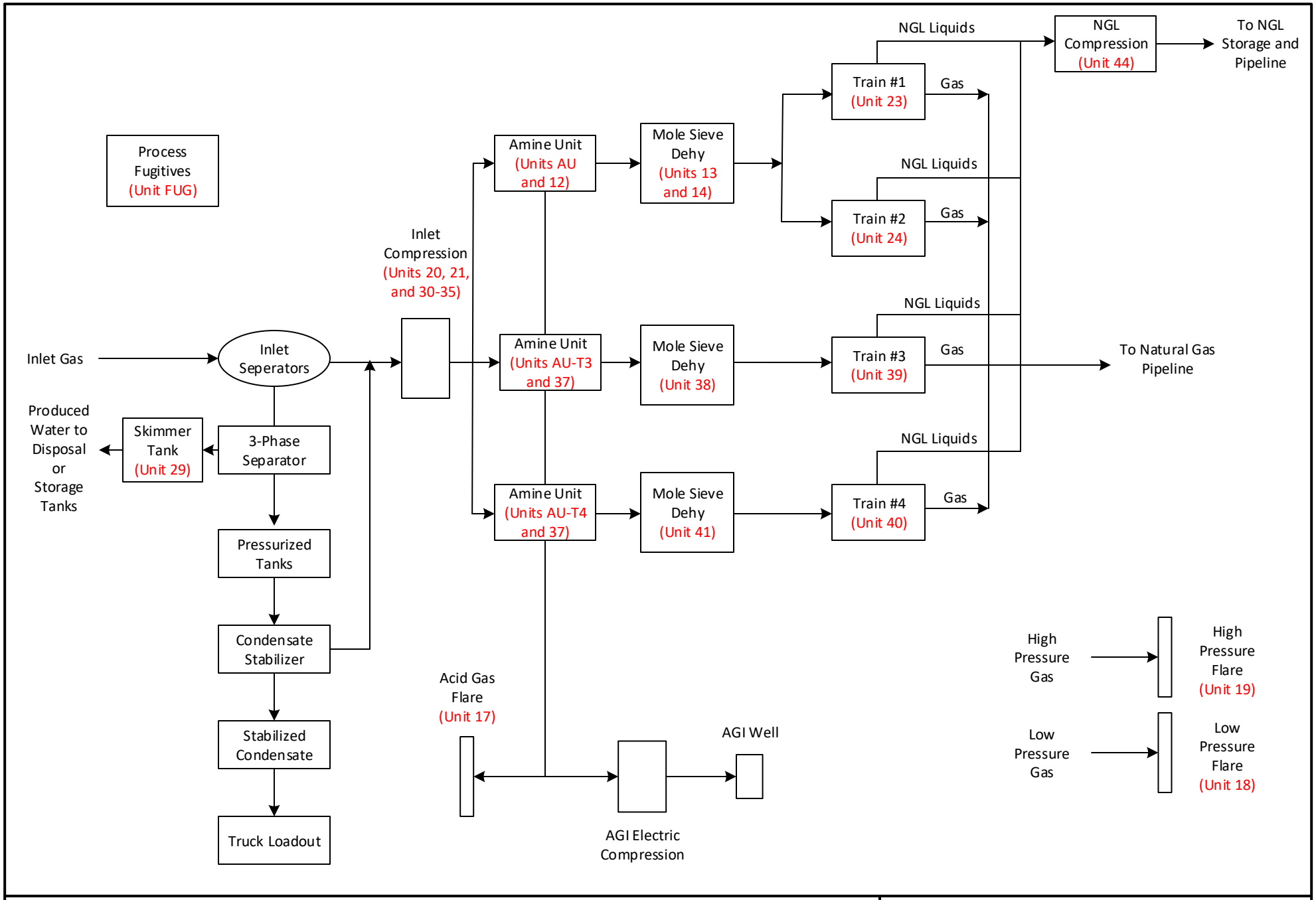
- Authorize the use of one (1) new natural gas-fired four (4)-stroke lean-burn engines, described as the Propane Refrigeration Engine (Unit Number: 44);
- Authorize a new amine contactor; and
- Modify existing process fugitive emissions (Unit Number: FUG) to account for new fugitive components associated with the project.

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.



Frontier Field Services, LLC

Drawn by: RL	**Date:** 02/04/2020	**Scale:** Drawing Not to Scale	**Maljamar Gas Plant – Plant Overview Process Flow Diagram** Significant Revision Application | New Mexico
Checked by: WSH	**Date:** 02/04/2020		

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.

New Cat 3512 Propane Refrigeration Engine

SPENT AMINE

LUBE OIL

H-770
E. 27'-4"
H-701
H-760
HE-25.02
H-750-1
H-750-2
PV-16.45
E-203
T-502
NOTE 1
P-601/602
AC-720
E-520
AC-700/705
A-301
AMINE SKID
CIRC. PUMPS
REFRIG. SKIDS
#1
#2
TRAIN #1
TRAIN #2
T-1000-1
T-1000-2
AC-710-1
V-150-1
X-600-1
V-150-2
AC-710-2
X-600-2
AC-715B
AC-715
T-1200
AC-1200
F-500
AMINE MCC
CONTROL BUILDING
F-410
F-411
F-412
RIE BUILDING
TK-903
T-1300
R.O. BUILDING
TK-910
I.A. BUILDING
FIRE PUMP BUILDING
WATER
WATER BUILDING
N. 477'-1"

AC-620
AC-622
REFRIG. SKID
V-640
V-670
C-11.11B
C-11.11A
AC-19.31
PV-16.31
F-402
T-501
PV-16.10
PV-16.02A
PV-16.02B
A-305
CM-11.01
V-403
PV-16.44
TAMP PAD
CHILLED H2O PADS
HE-15.93
N. 243'-8"
T-330
N. 176'-8"
PV-16.04
HE-15.01 A/B
PV-16.07
HE-15.04
A-322 COOLER
W. 209'-1"
F-430 FILTER
W. 227'-0"
V-410
W. 217'-7"
DEHY SKID
REGEN SKID
E/C COOLER
E/C
DEMETH
PIPE RACK
E-244
N. 191'-1"
N. 210'-1"
W. 302'-7"
METHANOL TANK
V-422 DEMETH TANK
W. 316'-7"
W. 328'-11"
A-322 COOLER
W. 334'-7½"
P-70-H
W. 343'-9"
P-70-I
W. 354'-0"
STABILIZER SKID
FT-11203
TK-12
TK-13
TK-14
N. 246'-11"
CHEVRON TOTAL METER SKID
V-310
V-311
TK-15
NAVAJO LACT SKID
PV-16.43
V-320
V-70G
V-70F
V-70E
KOCH METER RUN
CHEVRON METER RUN
V-300A
V-300B
STABILIZER SKID
F-70
FIRE EQUIP BLDG.
P-60A
P-60B
P-300A
P-300B
P-300C

MCC/IA BUILDING
VFD
AC-211A

C-452
AC-452
C-451
AC-451
MCC BUILDING
AC-777
C-777
V-12503
PV-12502
V-12502
PV-12501
OILY WASTE WATER TANK
COOLANT TANK
WASTE OIL TANK
AC-210A
C-210
AC-210B
EX-210
C-211
AC-211B
EX-211
LUBE OIL
C-212
RESIDUE COMP.
CM-112
CM-111
CM-110
SV-18.01 (FUTURE)
TK-2026
PV-16.46
V-2020
V-2021
PV-16.11
V-2025
FT-11201
V-1113
V-1111
V-1103
PIG TRAP
PIG TRAP
PIG TRAP
PV-16.42
TRUCK LOADOUT

KOCH PIG TRAP
AC-100
AC-101
AC-102
AC-103
AC-104
AC-105B
AC-105A
V-2045
TK-2046
C-100
C-101
C-102
C-103
C-104
C-105

SWITCH GEAR BUILDING
ELECTRICAL SUBSTATION

TK-3319
PV-3500

N

E. 100'-0"
E. 0'-0"
W. 100'-0"
W. 200'-0"
W. 300'-0"
W. 400'-0"
W. 500'-0"
W. 600'-0"

N. 600'-0" N. 500'-0" N. 400'-0" N. 300'-0" N. 200'-0" N. 100'-0" N. 0'-0" S. 100'-0" S. 200'-0" S. 300'-0" S. 400'-0" S. 500'-0" S. 600'-0"

NOTES:

REV	BY	DATE	REVISION	CHECKED	APPRVD	DATE

REV	BY	DATE	REVISION	CHECKED	APPRVD	DATE
3	KAC	6/2/16	UPDATED PER STABILIZER ADDTION	MS		
2	TNC	04/24/14	REVISED, RENAMED H-100 TO H-770			
1	SOS	03/07/14	REVISED IFC PER CLIENT COMMENTS			
0	ACP	01/27/14	ISSUED FOR CONSTRUCTION – PHASE II			

aka energy group, llc
southern ute indian tribe

AKA ENERGY GROUP, LLC
MALJAMAR GAS PLANT
PLOT PLAN

AFE NO:	SCALE: 1"=40'	DATE DRAWN: 12/06/13	DWG. NO: MJ-PP-3100	REV: 3
LOCATION: MALJAMAR, NEW MEXICO	DRAWN BY: SOS	ENGINEER:		

Jun 01, 2016 – 4:39pm by kcoleman – Path = I:\FACILITIES\Maljamar System\2012 Maljamar Expansion Phase II MA1316\05. Drawings\3D Model_MJ_Phase II Design Review Model – Standard\MJ-PP-3100 Rev 3.DWG

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.

REVISED EMISSION UNITS

Engine Emissions Estimate

The maximum short-term emissions are estimated in units of lb/hr using the maximum output power and heat rate for the engine. Emission factors for NOx, CO, and VOC are based on emission factors from the manufacturer's specifications. The Propane Refrigeration Engine (Unit Number: 44) emission factors for NO_X, CO, VOC, and formaldehyde are 0.50 g/hp-hr, 2.24 g/hp-hr, and 0.49 g/hp-hr, and 0.52 g/hp-hr, respectively. The emission factors were converted to lb/MMBtu for ease of use in estimating emissions. PM, benzene, acetaldehyde, and acrolein emissions are estimated using emission factors from AP-42, Chapter 3.2, Table 3.2-2 for 4-stroke lean-burn engines. For the purposes of these calculations, PM = PM_{10} = $PM_{2.5}$. SO_2 emissions are estimated using the emission factor listed in AP-42, Chapter 3.2, Table 3.2-2, adjusted for 5.0 g-S/100 scf of natural gas from the 0.2 gr-S/100 scf of natural gas in AP-42. The engine is equipped with a catalytic oxidizer, which controls CO and formaldehyde emissions with a 93% control efficiency and VOC emissions with a 52% control efficiency. NO_X, CO, VOC, PM_{10}, $PM_{2.5}$, formaldehyde, and other HAP maximum short-term emissions are estimated using the following calculation methodology (using NO_X as an example):

(0.5 lb NO_X / MMBtu) x (1,035 hp) x (8,183 Btu / hp-hr) x (MMBtu / 10^6 Btu) = 1.14 lb / hr NO_X

Annual average emissions are estimated in units of tpy, assuming operation of 8,760 hours per year. NO_X, CO, VOC, PM_{10}, $PM_{2.5}$, formaldehyde, and other HAP tpy emissions are estimated using the following calculation methodology (using NO_X as an example):

(1.14 lb NO_X / hr) x (8,760 hrs / yr) x (1 ton / 2,000 lbs) = 4.99 tpy NO_X

All SSM emissions at the site are routed to either unit 17 acid gas flare, 18 low pressure inlet flare, or 19 high pressure inlet flare. With the installation of this new engine, SSM emissions are already accounted for and will not increase about current allowable emission rates.

Engine Greenhouse Gas Emissions Estimate

GHG emissions for the combustion of natural gas in the engines are estimated using the methodology in Title 40 Code of Federal Regulations ("40 CFR") Part 98, Subpart C. GHG emission rates of N_2O, CH_4, and CO_2 are calculated using the Mandatory Reporting Rule ("MRR") factors, in a manner similar to NO_x, CO, VOC, PM, SO_2, formaldehyde, and HAPs emission calculations.

CH_4 emissions are estimated using the emission factor 1.0 x 10^{-3} kilograms per million British thermal units ("kg/MMBtu") (0.0022 lb/MMBtu), N_2O emissions are estimated using the emission factor 1.0 x 10^{-4} kg/MMBtu (0.00022 lb/MMBtu), and CO_2 emissions are estimated using the emission factor 53.06 kg/MMBtu (116.98 lb/MMBtu) (Tables C-1 and C-2 to subpart C of 40 CFR Part 98). The emission factors are converted from kg/MMBtu to lb/MMBtu. CH_4, N_2O, and CO_2 lb/hr emissions are calculated using the following calculation methodology (using CH_4 as an example):

(0.0022 lb CH_4 / MMBtu) x (1,035 hp) x (8,183 Btu / hp-hr) x (MMBtu / 10^6 Btu) = 0.02 lb / hr CH_4

The annual average emission rate of each GHG is then estimated assuming 8,760 hours of operation per year and converted to tons. Annual emissions of each GHG are calculated as follows (using CH_4 as an example):

(0.02 lb CH_4 / hr) x (8,760 hrs / yr) x (1 ton / 2,000 lbs) = 0.09 tpy CH_4

The CO_2e emission rate for the engines is then estimated by multiplying the individual GHG emission rate by the appropriate GWP as specified in 40 CFR 98, Subpart A, Table A-1.

Therefore, the maximum hourly CO_2e emission rate for the engines is estimated as follows:

((990.72 lb CO_2 / hr) x (1)) + ((0.02 lb CH_4 / hr) x (25)) + ((0.002 lb / N_2O hr) x (298)) = 991.82 lb CO_2e / hr

Annual average CO_2e emissions are estimated assuming 8,760 operating hours per year and converted to tons:

(991.82 lb CO_2e / hr) x (8,760 hr / yr) x (1 ton / 2,000 lbs) = 4,344.17 tpy CO_2e

Fugitive Emissions Estimate

This section outlines the emission rates, calculation methodologies, and assumptions directly related to equipment components (Unit Number: FUG) associated with this project. These equipment components are potential sources of VOC, CO2e, and HAPS emissions due to leaking valves, flanges, seals, etc. Therefore, in the event of any equipment component leaks, these pollutants could be emitted to the atmosphere.

Potential VOC and HAPS emissions from leaking equipment components are estimated using emission factors in the USEPA "Protocol for Equipment Leak Emission Estimates" for oil and gas production operations, 11/95 (EPA-453/R-95-017), Table 2-4, Page 2-15 and the percentage of each component in the inlet gas (per the representative inlet gas analysis from the Maljamar Gas Plant). The percentages of VOC and HAPs are normalized for TOC for use with fugitive emission factors only. Fugitive emission factors are listed in units of lb/hr TOC per component. Hourly emissions are calculated as follows (using VOC emissions for connectors in gas service as an example):

(159 connector components) × (4.41E-04 lb /hr / component) × 27.13 % VOC = 0.02 lb VOC / hr"

Annual average emissions of VOC from connectors in gas service are estimated as follows:

(0.02 lb VOC / hr) × (8,760 hours / year) × (1 ton / 2,000 lbs) = 0.27 tpy VOC

Fugitive Greenhouse Gas Emissions Estimate

Total maximum CO2, and CH4 emissions for all components in all streams are calculated using the method described above for VOC emissions. The total CO2e emission rate for the equipment leak fugitives is estimated by multiplying the speciated emission rates by the appropriate GWP as outlined in Table 3.1-1 and summing the results. Therefore, maximum hourly CO2e emission rates are calculated as follows (using connectors in gas service as an example):

(0.001 lb CO2" / hr × 1) + (0.06 lb CH4 / hr × 25) = 1.48 lb CO2e / hr"

The annual average CO2e emission rate is calculated assuming 8,760 hours of operation per year and converted to tons:

(1.48 lb CO2e / hour) × (8,760 hours / year) × (1 ton / 2,000 lbs) = 6.50 ton CO2e / year

UNCHANGED EMISSION UNITS

Heaters (Unit 12, 13, 14, 37, 38, 41)
Emission rates for NOx, CO, VOC, and PM were calculated using AP-42 factors for external natural gas combustion sources, Table 1.4-1 and 1.4-2/ PM10 and PM2.5 emissions are set equal to emissions as a conservative measure. SO2 emissions were calculated based on the units' fuel consumption and a maximum sulfur content of five grains per 100 standard cubic feet (5gr/100 scf). GHG emissions were calculated using 40 CFR Subpart C Tier 1.

