Piñon Midstream, LLC

Dark Horse Treating Facility
Application for NSR Permit No. 9058

Jal, Lea County, NM

October 2023

Prepared for:

Piñon Midstream, LLC
20445 SH 249, Suite 300
Houston, TX 77070

Prepared by:

Alliant Environmental, LLC
7804 Pan American Fwy. NE
Albuquerque, NM 87109

Air Permit Application
Compliance History Disclosure Form

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

Permittee/Applicant Company Name		**Expected Application Submittal Date**
Piñon Midstream, LLC		October 27, 2023
Permittee/Company Contact	**Phone**	**Email**
Chris Kassen	(713) 300-9300	ckassen@pinonmidstream.com

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

Mail Application To:		**For Department use only:**
New Mexico Environment Department Air Quality Bureau Permits Section 525 Camino de los Marquez, Suite 1 Santa Fe, New Mexico, 87505 Phone: (505) 476-4300 Fax: (505) 476-4375 www.env.nm.gov/aqb		

Universal Air Quality Permit Application

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

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

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

Acknowledgements:

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

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

☒ Check No.: 1035 in the amount of $500.00

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

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

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

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

Section 1 – Facility Information

Section 1-A: Company Information

		AI # if known: **39823**	Updating Permit/NOI #: **9058**
1	Facility Name: **Dark Horse Treating Facility**	Plant primary SIC Code (4 digits): **4932**	
		Plant NAIC code (6 digits): **221210**	
a	Facility Street Address (If no facility street address, provide directions from a prominent landmark): **The approximate location of the facility is 5.9 miles west of Jal, NM. From the intersection of N 3rd Street and NM-128 (W Kansas Ave.) in Jal, head west on NM-128 for 5.4 miles and turn left at dirt access road. Travel 1.0 mile south and turn right at a second dirt access road. After 0.6 mile, turn left at a third dirt access road. The site is on the right-hand side of the road.**		

2	Plant Operator Company Name: **Piñon Midstream, LLC**	Phone/Fax: **(713) 300-9300**
a	Plant Operator Address: **465 West NM HWY 128, Jal, NM 88252**	
b	Plant Operator's New Mexico Corporate ID or Tax ID: **03-541801-00-0**	
3	Plant Owner(s) name(s): **Piñon Midstream, LLC**	Phone/Fax: **(713) 300-9300**
a	Plant Owner(s) Mailing Address(s): **20445 SH 249, Suite 300, Houston, TX 77070**	
4	Bill To (Company): **Piñon Midstream, LLC**	Phone/Fax: **(713) 300-9300**
a	Mailing Address: **20445 SH 249, Suite 300, Houston, TX 77070**	E-mail: **accountspayable@pinonmidstream.com**
5	☒ Preparer: **Alliant Environmental, LLC** ☒ Consultant: **Martin Schluep**	Phone/Fax: **(505) 205-4819**
a	Mailing Address: **7804 Pan American Fwy, Suite 5** **Albuquerque, NM 87109**	E-mail: **mschluep@alliantenv.com**
6	Plant Operator Contact: **Casey Fix**	Phone/Fax: **(970) 405-2614**
a	Address: **20445 SH 249, Suite 300, Houston, TX 77070**	E-mail: **cfix@pinonmidstream.com**
7	Air Permit Contact: **Chris Kassen**	Title: **Vice President of Operations**
a	E-mail: **ckassen@pinonmidstream.com**	Phone/Fax: **(469) 474-8092**
b	Mailing Address: **20445 SH 249, Suite 300, Houston, TX 77070**	
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: **N/A**
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: **GCP-O&G-9058**
10	Is this facility registered under a General permit (GCP-1, GCP-2, etc.)? ☒ Yes ☐ No	If yes, the register No. is: **GCP-O&G-9058**

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: Condensate (bbl/hr): 208.3 Gas (MMSCFHR): 12.5 NGL (bbl/hr): 41.7	Daily: Condensate (bbl/day): 5,000 Gas (MMSCFD): 300 NGL (bbl/day): 1,000	Annually: Condensate (bbl/yr): 1,825,175 Gas (MMSCFY): 109,500 NGL (bbl/yr): 365,000
b	Proposed	Hourly: Condensate (bbl/hr): 341.7 Gas (MMSCFHR): 41.3 NGL (bbl/hr): 85.5	Daily: Condensate (bbl/day): 8,200 Gas (MMSCFD): 990 NGL (bbl/day): 2,052	Annually: Condensate (bbl/yr): 2,992,585 Gas (MMSCFY): 361,350 NGL (bbl/yr): 749,020
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: Condensate (bbl/hr): 208.3 Gas (MMSCFHR): 12.5 NGL (bbl/hr): 41.7	Daily: Condensate (bbl/day): 5,000 Gas (MMSCFD): 300 NGL (bbl/day): 1,000	Annually: Condensate (bbl/yr): 1,825,175 Gas (MMSCFY): 109,500 NGL (bbl/yr): 365,000
b	Proposed	Hourly: Condensate (bbl/hr): 341.7 Gas (MMSCFHR): 41.3 NGL (bbl/hr): 85.5	Daily: Condensate (bbl/day): 8,200 Gas (MMSCFD): 990 NGL (bbl/day): 2,052	Annually: Condensate (bbl/yr): 2,992,585 Gas (MMSCFY): 361,350 NGL (bbl/yr): 749,020

Section 1-D: Facility Location Information

1	Latitude (decimal degrees): **32.120112**	Longitude (decimal degrees): **-103.289663**	County: **Lea**	Elevation (ft): **3,100**
2	UTM Zone: ☐ 12 or ☒ 13	Datum: ☐ NAD 83 ☒ WGS 84		
a	UTM E (in meters, to nearest 10 meters): **661,350**	UTM N (in meters, to nearest 10 meters): **3,555,030**		
3	Name and zip code of nearest New Mexico town: **Jal, NM 88252**			
4	Detailed Driving Instructions from nearest NM town (attach a road map if necessary): **From the intersection of N 3rd Street and NM-128 (W Kansas Ave.) in Jal, head west on NM-128 for 5.4 miles and turn left at dirt access road. Travel 1.0 mile south and turn right at a second dirt access road. After 0.6 mile, turn left at a third dirt access road. The site is on the right-hand side of the road.**			
5	The facility is 5.9 miles west of Jal, NM.			
6	Land Status of facility (check one): ☒ Private ☐ Indian/Pueblo ☐ Government ☐ BLM ☐ Forest Service ☐ Military			
7	List all municipalities, Indian tribes, and counties within a ten (10) mile radius (20.2.72.203.B.2 NMAC) of the property on which the facility is proposed to be constructed or operated: **Municipalities: Jal; Indian Tribes: None; Counties: Lea**			
8	**20.2.72** NMAC applications **only**: Will the property on which the facility is proposed to be constructed or operated be closer than 50 km (31 miles) to other states, Bernalillo County, or a Class I area (see www.env.nm.gov/air-quality/modeling-publications/)? ☒ Yes ☐ No (20.2.72.206.A.7 NMAC) If yes, list all with corresponding distances in kilometers: **Texas – 14.0 km**			
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): **102.1**			
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: **Occupied structure approximately 2,955 meters to the northeast of the site.**			
12	Method(s) used to delineate the Restricted Area: **Continuous fencing** "**Restricted Area**" is an area to which public entry is effectively precluded. Effective barriers include continuous fencing, continuous walls, or other continuous barriers approved by the Department, such as rugged physical terrain with steep grade that would require special equipment to traverse. If a large property is completely enclosed by fencing, a restricted area within the property may be identified with signage only. Public roads cannot be part of a Restricted Area.			
13	Does the owner/operator intend to operate this source as a portable stationary source as defined in 20.2.72.7.X NMAC? ☐ Yes ☒ No A portable stationary source is not a mobile source, such as an automobile, but a source that can be installed permanently at one location or that can be re-installed at various locations, such as a hot mix asphalt plant that is moved to different job sites.			
14	Will this facility operate in conjunction with other air regulated parties on the same property? ☒ No ☐ Yes If yes, what is the name and permit number (if known) of the other facility?			