Flares (Unit 17, 18, 19)
Pilot emissions
Pilot only emissions are included for the facility flare, assuming year-round operation of the flare pilot. A copy of the flare pilot only calculation is provided in this section. Emission rates for NOx and CO are calculated using factors from TNRCC (high btu, other). H2S is calculated using the standard for purchased sweet natural gas fuel of 0.25 gr H2S per 100 scf and 98%

combustion. SO2 is calculated using a fuel sulfur content of 5 gr sulfur as H2S per 100 scf in sweet fuel and assumed 100% combustion of H2S to SO2.

SSM Emissions (Unit SSM)
Emission rates of NOx and CO from Units 17, 18, and 19 are based on emission factors from TNRCC RG-109 (high btu, other). VOCs are calculated using the gas analysis found in Section 7 and the assumption of 98% destruction of VOCs. H2S is calculated using the gas analysis found in Section 7 and an assumed 98% combustion of H2S. Conversion of H2S to SO2 was assumed 100%.

Unit 17 emissions were adjusted based on the VOC composition in the acid gas. A flexibility factor of 50% was added to account for these fluctuations. Emissions from Unit 19 were adjusted to account for the flaring of residue gas. Unit 19 emissions consist of three separate streams; inlet gas containing H2S, gas released during annual dehydrator bed maintenance, residue gas. Flaring of the residue gas stream is now included in the annual PTE for Unit 19.

White Superior 6G825 (Units 20 and 21)
Emission factors for NOx, CO, and VOC, are based on manufacturer's data. A control efficiency of 87% was used for NOx. Emission rates for TSP, PM10, PM2.5, and formaldehyde were calculated using AP-42 Table 3.2-2 emission factors. PM10 and PM2.5 emissions are set equal to TSP emissions as a conservative measure. SO2 emissions were calculated based on the units' fuel consumption and a maximum sulfur content of five grains per 100 standard cubic feet (5gr/100 scf). Hazardous Air Pollutants (HAPs) except for formaldehyde were calculated using AP-42 factors. Only those HAPs greater than 1 tpy were illustrated in the application.

Caterpillar 3612LE and Caterpillar 3516B (Units 30, 31, 32, 33, 34, 35)
Emission factors for NOx, CO, VOC, and formaldehyde are based on manufacturer's data. A control efficiency of 90% was used for CO and formaldehyde, while 65% was used for VOC. Emission rates for VOC were based on manufacturer's specifications. The VOC rate, however did not included formaldehyde. The new VOC emission rates include formaldehyde. Emission rates for TSP, PM10, PM2.5, and formaldehyde were calculated using AP-42 Table 3.2-2 emission factors. PM10 and PM2.5 emissions are set equal to TSP emissions as a conservative measure. SO2 emissions were calculated based on the units' fuel consumption and a maximum sulfur content of five grains per 100 standard cubic feet (5gr/100 scf). Hazardous Air Pollutants (HAPs) except for formaldehyde were calculated using AP-42 factors. Only those HAPs greater than 1 tpy were illustrated in the application.

Skimmer Tank (Unit 29)
VOC emissions from working and breathing losses were calculated with EPA's TANKS version 4.09d. A copy of the Tanks 4.09d run can be found in Section 7 of this application. This tank has no flashing losses.

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)

Maljamar Gas Plant

Born Hot Oil Heater

Emission unit number(s):	12
Source description:	Hot oil heater
Manufacturer:	Born, Inc.

Fuel Consumption

Input heat rate:	11.0	MMBtu/hr	From previous application
Fuel heat value:	996	Btu/scf	Fuel Gas
Fuel rate:	11044	scf/hr	Input heat rate / fuel heat value
Annual fuel usage:	96.75	MMscf/yr	8760 hrs/yr operation

Exhaust Parameters

Exhaust temp	400	°F	From previous application
Stack height	91.2	ft	From previous application
Stack diameter	1.17	ft	From previous application
Exhaust flow	53	acfs	From previous application
Exhaust velocity	49.60	ft/sec	From previous application

Emission Rates

Uncontrolled Emissions

NOx[1]	CO[1]	VOC[1]	SO_2[2]	PM[1]	
100	84	5.5		7.6	lb/MMscf
0.0980	0.0824	0.0054		0.0075	lb/MMBtu
			5		gr Total Sulfur/100 scf
0%	0%	0%	0%	0%	Safety Factor
1.08	**0.91**	**0.06**	**0.16**	**0.08**	lb/hr
4.72	**3.97**	**0.26**	**0.69**	**0.36**	tpy

GHG Emissions

CO_2[3]	CH_4[3]	N_2O[3]	CO_2e[4]	Hexane[1]	
116.91	0.002205	0.0002205		0.00181	lb/MMbtu
1286.00	0.02	0.002		0.02	lb/hr
5632.68	**0.11**	**0.01**	**5638.50**	**0.09**	tons/yr

[1] *USEPA AP-42, Section 1.4*

[2] *5 gr S/100scf. SO_2 calculation assumes 100% converstion of fuel elemental sulfur to SO_2.*

[3] *40 CFR 98 emission factors*

[4] *CH4 warming potential is 25 times greater than CO2; N2O warming potential is 298 times greater than CO2*

Maljamar Gas Plant

Radco Mole Sieve Regeneration Heater

Emission unit number(s): 13
Source description: Mole Sieve Regeneration Heater
Manufacturer: Radco

Fuel Consumption

Input heat rate:	3.05	MMBtu/hr	From previous application
Fuel heat value:	996	Btu/scf	Fuel Gas
Fuel rate:	3062	scf/hr	Input heat rate / fuel heat value
Annual fuel usage:	26.8	MMscf/yr	8760 hrs/yr operation

Exhaust Parameters

Exhaust temp	800	°F	From previous application
Stack height	64	ft	From previous application
Stack diameter	1.15	ft	From previous application
Exhaust flow	26	acfs	From previous application
Exhaust velocity	25.00	ft/sec	From previous application

Emission Rates

Uncontrolled Emissions

NO_x[1]	CO[1]	VOC[1]	SO_2[2]	PM[1]	
100	84	5.5		7.6	lb/MMscf
0.0980	0.0824	0.0054		0.0075	lb/MMBtu
			5		gr Total Sulfur/100 scf
0%	0%	0%	0%	0%	Safety Factor
0.30	**0.25**	**0.02**	**0.04**	**0.02**	lb/hr
1.31	**1.10**	**0.07**	**0.19**	**0.10**	tpy

GHG Emissions

CO_2[3]	CH_4[3]	N_2O[3]	CO_2e[4]	Hexane[1]	
116.91	0.002205	0.0002205		0.00181	lb/MMbtu
356.57	0.01	0.001		0.01	lb/hr
1561.79	**0.03**	**0.003**	**1563.40**	**0.02**	tons/yr

[1] *USEPA AP-42, Section 1.4*

[2] *5 gr S/100scf. SO_2 calculation assumes 100% converstion of fuel elemental sulfur to SO_2.*

[3] *40 CFR 98 emission factors*

[4] *CH4 warming potential is 25 times greater than CO2; N2O warming potential is 298 times greater than CO2*

Maljamar Gas Plant

Radco Mole Sieve Regeneration Heater

Emission unit number(s): 14
Source description: Mole Sieve Regeneration Heater
Manufacturer: Radco

Fuel Consumption

Input heat rate:	3.05	MMBtu/hr	From previous application
Fuel heat value:	996	Btu/scf	Fuel Gas
Fuel rate:	3062	scf/hr	Input heat rate / fuel heat value
Annual fuel usage:	26.8	MMscf/yr	8760 hrs/yr operation

Exhaust Parameters

Exhaust temp	800	°F	From previous application
Stack height	64	ft	From previous application
Stack diameter	1.15	ft	From previous application
Exhaust flow	26	acfs	From previous application
Exhaust velocity	25.00	ft/sec	From previous application

Emission Rates

Uncontrolled Emissions

NOx[1]	CO[1]	VOC[1]	SO_2[2]	PM[1]	
100	84	5.5		7.6	lb/MMscf
0.0980	0.0824	0.0054		0.0075	lb/MMBtu
			5		gr Total Sulfur/100 scf
0%	0%	0%	0%	0%	Safety Factor
0.30	**0.25**	**0.02**	**0.04**	**0.02**	lb/hr
1.31	**1.10**	**0.07**	**0.19**	**0.10**	tpy

GHG Emissions

CO_2[3]	CH_4[3]	N_2O[3]	CO_2e[4]	Hexane[1]	
116.91	0.002205	0.0002205		0.00181	lb/MMbtu
356.57	0.01	0.00		0.01	lb/hr
1561.79	**0.03**	**0.003**	**1563.40**	**0.02**	tons/yr

[1] *USEPA AP-42, Section 1.4*

[2] *5 gr S/100scf. SO_2 calculation assumes 100% conversion of fuel elemental sulfur to SO_2.*

[3] *40 CFR 98 emission factors*

[4] *CH4 warming potential is 25 times greater than CO2; N2O warming potential is 298 times greater than CO2*

Maljamar Gas Plant

Acid Gas Flare

Emission Unit: 17

Acid gas and assist gas	0.69%	*VOC mole % (includes 50% for variability in gas composition)*
	0.98%	*VOC wt % (includes 50% for variability in gas composition)*
	7.681	*VOC specific volume*
	300	*HHV, Btu/scf*
	993.27	*lb H_2S/hr at inlet (includes 25% increase due to higher gas H2S content)*

[1] *Flared gas includes acid gas and supplemental fuel needed to ensure LHV > 200 Btu/scf.*
Compostion and HHV is based on 2010 Emissions Inventory report. H2S based on mass balance from inlet.

Fuel Data

Pilot and Purge Gas	400 scf/hr	Design	
	0.0004 MMscf/hr		
	1000 Btu/scf	Pipeline Gas, HHV	
	0.40 MMBtu/hr		
	3.50 MMscf/yr		
Flared Gas	1.96 MMscf/day	Acid gas and supplemental fuel. Based on average daily flow from 2010 Emission Inventory report.	
	0.12 MMscf/hr	Effective hourly flowrate = MMscf/day ÷ 24 hr/day * 1.5 (flexibility for instantaneous flow)	
	300 Btu/scf	Heating value calculated from gas compostion above.	
	36.8 MMBtu/hr	Hourly heat rate = Heating value * Effective hourly flow rate.	
Total	37.2 MMBtu/hr	Pilot + Flared gas	
	30.4 MMscf/yr	Pilot + Flared gas	Estimated on pilot @ 8760 hr/yr and acid gas flaring at 219.73 hrs/yr.

Stack Parameters

1000 °C	Exhaust temperature	Per NMAQB guidelines
20 m/sec	Exhaust velocity	Per NMAQB guidelines
155 ft	Flare height	Design

Emission Rates

Pilot and Purge

NOx	CO	VOC	H_2S	SO_2	Units	
0.1380	0.2755				lb/MMBtu	TNRCC RG-109 (high Btu; other)
			4E-04		lb H_2S/Mscf	Purchased sweet natural gas fuel, 0.25 gr H_2S/100scf
			1.43E-04		lb H_2S/hr	H_2S rate * fuel usage
				7E-03	lb S/Mscf	Purchased sweet natural gas fuel, 5 gr S/100scf
				3E-03	lb SO_2/hr*	SO_2 rate * fuel usage
		0.00%			mol%	Assume no VOC content in purchased fuel (methane)
		23.7			ft^3/lb	Specific volume (methane)
		0.00			lb/hr	vol. Gas * mole fraction / specific volume
100%	100%	100%	100%	100%	%	Safety Factor
0.2760	0.5510				lb/MMBtu	Unit emission rate with Safety Factor
0.11	**0.22**				lb/hr	lb/MMBtu * MMBtu/hr
		0.000	**5.7E-06**	**5.7E-03**	lb/hr	98% combustion H_2S; 100% conversion to SO_2
0.48	**0.97**	**0.000**	**2.5E-05**	**2.5E-02**	tpy	8760 hrs/yr

Flared Gas

NOx	CO	VOC	H_2S	SO_2	Units	
0.0641	0.5496				lb/MMBtu	TNRCC RG-109 (low Btu; other)
		0.69%			mol%	Flare Gas
		7.681			ft^3/lb	Specific volume
		110.04	993.27		lb/hr	Inlet gas
2.36	**20.20**				lb/hr	lb/MMBtu * MMBtu/hr
		110.04	**993.3**		lb/hr	Uncontrolled emissions
0.26	**2.22**				tpy	

pilot + flared gas	**2.47**	**20.42**	**2.20**	**19.87**	**1,869.70**	lb/hr	98% combustion H_2S and VOC; 100% conversion to SO_2
	0.74	**3.18**	**0.24**	**2.18**	**205.44**	tpy	Annual Emissions at 219.7 hrs/year.

** No annual SO2 increase was requested.*

Maljamar Gas Plant

Low Pressure (LP) Flare

Emission Unit: 18

Flared Gas Composition

Component	MW	Flared Gas[1] Mol%	MW * wet vol %	HHV Btu/scf[2]	Btu/scf * wet vol %	Mass Fraction (wet)	Spec. Volume[2] ft³/lb	Spec. Volume VOC ft³/lb
Water	18.02	0.00%	0.00	0.0	0.0	0.00	21.06	
Hydrogen Sulfide	34.08	0.25%	0.09	637.02	1.6	0.00	11.136	
Carbon Dioxide	44.01	1.40%	0.62	0.0	0.0	0.03	8.623	
Nitrogen	28.01	4.28%	1.20	0.0	0.0	0.05	13.547	
Oxygen	32.00	0.00%	0.00	0.0	0.0	0.00	13.5	
Methane	16.04	72.64%	11.65	1009.7	733.4	0.53	23.65	
Ethane	30.07	12.01%	3.61	1768.7	212.4	0.16	12.62	
Propane	44.10	6.06%	2.67	2517.2	152.5	0.12	8.606	4.715
i-Butane	58.12	0.71%	0.41	3252.6	23.1	0.02	6.529	0.552
n-Butane	58.12	1.73%	1.01	3262	56.4	0.05	6.529	1.346
i-Pentane	72.15	0.35%	0.25	4008.7	14.0	0.01	5.26	0.272
n-Pentane	72.15	0.37%	0.27	4008.7	14.8	0.01	5.26	0.288
n-Hexane	86.18	0.31%	0.27	4756.1	14.7	0.01	4.404	0.241
Other Hexanes	86.18	0.00%	0.00	4756.1	0.0	0.00	4.509	0.000
Heptanes (as n-Heptane)	100.20	0.00%	0.00	5502.8	0.0	0.00	3.787	0.000
Benzene	78.11	0.00%	0.00	3591.0	0.0	0.00	4.858	0.000
Toluene	92.14	0.00%	0.00	4273.5	0.0	0.00	4.119	0.000
Ethylbenzene	106.17	0.00%	0.00	4970.6	0.0	0.00	3.574	0.000
Xylenes	106.17	0.00%	0.00	4957.0	0.0	0.00	3.574	0.000
Octanes+	114.23	0.00%	0.00	5796.1	0.0	0.00	3.322	0.000
		100%	22.04		1223.1	1.00		7.415
NMNEHC (VOC)		9.5%				22.1%		

[1] Composition is based on Wet Gas (analysis date 04/07/2011). Email from F. Brown (10/31/2011) - "Fw: emissions Calculations ver5.xlx". using Workbook/Worksheet "emissions calculations ver5.xlsx/Gas Analysis". H_2S mol% is equivalent to 155 gr/100scf.

[2] Component HHVs and specific volumes obtained from Physical Properties of Hydrocarbons, API Research Project 44, Fig. 16-1, Rev. 1981.

Fuel Data

Flare Pilot	200	scf/hr	Design
	0.0002	MMscf/hr	
	1000.00	Btu/scf	Pipeline Gas, HHV
	0.20	MMBtu/hr	
	1.75	MMscf/yr	
Flared Gas - Short Term	16.6	MMscf/day	BASELINE: Maximum daily SSM flowrate to the LP flare during 1/1/2009 - 10/25/2011.
	0.7	MMscf/hr	Effective hourly flowrate = MMscf/day ÷ 24 hr/day
	1,223	Btu/scf	Heating value calculated from gas compostion above.
	847	MMBtu/hr	Hourly heat rate = Heating value * Effective hourly flow rate.
Flared Gas - Annual	73.4	MMscf/yr	Maximum annual SSM flowrate to the LP flare during 1/1/2009 - 10/25/2011.
Total	846.7	MMBtu/hr	Pilot + Flared gas

Stack Parameters

1000	°C	Exhaust temperature
20	m/sec	Exhaust velocity
75	ft	Flare height

Per NMAQB guidelines

Per NMAQB guidelines

Emission Rates

Pilot

NOx	CO	VOC	H_2S	SO_2	Units	
0.1380	0.2755				lb/MMBtu	TNRCC RG-109 (high Btu; other)
			4E-04		lb H_2S/Mscf	Purchased sweet natural gas fuel, 0.25 gr H_2S/100scf
			7.14E-05		lb H_2S/hr	H_2S rate * fuel usage
				7E-03	lb S/Mscf	Purchased sweet natural gas fuel, 5 gr S/100scf
				1E-03	lb SO_2/hr*	SO_2 rate * fuel usage
		0.00%			mol%	Assume no VOC content in purchased fuel (methane)
		23.7			ft^3/lb	Specific volume (methane)
		0.00			lb/hr	vol. Gas * mole fraction / specific volume
100%	100%	100%	100%	100%	%	Safety Factor
0.2760	0.5510				lb/MMBtu	Unit emission rate with Safety Factor
0.06	**0.11**				lb/hr	lb/MMBtu * MMBtu/hr
		0.000	**2.9E-06**	**2.9E-03**	lb/hr	98% combustion H_2S; 100% conversion to SO_2
0.24	**0.48**	**0.000**	**1.3E-05**	**1.3E-02**	tpy	8760 hrs/yr

Flared Gas

NOx	CO	VOC	H_2S	SO_2	Units	
0.1380	0.2755				lb/MMBtu	TNRCC RG-109 (high Btu; other)
		9.53%	0.25%		mol%	Flare Gas
		7.415	11.136		ft^3/lb	Specific volume
		8,894.3	155.4		lb/hr	vol. Gas * mole fraction / specific volume
116.82	233.21				lb/hr	lb/MMBtu * MMBtu/hr
116.82	233.21	8,894.3	155.4		lb/hr	Uncontrolled emissions at maximum rate
6.19	12.36	471.5	8.2		tpy	

	NOx	CO	VOC	H_2S	SO_2	Units	
pilot + flared gas	**116.87**	**291.65**	**177.89**	**3.11**	**292.47**	lb/hr	
	6.43	**16.06**	**9.43**	**0.16**	**15.51**	tpy	CO emissions include a 25% safety factor

Maljamar Gas Plant

High-Pressure Flare

Emission Unit: 19 Flaring of Inlet Gas

Estimated Flared Gas Composition

Component	MW	Flared Gas[1] Mol%	MW * wet vol %	HHV Btu/scf[2]	Btu/scf * wet vol %	Mass Fraction (wet)	Spec. Volume[2] ft³/lb	Spec. Volume VOC ft³/lb
Water	18.02	0.18%	0.03	0.0	0.0	0.00	21.06	
Hydrogen Sulfide	34.08	0.59%	0.20	637.02	3.8	0.01	11.136	
Carbon Dioxide	44.01	1.42%	0.62	0.0	0.0	0.03	8.623	
Nitrogen	28.01	2.60%	0.73	0.0	0.0	0.03	13.547	
Oxygen	32.00	0.00%	0.00	0.0	0.0	0.00	13.5	
Methane	16.04	70.60%	11.33	1009.7	712.8	0.50	23.65	
Ethane	30.07	13.55%	4.07	1768.7	239.6	0.18	12.62	
Propane	44.10	6.67%	2.94	2517.2	167.9	0.13	8.606	4.358
i-Butane	58.12	0.80%	0.46	3252.6	25.9	0.02	6.529	0.521
n-Butane	58.12	1.98%	1.15	3262	64.4	0.05	6.529	1.290
i-Pentane	72.15	0.49%	0.35	4008.7	19.6	0.02	5.26	0.319
n-Pentane	72.15	0.50%	0.36	4008.7	19.9	0.02	5.26	0.324
n-Hexane	86.18	0.00%	0.00	4756.1	0.0	0.00	4.404	0.000
Other Hexanes	86.18	0.63%	0.55	4756.1	30.1	0.02	4.509	0.423
Heptanes (as n-Heptane)	100.20	0.00%	0.00	5502.8	0.0	0.00	3.787	0.000
Benzene	78.11	0.00%	0.00	3591.0	0.0	0.00	4.858	0.000
Toluene	92.14	0.00%	0.00	4273.5	0.0	0.00	4.119	0.000
Ethylbenzene	106.17	0.00%	0.00	4970.6	0.0	0.00	3.574	0.000
Xylenes	106.17	0.00%	0.00	4957.0	0.0	0.00	3.574	0.000
Octanes+	114.23	0.00%	0.00	5796.1	0.0	0.00	3.322	0.000
		100%	22.80		1284.1	1.00		7.236
NMNEHC (VOC)		11.1%				25.5%		
		13.8%	**Add 25% for constituent variability**					

[1] *Composition is based on Promax model using weighted average of flow into two contactors.*

[2] *Component HHVs and specific volumes obtained from Physical Properties of Hydrocarbons, API Research Project 44, Fig. 16-1, Rev. 1981.*

Fuel Data

Flare Pilot	200 scf/hr	Design
	0.0002 MMscf/hr	
	1000.00 Btu/scf	Pipeline Gas, HHV
	0.20 MMBtu/hr	
	1.75 MMscf/yr	
Flared Gas - Short Term	27.8 MMscf/day	Engineering Estimate; flow rates are for calculation purposes only and not intended to propose a limit.
	1.2 MMscf/hr	Effective hourly flowrate = MMscf/day ÷ 24 hr/day; for calculation purposes only.
	1,284 Btu/scf	Heating value calculated from gas compostion above; for calculation purposes only.
	1,487 MMBtu/hr	Hourly heat rate = Heating value * Effective hourly flow rate; for calculation purposes only.
Flared Gas - Annual	39.6 MMscf/yr	Engineering Estimate - Based on Historical SSM Events (used for NOx, CO, and VOC)
Flared Gas - Annual	17.5 MMscf/yr	Engineering Estimate - Worst Case H2S (for H2S and SO2 Calculations)
Total	1486.7 MMBtu/hr	Pilot + Flared gas

Stack Parameters

1000 °C	Exhaust temperature	Per NMAQB guidelines
20 m/sec	Exhaust velocity	Per NMAQB guidelines
75 ft	Flare height	

Emission Rates

Pilot

NOx	CO	VOC	H_2S	SO_2	Units	
0.1380	0.2755				lb/MMBtu	TNRCC RG-109 (high Btu; other)
			4E-04		lb H_2S/Mscf	Purchased sweet natural gas fuel, 0.25 gr H_2S/100scf
			7.14E-05		lb H_2S/hr	H_2S rate * fuel usage
				7E-03	lb S/Mscf	Purchased sweet natural gas fuel, 5 gr S/100scf
				1E-03	lb SO_2/hr*	SO_2 rate * fuel usage
		0.00%			mol%	Assume no VOC content in purchased fuel (methane)
		23.7			ft^3/lb	Specific volume (methane)
		0.00			lb/hr	vol. Gas * mole fraction / specific volume
100%	100%	100%	100%	100%	%	Safety Factor
0.2760	0.5510				lb/MMBtu	Unit emission rate with Safety Factor
0.06	**0.11**				lb/hr	lb/MMBtu * MMBtu/hr
		0.000	**2.9E-06**	**2.9E-03**	lb/hr	98% combustion H_2S; 100% conversion to SO_2
0.24	**0.48**	**0.000**	**1.3E-05**	**1.3E-02**	tpy	8760 hrs/yr

Flared Gas

NOx	CO	VOC	H_2S	SO_2	Units	
0.1380	0.2755				lb/MMBtu	TNRCC RG-109 (high Btu; other)
		13.83%	0.59%		mol%	Flare Gas
		7.236	11.136		ft^3/lb	Specific volume
		22,121.8	613.3		lb/hr	vol. Gas * mole fraction / specific volume
205.14	409.53				lb/hr	lb/MMBtu * MMBtu/hr
205.14	511.91	22,121.8	613.3		lb/hr	Uncontrolled emissions at maximum rate (plus 25% for CO)
3.51	8.76	378.6	4.6		tpy	

	NOx	CO	VOC	H_2S	SO_2	
flared gas controlled	**205.14**	**511.91**	**442.44**	**12.27**	**1154.51**	lb/hr
	3.51	**8.76**	**7.57**	**0.09**	**8.74**	tpy

*No increase in annual SO2 emissions was requested.

Aka - Malmajar Gas Plant

High-Pressure Flare

Emission Unit: 19 Flaring of Residue Gas

Estimated Flared Gas Composition

Component	MW	Flared Gas[1] Mol%	MW * wet vol %	HHV Btu/scf[2]	Btu/scf * wet vol %	Mass Fraction (wet)	Spec. Volume[2] ft³/lb	Spec. Volume VOC ft³/lb
Water	18.02	0.00%	0.00	0.0	0.0	0.00	21.06	
Hydrogen Sulfide	34.08	0.00%	0.00	637.02	0.0	0.00	11.136	
Carbon Dioxide	44.01	0.03%	0.01	0.0	0.0	0.00	8.623	
Nitrogen	28.01	3.61%	1.01	0.0	0.0	0.06	13.547	
Oxygen	32.00	0.00%	0.00	0.0	0.0	0.00	13.5	
Methane	16.04	86.76%	13.92	1009.7	876.1	0.77	23.65	
Ethane	30.07	8.52%	2.56	1768.7	150.6	0.14	12.62	
Propane	44.10	0.82%	0.36	2517.2	20.6	0.02	8.606	5.962
i-Butane	58.12	0.06%	0.04	3252.6	2.0	0.00	6.529	0.445
n-Butane	58.12	0.14%	0.08	3262	4.5	0.00	6.529	0.999
i-Pentane	72.15	0.03%	0.02	4008.7	1.1	0.00	5.26	0.204
n-Pentane	72.15	0.03%	0.02	4008.7	1.1	0.00	5.26	0.197
n-Hexane	86.18	0.00%	0.00	4756.1	0.0	0.00	4.404	0.000
Other Hexanes	86.18	0.01%	0.01	4756.1	0.3	0.00	4.509	0.045
Heptanes (as n-Heptane)	100.20	0.00%	0.00	5502.8	0.0	0.00	3.787	0.000
Benzene	78.11	0.00%	0.00	3591.0	0.0	0.00	4.858	0.000
Toluene	92.14	0.00%	0.00	4273.5	0.0	0.00	4.119	0.000
Ethylbenzene	106.17	0.00%	0.00	4970.6	0.0	0.00	3.574	0.000
Xylenes	106.17	0.00%	0.00	4957.0	0.0	0.00	3.574	0.000
Octanes+	114.23	0.00%	0.00	5796.1	0.0	0.00	3.322	0.000
		100%	18.03		1028.4	1.00		7.851
NMNEHC (VOC)		1.1%				2.9%		
		1.35%	**Add 25% for constituent variability**					

[1] *Composition is based on analysis dated 06/17/15.*

[2] *Component HHVs and specific volumes obtained from Physical Properties of Hydrocarbons, API Research Project 44, Fig. 16-1, Rev. 1981.*

Fuel Data

Flare Pilot	200	scf/hr	Design
	0.0002	MMscf/hr	
	1000.00	Btu/scf	Pipeline Gas, HHV
	0.20	MMBtu/hr	
Flared Gas - Short Term	27.8	MMscf/day	Engineering Estimate; flow rates are for calculation purposes only and not intended to propose a limit.
	1.7	MMscf/hr	Effective hourly flowrate = MMscf/day ÷ 24 hr/day * 1.5; for calculation purposes only.
	1,028	Btu/scf	Heating value calculated from gas compostion above; for calculation purposes only.
	1,786	MMBtu/hr	Hourly heat rate = Heating value * Effective hourly flow rate; for calculation purposes only.
Flared Gas - Annual	123.8	MMscf/yr	Plant inlet capacity (150 mm) * 0.75 (shrinkage) * 1.1 (operational flexibility)
Total	1786.0	MMBtu/hr	Pilot + Flared gas

Stack Parameters

1000	°C	Exhaust temperature	Per NMAQB guidelines
20	m/sec	Exhaust velocity	Per NMAQB guidelines
75	ft	Flare height	

Emission Rates

Pilot

NOx	CO	VOC	H_2S	SO_2	Units	
0.1380	0.2755				lb/MMBtu	TNRCC RG-109 (high Btu; other)
			4E-04		lb H_2S/Mscf	Purchased sweet natural gas fuel, 0.25 gr H_2S/100scf
			7.14E-05		lb H_2S/hr	H_2S rate * fuel usage
				7E-03	lb S/Mscf	Purchased sweet natural gas fuel, 5 gr S/100scf
				1E-03	lb SO_2/hr*	SO_2 rate * fuel usage
		0.00%			mol%	Assume no VOC content in purchased fuel (methane)
		23.7			ft^3/lb	Specific volume (methane)
		0.00			lb/hr	vol. Gas * mole fraction / specific volume
100%	100%	100%	100%	100%	%	Safety Factor
0.2760	0.5510				lb/MMBtu	Unit emission rate with Safety Factor
0.06	**0.11**				lb/hr	lb/MMBtu * MMBtu/hr
		0.000	**2.9E-06**	**2.9E-03**	lb/hr	98% combustion H_2S; 100% conversion to SO_2
0.24	**0.48**	**0.000**	**1.3E-05**	**1.3E-02**	tpy	8760 hrs/yr

Flared Gas

NOx	CO	VOC	H_2S	SO_2	Units	
0.1380	0.2755				lb/MMBtu	TNRCC RG-109 (high Btu; other)
		1.35%	0.00%		mol%	Flare Gas
		7.851	11.136		ft^3/lb	Specific volume
		2,977.5	0.0		lb/hr	vol. Gas * mole fraction / specific volume
246.44	491.98				lb/MMBtu	lb/MMBtu * MMBtu/hr
246.44	614.98	2,977.5	0.0		lb/hr	Uncontrolled emissions at maximum rate (plus 25% for CO)
8.78	21.92	106.1	0.0		tpy	

	NOx	CO	VOC	H_2S	SO_2	
flared gas controlled	**246.44**	**614.98**	**59.55**	**0.00**	**0.00**	lb/hr
	8.78	**21.92**	**2.12**	**0.00**	**0.00**	tpy

Maljamar Gas Plant

High-Pressure Flare -Annual Dehy Bed Maintenance

Emission Unit: 19

Flared Gas Composition

Component	MW	Flared Gas[1] Mol%	MW * wet vol %	HHV Btu/scf[2]	Btu/scf * wet vol %	Mass Fraction (wet)	Spec. Volume[2] ft³/lb	Spec. Volume VOC ft³/lb
Water	18.02	0.00%	0.00	0.0	0.0	0.00	21.06	
Hydrogen Sulfide	34.08	0.01%	0.00	637.02	0.0	0.00	11.136	
Carbon Dioxide	44.01	0.05%	0.02	0.0	0.0	0.00	8.623	
Nitrogen	28.01	4.50%	1.26	0.0	0.0	0.05	13.547	
Oxygen	32.00	0.00%	0.00	0.0	0.0	0.00	13.5	
Methane	16.04	71.00%	11.39	1009.7	716.9	0.49	23.65	
Ethane	30.07	9.00%	2.71	1768.7	159.2	0.12	12.62	
Propane	44.10	7.00%	3.09	2517.2	176.2	0.13	8.606	3.372
i-Butane	58.12	5.00%	2.91	3252.6	162.6	0.12	6.529	2.409
n-Butane	58.12	2.00%	1.16	3262	65.2	0.05	6.529	0.964
i-Pentane	72.15	0.50%	0.36	4008.7	20.0	0.02	5.26	0.241
n-Pentane	72.15	0.50%	0.36	4008.7	20.0	0.02	5.26	0.241
n-Hexane	86.18	0.00%	0.00	4756.1	0.0	0.00	4.404	0.000
Other Hexanes	86.18	0.00%	0.00	4756.1	0.0	0.00	4.509	0.000
Heptanes (as n-Heptane)	100.20	0.00%	0.00	5502.8	0.0	0.00	3.787	0.000
Benzene	78.11	0.00%	0.00	3591.0	0.0	0.00	4.858	0.000
Toluene	92.14	0.00%	0.00	4273.5	0.0	0.00	4.119	0.000
Ethylbenzene	106.17	0.00%	0.00	4970.6	0.0	0.00	3.574	0.000
Xylenes	106.17	0.00%	0.00	4957.0	0.0	0.00	3.574	0.000
Octanes+	114.23	0.00%	0.00	5796.1	0.0	0.00	3.322	0.000
		100%	23.26		1320.3	1.00		7.227
NMNEHC (VOC)		15.0%				33.9%		

[1] *Engineering Estimate*

[2] *Component HHVs and specific volumes obtained from Physical Properties of Hydrocarbons, API Research Project 44, Fig. 16-1, Rev. 1981.*