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

1	Facility **maximum** operating ($\frac{\text{hours}}{\text{day}}$): **24**	($\frac{\text{days}}{\text{week}}$): **7**	($\frac{\text{weeks}}{\text{year}}$): **52**	($\frac{\text{hours}}{\text{year}}$): **8,760**		
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: **Site is already constructed. Expansion project: As soon as permit is issued**					
4	Month and year of anticipated construction completion: **Site is already operating. Expansion project: December 2024**					

5	Month and year of anticipated startup of new or modified facility: **Startup of modified facility is expected in December 2024.**
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): **N/A**	Phone: **N/A**
a	R.O. Title: **N/A**	R.O. e-mail: **N/A**
b	R. O. Address: **N/A**	
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: **N/A**
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: **N/A**

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.
C-1200	LP Inlet Compressor	Caterpillar	G3608 A4	TBD	2500 hp	2500 hp	>7/1/2010 >7/1/2010	CAT-1200 C-1200	20200254	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	4SLB	N/A
C-1210	LP Inlet Compressor	Caterpillar	G3608 A4	TBD	2500 hp	2500 hp	>7/1/2010 >7/1/2010	CAT-1210 C-1210	20200254	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	4SLB	N/A
C-1220	LP Inlet Compressor	Caterpillar	G3608 A4	TBD	2500 hp	2500 hp	>7/1/2010 >7/1/2010	CAT-1220 C-1220	20200254	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	4SLB	N/A
C-1230	LP Inlet Compressor	Caterpillar	G3608 A4	TBD	2500 hp	2500 hp	>7/1/2010 >7/1/2010	CAT-1230 C-1230	20200254	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	4SLB	N/A
H-1600	Stabilizer Hot Oil Heater	TBD	TBD	TBD	6.97 MMBTU/hr	6.97 MMBTU/hr	2021 2021	N/A H-1600	31000404	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
H-1620	Amine Hot Oil Heater	TBD	TBD	TBD	37.2 MMBTU/hr	37.2 MMBTU/hr	2021 2021	N/A H-1620	31000404	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
H-2600	Stabilizer Hot Oil Heater	TBD	TBD	TBD	27.83 MMBTU/hr	27.83 MMBTU/hr	2021 2021	N/A H-2600	31000404	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
H-2620	Amine Hot Oil Heater	TBD	TBD	TBD	37.2 MMBTU/hr	37.2 MMBTU/hr	2021 2021	N/A H-2620	31000404	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
H-3620	Amine Hot Oil Heater	TBD	TBD	TBD	37.2 MMBTU/hr	37.2 MMBTU/hr	2021 2021	N/A H-3620	31000404	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
H-4620	Amine Hot Oil Heater	TBD	TBD	TBD	82.17 MMBTU/hr	82.17 MMBTU/hr	2024 2024	N/A H-4620	31000404	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
H-5620	Utility Hot Oil Heater	TBD	TBD	TBD	88.91 MMBTU/hr	88.91 MMBTU/hr	2024 2024	N/A H-5620	31000404	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
H-6620	Utility Hot Oil Heater	TBD	TBD	TBD	88.91 MMBTU/hr	88.91 MMBTU/hr	2024 2024	N/A H-6620	31000404	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
E-1566	TEG Reboiler (Direct Fired Heater)	TBD	TBD	TBD	1.5 MMBTU/hr	1.5 MMBTU/hr	2021 2021	N/A E-1566	31000404	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
E-2566	TEG Reboiler (Direct Fired Heater)	TBD	TBD	TBD	1.5 MMBTU/hr	1.5 MMBTU/hr	2021 2021	N/A E-2566	31000404	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
E-3566	TEG Reboiler (Direct Fired Heater)	TBD	TBD	TBD	1.5 MMBTU/hr	1.5 MMBTU/hr	2021 2021	N/A E-3566	31000404	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
E-4566	TEG Reboiler (Direct Fired Heater)	TBD	TBD	TBD	3 MMBTU/hr	3 MMBTU/hr	2024 2024	N/A E-4566	31000404	☐ 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.
H-1781	Cryo Trim Heater	TBD	TBD	TBD	22.04 MMBTU/hr	22.04 MMBTU/hr	2024 / 2024	N/A / H-1781	31000404	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
H-2781	Cryo Trim Heater	TBD	TBD	TBD	22.04 MMBTU/hr	22.04 MMBTU/hr	2024 / 2024	N/A / H-2781	31000404	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
H-1741	Cryo Regen Heater	TBD	TBD	TBD	9.09 MMBTU/hr	9.09 MMBTU/hr	2024 / 2024	N/A / H-1741	31000404	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
H-2741	Cryo Regen Heater	TBD	TBD	TBD	9.09 MMBTU/hr	9.09 MMBTU/hr	2024 / 2024	N/A / H-2741	31000404	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
FL-1850	Plant Flare	Hero Flare	N/A	TBD	2,380 MMBtu/hr	2,380 MMBtu/hr	2021 / 2021	N/A / FL-1850	31000205	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
FL-1850 BD	FL-1850 Facility Blowdown	Hero Flare	N/A	TBD	2,380 MMBtu/hr	2,380 MMBtu/hr	2021 / 2021	N/A / FL-1850 BD	31000205	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
FL-1950	Train 5 and 6 Process Flare	Hero Flare	N/A	TBD	2,380 MMBtu/hr	2,380 MMBtu/hr	2024 / 2024	N/A / FL-1950	31000205	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
FL-1950 BD	FL-1950 Blowdown	Hero Flare	N/A	TBD	2,380 MMBtu/hr	2,380 MMBtu/hr	2024 / 2024	N/A / FL-1950 BD	31000205	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
FL-2050	Cryogenic Process Flare	Zeeco Flare	N/A	TBD	4,760 MMBtu/hr	4,760 MMBtu/hr	2024 / 2024	N/A / FL-2050	31000205	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
FL-2050 BD	FL-2050 Blowdown	Zeeco Flare	N/A	TBD	4,760 MMBtu/hr	4,760 MMBtu/hr	2024 / 2024	N/A / FL-2050 BD	31000205	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
FL-1967	Dehy Regen Combustor	Cimmaron	N/A	TBD	1.93 MMBtu/hr	1.93 MMBtu/hr	2021 / 2021	N/A / FL-1967	31000205	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
FL-2967	Dehy Regen Combustor	Cimmaron	N/A	TBD	1.93 MMBtu/hr	1.93 MMBtu/hr	2021 / 2021	N/A / FL-2967	31000205	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
FL-3967	Dehy Regen Combustor	Cimmaron	N/A	TBD	1.93 MMBtu/hr	1.93 MMBtu/hr	2021 / 2021	N/A / FL-3967	31000205	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
FL-4967	Dehy Regen Combustor	Cimmaron	N/A	TBD	3.28 MMBtu/hr	3.28 MMBtu/hr	2024 / 2024	N/A / FL-4967	31000205	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
FL-5967	Dehy Regen Combustor	Cimmaron	N/A	TBD	3.28 MMBtu/hr	3.28 MMBtu/hr	2024 / 2024	N/A / FL-5967	31000205	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
FL-6967	Dehy Regen Combustor	Cimmaron	N/A	TBD	3.28 MMBtu/hr	3.28 MMBtu/hr	2024 / 2024	N/A / FL-6967	31000205	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
FL-7967	Tank Loading Combustor	Cimmaron	N/A	TBD	1.67 MMBtu/hr	1.67 MMBtu/hr	2024 / 2024	N/A / FL-7967	31000205	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A

Unit Number[1]	Source Description	Make	Model #	Serial #	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.
DEHY-1	TEG Dehydrator	N/A	N/A	TBD	110 MMSCFD	110 MMSCFD	2021 2021	FL-1967 DEHY-1	31000303	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
DEHY-2	TEG Dehydrator	N/A	N/A	TBD	110 MMSCFD	110 MMSCFD	2021 2021	FL-2967 DEHY-2	31000303	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
DEHY-3	TEG Dehydrator	N/A	N/A	TBD	110 MMSCFD	110 MMSCFD	2021 2021	FL-3967 DEHY-3	31000303	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
DEHY-4	TEG Dehydrator	N/A	N/A	TBD	220 MMSCFD	220 MMSCFD	2024 2024	FL-4967 DEHY-4	31000303	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
DEHY-5	TEG Dehydrator	N/A	N/A	TBD	220 MMSCFD	220 MMSCFD	2024 2024	FL-5967 DEHY-5	31000303	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
DEHY-6	TEG Dehydrator	N/A	N/A	TBD	220 MMSCFD	220 MMSCFD	2024 2024	FL-6967 DEHY-6	31000303	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
AMINE-1	Amine Unit	N/A	N/A	TBD	110 MMSCFD	110 MMSCFD	2021 2021	AGI N/A	31000305	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
AMINE-2	Amine Unit	N/A	N/A	TBD	110 MMSCFD	110 MMSCFD	2021 2021	AGI N/A	31000305	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
AMINE-3	Amine Unit	N/A	N/A	TBD	110 MMSCFD	110 MMSCFD	2021 2021	AGI N/A	31000305	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
AMINE-4	Amine Unit	N/A	N/A	TBD	220 MMSCFD	220 MMSCFD	2024 2024	AGI N/A	31000305	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
AMINE-5	Amine Unit	N/A	N/A	TBD	220 MMSCFD	220 MMSCFD	2024 2024	AGI N/A	31000305	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
AMINE-6	Amine Unit	N/A	N/A	TBD	220 MMSCFD	220 MMSCFD	2024 2024	AGI N/A	31000305	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
TK-1900	Stabilized Condensate Storage Tank	TOCE	N/A	TBD	400 bbl	400 bbl	2021 2021	VRU N/A	40400311	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
TK-1901	Stabilized Condensate Storage Tank	TOCE	N/A	TBD	400 bbl	400 bbl	2021 2021	VRU N/A	40400311	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
TK-1970	Sour Water Storage Tank	TOCE	N/A	TBD	400 bbl	400 bbl	2021 2021	VRU N/A	40400315	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
TK-1971	Sour Water Storage Tank	TOCE	N/A	TBD	400 bbl	400 bbl	2021 2021	VRU N/A	40400315	☐ 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.
TK-1980	Slop Tank	TOCE	N/A	TBD	400 bbl	400 bbl	2021 2021	VRU N/A	40400313	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
TK-1981	Slop Tank	TOCE	N/A	TBD	400 bbl	400 bbl	2021 2021	VRU N/A	40400313	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
TK-2010	Slop Tank	TOCE	N/A	TBD	400 bbl	400 bbl	2024 2024	VRU N/A	40400313	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
TK-2020	Slop Tank	TOCE	N/A	TBD	400 bbl	400 bbl	2024 2024	VRU N/A	40400313	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
TK-2030	Sour Water Storage Tank	TOCE	N/A	TBD	400 bbl	400 bbl	2024 2024	VRU N/A	40400315	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
TK-2040	Sour Water Storage Tank	TOCE	N/A	TBD	400 bbl	400 bbl	2024 2024	VRU N/A	40400315	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
TK-2050	Stabilized Condensate Storage Tank	TOCE	N/A	TBD	400 bbl	400 bbl	2024 2024	VRU N/A	40400311	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
TK-2060	Stabilized Condensate Storage Tank	TOCE	N/A	TBD	400 bbl	400 bbl	2024 2024	VRU N/A	40400311	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
TK-2070	Stabilized Condensate Storage Tank	TOCE	N/A	TBD	400 bbl	400 bbl	2024 2024	VRU N/A	40400311	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
TK-2080	Stabilized Condensate Storage Tank	TOCE	N/A	TBD	400 bbl	400 bbl	2024 2024	VRU N/A	40400311	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
COND-LOAD 1-3	Condensate and Sour Water Loadout	N/A	N/A	N/A	710,658 bbl/yr	710,658 bbl/yr	2021 2021	VRU COND-LOAD 1-3	40600132	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
COND-LOAD 4-6	Condensate and Sour Water Loadout	N/A	N/A	N/A	3,005,228 bbl/yr	3,005,228 bbl/yr	2024 2024	VRU COND-LOAD 4-6	40600132	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
NGL-LOAD	Pressurized NGL Loadout	N/A	N/A	N/A	738,756 bbl/yr	738,756 bbl/yr	2024 2024	N/A NGL-LOAD	40600132	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
HAUL	Condensate, Water and NGL Truck Haul	N/A	N/A	N/A	N/A	N/A	2021 2021	N/A HAUL	31088811	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
FUG	Fugitive Emissions	N/A	N/A	N/A	N/A	N/A	2021 2021	N/A FUG	31088811	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
SSM	Startup, Shutdown, Maintenance	N/A	N/A	N/A	N/A	N/A	N/A N/A	N/A SSM	31088811	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A

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

[2] Specify dates required to determine regulatory applicability.

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

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

Table 2-B: Insignificant Activities[1] (20.2.70 NMAC) OR Exempted Equipment (20.2.72 NMAC)