Fuel Data

Flare Pilot	200	scf/hr	Design
	0.0002	MMscf/hr	
	1000.00	Btu/scf	Pipeline Gas, HHV
	0.20	MMBtu/hr	
Flared Gas - Short Term	10.0	MMscf/day	Engineering Estimate
	0.4	MMscf/hr	Effective hourly flowrate = MMscf/day ÷ 24 hr/day
	1,320	Btu/scf	Heating value calculated from gas compostion above.
	551	MMBtu/hr	Hourly heat rate = Heating value * Effective hourly flow rate.
Flared Gas - Annual	10.0	MMscf/yr	One event per year
Total	550.8	MMBtu/hr	Pilot + Flared gas
	13213.85	MMBtu	

Stack Parameters

1000	°C	Exhaust temperature
20	m/sec	Exhaust velocity
75	ft	Flare height

Per NMAQB guidelines

Per NMAQB guidelines

Emission Rates

Pilot

NOx	CO	VOC	H_2S	SO_2	Units	
0.1380	0.2755				lb/MMBtu	TNRCC RG-109 (high Btu; other)
			4E-04		lb H_2S/Mscf	Purchased sweet natural gas fuel, 0.25 gr H_2S/100scf
			7.14E-05		lb H_2S/hr	H_2S rate * fuel usage
				7E-03	lb S/Mscf	Purchased sweet natural gas fuel, 5 gr S/100scf
				1E-03	lb SO_2/hr*	SO_2 rate * fuel usage
		0.00%			mol%	Assume no VOC content in purchased fuel (methane)
		23.7			ft^3/lb	Specific volume (methane)
		0.00			lb/hr	vol. Gas * mole fraction / specific volume
100%	100%	100%	100%	100%	%	Safety Factor
0.2760	0.5510				lb/MMBtu	Unit emission rate with Safety Factor
0.06	**0.11**				lb/hr	lb/MMBtu * MMBtu/hr
		0.000	**2.9E-06**	**2.9E-03**	lb/hr	98% combustion H_2S; 100% conversion to SO_2
0.24	**0.48**	**0.000**	**1.3E-05**	**1.3E-02**	tpy	8760 hrs/yr

Flared Gas

NOx	CO	VOC	H_2S	SO_2	Units	
0.1380	0.2755				lb/MMBtu	TNRCC RG-109 (high Btu; other)
		15.00%	0.01%		mol%	Flare Gas
		7.227	11.136		ft^3/lb	Specific volume
		8,655.8	1.9		lb/hr	vol. Gas * mole fraction / specific volume
75.98	151.68				lb/MMBtu	lb/MMBtu * MMBtu/hr
75.98	189.60	8,655.8	1.9		lb/hr	Uncontrolled emissions at maximum rate (plus 25% for CO)
0.91	2.28	103.9	0.0		tpy	

	NOx	CO	VOC	H_2S	SO_2	
flared gas controlled	**75.98**	**189.60**	**173.12**	**0.04**	**3.52**	lb/hr
	0.91	**2.28**	**2.08**	**0.00**	**0.04**	tpy

Maljamar Gas Plant

White Superior 6G825

Emission Unit:	20
Source Description:	Natural gas engine
Manufacturer:	White Superior
Model:	6G825
Type	4-stroke, rich burn natural gas engine with NSCR catalyst

	Maximum Rating 100%		
Rated hp	495	hp	*Mfg data*
Heat Rate	8250	Btu/hp-hr	*Mfg data*
Fuel heat value	996	Btu/scf	*HHV*
Heat Input	4.08	MMBtu/hr	*Heat Rate * hp*
Fuel consumption	4.10	Mscf/hr	*Heat input / fuel heat value*
Annual fuel usage	35.9	MMcf/yr	*8760 hrs/yr operation*
NOx	15.00	g/hp-hr	*Mfg. data*
CO	3.00	g/hp-hr	*Mfg. data*
NMNEHC (VOC)	1.00	g/hp-hr	*Mfg. data*

Exhaust Parameters

Exhaust temp	800		
Stack diameter	0.67	ft	*Design*
Stack height	24.9	ft	*Design*
Exhaust flow	1,825	acfm	*Mfg data*
Stack velocity	86.3	ft/s	*Exhaust flow / stack area*

Emission Calculations

Maximum Uncontrolled Emissions

NOx[3]	CO[3]	VOC[3]	SO_2[1]	PM[2]	HCHO[3]	CO_2[4]	CH_4[4]	N_2O[4]	
			0.0143	9.91E-03	2.05E-02	116.91	0.00221	0.0002205	lb/MMBtu
16.37	3.27	1.09	0.06	0.04	0.08	477	0.009	0.001	lb/hr
71.70	14.34	4.78	0.26	0.18	0.37	2,091	0.04	0.004	tpy

Maximum Controlled Emissions

NOx[3]	CO[3]	VOC[3]	SO_2[1]	PM[2]	HCHO[3]	CO_2[4]	CH_4[4]	N_2O[4]	
87%									Nominal % reduction
2.18	3.27	1.09	0.06	0.04	0.08	477.43	0.01	0.001	lb/hr
9.56	14.34	4.78	0.26	0.18	0.37	2091.13	0.04	0.004	tpy

Benzene[2]	Acetaldehyde[2]	Acrolein[2]	CO_2e[4]	
1.58E-03	2.79E-03	2.63E-03		lb/MMBtu
0.01	0.01	0.01	477.921	lb/hr
0.03	0.05	0.05	2093.29	tpy

[1] *Based on 5 gr / 100 scf, nominal pipeline natural gas fuel*

[2] *USEPA AP-42, Section 3.2-2*

[3] *Based on manufacturer's data*

[4] *40 CFR 98 emission factors. CH4 warming potential = 25. N2O warming potential = 298.*

Maljamar Gas Plant

White Superior 6G825

Emission Unit:	21
Source Description:	Natural gas engine
Manufacturer:	White Superior
Model:	6G825
Type	4-stroke, rich burn natural gas engine with NSCR catalyst

	Maximum Rating 100%		
Rated hp	495	hp	*Mfg data*
Heat Rate	8250	Btu/hp-hr	*Mfg data*
Fuel heat value	996	Btu/scf	*HHV*
Heat Input	4.08	MMBtu/hr	*Heat Rate * hp*
Fuel consumption	4.10	Mscf/hr	*Heat input / fuel heat value*
Annual fuel usage	35.9	MMcf/yr	*8760 hrs/yr operation*
NOx	15.00	g/hp-hr	*Mfg. data*
CO	3.00	g/hp-hr	*Mfg. data*
NMNEHC (VOC)	1.00	g/hp-hr	*Mfg. data*

Exhaust Parameters

Exhaust temp	800		
Stack diameter	0.67	ft	*Design*
Stack height	24.9	ft	*Design*
Exhaust flow	1,825	acfm	*Mfg data*
Stack velocity	86.3	ft/s	*Exhaust flow / stack area*

Emission Calculations

Maximum Uncontrolled Emissions

NOx[3]	CO[3]	VOC[3]	SO_2[1]	PM[2]	HCHO[3]	CO_2[4]	CH_4[4]	N_2O[4]	
			0.0143	9.91E-03	2.05E-02	116.91	0.00221	0.0002205	lb/MMBtu
16.37	3.27	1.09	0.06	0.04	0.08	477	0.009	0.001	lb/hr
71.70	14.34	4.78	0.26	0.18	0.37	2,091	0.04	0.004	tpy

Maximum Controlled Emissions

NOx[3]	CO[3]	VOC[3]	SO_2[1]	PM[2]	HCHO[3]	CO_2[4]	CH_4[4]	N_2O[4]	
87%									Control efficiency
2.18	3.27	1.09	0.06	0.04	0.08	477.43	0.01	0.001	lb/hr
9.56	14.34	4.78	0.26	0.18	0.37	2091.13	0.04	0.004	tpy

Benzene[2]	Acetaldehyde[2]	Acrolein[2]	CO_2e[4]	
1.58E-03	2.79E-03	2.63E-03		lb/MMBtu
0.01	0.01	0.01	477.921	lb/hr
0.03	0.05	0.05	2093.29	tpy

[1] *Based on 5 gr / 100 scf, nominal pipeline natural gas fuel*

[2] *USEPA AP-42, Section 3.2-2*

[3] *Based on manufacturer's data*

[4] *40 CFR 98 emission factors. CH4 warming potential = 25. N2O warming potential = 298.*

Maljamar Gas Plant

Skimmer Tank

Unit No:	29
Source Description:	Skimmer Tank
Manufacturer:	N/A
Description	One 1000 bbl

General Tank Information

Unit 29

Volume	1,000	bbl
	42,000	gal
Height (shell)	16	ft
Diameter	21.5	ft
Throughput	75	bbl/day
St. Louis, MO	3,129	gal/day
	1,142,200	gal/yr

VOC Emissions

	Unit 29		
	VOCs		
	2347.99	lb/yr	TANKS 4.09 d
	1.17	tpy	tpy = lb/hr x [(8760hr/yr) / (2000lb/ton)])
Total VOCs	1.17	tpy	

Maljamar Gas Plant

Caterpillar G3612

Emission Units:	30-31
Source Description:	Natural gas engine
Manufacturer:	Caterpillar
Model:	G3612LE
Type	4-stroke, lean burn natural gas engine

	Maximum Rating	Site Rating at Maximum Inlet Air Temperature				
	100%	100%	75%	57%		
Rated hp	3550	3109	2331	1775	hp	*Mfg data*
Heat Rate	7500	7660	8069	8486	Btu/hp-hr	*Mfg data*
Fuel heat value	996	996	996	996	Btu/scf	*HHV*
Heat Input	26.63	23.81	18.81	15.06	MMBtu/hr	*Heat Rate * hp*
Fuel consumption	26.73	23.91	18.88	15.12	Mscf/hr	*Heat input / fuel heat value*
Annual fuel usage	234.2	209.5	165.4	132.5	MMcf/yr	*8760 hrs/yr operation*
NOx	0.70	0.70	0.70	0.70	g/hp-hr	*Mfg. data*
CO	2.50	2.50	2.49	2.50	g/hp-hr	*Mfg. data*
NMNEHC (VOC)	0.87	0.88	0.93	0.96	g/hp-hr	*Mfg. data (includes formaldehyde)*
Formaldehyde	0.26	0.27	0.29	0.31	g/hp-hr	*Mfg. data*
CO_2	439	448	471	497	g/hp-hr	*Mfg. data*
CH_4	5.22	5.29	5.41	5.53	g/hp-hr	*Mfg. data*

Exhaust Parameters

Exhaust temp	858	877	915	946	deg F	*Mfg data*
Stack diameter	1.50	1.50	1.50	1.50	ft	*Design*
Stack height	45	45	45	45	ft	*Design*
Exhaust flow	23,806	21,364	16,843	13,383	acfm	*Mfg data*
Stack velocity	224.5	201.5	158.9	126.2	ft/s	*Exhaust flow / stack area*

Emission Calculations

Maximum Uncontrolled Emissions

NOx[3]	CO[3]	VOC[3]	SO_2[1]	PM[2]	HCHO[3]	CO_2[3]	CH_4	N_2O	
			0.0143	9.99E-03				0.00022	lb/MMBtu
5.48	19.57	6.81	0.38	0.27	2.03	3,436	41	0.006	lb/hr
24.00	85.70	29.82	1.67	1.16	8.91	15,049	179	0.026	tpy

Maximum Controlled Emissions

NOx[3]	CO[3]	VOC[3]	SO_2[1]	PM[2]	HCHO[3]	CO_2[3]	CH_4	N_2O	
	90%	65%			90%				Control efficiency
5.48	1.96	2.38	0.38	0.27	0.20	3,436	41	0.006	lb/hr
24.00	8.57	10.44	1.67	1.16	0.89	15,049	179	0.026	tpy

Hexane[2]	Acetaldehyde[2]	Acrolein[2]	CO2e[4]	
1.11E-03	8.36E-03	5.14E-03		lb/MMBtu
0.03	0.22	0.14	4458.87	lb/hr
0.13	0.98	0.60	19529.8	tpy

[1] *Based on 5 gr / 100 scf, nominal pipeline natural gas fuel*

[2] *USEPA AP-42, Section 3.2-2*

[3] *Based on manufacturer's data*

[4] *40 CFR 98 emission factors. CH4 warming potential = 25. N2O warming potential = 298.*

Maljamar Gas Plant

Caterpillar G3516B

Emission Units:	32,33,34,35
Source Description:	Natural gas engine
Manufacturer:	Caterpillar
Model:	G3516B
Type	4-stroke, lean burn natural gas engine

	Maximum Rating	Site Rating at Maximum Inlet Air Temperature				
	100%	100%	75%	57%		
Rated hp	1380	1380	1035	690	hp	*Mfg data*
Heat Rate	7973	7973	8562	9155	Btu/hp-hr	*Mfg data*
Fuel heat value	996	996	996	996	Btu/scf	*HHV*
Heat Input	11.00	11.00	8.86	6.32	MMBtu/hr	*Heat Rate * hp*
Fuel consumption	11.05	11.05	8.90	6.34	Mscf/hr	*Heat input / fuel heat value*
Annual fuel usage	96.8	96.8	77.9	55.6	MMcf/yr	*8760 hrs/yr operation*
NOx	1.00	1.00	1.00	1.00	g/hp-hr	*Mfg. data*
CO	2.80	2.80	3.02	3.07	g/hp-hr	*Mfg. data*
NMNEHC (VOC)	0.78	0.78	0.77	0.74	g/hp-hr	*Mfg. data*
Formaldehyde	0.40	0.40	0.41	0.40	g/hp-hr	*Mfg. data*
CO_2	461	461	494	528	g/hp-hr	*Mfg. data*
CH_4	3.20	3.20	3.06	2.90	g/hp-hr	*Mfg. data*

Exhaust Parameters

Exhaust temp	990	990	952	1018	deg F	*Mfg data*
Stack diameter	1.50	1.50	1.50	1.50	ft	*Design*
Stack height	45	45	45	45	ft	*Design*
Exhaust flow	8,710	8,710	6,588	4,784	acfm	*Mfg data*
Stack velocity	82.1	82.1	62.1	45.1	ft/s	*Exhaust flow / stack area*

Emission Calculations

Maximum Uncontrolled Emissions

NOx[3]	CO[3]	VOC[3]	SO_2[1]	PM[2]	HCHO[3]	CO_2[3]	CH_4[4]	N_2O[4]	
			0.0143	9.99E-03				0.00022	lb/MMBtu
3.04	8.52	2.37	0.16	0.11	1.22	1,403	10	0.002	lb/hr
13.33	37.31	10.39	0.69	0.48	5.33	6,143	43	0.011	tpy

Maximum Controlled Emissions

NOx[3]	CO[3]	VOC[3]	SO_2[1]	PM[2]	HCHO[3]	CO_2[3]	CH_4[4]	N_2O[4]	
	90%	65%			90%				Control efficiency
3.04	0.85	0.83	0.16	0.11	0.12	1,403	10	0.002	lb/hr
13.33	3.73	3.64	0.69	0.48	0.53	6,143	43	0.011	tpy

Hexane[2]	Acetaldehyde[2]	Acrolein[2]	CO2e[4]	
1.11E-03	8.36E-03	5.14E-03		lb/MMBtu
0.01	0.09	0.06	1646.64	lb/hr
0.05	0.40	0.25	7212.27	tpy

[1] *Based on 5 gr / 100 scf, nominal pipeline natural gas fuel*

[2] *USEPA AP-42, Section 3.2-2*

[3] *Based on manufacturer's data*

[4] *40 CFR 98 emission factors. CH4 warming potential = 25. N2O warming potential = 298.*

Maljamar Gas Plant

Amine Regeneration Heater

Emission unit number(s):	37	(HT 25.11)	
Source description:	Natural gas fired heater		
Manufacturer:			

Fuel Consumption

Total input heat rate:	21.2	MMBtu/hr	
Fuel heat value:	996	Btu/scf	Pipeline specification
Max fuel rate:	0.02	MMscf/hr	Input heat rate / fuel heat value
Max annual fuel usage:	186.5	MMscf/yr	8760 hrs/yr operation

Exhaust Parameters

Exhaust temp	783	deg F	
Stack diameter	3.46	ft	
Stack height	30	ft	
Exhaust flow	7,793	acfm	
Stack velocity	13.8	ft/s	Exhaust flow / stack area

Emission Rates

Uncontrolled Emissions

NOx^1	CO^1	VOC^1	SO_2^2	CO_2^1	CH_4^1	N_2O^4	
0.100	0.125	0.00003	0.01	115.85	0.01	0.00022	lb/MMBtu
2.12	2.65	6.15E-04	0.30	2,456	0.11	0.005	lb/hr
9.29	11.61	2.69E-03	1.33	10,757	0.50	0.02	tpy

TSP^2	$PM\text{-}10^2$	$PM\text{-}2.5^2$	$CO2e^4$	
7.6	7.6	7.6		lb/MMscf
0.0075	0.0075	0.0075		lb/MMBtu
0.16	0.16	0.16	2460.2	lb/hr
0.69	0.69	0.69	10775.9	tpy

[1] *NOx, CO, VOC, CO2, and CH4 factors from previous application. PM from AP42, Section 1.4-2.*

[2] *5 gr S/100scf. SO_2 calculation assumes 100% converstion of fuel elemental sulfur to SO_2.*

[3] *40 CFR 98 emission factors. CH4 warming potential = 25. N2O warming potential = 298.*

Maljamar Gas Plant

Regeneration Heater

Emission unit number(s):	38	(HT 25.02)
Source description:	Natural gas fired heater	
Manufacturer:		

Fuel Consumption

Total input heat rate:	5.5	MMBtu/hr	
Fuel heat value:	996	Btu/scf	Pipeline specification
Max fuel rate:	0.006	MMscf/hr	Input heat rate / fuel heat value
Max annual fuel usage:	48.4	MMscf/yr	8760 hrs/yr operation

Exhaust Parameters

Exhaust temp	643	deg F	
Stack diameter	2.00	ft	
Stack height	20	ft	
Exhaust flow	2,916	acfm	
Stack velocity	15.5	ft/s	Exhaust flow / stack area

Emission Rates

Uncontrolled Emissions

NOx^1	CO^1	VOC^1	SO_2^2	CO_2^1	CH_4^1	N_2O^4	
0.100	0.125	0.00003	0.01	115.85	0.01	0.00022	lb/MMBtu
0.55	0.69	1.59E-04	0.04	637	0.04	0.001	lb/hr
2.41	3.01	6.99E-04	0.17	2,791	0.18	0.005	tpy

TSP^2	$PM\text{-}10^2$	$PM\text{-}2.5^2$	$CO2e^4$	
7.6	7.6	7.6		lb/MMscf
0.0075	0.0075	0.0075		lb/MMBtu
0.04	0.04	0.04	638.5	lb/hr
0.18	0.18	0.18	2796.8	tpy

[1] *NOx, CO, VOC, CO2, and CH4 factors from previous application. PM from AP42, Section 1.4-2.*

[2] *5 gr S/100scf. SO_2 calculation assumes 100% converstion of fuel elemental sulfur to SO_2.*

[3] *40 CFR 98 emission factors. CH4 warming potential = 25. N2O warming potential = 298.*

Maljamar Gas Plant

Regeneration Heater

Emission unit number(s):	41		
Source description:	Natural gas fired heater		
Manufacturer:	Devco		

Fuel Consumption

Total input heat rate:	9.35	MMBtu/hr	
Fuel heat value:	996	Btu/scf	Pipeline specification
Max fuel rate:	0.009	MMscf/hr	Input heat rate / fuel heat value
Max annual fuel usage:	82.2	MMscf/yr	8760 hrs/yr operation

Exhaust Parameters

Exhaust temp	783	deg F	
Stack diameter	0.96	ft	
Stack height	20	ft	
Exhaust flow	4,506	acfm	
Stack velocity	90.9	ft/s	Exhaust flow / stack area

Emission Rates

Uncontrolled Emissions

NOx^1	CO^1	VOC^1	SO_2^2	CO_2^1	CH_4^1	N_2O^4	
0.100	0.125	0.00003	0.01	115.85	0.01	0.00022	lb/MMBtu
0.94	1.17	0.00	0.07	1,083	0.07	0.002	lb/hr
4.10	5.12	0.0012	0.29	4,744	0.30	0.009	tpy

TSP^2	$PM\text{-}10^2$	$PM\text{-}2.5^2$	$CO2e^4$	$Hexane^1$	
7.6	7.6	7.6		1.80000	lb/MMscf
0.0075	0.0075	0.0075		0.002	lb/MMBtu
0.07	0.07	0.07	1085.5	0.008	lb/hr
0.31	0.31	0.31	4754.6	0.03	tpy

[1] *NOx, CO, VOC, CO2, and CH4 factors from previous application. PM from AP42, Section 1.4-2.*

[2] *5 gr S/100scf. SO_2 calculation assumes 100% converstion of fuel elemental sulfur to SO_2.*

[3] *40 CFR 98 emission factors. CH4 warming potential = 25. N2O warming potential = 298.*

Maljamar Gas Plant

Pressure-relief Valve Emergency Flare

Emission Unit: 43

Fuel Data

Flare Pilot	500	scf/hr	Design
and Purge Gas	0.0005	MMscf/hr	
	996.00	Btu/scf	Pipeline Gas, HHV
	0.50	MMBtu/hr	
	4.38	MMscf/yr	

Stack Parameters

	1000	°C	Exhaust temperature
	20	m/sec	Exhaust velocity
	50.0000	ft	Flare height

Pilot

16.04	g/mol	Fuel gas molecular weight	Mol. wt. of methane, the dominant species
34,860	cal/sec	Heat release (q)	MMBtu/hr * 10^6 * 252 cal/Btu ÷ 3600 sec/hr
28,159		q_n	$q_n = q(1\text{-}0.048(MW)^{1/2})$
0.1678	m	Effective stack diameter (D)	$D = (10^{-6}q_n)^{1/2}$

Emission Rates

Pilot

NOx	CO	VOC	H_2S	SO_2	Units	
0.1380	0.2755				lb/MMBtu	TNRCC RG-109 (high Btu; other)
			4E-04		lb H_2S/Mscf	Purchased sweet natural gas fuel, 0.25 gr H_2S/100scf
			1.79E-04		lb H_2S/hr	H_2S rate * fuel usage
				7E-03	lb S/Mscf	Purchased sweet natural gas fuel, 5 gr S/100scf
				4E-03	lb SO_2/hr*	SO_2 rate * fuel usage
		0.00%			mol%	Assume no VOC content in purchased fuel (methane)
		23.7			ft^3/lb	Specific volume (methane)
		0.00			lb/hr	vol. Gas * mole fraction / specific volume
100%	100%	100%	100%	100%	%	Safety Factor
0.2760	0.5510				lb/MMBtu	Unit emission rate with Safety Factor
0.14	**0.27**				lb/hr	lb/MMBtu * MMBtu/hr
		0.000	**7.1E-06**	**7.2E-03**	lb/hr	98% combustion H_2S; 100% conversion to SO_2
0.60	**1.20**	**0.000**	**3.1E-05**	**3.1E-02**	tpy	8760 hrs/yr

Hose Disconnect Fugitive Emissions

Source ID	Material Transferred	Loading or Unloading	Loading Arm Diameter (in)	Soft Hose Length (ft)	Loading Arm Pipe Length (ft)	Arm Overpressure (psig)	Depressurived Volume[1] (ft^3/truck)	Gas Molecular Weight (lb/lb-mole)	True Vapor Pressure (psia)	Annual Throughput (gal/yr)	Fugitive Emissions (lb/truck)	Annual VOC Emissions[2] (tpy)
Loadout	Condensate	Loading	4	6	10	1	0.62	50	5.3	15,330,000	0.03	0.03

[1] The hose will be capped as soon as it is disconnected from the truck or railcar. It is assumed, all of the vapor from the soft hose is released (worst case emissions) and all of the vapor from the pipe above atmospheric pressure (14.7 psia) or gauge pressure. The vapor area released is calculated by taking the volume of the hose and piping multiplied by the pressure fraction released. The entire volume of the hose is assumed to be released, but only the presssure above atmospheric or gauge pressure of the pipe.

Ex. (Diameter^2 x Pi ÷ 4) x [Hose length x (psia ÷ 14.7 psi) + Pipe length x (psig ÷ 14.7 psi)]

[2] Annual emissions are based on the annual throughput and the number of trucks necessary to deliver the annual amount of material. The number of trucks is based on the truck capacity of each (i.e., 8,000 gallons)

Sample Calculation

Depressurized Volume:

$$\frac{8.73\text{E-}02 \text{ square ft}}{} \left| \frac{6 \text{ ft}}{} \right| \frac{(1 \text{ psig} + 14.7 \text{ psia})}{14.7 \text{ psia}} + \frac{10 \text{ ft}}{} \left| \frac{1 \text{ psig}}{14.7 \text{ psia}} \right. = \frac{0.62 \text{ cubic ft}}{\text{truck}}$$

Unloading Emissions:

$$\frac{0.62 \text{ cubic ft}}{\text{truck}} \left| \frac{\text{lb-mol}}{379.41 \text{ cubic ft}} \right| \frac{50 \text{ lb}}{\text{lb-mol}} \left| \frac{5.31 \text{ psia}}{} \right| \frac{}{14.7 \text{ psia}} = \frac{2.95\text{E-}02 \text{ lb}}{\text{truck}}$$

Annual Emission:

$$\frac{2.95\text{E-}02 \text{ lb}}{\text{truck}} \left| \frac{15{,}330{,}000 \text{ gal}}{\text{yr}} \right| \frac{\text{truck}}{8000 \text{ gal}} \left| \frac{\text{ton}}{2000 \text{ lb}} \right. = \frac{0.03 \text{ ton}}{\text{yr}}$$

Frontier Energy Services, L.L.C. - Maljamar Gas Plant

Fugitive Emissions

Total of Existing and Project	13.30	lb/hr VOC
	58.23	tpy VOC

I. Existing 60 MMSCFD Process — **Potential to Emit**

Component	Number[1]	THC Emission[2] lb/hr-Component	VOC %	Reduction Allowed %	Total VOC Emission lb/hr	TPY
V alves - Inlet gas	763	0.00992	24.89%	0	1.8841	8.25
Valves- Light Liquid	1421	0.0055	64.42%	0	5.0347	22.05
Valves- Propane Liquid	156	0.0055	100.00%	0	0.8580	3.76
Valves- Propane gas	160	0.00992	100.00%	0	1.5872	6.95
Valves- Methanol Liquid	73	0.0055	100.00%		0.4015	1.76
	Emergency Flare (High Pressure)					
Relief Valves- Inlet gas	35	0.0194	24.89%	0	0.1690	0.74
Relief valves- Propane Gas	18	0.0194	100.00%	0	0.3492	1.53
Flanges- Inlet Gas	2099	0.00086	24.89%	0	0.4494	1.97
Flanges - Light Liquid	3908	0.000243	64.42%	0	0.6118	2.68
Flanges - Propane Liquid	430	0.000243	100.00%	0	0.1045	0.46
Flanges - Propane gas	439	0.00086	100.00%	0	0.3775	1.65
Flanges - Methanol Liquid	200	0.000243	100.00%	0	0.0486	0.21
Compressor Seals -Propane Gas	4	0.0194	100.00%	0	0.0776	0.34
Pump seals- light liquid	30	0.02866	64.42%	0	0.5539	2.43
Pump seals- propane liquid	1	0.02866	100.00%		0.0287	0.13
				Subtotal Fugitive VOC=	**12.54**	**54.91**

II. 20 MMscfd TEG Dehydration Unit

Valves - Inlet gas	50	0.00992	24.89%	0	0.1235	0.54
Valves - Light Liquid	40	0.0055	64.42%	0	0.1417	0.62
Flanges - Inlet Gas	80	0.0086	24.89%	0	0.1713	0.75
Threaded Connections	75	0.000604	24.89%	0	0.0113	0.05
				Subtotal Fugitive VOC=	**0.45**	**1.96**
				Total Permitted Fugitive VOC	**12.98**	**56.87**

III. NSPS KKK Portion of Plant

	Component Count[1]	THC Emission[2] lb/hr-Component	VOC[1] %	Reduction Allowed[3] %	Total VOC Emissions lb/hr	tons
V alves - Wet gas	361	0.00992	22.27%	96%	0.03	0.14
V alves - Dry gas	190	0.00992	12.80%	96%	0.01	0.04
Valves- Propane gas	38	0.00992	100.00%	96%	0.02	0.07
Valves- Light Liquid	63	0.00550	61.41%	95%	0.01	0.05
Relief Valves- Wet gas	77	0.0194	22.27%	96%	0.01	0.06
Relief Valves - Dry gas	30	0.0194	12.80%	96%	0.003	0.01
Relief Valves- Propane gas	10	0.0194	100.00%	96%	0.01	0.03
Relief Valves- Light Liquid	7	0.0194	61.41%	95%	0.004	0.02
Flanges / Connectors- Wet gas	2481	0.000860	22.27%	81%	0.09	0.40
Flanges / Connectors- Dry gas	1163	0.000860	12.80%	81%	0.02	0.11
Flanges / Connectors- Propane gas	305	0.000860	100.00%	81%	0.05	0.22
Flanges / Connectors- Light Liquid	447	0.000243	61.41%	81%	0.01	0.06
Compressor seals- Wet gas	6	0.0194	22.27%	81%	0.005	0.02
Compressor seals - Dry gas	7	0.0194	12.80%	81%	0.003	0.01
Compressor seals- Propane gas	5	0.0194	100.00%	81%	0.02	0.08
Compressor seals- Light Liquid	0	0.0194	61.41%	81%	0.00	0.00
Pump seals- Light liquid	6	0.02866	61.41%	88%	0.01	0.06
				Total Project Fugitive VOC=	**0.31**	**1.37**

1 Information provided by email from D. Feather (9/06/2011) - "Latest Permit Applications Maljamar Gas Plant (Expansion Project)".

2 EPA Protocol for Equipment Leak and Emission Estimates (EPA-453/R-95-017, Nov. 1995), Table 2-4. Converted to English units.

3 EPA "Leak Detection and Repair A Best Practices Guide", Table 4.1, Refinery, 500 ppm Leak Definition.

COMPONENTS AND NET VOC, CO_2 and H_2S FUGITIVE EMISSIONS BY UNIT / SERVICE / COMPONENT
Aka Energy, Maljamar Gas Plant

Number of Components [1]

	Gas				Water / Oil			
Unit	Valves	Compressors	Others	Flanges	Valves	Pumps	Others	Flanges
AGI Compression and Injection	27	2	32	150	0	0	0	0
Sour Water	28	0	10	110	24	4	0	42
Acid Gas Flare (components only)	10	0	5	23	0	0	0	0
Totals	65	2	47	283	24	4	0	42
Emission Factor (lb/hr/component)	1.0E-02	1.9E-02	1.9E-02	8.6E-04	2.2E-04	5.3E-05	3.1E-02	6.4E-06

Emission by Unit / Service / Component, lbs/hr

									Composition [2]											
									VOC			CO_2			CO_2e			H_2S		
	Gas				Water / Oil				fraction	lb/hr	tpy	fraction	lb/hr	tpy	fraction	lb/hr	tpy	fraction	lb/hr	tpy
Unit	Valves	Compressors	Others	Flanges	Valves	Pumps	Others	Flanges												
AGI Compression and Injection	0.2691	0.0387	0.6195	0.1287					0.18	0.19	0.83	0.87	0.92	4.04	0.04	0.87	3.80	0.09	0.09	0.40
Sour Water	0.2790		0.1936	0.0944	0.0052	0.0002		0.0003	0.00	0.00	0.00	0.01	0.01	0.03	0.01	0.12	0.53	0.01	0.01	0.03
Acid Gas Flare (components only)	0.0997		0.0968	0.0197					0.18	0.04	0.17	0.87	0.19	0.83	0.04	0.18	0.78	0.09	0.02	0.08
Total Service / Component (lb/hr)	0.6478	0.0387	0.9099	0.2428	0.0052	0.0002		0.0003		0.23	1.00		1.12	4.89		1.16	5.10		0.12	0.51

[1] Component counts based on process flow diagram provided by Aka Energy (8/3/11, DWG NO. 2405)

[2] Composition based on Aka Emission Calculations

Aka - Malmajar Gas Plant

Acid Gas Composition

Emission Unit: 17

Component	MW	Mol%	MW * wet vol %	Mass Fraction (wet)	Spec. Volume ft^3/lb
Water	18.02	0.00%	0.0000	0.00%	21.06
Nitrogen	28.01	0.01%	0.0028	0.01%	13.547
Argon/Oxygen	31.99	0.00%	0.0000	0.00%	13.5
CO_2	44.01	87.35%	38.4427	91.42%	8.623
H_2S	34.08	8.74%	2.9788	7.08%	11.136
C1	16.04	3.89%	0.6241	1.48%	23.65
C2	30.07	0.01%	0.0030	0.01%	12.62
C3	44.10	0.00%	0.0000	0.00%	8.606
C4	58.12	0.00%	0.0000	0.00%	6.529
C5	58.12	0.00%	0.0000	0.00%	6.529
C6	86.18	0.00%	0.0000	0.00%	4.404
Total		100%	42.05	100%	