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

Unit Number	Source Description	Manufacturer	Model No. / Serial No.	Max Capacity / Capacity Units	List Specific 20.2.72.202 NMAC Exemption (e.g. 20.2.72.202.B.5) / Insignificant Activity citation (e.g. IA List Item #1.a)	Date of Manufacture /Reconstruction[2] / Date of Installation /Construction[2]	For Each Piece of Equipment, Check Onc
TK-1903	Lube Oil Tank	N/A	N/A N/A	TBD TBD	20.2.72.202.B(2) NMAC	2021 2021	☐ Existing (unchanged) To ☐ Removed ☑ New/Additional Replacement Unit ☐ To Be Modified To ☐ Replaced
TK-1904	Lube Oil Tank	N/A	N/A N/A	TBD TBD	20.2.72.202.B(2) NMAC	2021 2021	☐ Existing (unchanged) To ☐ Removed ☑ New/Additional Replacement Unit ☐ To Be Modified To ☐ Replaced
TK-1905	Lube Oil Tank	N/A	N/A N/A	TBD TBD	20.2.72.202.B(2) NMAC	2021 2021	☐ Existing (unchanged) To ☑ Removed ☑ New/Additional Replacement Unit ☐ To Be Modified To ☐ Replaced
TK-1907	Coolant Tank	N/A	N/A N/A	TBD TBD	20.2.72.202.B(2) NMAC	2021 2021	☐ Existing (unchanged) To ☐ Removed ☑ New/Additional Replacement Unit ☐ To Be Modified To ☐ Replaced
TK-1500	Amine Make-up Tank	N/A	N/A N/A	100 bbl	20.2.72.202.B(2) NMAC	2021 2021	☐ Existing (unchanged) To ☐ Removed ☑ New/Additional Replacement Unit ☐ To Be Modified To ☐ Replaced
TK-1501	Water Make-up Tank	N/A	N/A N/A	210 bbl	20.2.72.202.B(2) NMAC	2021 2021	☐ Existing (unchanged) To ☐ Removed ☑ New/Additional Replacement Unit ☐ To Be Modified To ☐ Replaced
TK-2500	Amine Make-up Tank	N/A	N/A N/A	100 bbl	20.2.72.202.B(2) NMAC	2021 2021	☐ Existing (unchanged) To ☐ Removed ☑ New/Additional Replacement Unit ☐ To Be Modified To ☐ Replaced
TK-2501	Water Make-up Tank	N/A	N/A N/A	210 bbl	20.2.72.202.B(2) NMAC	2021 2021	☐ Existing (unchanged) To ☐ Removed ☑ New/Additional Replacement Unit ☐ To Be Modified To ☐ Replaced
TK-3500	Amine Make-up Tank	N/A	N/A N/A	400 bbl	20.2.72.202.B(2) NMAC	2021 2021	☐ Existing (unchanged) To ☐ Removed ☑ New/Additional Replacement Unit ☐ To Be Modified To ☐ Replaced
TK-3501	Water Make-up Tank	N/A	N/A N/A	500 bbl	20.2.72.202.B(2) NMAC	2021 2021	☐ Existing (unchanged) To ☐ Removed ☑ New/Additional Replacement Unit ☐ To Be Modified To ☐ Replaced
TK-3502	Water Make-up Tank	N/A	N/A N/A	500 bbl	20.2.72.202.B(2) NMAC	2021 2021	☐ Existing (unchanged) To ☐ Removed ☑ New/Additional Replacement Unit ☐ To Be Modified To ☐ Replaced
TK-3503	TEG Make-up Tank	N/A	N/A N/A	150 bbl	20.2.72.202.B(2) NMAC	2021 2021	☐ Existing (unchanged) To ☐ Removed ☑ New/Additional Replacement Unit ☐ To Be Modified To ☐ Replaced
TK-1515	RO Reject Tank	N/A	N/A N/A	210 bbl	20.2.72.202.B(2) NMAC	2021 2021	☐ Existing (unchanged) To ☐ Removed ☑ New/Additional Replacement Unit ☐ To Be Modified To ☐ Replaced
C-1580	Electric AGI Compressor	TBD	TBD TBD	2250 hp	20.2.72.202.B(5) NMAC	2021 2021	☐ Existing (unchanged) To ☐ Removed ☑ New/Additional Replacement Unit ☐ To Be Modified To ☐ Replaced

Unit Number	Source Description	Manufacturer	Model No. / Serial No.	Max Capacity / Capacity Units	List Specific 20.2.72.202 NMAC Exemption (e.g. 20.2.72.202.B.5) / Insignificant Activity citation (e.g. IA List Item #1.a)	Date of Manufacture /Reconstruction[2] / Date of Installation /Construction[2]	For Each Piece of Equipment, Check Onc
C-1585	Electric AGI Compressor	TBD	TBD	2250	20.2.72.202.B(5) NMAC	2021	☐ Existing (unchanged) To ☐ Removed
			TBD	hp		2021	☑ New/Additional Rep ☐ ement Unit
							☐ To Be Modified To ☐ Replaced
C-1590	Electric AGI Compressor	TBD	TBD	2250	20.2.72.202.B(5) NMAC	2021	☐ Existing (unchanged) To ☐ Removed
			TBD	hp		2021	☑ New/Additional Rep ☐ ement Unit
							☐ To Be Modified To ☐ Replaced
C-1595	Electric AGI Compressor	TBD	TBD	2250	20.2.72.202.B(5) NMAC	2021	☐ Existing (unchanged) To ☐ Removed
			TBD	hp		2021	☑ New/Additional Rep ☐ ement Unit
							☐ To Be Modified To ☐ Replaced
C-1680	Electric AGI Compressor	TBD	TBD	TBD	20.2.72.202.B(5) NMAC	2024	☐ Existing (unchanged) To ☐ Removed
			TBD	TBD		2024	☑ New/Additional Rep ☐ ement Unit
							☐ To Be Modified To ☐ Replaced
C-1685	Electric AGI Compressor	TBD	TBD	TBD	20.2.72.202.B(5) NMAC	2024	☐ Existing (unchanged) To ☐ Removed
			TBD	TBD		2024	☑ New/Additional Rep ☐ ement Unit
							☐ To Be Modified To ☐ Replaced
C-1690	Electric AGI Compressor	TBD	TBD	TBD	20.2.72.202.B(5) NMAC	2024	☐ Existing (unchanged) To ☐ Removed
			TBD	TBD		2024	☑ New/Additional Rep ☐ ement Unit
							☐ To Be Modified To ☐ Replaced
C-1695	Electric AGI Compressor	TBD	TBD	TBD	20.2.72.202.B(5) NMAC	2024	☐ Existing (unchanged) To ☐ Removed
			TBD	TBD		2024	☑ New/Additional Rep ☐ ement Unit
							☐ To Be Modified To ☐ Replaced
C-1205	Electric Residue Compressor	TBD	TBD	TBD	20.2.72.202.B(5) NMAC	2021	☐ Existing (unchanged) To ☐ Removed
			TBD	TBD		2021	☑ New/Additional Rep ☐ ement Unit
							☐ To Be Modified To ☐ Replaced
C-1225	Electric Residue Compressor	TBD	TBD	TBD	20.2.72.202.B(5) NMAC	2021	☐ Existing (unchanged) To ☐ Removed
			TBD	TBD		2021	☑ New/Additional Rep ☐ ement Unit
							☐ To Be Modified To ☐ Replaced
C-1250	Electric Residue Compressor	TBD	TBD	TBD	20.2.72.202.B(5) NMAC	2021	☐ Existing (unchanged) To ☐ Removed
			TBD	TBD		2021	☑ New/Additional Rep ☐ ement Unit
							☐ To Be Modified To ☐ Replaced
C-1275	Electric Residue Compressor	TBD	TBD	TBD	20.2.72.202.B(5) NMAC	2021	☐ Existing (unchanged) To ☐ Removed
			TBD	TBD		2021	☑ New/Additional Rep ☐ ement Unit
							☐ To Be Modified To ☐ Replaced
C-2200	Electric Residue Compressor	TBD	TBD	TBD	20.2.72.202.B(5) NMAC	2024	☐ Existing (unchanged) To ☐ Removed
			TBD	TBD		2024	☑ New/Additional Rep ☐ ement Unit
							☐ To Be Modified To ☐ Replaced
C-2225	Electric Residue Compressor	TBD	TBD	TBD	20.2.72.202.B(5) NMAC	2024	☐ Existing (unchanged) To ☐ Removed
			TBD	TBD		2024	☑ New/Additional Rep ☐ ement Unit
							☐ To Be Modified To ☐ Replaced
C-2250	Electric Residue Compressor	TBD	TBD	TBD	20.2.72.202.B(5) NMAC	2024	☐ Existing (unchanged) To ☐ Removed
			TBD	TBD		2024	☑ New/Additional Rep ☐ ement Unit
							☐ To Be Modified To ☐ Replaced
C-2275	Electric Residue Compressor	TBD	TBD	TBD	20.2.72.202.B(5) NMAC	2024	☐ Existing (unchanged) To ☐ Removed
			TBD	TBD		2024	☑ New/Additional Rep ☐ ement Unit
							☐ To Be Modified To ☐ Replaced
							☐ Existing (unchanged) To ☐ Removed
							☐ New/Additional Rep ☐ ement Unit
							☐ To Be Modified To ☐ Replaced