Frontier Field Services, LLC
Maljamar Gas Plant

Unit Number	44	
Source Description	Propane Refrigeration Engine	
Engine Make	Caterpillar	
Engine Model	G3512B	
Serial Number		
Manufacture Date		
Ignition Type	4SLB	
Net Output Power	1,035	hp
Fuel Consumption	8,183	Btu/hp-hr
Heating Value	996	Btu/Scf
Hourly Fuel Usage	8.50	Mscf/hr
Annual Fuel Usage	74.49	MMscf/yr
Hours of Operation	8,760	hours
Stack Height	22.7	ft
Stack Diameter	1	ft
Exit Velocity	143.00	ft/s
Stack Temperature	680.00	°F

Example Calculations

1. lb/hr NO_x = (lb/MMBtu * hp * Btu/hp-hr) / 1,000,000 Btu/MMBtu)
2. tpy NO_x = (lb/hr NO_x) * hrs / 2,000 lbs/ton

Potential Emissions

Pollutant	Pre-Control Emission Factor (g/bhp-hr)	Control Efficiency	Post-Control Emission Factor (lb/MMBtu)	Estimated Emissions (lb/hr)	Estimated Emissions (tpy)	Source of Emission Factor
NO_X	0.50	--	0.1347	1.14	4.99	Vendor Data
CO [1]	2.24	93.0%	0.0422	0.36	1.58	Vendor Data
Total VOC [2]	0.49	52.0%	0.0634	0.54	2.37	Vendor Data
PM [3]	--	--	0.0099	0.08	0.35	AP-42 Table 3.2-2
SO_2 [4]	--	--	0.0147	0.12	0.53	AP-42 Table 3.2-2 (adjusted)
Formaldehyde [5]	0.52	93.0%	0.0098	0.08	0.35	Vendor Data
Benzene	--	--	4.40E-04	4.00E-03	0.02	AP-42 Table 3.2-2
Acetaldehyde	--	--	0.0084	0.07	0.31	AP-42 Table 3.2-2
Acrolein	--	--	0.0051	0.04	0.18	AP-42 Table 3.2-2
N_2O	--	--	0.0002	2.00E-03	0.01	40 CFR Part 98, Subpart C
CH_4	--	--	0.0022	0.02	0.09	40 CFR Part 98, Subpart C
CO_2	--	--	116.9761	990.72	4,339.35	40 CFR Part 98, Subpart C
CO_2e	--	--	--	991.82	4,344.17	--

[1] Vendor data indicates that the catalytic oxidizer controls CO by 93%

[2] Emission factor from vendor for NMNEHC is 0.49 g/HP-hr. Vendor data indicates that the catalytic oxidizer controls VOC by 52%.

[3] For purposes of these calculations, PM = PM_{10} = $PM_{2.5}$.

[4] SO_2 emission factor based on AP-42 Table 3.2-2 and adjusted based on 5.0 gr S per 100 scf of natural gas.

[5] Vendor data indicates that the catalytic oxidizer controls formaldehyde emissions by 93%.

Frontier Field Services, LLC
Maljamar Gas Plant

Unit Number: FUG
Source Description: Fugitive Emissions

Component Type	Actual Component Count	Component Count [1]	Service Type	Factor [2] (lb/hr/comp)	Total (lbs/hr)	Total (tpy)	VOC (wt%) [3]	VOC (lbs/hr)	VOC (tpy)	HAPs (wt%) [3]	HAPs (lbs/hr)	HAPs (tpy)	CH_4 (lbs/hr)	CH_4 (tpy)	CO_2 (lbs/hr)	CO_2 (tpy)	CO_2 e [4] (lbs/hr)	CO_2 e [4] (tpy)
VALVE	23	26	Gas	9.92E-03	0.22	0.98	27.13%	0.06	0.27	2.94%	6.58E-03	0.03	0.21	0.94	0.004	0.015	5.37	23.52
CONNECTORS	138	159	Gas	4.41E-04	0.06	0.27	27.13%	0.02	0.07	2.94%	1.81E-03	0.01	0.06	0.26	0.001	0.004	1.48	6.50
FLANGES	28	32	Gas	8.60E-04	0.02	0.11	27.13%	0.01	0.03	2.94%	7.39E-04	0.00	0.03	0.11	0.000	0.002	0.63	2.75
OTHERS	3	3	Gas	1.94E-02	0.06	0.26	27.13%	0.02	0.07	2.94%	1.75E-03	7.65E-03	0.06	0.25	0.001	0.004	1.43	6.25
Total		**220**	**-**	**-**	**0.37**	**1.62**	**-**	**0.10**	**0.44**	**-**	**0.01**	**0.05**	**0.36**	**1.56**	**0.01**	**0.03**	**8.91**	**39.02**

[1] The component count used for the emission estimates conservatively adds a 15% safety factor from actual component counts.

[2] Emission Factors from EPA-453/R-95-17, Protocol for Equipment Leak Emission Estimates, Table 2-4, (11/95)

[3] Gas VOC and HAPs weight percent is based on an inlet gas sample.

[4] Assumes 95.87 wt% CH_4, and 1.58 wt% CO_2

FUG Emissions	VOC (lbs/hr)	VOC (tpy)
Current Allowable	13.52	59.20
Project	0.10	0.44
Proposed Allowable	13.62	59.64

Frontier Field Services, LLC
Maljamar Gas Plant

Maljamar Gas Plant Inlet Gas Analysis

Natural Gas Analysis

Heating Value (Btu/scf) 996.0

Pollutant	Molecular Weight (lb/lbmol)	Percent by Volume (Mole %)	Gas Weight (lb/lbmol)	Percent by Weight (Wt %)	Percent by Weight (Wt %)[2]
Methane	16.04	71.392%	11.4513	50.784%	54.216%
Ethane	30.07	13.101%	3.9395	17.471%	18.652%
Total HC (Non-VOC)		***84.49%***		***68.25%***	***72.87%***
Propane	44.10	6.431%	2.836	12.577%	13.427%
i-Butane	58.12	0.768%	0.446	1.980%	2.113%
n-Butane	58.12	1.922%	1.117	4.954%	5.289%
i-Pentane	72.15	0.492%	0.355	1.574%	1.681%
n-Pentane	72.15	0.492%	0.355	1.574%	1.681%
n-Hexane	86.18	0.721%	0.621	2.756%	2.942%
Total NMNE VOC		***10.826%***		***25.41%***	***27.13%***
Total HAPs		***0.721%***		***2.76%***	***2.94%***
Carbon Dioxide	44.01	1.426%	62.758%	2.783%	-
Nitrogen	28.02	2.855%	79.997%	3.548%	-
	Totals	**100%**	**22.55**	**100.00%**	**100.00%**

[1] Based on inlet gas sample L.P. Inlet, test no. 21798.

[2] Percentage is normalized for Total Organic Compounds for use with Fugitive emission factors only. Fugitive emission factors are in units of lb/hr TOC per component.

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.

Information used to determine emissions are represented in this section as they were represented in the most current NSR application.

Engines

- NO_X, CO, and VOC emission factors are from manufacturer specifications;
- Oxidation catalyst control efficiency is from manufacturer specification;
- TSP, PM10, PM2.5, and formaldehyde were calculated using AP-42 Table 3.2-2 emission factors
- For these estimates, it is assumed PM = PM_{10} = $PM_{2.5}$;
- SO_2 emission factor based on AP-42 Table 3.2-2 and adjusted based on 5.0 gr S per 100 scf of natural gas;
- CO_2e emissions were estimated using 40 CFR 98, Subpart C.

Fugitives

- Emission factors in the USEPA "Protocol for Equipment Leak Emission Estimates" for oil and gas production operations, 11/95 (EPA-453/R-95-017), Table 2-4, Page 2-15; and
- The percentage of each component in the inlet gas (per the representative inlet gas analysis from the Maljamar Gas Plant)

Heaters (Unit 12, 13, 14, 37, 38, 41)

- AP-42 Section 1.4-1 and 1.4-2
- SO_2 emissions were calculated based on the units' fuel consumption and a maximum sulfur content of five grains per 100 standard cubic feet (5gr/100 scf). GHG emissions were calculated using 40 CFR Subpart C Tier 1.

Flares (Unit 17, 18, 19, 31)

Pilot emissions

- TNRCC flare emission factors
- H_2S is calculated using the standard for purchased sweet natural gas fuel of 0.25 gr H_2S per 100 scf and 98% combustion.
- SO_2 is calculated using a fuel sulfur content of 5 gr sulfur as H_2S per 100 scf in sweet fuel and assumed 100% combustion of H_2S to SO2.

SSM Emissions (Unit SSM)

- Units 17, 18, and 19 are based on emission factors from TNRCC RG-109 (high btu, other).
- VOCs are calculated using gas analysis and the assumption of 98% destruction of VOCs.

- H2S is calculated using gas analysis with an assumed 98% combustion of H_2S. Conversion of H_2S to SO_2 was assumed 100%.

Skimmer Tank (Unit 29)

- TANKS version 4.09d

MANLEY GAS TESTING, INC.
P.O. DRAWER 193 ODESSA, TEXAS 79760
OFFICE(432)367-3024 FAX(432)367-1166 E-MAIL: MANLEYGAST@AOL.COM

CHARGE..... 150 - 0
REC. NO. 15
TEST NUMBER.. 21798

DATE SAMPLED..... 12-16-19
DATE RUN..... 12-19-19
EFFEC. DATE..... 12-01-19

STATION NO. ... 06012021

PRODUCER ..... DURANGO MIDSTREAM

SAMPLE NAME.... L.P. INLET TYPE: COMPOSITE

RECEIVED FROM.. FRONTIER FIELD SERVICES LLC - MALJAMAR

FLOWING PRESSURE ..... 28.0 PSIA FLOWING TEMPERATURE ..... 61 F

SAMPLED BY: JT CYLINDER NO. ...

FRACTIONAL ANALYSIS
CALCULATED @ 14.650 PSIA AND 60F

	MOL%	GPM (REAL)
HYDROGEN SULFIDE...	0.400	
NITROGEN.....	2.855	
CARBON DIOXIDE.....	1.426	
METHANE.....	71.392	
ETHANE.....	13.101	3.498
PROPANE.....	6.431	1.769
ISO-BUTANE.....	0.768	0.251
NOR-BUTANE.....	1.922	0.604
ISO-PENTANE.....	0.492	0.180
NOR-PENTANE.....	0.492	0.178
HEXANES +.....	0.721	0.315
TOTALS	100.000	6.795

H2S PPMV = 4000

'Z' FACTOR (DRY) = 0.9960
'Z' FACTOR (WET) = 0.9956

CALC. MOL. WT. = 22.73

..CALCULATED SPECIFIC GRAVITIES..

REAL, DRY 0.7878

REAL, WET 0.7853

..CALCULATED GROSS HEATING VALUES..

BTU/CF - REAL, DRY 1280

BTU/CF - REAL, WET 1259

DISTRIBUTION AND REMARKS:

N

ANALYZED BY: MW
** R **

APPROVED:

TABLE 2-4. OIL AND GAS PRODUCTION OPERATIONS AVERAGE EMISSION FACTORS (kg/hr/source)

Equipment Type	Service[a]	Emission Factor (kg/hr/source)[b]
Valves	Gas	4.5E-03
	Heavy Oil	8.4E-06
	Light Oil	2.5E-03
	Water/Oil	9.8E-05
Pump seals	Gas	2.4E-03
	Heavy Oil	NA
	Light Oil	1.3E-02
	Water/Oil	2.4E-05
Others[c]	Gas	8.8E-03
	Heavy Oil	3.2E-05
	Light Oil	7.5E-03
	Water/Oil	1.4E-02
Connectors	Gas	2.0E-04
	Heavy Oil	7.5E-06
	Light Oil	2.1E-04
	Water/Oil	1.1E-04
Flanges	Gas	3.9E-04
	Heavy Oil	3.9E-07
	Light Oil	1.1E-04
	Water/Oil	2.9E-06
Open-ended lines	Gas	2.0E-03
	Heavy Oil	1.4E-04
	Light Oil	1.4E-03
	Water/Oil	2.5E-04

[a]Water/Oil emission factors apply to water streams in oil service with a water content greater than 50%, from the point of origin to the point where the water content reaches 99%. For water streams with a water content greater than 99%, the emission rate is considered negligible.

[b]These factors are for total organic compound emission rates (including non-VOC's such as methane and ethane) and apply to light crude, heavy crude, gas plant, gas production, and off shore facilities. "NA" indicates that not enough data were available to develop the indicated emission factor.

[c]The "other" equipment type was derived from compressors, diaphrams, drains, dump arms, hatches, instruments, meters, pressure relief valves, polished rods, relief valves, and vents. This "other" equipment type should be applied for any equipment type other than connectors, flanges, open-ended lines, pumps, or valves.

G3612

CATERPILLAR®

GAS ENGINE SITE SPECIFIC TECHNICAL DATA
Aka Energy Group, LLC
Maljamar

GAS COMPRESSION APPLICATION

ENGINE SPEED (rpm):	1000	FUEL SYSTEM:	GAV WITH AIR FUEL RATIO CONTROL
COMPRESSION RATIO:	9:1		
AFTERCOOLER WATER INLET (°F):	130	**SITE CONDITIONS:**	
JACKET WATER OUTLET (°F):	190	FUEL:	Nat Gas
ASPIRATION:	TA	FUEL PRESSURE RANGE(psig):	42.8-47.0
COOLING SYSTEM:	JW, OC+AC	FUEL METHANE NUMBER:	84.8
IGNITION SYSTEM:	CIS/ADEM3	FUEL LHV (Btu/scf):	905
EXHAUST MANIFOLD:	DRY	ALTITUDE(ft):	4010
COMBUSTION:	Low Emission	MAXIMUM INLET AIR TEMPERATURE(°F):	110
NOx EMISSION LEVEL (g/bhp-hr NOx):	0.7	STANDARD RATED POWER:	3550 bhp@1000rpm

				MAXIMUM RATING	SITE RATING AT MAXIMUM INLET AIR TEMPERATURE		
RATING		**NOTES**	**LOAD**	**100%**	**100%**	**75%**	**57%**
ENGINE POWER	(WITHOUT FAN)	(1)	bhp	3550	3109	2331	1775
INLET AIR TEMPERATURE			°F	87	110	110	110
ENGINE DATA							
FUEL CONSUMPTION (LHV)		(2)	Btu/bhp-hr	6761	6905	7274	7650
FUEL CONSUMPTION (HHV)		(2)	Btu/bhp-hr	7500	7660	8069	8486
AIR FLOW (77°F, 14.7 psia)	(WET)	(3)(4)	scfm	9098	8045	6158	4776
AIR FLOW	(WET)	(3)(4)	lb/hr	40341	35673	27305	21175
INLET MANIFOLD PRESSURE		(5)	in Hg(abs)	71.7	63.7	49.1	38.2
EXHAUST TEMPERATURE - ENGINE OUTLET		(6)	°F	858	877	915	946
EXHAUST GAS FLOW (@engine outlet temp, 14.5 psia)	(WET)	(7)(4)	ft3/min	23806	21364	16843	13383
EXHAUST GAS MASS FLOW	(WET)	(7)(4)	lb/hr	41553	36756	28161	21861
EMISSIONS DATA - ENGINE OUT							
NOx (as NO2)		(8)(9)	g/bhp-hr	0.70	0.70	0.70	0.70
CO		(8)(9)	g/bhp-hr	2.50	2.50	2.49	2.50
THC (mol. wt. of 15.84)		(8)(9)	g/bhp-hr	6.14	6.22	6.36	6.50
NMHC (mol. wt. of 15.84)		(8)(9)	g/bhp-hr	0.92	0.93	0.95	0.97
NMNEHC (VOCs) (mol. wt. of 15.84)		(8)(9)(10)	g/bhp-hr	0.61	0.62	0.64	0.65
HCHO (Formaldehyde)		(8)(9)	g/bhp-hr	0.26	0.27	0.29	0.31
CO2		(8)(9)	g/bhp-hr	439	448	471	497
EXHAUST OXYGEN		(8)(11)	% DRY	12.5	12.2	11.4	10.7
HEAT REJECTION							
HEAT REJ. TO JACKET WATER (JW)		(12)	Btu/min	36378	34359	31794	29206
HEAT REJ. TO ATMOSPHERE		(12)	Btu/min	14001	13767	13243	12447
HEAT REJ. TO LUBE OIL (OC)		(12)	Btu/min	18002	17879	17655	16974
HEAT REJ. TO AFTERCOOLER (AC)		(12)(13)	Btu/min	40530	40530	13513	3023
COOLING SYSTEM SIZING CRITERIA							
TOTAL JACKET WATER CIRCUIT (JW)		(14)	Btu/min	40016			
TOTAL AFTERCOOLER CIRCUIT (OC+AC)		(13)(14)	Btu/min	64158			
A cooling system safety factor of 0% 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. Max. rating is the maximum capability 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.