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

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

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
CAT-1200	Engine Oxidation Catalyst	2021	CO, Formaldehyde	C-1200	CO = 86.8% CH2O = 78.8%	Manufacturer Guarantee
CAT-1210	Engine Oxidation Catalyst	2021	CO, Formaldehyde	C-1210	CO = 86.8% CH2O = 78.8%	Manufacturer Guarantee
CAT-1220	Engine Oxidation Catalyst	2021	CO, Formaldehyde	C-1220	CO = 86.8% CH2O = 78.8%	Manufacturer Guarantee
CAT-1230	Engine Oxidation Catalyst	2021	CO, Formaldehyde	C-1230	CO = 86.8% CH2O = 78.8%	Manufacturer Guarantee
FL-1850 and FL-1850 BD	Trains 1-4 Blowdown Flare	2021	VOC, HAPs, H2S	Trains 1-4 Blowdown Activities	98%	Manufacturer Guarantee
FL-1950 and FL-1950 BD	Trains 5 and 6 Blowdown Flare	2024	VOC, HAPs, H2S	Trains 5 and 6 Blowdown Activities	98%	Manufacturer Guarantee
FL-2050 and FL-2050 BD	Cryogenic Process Blowdown Flare	2024	VOC, HAPs, H2S	Cryogenic Process Blowdown Activities	98%	Manufacturer Guarantee
FL-1967	Dehy Regen Combustor	2021	VOC, HAPs, H2S	DEHY-1	98%	Manufacturer Guarantee
FL-2967	Dehy Regen Combustor	2021	VOC, HAPs, H2S	DEHY-2	98%	Manufacturer Guarantee
FL-3967	Dehy Regen Combustor	2021	VOC, HAPs, H2S	DEHY-3	98%	Manufacturer Guarantee
FL-4967	Dehy Regen Combustor	2024	VOC, HAPs, H2S	DEHY-4	98%	Manufacturer Guarantee
FL-5967	Dehy Regen Combustor	2024	VOC, HAPs, H2S	DEHY-5	98%	Manufacturer Guarantee
FL-6967	Dehy Regen Combustor	2024	VOC, HAPs, H2S	DEHY-6	98%	Manufacturer Guarantee
FL-7967	Tank Loading Combustor	2024	VOC, HAPs, H2S	COND-LOAD 1-3 and COND-LOAD 4-6	98%	Manufacturer Guarantee
SK-1975	Vapor Recovery Unit	2021	VOC, HAPs, H2S	Storage Tanks	100% (redundant VRUs)	Engineering Judgement
SK-1976	Vapor Recovery Unit	2021	VOC, HAPs, H2S	Storage Tanks	100% (redundant VRUs)	Engineering Judgement
SK-1988	Vapor Recovery Unit	2021	VOC, HAPs, H2S	AGI Compressor Packing	100% (redundant VRUs)	Engineering Judgement
SK-1989	Vapor Recovery Unit	2021	VOC, HAPs, H2S	AGI Compressor Packing	100% (redundant VRUs)	Engineering Judgement
SK-2075	Vapor Recovery Unit	2024	VOC, HAPs, H2S	Storage Tanks	100% (redundant VRUs)	Engineering Judgement
SK-2076	Vapor Recovery Unit	2024	VOC, HAPs, H2S	Storage Tanks	100% (redundant VRUs)	Engineering Judgement

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
SK-2088	Vapor Recovery Unit	2024	VOC, HAPs, H2S	AGI Compressor Packing	100% (redundant VRUs)	Engineering Judgement
SK-2089	Vapor Recovery Unit	2024	VOC, HAPs, H2S	AGI Compressor Packing	100% (redundant VRUs)	Engineering Judgement
AGI	Acid Gas Injection Well	2021	VOC, HAPs, H2S	AMINE-1 through AMINE-6	100%	Engineering Judgement

[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
C-1200	1.65	7.24	13.78	60.35	2.53	11.07	0.22	0.98	0.19	0.82	0.19	0.82	0.19	0.82	1.1E-04	4.7E-04	-	-
C-1210	1.65	7.24	13.78	60.35	2.53	11.07	0.22	0.98	0.19	0.82	0.19	0.82	0.19	0.82	1.1E-04	4.7E-04	-	-
C-1220	1.65	7.24	13.78	60.35	2.53	11.07	0.22	0.98	0.19	0.82	0.19	0.82	0.19	0.82	1.1E-04	4.7E-04	-	-
C-1230	1.65	7.24	13.78	60.35	2.53	11.07	0.22	0.98	0.19	0.82	0.19	0.82	0.19	0.82	1.1E-04	4.7E-04	-	-
H-1600	0.28	1.22	0.28	1.24	0.13	0.59	0.08	0.36	0.11	0.48	0.11	0.48	0.11	0.48	4.0E-05	1.7E-04	-	-
H-1620	1.49	6.53	1.51	6.63	0.71	3.13	0.44	1.95	0.58	2.54	0.58	2.54	0.58	2.54	2.1E-04	9.3E-04	-	-
H-2600	1.12	4.89	1.13	4.96	0.53	2.34	0.33	1.46	0.43	1.90	0.43	1.90	0.43	1.90	1.6E-04	7.0E-04	-	-
H-2620	1.49	6.53	1.51	6.63	0.71	3.13	0.44	1.95	0.58	2.54	0.58	2.54	0.58	2.54	2.1E-04	9.3E-04	-	-
H-3620	1.49	6.53	1.51	6.63	0.71	3.13	0.44	1.95	0.58	2.54	0.58	2.54	0.58	2.54	2.1E-04	9.3E-04	-	-
H-4620	3.30	14.43	3.34	14.65	1.58	6.91	0.98	4.30	1.28	5.61	1.28	5.61	1.28	5.61	4.7E-04	2.1E-03	-	-
H-5620	3.57	15.62	3.62	15.85	1.71	7.48	1.06	4.65	1.39	6.08	1.39	6.08	1.39	6.08	5.1E-04	2.2E-03	-	-
H-6620	3.57	15.62	3.62	15.85	1.71	7.48	1.06	4.65	1.39	6.08	1.39	6.08	1.39	6.08	5.1E-04	2.2E-03	-	-
E-1566	0.15	0.64	0.12	0.54	0.01	0.04	0.02	0.08	0.01	0.05	0.01	0.05	0.01	0.05	8.6E-06	3.8E-05	-	-
E-2566	0.15	0.64	0.12	0.54	0.01	0.04	0.02	0.08	0.01	0.05	0.01	0.05	0.01	0.05	8.6E-06	3.8E-05	-	-
E-3566	0.15	0.64	0.12	0.54	0.01	0.04	0.02	0.08	0.01	0.05	0.01	0.05	0.01	0.05	8.6E-06	3.8E-05	-	-
E-4566	0.29	1.29	0.25	1.08	0.02	0.07	0.04	0.16	0.02	0.10	0.02	0.10	0.02	0.10	1.7E-05	7.5E-05	-	-
H-1781	2.16	9.46	1.82	7.95	0.12	0.52	0.26	1.15	0.16	0.72	0.16	0.72	0.16	0.72	1.3E-04	5.5E-04	-	-
H-2781	2.16	9.46	1.82	7.95	0.12	0.52	0.26	1.15	0.16	0.72	0.16	0.72	0.16	0.72	1.3E-04	5.5E-04	-	-
H-1741	0.89	3.90	0.75	3.28	0.05	0.21	0.11	0.48	0.07	0.30	0.07	0.30	0.07	0.30	5.2E-05	2.3E-04	-	-
H-2741	0.89	3.90	0.75	3.28	0.05	0.21	0.11	0.48	0.07	0.30	0.07	0.30	0.07	0.30	5.2E-05	2.3E-04	-	-
FL-1850	0.29	1.26	0.57	2.51	0.01	0.04	0.02	0.10	-	-	-	-	-	-	5.9E-04	2.6E-03	-	-
FL-1850 BD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FL-1950	0.29	1.27	0.58	2.54	0.01	0.04	0.02	0.11	-	-	-	-	-	-	6.0E-04	2.6E-03	-	-
FL-1950 BD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FL-2050	0.55	2.42	1.10	4.82	0.02	0.07	0.05	0.20	-	-	-	-	-	-	1.1E-03	5.0E-03	-	-
FL-2050 BD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FL-1967	0.00	0.02	0.00	0.02	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.3E-05	5.5E-05	-	-
FL-2967	0.00	0.02	0.00	0.02	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.3E-05	5.5E-05	-	-
FL-3967	0.00	0.02	0.00	0.02	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.3E-05	5.5E-05	-	-
FL-4967	0.00	0.02	0.00	0.02	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.3E-05	5.5E-05	-	-
FL-5967	0.00	0.02	0.00	0.02	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.3E-05	5.5E-05	-	-
FL-6967	0.00	0.02	0.00	0.02	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.3E-05	5.5E-05	-	-
FL-7967	0.02	0.07	0.01	0.06	-	-	0.00	0.01	-	-	-	-	-	-	4.6E-05	5.3E-03	-	-