PREPARED BY: John Sostmann, Exterran
Data generated by Gas Engine Rating Pro Version 4.01.00
Ref. Data Set DM5310-07-001, Printed 11Jan2012

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 for total flow rate with a tolerance of ±6%. Exhaust gas vented through the wastegate flows only to the right exhaust outlet. The total flow through the wastegate may be as great as 15% of the total value for conditions under which the wastegate is open. For installations that use dual exhaust runs this difference must be taken into account when specifying any items to be connected to the exhaust outlets. The flow in the right exhaust outlet must be sized for at least 65% of the total flow to allow for the wastegate full open condition, while the left outlet must be sized for 50% of the total flow for the wastegate closed condition. Both runs must meet the allowable backpressure requirement as described in the Exhaust Systems A&I Guide.

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 tolerances.

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:	84.8
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
Specific Heat Constant (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.

G3516B

GAS COMPRESSION APPLICATION

GAS ENGINE SITE SPECIFIC TECHNICAL DATA
Maljamar Expansion

CATERPILLAR®

ENGINE SPEED (rpm):	1400	FUEL SYSTEM:	CAT WIDE RANGE WITH AIR FUEL RATIO CONTROL
COMPRESSION RATIO:	8:1		
AFTERCOOLER - STAGE 2 INLET (°F):	130	**SITE CONDITIONS:**	
AFTERCOOLER - STAGE 1 INLET (°F):	201	FUEL:	mal fuel
JACKET WATER OUTLET (°F):	210	FUEL PRESSURE RANGE(psig):	7.0-50.0
ASPIRATION:	TA	FUEL METHANE NUMBER:	91.0
COOLING SYSTEM:	JW+OC+1AC, 2AC	FUEL LHV (Btu/scf):	880
IGNITION SYSTEM:	ADEM3	ALTITUDE(ft):	4010
EXHAUST MANIFOLD:	DRY	MAXIMUM INLET AIR TEMPERATURE(°F):	77
COMBUSTION:	Ultra Lean Burn	STANDARD RATED POWER:	1380 bhp@1400rpm
NOx EMISSION LEVEL (g/bhp-hr NOx):	1.0		
SET POINT TIMING:	30		

			MAXIMUM RATING	SITE RATING AT MAXIMUM INLET AIR TEMPERATURE		
RATING	**NOTES**	**LOAD**	**100%**	**100%**	**75%**	**50%**
ENGINE POWER (WITHOUT FAN)	(1)	bhp	1380	1380	1035	690
INLET AIR TEMPERATURE		°F	77	77	77	77
ENGINE DATA						
FUEL CONSUMPTION (LHV)	(2)	Btu/bhp-hr	7187	7187	7717	8252
FUEL CONSUMPTION (HHV)	(2)	Btu/bhp-hr	7973	7973	8562	9155
AIR FLOW (77°F, 14.7 psia) (WET)	(3)(4)	scfm	2985	2985	2314	1602
AIR FLOW (WET)	(3)(4)	lb/hr	13236	13236	10259	7102
INLET MANIFOLD PRESSURE	(5)	in Hg(abs)	90.7	90.7	73.2	52.1
EXHAUST TEMPERATURE - ENGINE OUTLET	(6)	°F	990	990	952	1018
EXHAUST GAS FLOW (@engine outlet temp, 14.5 psia) (WET)	(7)(4)	ft3/min	8710	8710	6588	4784
EXHAUST GAS MASS FLOW (WET)	(7)(4)	lb/hr	13741	13741	10667	7392
EMISSIONS DATA - ENGINE OUT						
NOx (as NO2)	(8)(9)	g/bhp-hr	1.00	1.00	1.00	1.00
CO	(8)(9)	g/bhp-hr	2.80	2.80	3.02	3.27
THC (mol. wt. of 15.84)	(8)(9)	g/bhp-hr	3.77	3.77	3.60	3.41
NMHC (mol. wt. of 15.84)	(8)(9)	g/bhp-hr	0.57	0.57	0.54	0.51
NMNEHC (VOCs) (mol. wt. of 15.84)	(8)(9)(10)	g/bhp-hr	0.38	0.38	0.36	0.34
HCHO (Formaldehyde)	(8)(9)	g/bhp-hr	0.40	0.40	0.41	0.40
CO2	(8)(9)	g/bhp-hr	461	461	494	528
EXHAUST OXYGEN	(8)(11)	% DRY	8.7	8.7	8.2	7.6
HEAT REJECTION						
HEAT REJ. TO JACKET WATER (JW)	(12)	Btu/min	23892	23892	24613	20270
HEAT REJ. TO ATMOSPHERE	(12)	Btu/min	6110	6110	5092	4074
HEAT REJ. TO LUBE OIL (OC)	(12)	Btu/min	4475	4475	3978	3363
HEAT REJ. TO A/C - STAGE 1 (1AC)	(12)(13)	Btu/min	11020	11020	9363	3278
HEAT REJ. TO A/C - STAGE 2 (2AC)	(12)(13)	Btu/min	4569	4569	4377	2993

COOLING SYSTEM SIZING CRITERIA			
TOTAL JACKET WATER CIRCUIT (JW+OC+1AC)	(13)(14)	Btu/min	43222
TOTAL AFTERCOOLER CIRCUIT (2AC)	(13)(14)	Btu/min	4797
A cooling system safety factor of 0% 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. Max. rating is the maximum capability 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.

NOTES

1. Engine rating is with two engine driven water pumps. Tolerance is ± 3% of full load.

2. Fuel consumption tolerance is ± 3.0% 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 tolerances.

Constituent	Abbrev	Mole %	Norm
Water Vapor	H2O	0.0000	0.0000
Methane	CH4	92.0100	92.0100
Ethane	C2H6	2.4700	2.4700
Propane	C3H8	0.0300	0.0300
Isobutane	iso-C4H1O	0.0100	0.0100
Norbutane	nor-C4H1O	0.0000	0.0000
Isopentane	iso-C5H12	0.0000	0.0000
Norpentane	nor-C5H12	0.0000	0.0000
Hexane	C6H14	0.0000	0.0000
Heptane	C7H16	0.0000	0.0000
Nitrogen	N2	5.4100	5.4100
Carbon Dioxide	CO2	0.0700	0.0700
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:	mal fuel
Unit of Measure:	English

Calculated Fuel Properties

Caterpillar Methane Number:	91.0
Lower Heating Value (Btu/scf):	880
Higher Heating Value (Btu/scf):	976
WOBBE Index (Btu/scf):	1146
THC: Free Inert Ratio:	17.25
Total % Inerts (% N2, CO2, He):	5.48%
RPC (%) (To 905 Btu/scf Fuel):	100%
Compressibility Factor:	0.998
Stoich A/F Ratio (Vol/Vol):	9.19
Stoich A/F Ratio (Mass/Mass):	15.59
Specific Gravity (Relative to Air):	0.589
Specific Heat Constant (K):	1.316

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.

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 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. 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 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 3.2-3. 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

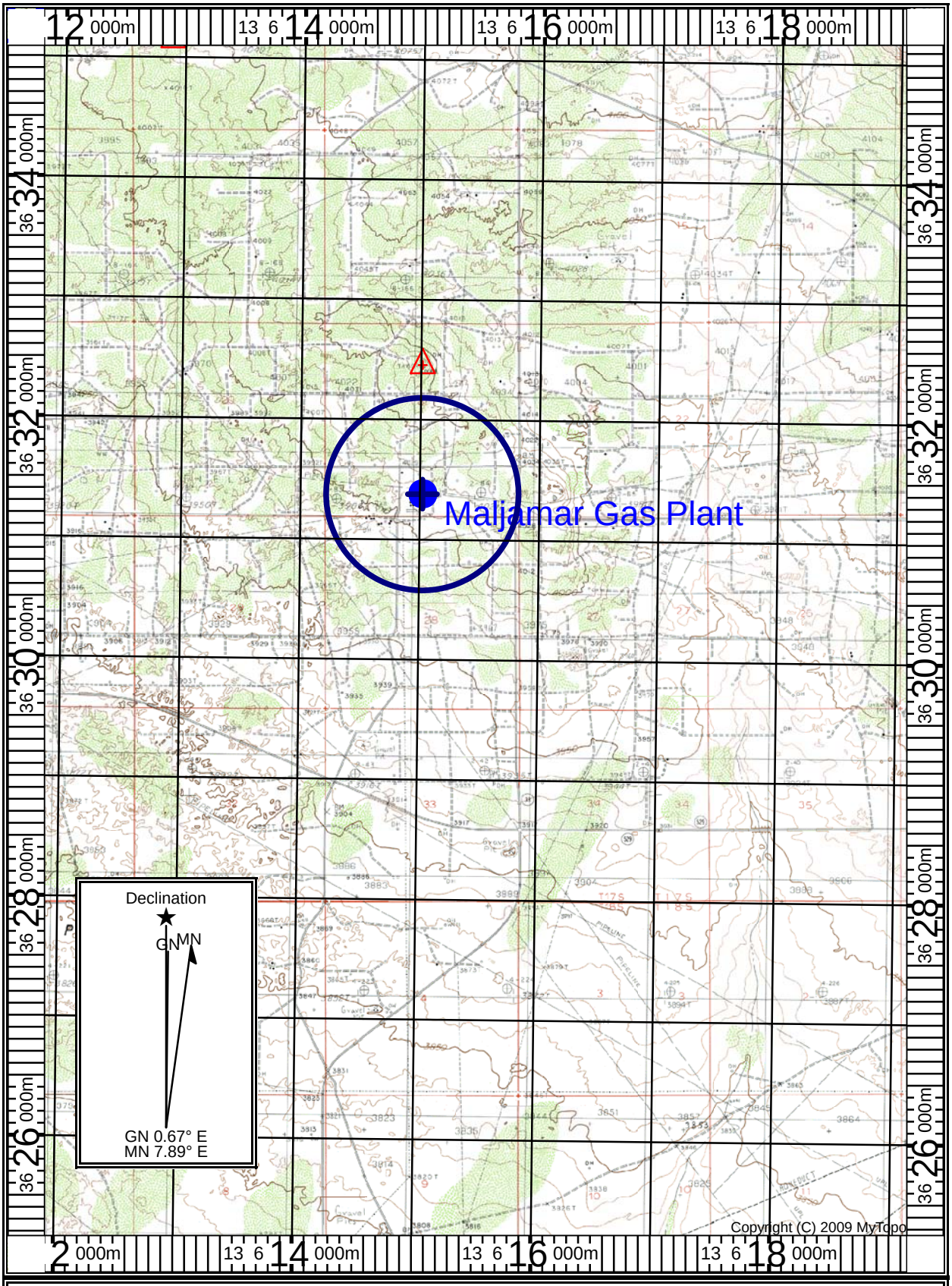
Section 8

Map(s)

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

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

A topographic map is attached.



Map Name: MALJAMAR (NM)
Print Date: 07/01/21
Scale: 1 inch = 4,000 ft.
Map Center: 13 0615480 E 3630167 N
Horizontal Datum: WGS84

Section 9

Proof of Public Notice

(for NSR applications submitting under 20.2.72 or 20.2.74 NMAC)
(This proof is required by: 20.2.72.203.A.14 NMAC "Documentary Proof of applicant's public notice")

☑ **I have read the AQB "Guidelines for Public Notification for Air Quality Permit Applications"**
This document provides detailed instructions about public notice requirements for various permitting actions. It also provides public notice examples and certification forms. Material mistakes in the public notice will require a re-notice before issuance of the permit.

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

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

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

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

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

N/A – Public Notice is not required for applications being submitted under 20.2.70 NMAC.

Section 10

Written Description of the Routine Operations of the Facility

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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.

This facility is a cryogenic natural gas processing plant, with a permitted maximum throughput capacity of 165 MMSCF/D. Raw field gas enters at different inlet pressures and is routed to various compressors in the plant to optimize field and plant operations. Field gas passes through inlet separation, coalescing filters, and particulate filters to remove liquids and contaminants prior to treating and processing. The facility is also equipped with a low pressure and high-pressure process flare that can burn raw field gas or residue gas during plan upset conditions.

Maljamar Gas Plant has both inlet and intermediate compression that is either electric driven or internal combustion (engine) driven. Heavier hydrocarbons that are separated in the inlet or through the various stages of compression are stabilized, collected in a pressure tank, and loaded to tanker trucks. The vapors recovered from stabilization are routed into the low-pressure inlet system. Produced water from separation/stabilization is routed to a skimmer tank and the water is pumped to a third party.

High pressure gas from the final stage of compression enters one of three contactors for sweetening. Contactor one, two, and three are capable of treating approximately 65 MMSCF/D, 60 MMSCF/D, and 30 MMSCF/D, respectively depending on inlet acid gas concentrations. Rich amine from the contactors is regenerated in two separate stills utilizing heat from two hot oil systems. The acid gas from the still overhead is sent to the Acid Gas Injection (AGI) and acid gas flare system. The AGI system consists of two redundant electric driven compression trains for sequestration via two injection wells at the site. Typical emissions from the AGI system are fugitive under normal operation. Under upset conditions, when the compression trains or wells are not operational, the acid gas from the still overhead is sent to the AGI flare.

After CO_2/H_2S removal, raw/wet sweet gas is sent to one of the four natural gas cryogenic trains for processing to extract Natural Gas Liquids (NGL) from the gas. Three of the trains have a 30 MMSCF/D capacity and one train is capable of processing 60 MMSCF/D. Each cryogenic train is equipped with mole sieve desiccant bed towers, propane refrigeration, and gas regeneration systems. NGLs from the cryo trains are sent to pressurized storage where it is pumped and exported to a third party via pipelines for delivery to market. Residue gas from the cryo system is compressed by either electric of gas fired engine driven compression and delivered via pipeline to adjacent transportation pipeline for delivery to market.

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)**: See 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.**

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

Section 13

Determination of State & Federal Air Quality Regulations

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

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

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

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

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

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

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

INCLUDE ANY OTHER INFORMATION NEEDED TO COMPLETE AN APPLICABILITY DETERMINATION OR THAT IS 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/

STATE REGULATIONS:

STATE REGU-LATIONS 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	This facility is authorized under P-0123-R3 and therefore, this regulation applies.
20.2.3 NMAC	Ambient Air Quality Standards NMAAQS	Yes	Facility	20.2.3 NMAC is a SIP approved regulation that limits the maximum allowable concentration of Total Suspended Particulates, Sulfur Compounds, Carbon Monoxide and Nitrogen Dioxide. The facility meets the maximum allowable concentrations of TSP, SO_2, H_2S, NO_X and CO under this regulation.
20.2.7 NMAC	Excess Emissions	Yes	Facility	This regulation establishes requirements for the facility if operations at the facility result in any excess emissions. The owner or operator will operate the source at the facility having an excess emission, to the extent practicable, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions. The facility will also notify the NMED of any excess emissions per 20.2.7.110 NMAC.
20.2.23 NMAC	Fugitive Dust Control	No	N/A	This regulation does not apply as this application is submitted under 20.2.70 NMAC and therefore exempt of this requirement. Sources exempt from 20.2.23 NMAC are activities and facilities subject to a permit issued pursuant to the NM Air Quality Control Act, the Mining Act, or the Surface Mining Act (20.2.23.108.B NMAC.
20.2.33 NMAC	Gas Burning Equipment - Nitrogen Dioxide	No	N/A	This facility does not have gas burning equipment with a heat input of greater than 1,000,000 million British Thermal Units per year per unit. Therefore, this regulation does not apply.
20.2.34 NMAC	Oil Burning Equipment: NO_2	No	N/A	This facility does not have oil burning equipment with a heat input of greater than 1,000,000 million British Thermal Units per year per unit. Therefore, this regulation does not apply.
20.2.35 NMAC	Natural Gas Processing Plant – Sulfur	No	N/A	This regulation does not apply to gas plants that reduce sulfur emissions by underground injection with an acid gas injection system or to acid gas flaring emissions when an AGI or SRU is being maintained. Therefore, this regulation does not apply.
20.2.37 and 20.2.36 NMAC	Petroleum Processing Facilities and Petroleum Refineries	N/A	N/A	**These regulations were repealed by the Environmental Improvement Board. If you had equipment subject to 20.2.37 NMAC before the repeal, your combustion emission sources are now subject to 20.2.61 NMAC.**
20.2.38 NMAC	Hydrocarbon Storage Facility	No	N/A	This regulation seeks to minimize H_2S emissions from hydrocarbon storage facilities. For purposes of this regulation, this facility is a new hydrocarbon storage facility, constructed after Jan. 1 1975. Standards of new tanks batteries are established in 20.2.38.112 NMAC. This facility does not have a crude oil or condensate storage capacity greater than 65,000 gallons (1547.6 bbl) and is therefore not subject to this regulation.
20.2.39 NMAC	Sulfur Recovery Plant - Sulfur	No	N/A	This facility is not a sulfur recovery plant. Therefore, this regulation does not apply.
20.2.61.109 NMAC	Smoke & Visible Emissions	Yes	Stationary Combustion equipment	This facility operates combustion equipment that are subject to this regulation.
20.2.70 NMAC	Operating Permits	Yes	Facility	This facility operates under a permit issued under 20.2.70 NMAC and is therefore subject to this regulation.
20.2.71 NMAC	Operating Permit Fees	Yes	Facility	This facility is subject to 20.2.70 NMAC and is therefore subject to this regulation.
20.2.72 NMAC	Construction Permits	Yes	Facility	This facility is permitted under 20.2.72 and is therefore subject to this regulation.

STATE REGU-LATIONS 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.)
20.2.73 NMAC	NOI & Emissions Inventory Requirements	Yes	Facility	This facility is required to submit an annual emission inventory report pursuant to 20.2.73.300.A(1) NMAC. This regulation applies.
20.2.74 NMAC	Permits – Prevention of Significant Deterioration (PSD)	No	N/A	The facility is a minor source for PSD purposes therefore this regulation is not applicable. source and will therefore no longer be subject to this regulation.
20.2.75 NMAC	Construction Permit Fees	Yes	Facility	This application is being submitted under 20.2.72 and is therefore subject to this regulation.
20.2.77 NMAC	New Source Performance	Yes	Units subject to 40 CFR 60	This facility is a stationary source with units that are subject to 40 CFR 60. Therefore, this regulation applies.
20.2.78 NMAC	Emission Standards for HAPS	No	Units subject to 40 CFR 61	Under normal operation this facility will not emit hazardous air pollutants which are subject to the requirements of 40 CFR Part 61. In the case of asbestos demolition, Subpart M would apply.
20.2.79 NMAC	Permits – Nonattainment Areas	No	N/A	This facility is not located in a non-attainment area. Therefore, this regulation does not apply.
20.2.80 NMAC	Stack Heights	No	N/A	This regulation establishes requirements for the evaluation of stack heights and other dispersion techniques. This regulation does not apply as all stacks at the facility will follow good engineering practice.
20.2.82 NMAC	MACT Standards for source categories of HAPS	Yes	Units subject to 40 CFR 63	This regulation applies to all sources emitting hazardous air pollutants, which are subject to the requirements of 40 CFR Part 63. This facility operates units which are subject to 40 CFR 63. Therefor this regulation applies.

FEDERAL REGULATIONS:

FEDERAL REGU-LATIONS 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 (NAAQS). The facility meets all applicable NAAQS 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	Units subject to 40 CFR 60	This facility operates units which are subject to 40 CFR 60. Therefore, this regulation applies.
NSPS 40 CFR60.40a, Subpart Da	Subpart Da, Performance Standards for **Electric Utility Steam Generating Units**	No	N/A	This facility does not include any electric utility steam generating units. Therefore, this regulation does not apply.
NSPS 40 CFR60.40b Subpart Db	**Electric Utility Steam Generating Units**	No	N/A	This facility does not include any electric utility steam generating units. Therefore, this regulation does not apply.
40 CFR 60.40c, Subpart Dc	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units	Yes	37	Unit 37 is a 21.1 MMBtu/hr heater that combusts pipeline-specification natural gas to heat a transfer medium constructed after the applicability date of this subpart and meets the definition of a steam generating unit. As an affected facility, compliance with the sulfur emission limits will be based on the specification of the natural gas fuel. Durango Midstream with all requirements under this part that apply to this unit
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	Tank 29 has a storage capacity greater than 151,416 liters (40,000 gallons) and commenced construction after May 18, 1978. However this skimmer flash tank is a process vessel used to separate water and hydrocarbon liquids; petroleum liquids are not stored in this tank. This tank does not meet the definition of a storage vessel. This regulation does not apply.
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	Unit 29 is the only tank with a capacity greater than 75 cubic meters (m3) which was constructed, reconstructed, or modified before July 23, 1984. Therefore this regulation does not apply.
NSPS 40 CFR 60.330 Subpart GG	**Stationary Gas Turbines**	No	N/A	This facility does not have any stationary turbines. Therefore, this regulation does not apply.
NSPS 40 CFR 60, Subpart KKK	Leaks of VOC from **Onshore Gas Plants**	Yes	Units FUG, 23, 24, 25, 26, in VOC or wet gas service	This facility is an onshore gas plant. Therefore, this regulation does apply.
NSPS 40 CFR Part 60 Subpart LLL	Standards of Performance for **Onshore Natural Gas Processing**: SO_2 Emissions	No	N/A	Pursuant to §60.640 (e) the provisions of this subpart do not apply to sweetening facilities (unit AU) producing acid gas that is completely reinjected into oil-or-gas bearing geological strata or otherwise not released to the atmosphere. Therefore, this regulation does not apply.

FEDERAL REGU-LATIONS CITATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
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	Yes	Units 30-C, 31-C, 32-C, 33-C, 34-C, 35-C, 39, 40, FUG	Units 30-C, 31-C, 32-C, 33-C, 34-C, 35-C, 39, 40, FUG are subject to this standard for which construction, modification, or reconstruction commenced after August 23, 2011 and before September 18, 2015. This regulation does apply.
NSPS 40 CFR Part 60 Subpart OOOOa	Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015	Yes	Unit FUG	Unit FUG related to the capacity expansion project which were updated at the facility after September 18, 2015 applicability date for NSPS OOOOa and are therefore subject to this regulation.
NSPS 40 CFR 60 Subpart IIII	Standards of performance for Stationary Compression Ignition Internal Combustion Engines	No	N/A	There are no compression ignition engines installed at this facility. Therefore, this regulation does not apply.
NSPS 40 CFR Part 60 Subpart JJJJ	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines	Yes	Units 30-35 and 44	The engines and generators at this facility were manufactured in 2011-2012 after the NSPS JJJJ date of June 12, 2006. The units are therefore subject to this regulation.
NSPS 40 CFR 60 Subpart TTTT	Standards of Performance for Greenhouse Gas Emissions for Electric Generating Units	No	N/A	There are no electric generating units at this facility. Therefore, 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	There are no electric generating units at this facility. Therefore, 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. Therefore, this regulation does not apply.
NESHAP 40 CFR 61 Subpart A	General Provisions	No	Units subject to 40 CFR 61	Applies if any other subpart in 40 CFR 61 applies.
NESHAP 40 CFR 61 Subpart E	National Emission Standards for **Mercury**	No	N/A	This facility does not process mercury. Therefore, this regulation does not apply.
NESHAP 40 CFR 61 Subpart V	National Emission Standards for **Equipment Leaks** (Fugitive Emission Sources)	No	N/A	This facility is not a major source of HAPs. Therefore, this regulation does not apply.
MACT 40 CFR 63, Subpart A	General Provisions	Yes	Units subject to 40 CFR 63	Applies if any other subpart in 40 CFR 63 applies.
MACT 40 CFR 63.760 Subpart HH	**Oil and Natural Gas Production Facilities**	Yes	N/A	This facility does not contain the regulated source under this subpart. This regulation does not apply.

FEDERAL REGU-LATIONS CITATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
MACT 40 CFR 63 Subpart HHH		No	N/A	This subpart applies to owners and operators of natural gas transmission and storage facilities that transport or store natural gas prior to entering the pipeline to a local distribution company or to a final end user. This facility is not a natural gas transmission facility. Therefore, this regulation does not apply.
MACT 40 CFR 63 Subpart DDDDD	National Emission Standards for Hazardous Air Pollutants for Major Industrial, Commercial, and Institutional Boilers & Process Heaters	No	N/A	This facility does not operate and major industrial, commercial, and institutional boilers & process heaters. Therefore, this regulation does not apply.
MACT 40 CFR 63 Subpart UUUUU	National Emission Standards for Hazardous Air Pollutants Coal & Oil Fire Electric Utility Steam Generating Unit	No	N/A	This facility does not operate any coal & oil fire electric utility steam generating units. Therefore, 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	20, 21, and 30-35, 44	The compressor engines at this facility are subject to MACT ZZZZ and will comply with this regulation by complying with the requirements of NSPS JJJJ.
40 CFR 64	**Compliance Assurance Monitoring**	Yes	AU, AU-T3, AU-T4, AGI W, AGI W2, 17	A compliance assurance monitoring plan has been established in this facilities Title V permit emergency flares, the existing dehydrator and thermal oxidizer. In the Title V revision application that will be submitted after this permit revision is issued, the CAM plan will be updates to reflect the units that will be removed and the change in facility operations.
40 CFR 68	**Chemical Accident Prevention**	Yes	Facility	The facility is an affected facility, as it will use flammable process chemicals such as propane at quantities greater than the thresholds. The facility will develop and maintain an RMP for these chemicals.
Title IV – Acid Rain 40 CFR 72	**Acid Rain**	No	N/A	This facility does not generate commercial electric power or electric power for sale. Therefore, this regulation does not apply.
Title IV – Acid Rain 40 CFR 73	**Sulfur Dioxide** Allowance Emissions	No	N/A	This facility does not generate commercial electric power or electric power for sale. Therefore, this regulation does not apply.
Title IV-Acid Rain 40 CFR 75	**Continuous Emissions Monitoring**	No	N/A	This facility does not generate commercial electric power or electric power for sale. Therefore, this regulation does not apply.
Title IV – Acid Rain 40 CFR 76	**Acid Rain** Nitrogen Oxides **Emission Reduction Program**	No	N/A	This facility does not generate commercial electric power or electric power for sale. Therefore, this regulation does not apply.
Title VI – 40 CFR 82	Protection of **Stratospheric Ozone**	No	N/A	The facility does not service, maintain, or repair equipment containing refrigerants. Therefore, this regulation does not apply.

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.

Startup and shutdown procedures are performed according to guidelines, which dictate proper procedural sequence to minimize emissions from the facility during such activities.

Equipment located at the plant is equipped with various safety devices that aid in preventing excess emissions to the atmosphere in the event of an operational emergency. In the event of a malfunction, startup, shutdown, or scheduled maintenance in which emission rates from the facility exceed permitted allowable emissions, Durango Midstream, LLC will notify the AQB in accordance with 20.2.7 NMAC and the equipment responsible for the exceedance will be repaired as soon as possible.

Section 15

Alternative Operating Scenarios

(Submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

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

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

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

The term "alternative operating scenario" is not defined by regulation. Durango understands this term to apply to a source which may routinely operate with alternative fuels or processes in such a manner as to potentially affect emissions. Based on this understanding, this facility has no alternative operating scenarios.

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

Section 16
Air Dispersion Modeling

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

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

Check each box that applies:

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

Modeling is not being submitted with the application pursuant to 20.2.70 NMAC.

Section 17

Compliance Test History

(Submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

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

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

Compliance Test History Table

Unit No.	Serial	Quarterly Test Date	Quarterly Test Date	Annual JJJJ Test Date
20	2054-2S	05/17/2021	02/26/2021	NA
21	17970	05/17/2021	02/26/2021	NA
30	BKE0614	05/18/2021	11/18/2020	01/25/2021
31	BKE0618	05/17/2021	11/16/2020	01/25/2021
32	JEF01437	05/17/2021	11/16/2020	01/26/2021
33	JEF01821	05/18/2021	11/16/2020	01/27/2021
34	JEF01818	05/18/2021	11/16/2020	01/26/2021
35	JEF01797	05/18/2021	11/16/2020	01/27/2021

Section 19

Requirements for Title V Program

Who Must Use this Attachment:

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

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

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

Units AU, AU-T3, AU-T4, AGI W, AGI W2, 17 are subject to CAM. Operating Permit P123-R3 requires compliance with §60.18.(e) including monitoring continuously for the presence of a pilot flare for Unit 17 (Acid gas Flare). Compliance with 40 CFR 60.18 shall constitute compliance with 40 CFR 64 for this unit. Also, Units AU 1-4 would be major sources themselves, albeit for federally enforceable controls. These units and the associated controls are subject to this part.

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

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

Based on information and belief formed after reasonable inquiry, Durango Midstream believes that the Maljamar Gas Plantn is in compliance with each applicable requirement identified in Section 13. In the event that Durango Midstream should discover new information affecting the compliance status of the facility, Durango Midstream will make appropriate notifications and/or

take corrective actions. Pursuant to Condition A109.B of Permit P123-R3, Durango has certified to compliance with the terms and conditions of that permit. The most recent such certification was submitted within 30 days of the end of every 12-month reporting period. The 12-month reporting period starts on November 1st of each year given in P123-R3. Since that time, Durango Midstream has continued to follow applicable requirements as described in Section 13.

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

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

The facility will continue to comply with currently appliable regulations and is committed to complying with newly effective regulations.

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

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

Durango Midstream will submit Annual Compliance Certifications on the schedule specified in the Title V Permit.

19.5 - Stratospheric Ozone and Climate Protection

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

---

1. Does your facility have any air conditioners or refrigeration equipment that uses CFCs, HCFCs or other ozone-depleting substances? ☑ **Yes** ☐ **No**

2. Does any air conditioner(s) or any piece(s) of refrigeration equipment contain a refrigeration charge greater than 50 lbs? ☐ **Yes** ☑ **No**

   (If the answer is yes, describe the type of equipment and how many units are at the facility.)

3. Do your facility personnel maintain, service, repair, or dispose of any motor vehicle air conditioners (MVACs) or appliances ("appliance" and "MVAC" as defined at 82. 152)? ☐ **Yes** ☑ **No**

4. Cite and describe which Title VI requirements are applicable to your facility (i.e. 40 CFR Part 82, Subpart A through G.)

Durango Midstream hires certified contractors to maintain all refrigeration equipment.

19.6 - Compliance Plan and Schedule

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

A. Description of Compliance Status: (20.2.70.300.D.11.a NMAC)
A narrative description of your facility's compliance status with respect to all applicable requirements (as defined in 20.2.70 NMAC) at the time this permit application is submitted to the department.

B. Compliance plan: (20.2.70.300.D.11.B NMAC)
A narrative description of the means by which your facility will achieve compliance with applicable requirements with which it is not in compliance at the time you submit your permit application package.

C. Compliance schedule: (20.2.70.300D.11.c NMAC)
A schedule of remedial measures that you plan to take, including an enforceable sequence of actions with milestones, which will lead to compliance with all applicable requirements for your source. This schedule of compliance must be at least as stringent as that contained in any consent decree or administrative order to which your source is subject. The obligations of any consent decree or administrative order are not in any way diminished by the schedule of compliance.

D. Schedule of Certified Progress Reports: (20.2.70.300.D.11.d NMAC)
A proposed schedule for submission to the department of certified progress reports must also be included in the compliance schedule. The proposed schedule must call for these reports to be submitted at least every six (6) months.

E. Acid Rain Sources: (20.2.70.300.D.11.e NMAC)
If your source is an acid rain source as defined by EPA, the following applies to you. For the portion of your acid rain source subject to the acid rain provisions of title IV of the federal Act, the compliance plan must also include any additional requirements under the acid rain provisions of title IV of the federal Act. Some requirements of title IV regarding the schedule and methods the source will use to achieve compliance with the acid rain emissions limitations may supersede the requirements of title V and 20.2.70 NMAC. You will need to consult with the Air Quality Bureau permitting staff concerning how to properly meet this requirement.

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

This section is not applicable as the facility is in compliance with currently appliable regulations.

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

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

The facility is subject to RMP requirements for NGLs.

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

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

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

The facility is 66 km from the Texas state border.

19.9 - Responsible Official

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

Darin B. Kennard, Vice President & GM
10077 Grogans Mill Road, Suite 300, The Woodlands, Texas 77380
(346) 351-2790

Section 20

Other Relevant Information

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

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

No other relevant information is being submitted with this application.

Section 22: Certification

Company Name: Durango Midstream, LLC/ Frontier Field Services, LLC

I, Darin B. Kennard, 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 30 day of June , 2021 , upon my oath or affirmation, before a notary of the State of

TEXAS.

DaiBKe
*Signature

6/30/2021
Date

Darin B. Kennard
Printed Name

VP&GM
Title

Scribed and sworn before me on this 30 day of June, 2021.

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

11 day of June, 2024.

Notary's Signature

6/30/21
Date

Carlos Hernandez
Notary's Printed Name

CARLOS HERNANDEZ
Notary Public, State of Texas
Comm. Expires 06-11-2024
Notary ID 132517864

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