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
DEHY-1	-	-	-	-	223.30	978.05	-	-	-	-	-	-	-	-	3.1E-03	1.4E-02	-	-
DEHY-2	-	-	-	-	223.30	978.05	-	-	-	-	-	-	-	-	3.1E-03	1.4E-02	-	-
DEHY-3	-	-	-	-	223.30	978.05	-	-	-	-	-	-	-	-	3.1E-03	1.4E-02	-	-
DEHY-4	-	-	-	-	368.20	1612.72	-	-	-	-	-	-	-	-	4.7E-03	2.1E-02	-	-
DEHY-5	-	-	-	-	368.20	1612.72	-	-	-	-	-	-	-	-	4.7E-03	2.1E-02	-	-
DEHY-6	-	-	-	-	368.20	1612.72	-	-	-	-	-	-	-	-	4.7E-03	2.1E-02	-	-
TK-1900	-	-	-	-	2.49	10.91	-	-	-	-	-	-	-	-	2.8E-08	1.2E-07	-	-
TK-1901	-	-	-	-	2.49	10.91	-	-	-	-	-	-	-	-	2.8E-08	1.2E-07	-	-
TK-1970	-	-	-	-	0.05	0.20	-	-	-	-	-	-	-	-	2.8E-08	1.2E-07	-	-
TK-1971	-	-	-	-	0.05	0.20	-	-	-	-	-	-	-	-	2.8E-08	1.2E-07	-	-
TK-1980	-	-	-	-	0.01	0.03	-	-	-	-	-	-	-	-	2.8E-01	1.2E+00	-	-
TK-1981	-	-	-	-	0.01	0.03	-	-	-	-	-	-	-	-	2.8E-01	1.2E+00	-	-
TK-2010	-	-	-	-	0.01	0.03	-	-	-	-	-	-	-	-	2.8E-01	1.2E+00	-	-
TK-2020	-	-	-	-	0.01	0.03	-	-	-	-	-	-	-	-	2.8E-01	1.2E+00	-	-
TK-2030	-	-	-	-	0.12	0.52	-	-	-	-	-	-	-	-	2.2E+00	9.7E+00	-	-
TK-2040	-	-	-	-	0.12	0.52	-	-	-	-	-	-	-	-	2.2E+00	9.7E+00	-	-
TK-2050	-	-	-	-	5.17	22.63	-	-	-	-	-	-	-	-	4.8E-08	2.1E-07	-	-
TK-2060	-	-	-	-	5.17	22.63	-	-	-	-	-	-	-	-	4.8E-08	2.1E-07	-	-
TK-2070	-	-	-	-	5.17	22.63	-	-	-	-	-	-	-	-	4.8E-08	2.1E-07	-	-
TK-2080	-	-	-	-	5.17	22.63	-	-	-	-	-	-	-	-	4.8E-08	2.1E-07	-	-
COND-LOAD 1-3	-	-	-	-	0.21	0.92	-	-	-	-	-	-	-	-	7.9E-03	3.4E-02	-	-
COND-LOAD 4-6	-	-	-	-	1.03	4.51	-	-	-	-	-	-	-	-	2.0E-02	8.7E-02	-	-
NGL-LOAD	-	-	-	-	0.00	0.00	-	-	-	-	-	-	-	-	5.6E-10	2.4E-09	-	-
HAUL	-	-	-	-	-	-	-	-	0.63	0.86	0.63	0.86	0.06	0.09	-	-	-	-
FUG	-	-	-	-	13.27	58.12	-	-	-	-	-	-	-	-	5.5E-01	2.4E+00	-	-
SSM	-	-	-	-	-	10.00	-	-	-	-	-	-	-	-	-	1.0E+00	-	-
Totals	**30.92**	**135.43**	**79.69**	**349.04**	**1,833.33**	**8,039.99**	**6.68**	**29.26**	**8.24**	**34.19**	**8.24**	**34.19**	**7.67**	**33.41**	**6.15**	**27.94**	**-**	**-**

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

Table 2-E: Requested Allowable Emissions

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

Unit No.	NOx		CO		VOC		SOx		PM[1]		PM10[1]		PM2.5[1]		H_2S		Lead	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
C-1200	1.65	7.24	1.82	7.97	1.83	8.02	0.22	0.98	0.19	0.82	0.19	0.82	0.19	0.82	1.07E-04	4.68E-04	-	-
C-1210	1.65	7.24	1.82	7.97	1.83	8.02	0.22	0.98	0.19	0.82	0.19	0.82	0.19	0.82	1.07E-04	4.68E-04	-	-
C-1220	1.65	7.24	1.82	7.97	1.83	8.02	0.22	0.98	0.19	0.82	0.19	0.82	0.19	0.82	1.07E-04	4.68E-04	-	-
C-1230	1.65	7.24	1.82	7.97	1.83	8.02	0.22	0.98	0.19	0.82	0.19	0.82	0.19	0.82	1.07E-04	4.68E-04	-	-
H-1600	0.28	1.22	0.28	1.24	0.13	0.59	0.08	0.36	0.11	0.48	0.11	0.48	0.11	0.48	3.98E-05	1.74E-04	-	-
H-1620	1.49	6.53	1.51	6.63	0.71	3.13	0.44	1.95	0.58	2.54	0.58	2.54	0.58	2.54	2.12E-04	9.30E-04	-	-
H-2600	1.12	4.89	1.13	4.96	0.53	2.34	0.33	1.46	0.43	1.90	0.43	1.90	0.43	1.90	1.59E-04	6.96E-04	-	-
H-2620	1.49	6.53	1.51	6.63	0.71	3.13	0.44	1.95	0.58	2.54	0.58	2.54	0.58	2.54	2.12E-04	9.30E-04	-	-
H-3620	1.49	6.53	1.51	6.63	0.71	3.13	0.44	1.95	0.58	2.54	0.58	2.54	0.58	2.54	2.12E-04	9.30E-04	-	-
H-4620	3.30	14.43	3.34	14.65	1.58	6.91	0.98	4.30	1.28	5.61	1.28	5.61	1.28	5.61	4.69E-04	2.05E-03	-	-
H-5620	3.57	15.62	3.62	15.85	1.71	7.48	1.06	4.65	1.39	6.08	1.39	6.08	1.39	6.08	5.08E-04	2.22E-03	-	-
H-6620	3.57	15.62	3.62	15.85	1.71	7.48	1.06	4.65	1.39	6.08	1.39	6.08	1.39	6.08	5.08E-04	2.22E-03	-	-
E-1566	0.15	0.64	0.12	0.54	0.01	0.04	0.02	0.08	0.01	0.05	0.01	0.05	0.01	0.05	8.56E-06	3.75E-05	-	-
E-2566	0.15	0.64	0.12	0.54	0.01	0.04	0.02	0.08	0.01	0.05	0.01	0.05	0.01	0.05	8.56E-06	3.75E-05	-	-
E-3566	0.15	0.64	0.12	0.54	0.01	0.04	0.02	0.08	0.01	0.05	0.01	0.05	0.01	0.05	8.56E-06	3.75E-05	-	-
E-4566	0.29	1.29	0.25	1.08	0.02	0.07	0.04	0.16	0.02	0.10	0.02	0.10	0.02	0.10	1.71E-05	7.50E-05	-	-
H-1781	2.16	9.46	1.82	7.95	0.12	0.52	0.26	1.15	0.16	0.72	0.16	0.72	0.16	0.72	1.26E-04	5.51E-04	-	-
H-2781	2.16	9.46	1.82	7.95	0.12	0.52	0.26	1.15	0.16	0.72	0.16	0.72	0.16	0.72	1.26E-04	5.51E-04	-	-
H-1741	0.89	3.90	0.75	3.28	0.05	0.21	0.11	0.48	0.07	0.30	0.07	0.30	0.07	0.30	5.19E-05	2.27E-04	-	-
H-2741	0.89	3.90	0.75	3.28	0.05	0.21	0.11	0.48	0.07	0.30	0.07	0.30	0.07	0.30	5.19E-05	2.27E-04	-	-
FL-1850	0.29	1.26	0.57	2.51	0.01	0.04	0.02	0.10	-	-	-	-	-	-	5.95E-04	2.60E-03	-	-
FL-1950	0.29	1.27	0.58	2.54	0.01	0.04	0.02	0.11	-	-	-	-	-	-	6.00E-04	2.63E-03	-	-
FL-2050	0.55	2.42	1.10	4.82	0.02	0.07	0.05	0.20	-	-	-	-	-	-	1.14E-03	5.00E-03	-	-
FL-1967	0.19	0.85	0.16	0.71	1.85	8.12	0.00	0.02	0.01	0.06	0.01	0.06	0.01	0.06	5.83E-05	2.55E-04	-	-
FL-2967	0.19	0.85	0.16	0.71	1.85	8.12	0.00	0.02	0.01	0.06	0.01	0.06	0.01	0.06	5.83E-05	2.55E-04	-	-
FL-3967	0.19	0.85	0.16	0.71	1.85	8.12	0.00	0.02	0.01	0.06	0.01	0.06	0.01	0.06	5.83E-05	2.55E-04	-	-
FL-4967	0.33	1.43	0.27	1.20	3.15	13.79	0.01	0.03	0.02	0.11	0.02	0.11	0.02	0.11	8.10E-05	3.55E-04	-	-
FL-5967	0.33	1.43	0.27	1.20	3.15	13.79	0.01	0.03	0.02	0.11	0.02	0.11	0.02	0.11	8.10E-05	3.55E-04	-	-
FL-6967	0.33	1.43	0.27	1.20	3.15	13.79	0.01	0.03	0.02	0.11	0.02	0.11	0.02	0.11	8.10E-05	3.55E-04	-	-
FL-7967	0.18	0.79	0.15	0.66	0.43	1.90	0.04	0.17	0.01	0.05	0.01	0.05	0.01	0.05	4.46E-04	1.95E-03	-	-
DEHY-1	-	-	-	-	0.94	4.10	-	-	-	-	-	-	-	-	2.31E-05	1.01E-04	-	-
DEHY-2	-	-	-	-	0.94	4.10	-	-	-	-	-	-	-	-	2.31E-05	1.01E-04	-	-
DEHY-3	-	-	-	-	0.94	4.10	-	-	-	-	-	-	-	-	2.31E-05	1.01E-04	-	-

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
DEHY-4	-	-	-	-	1.59	6.97	-	-	-	-	-	-	-	-	3.46E-05	1.52E-04	-	-
DEHY-5	-	-	-	-	1.59	6.97	-	-	-	-	-	-	-	-	3.46E-05	1.52E-04	-	-
DEHY-6	-	-	-	-	1.59	6.97	-	-	-	-	-	-	-	-	3.46E-05	1.52E-04	-	-
TK-1900	-	-	-	-	0.00	0.00	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	-	-
TK-1901	-	-	-	-	0.00	0.00	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	-	-
TK-1970	-	-	-	-	0.00	0.00	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	-	-
TK-1971	-	-	-	-	0.00	0.00	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	-	-
TK-1980	-	-	-	-	0.00	0.00	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	-	-
TK-1981	-	-	-	-	0.00	0.00	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	-	-
TK-2010	-	-	-	-	0.00	0.00	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	-	-
TK-2020	-	-	-	-	0.00	0.00	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	-	-
TK-2030	-	-	-	-	0.00	0.00	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	-	-
TK-2040	-	-	-	-	0.00	0.00	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	-	-
TK-2050	-	-	-	-	0.00	0.00	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	-	-
TK-2060	-	-	-	-	0.00	0.00	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	-	-
TK-2070	-	-	-	-	0.00	0.00	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	-	-
TK-2080	-	-	-	-	0.00	0.00	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	-	-
COND-LOAD 1-3	-	-	-	-	0.00	0.02	-	-	-	-	-	-	-	-	1.57E-04	6.88E-04	-	-
COND-LOAD 4-6	-	-	-	-	0.02	0.09	-	-	-	-	-	-	-	-	4.00E-04	1.75E-03	-	-
NGL-LOAD	-	-	-	-	0.00	0.00	-	-	-	-	-	-	-	-	5.59E-10	2.41E-09	-	-
HAUL	-	-	-	-	-	-	-	-	0.63	0.86	0.63	0.86	0.06	0.09	-	-	-	-
FUG	-	-	-	-	13.27	58.12	-	-	-	-	-	-	-	-	5.48E-01	2.40E+00	-	-
Totals	**32.62**	**142.87**	**33.28**	**145.75**	**51.86**	**227.13**	**6.75**	**29.56**	**8.36**	**34.75**	**8.36**	**34.75**	**7.80**	**33.97**	**0.55**	**2.43**	**0.00**	**0.00**

[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
FL-1850 BD	6.10	3.85	12.18	7.70	59.24	7.42	2,465.16	80.96	-	-	-	-	-	-	26.73	0.88	-	-
FL-1950 BD	34.53	1.88	68.94	3.76	219.27	4.24	2,430.06	61.25	-	-	-	-	-	-	26.35	0.66	-	-
FL-2050 BD	204.34	2.50	407.94	5.00	7.03	0.09	0.09	0.00107	-	-	-	-	-	-	9.45E-04	1.16E-05	-	-
SSM	-	-	-	-	-	10.00	-	-	-	-	-	-	-	-	-	1.00	-	-
Totals	244.97	8.24	489.06	16.46	285.54	21.75	4,895.31	142.20	-	-	-	-	-	-	53.07	2.54	-	-

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

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

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

☑ 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)			
C-1200	C-1200	V	No	31.5	833.0	476.3			151.6	2.0
C-1210	C-1210	V	No	31.5	833.0	476.3			151.6	2.0
C-1220	C-1220	V	No	31.5	833.0	476.3			151.6	2.0
C-1230	C-1230	V	No	31.5	833.0	476.3			151.6	2.0
H-1600	H-1600	V	No	20.0	493.0	54.9			39.5	1.33
H-1620	H-1620	V	No	29.0	426.0	270.7			38.3	3.0
H-2600	H-2600	V	No	25.5	490.0	216.5			44.1	2.5
H-2620	H-2620	V	No	29.0	426.0	270.7			38.3	3.0
H-3620	H-3620	V	No	29.0	426.0	270.7			38.3	3.0
H-4620	H-4620	V	No	41.0	487.0	664.8			52.9	4.0
H-5620	H-5620	V	No	41.0	472.0	731.4			58.2	4.0
H-6620	H-6620	V	No	41.0	472.0	731.4			58.2	4.0
E-1566	E-1566	V	No	27.0	600.0	28.1			15.9	1.5
E-2566	E-2566	V	No	27.0	600.0	28.1			15.9	1.5
E-3566	E-3566	V	No	27.0	600.0	28.1			15.9	1.5
E-4566	E-4566	V	No	25.0	600.0	50.0			15.9	2.0
H-1781	H-1781	V	No	24.0	467.0	168.4			39.5	2.33
H-2781	H-2781	V	No	24.0	467.0	168.4			39.5	2.33
H-1741	H-1741	V	No	20.0	442.0	68.5			49.3	1.33
H-2741	H-2741	V	No	20.0	442.0	68.5			49.3	1.33

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)			
FL-1850 and FL-1850 BD	FL-1850 and FL-1850 BD	V	No	110.0	1831.73	71358.5			65.62	37.21
FL-1950 and FL-1950 BD	FL-1950 and FL-1950 BD	V	No	110.0	1831.73	71358.5			65.62	37.21
FL-2050 and FL-2050 BD	FL-2050 and FL-2050 BD	V	No	199.0	1831.73	142701.3			65.62	52.62
FL-1967	FL-1967	V	No	30.0	1831.7	824.6			65.6	4.0
FL-2967	FL-2967	V	No	30.0	1831.7	824.6			65.6	4.0
FL-3967	FL-3967	V	No	30.0	1831.7	824.6			65.6	4.0
FL-4967	FL-4967	V	No	30.0	1831.7	824.6			65.6	4.0
FL-5967	FL-5967	V	No	30.0	1831.7	824.6			65.6	4.0
FL-6967	FL-6967	V	No	30.0	1831.7	824.6			65.6	4.0
FL-7967	FL-7967	V	No	40.0	1831.7	2899.0			65.6	7.5
DEHY-1	DEHY-1	V	No	15.0	210	2.8			57.0	0.25
DEHY-2	DEHY-2	V	No	15.0	210	2.8			57.0	0.25
DEHY-3	DEHY-3	V	No	15.0	210	2.8			57.0	0.25
DEHY-4	DEHY-4	V	No	18.0	210	5.5			27.9	0.50
DEHY-5	DEHY-5	V	No	18.0	210	5.5			27.9	0.50
DEHY-6	DEHY-6	V	No	18.0	210	5.5			27.9	0.50

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		Toluene ☑ HAP or ☐ TAP		Benzene ☑ HAP or ☐ TAP		n-Hexane ☑ HAP or ☐ TAP		☐ HAP or ☐ TAP		☐ HAP or ☐ TAP	
		lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
C-1200	C-1200	0.54	2.35	0.19	0.82	0.16	0.69	0.10	0.42	0.00764	0.03	0.00824	0.04	0.02	0.09101				
C-1210	C-1210	0.54	2.35	0.19	0.82	0.16	0.69	0.10	0.42	0.00764	0.03	0.00824	0.04	0.02	0.09101				
C-1220	C-1220	0.54	2.35	0.19	0.82	0.16	0.69	0.10	0.42	0.00764	0.03	0.00824	0.04	0.02	0.09101				
C-1230	C-1230	0.54	2.35	0.19	0.82	0.16	0.69	0.10	0.42	0.00764	0.03	0.00824	0.04	0.02	0.09101				
H-1600	H-1600	0.01	0.06	0.00	0.00	-	-	-	-	2.3E-05	0.00	1.4E-05	0.00	0.01	0.05387				
H-1620	H-1620	0.07	0.30	0.00	0.01	-	-	-	-	0.00012	0.00	7.7E-05	0.00	0.07	0.28753				
H-2600	H-2600	0.05	0.22	0.00	0.01	-	-	-	-	9.3E-05	0.00	5.7E-05	0.00	0.05	0.21511				
H-2620	H-2620	0.07	0.30	0.00	0.01	-	-	-	-	0.00012	0.00	7.7E-05	0.00	0.07	0.28753				
H-3620	H-3620	0.07	0.30	0.00	0.01	-	-	-	-	0.00012	0.00	7.7E-05	0.00	0.07	0.28753				
H-4620	H-4620	0.15	0.66	0.01	0.03	-	-	-	-	0.00027	0.00	0.00017	0.00	0.15	0.63513				
H-5620	H-5620	0.16	0.72	0.01	0.03	-	-	-	-	0.0003	0.00	0.00018	0.00	0.16	0.68722				
H-6620	H-6620	0.16	0.72	0.01	0.03	-	-	-	-	0.0003	0.00	0.00018	0.00	0.16	0.68722				
E-1566	E-1566	0.00	0.01	0.00	0.00	-	-	-	-	5E-06	0.00	3.1E-06	0.00	0.00	0.01159				
E-2566	E-2566	0.00	0.01	0.00	0.00	-	-	-	-	5E-06	0.00	3.1E-06	0.00	0.00	0.01159				
E-3566	E-3566	0.00	0.01	0.00	0.00	-	-	-	-	5E-06	0.00	3.1E-06	0.00	0.00	0.01159				
E-4566	E-4566	0.01	0.02	0.00	0.00	-	-	-	-	0.00001	0.00	6.2E-06	0.00	0.01	0.02319				
H-1781	H-1781	0.04	0.18	0.00	0.01	-	-	-	-	7.3E-05	0.00	4.5E-05	0.00	0.04	0.17036				
H-2781	H-2781	0.04	0.18	0.00	0.01	-	-	-	-	7.3E-05	0.00	4.5E-05	0.00	0.04	0.17036				
H-1741	H-1741	0.02	0.07	0.00	0.00	-	-	-	-	3E-05	0.00	1.9E-05	0.00	0.02	0.07026				
H-2741	H-2741	0.02	0.07	0.00	0.00	-	-	-	-	3E-05	0.00	1.9E-05	0.00	0.02	0.07026				
FL-1850	FL-1850	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
FL-1850 BD	FL-1850 BD	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
FL-1950	FL-1950	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
FL-1950 BD	FL-1950 BD	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
FL-2050	FL-2050	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
FL-2050 BD	FL-2050 BD	-	-	-	-	-	-	-	-	-	-	-	-	-	-				

Stack No.	Unit No.(s)	Total HAPs		Formaldehyde ☑ HAP or ☐ TAP		Acetaldehyde ☑ HAP or ☐ TAP		Acrolein ☑ HAP or ☐ TAP		Toluene ☑ HAP or ☐ TAP		Benzene ☑ HAP or ☐ TAP		n-Hexane ☑ HAP or ☐ TAP		☐ HAP or TAP ☐		☐ HAP or TAP ☐	
		lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
FL-1967	FL-1967	0.75	3.30	-	-	-	-	-	-	-	-	0.2465	1.08	-	-				
FL-2967	FL-2967	0.75	3.30	-	-	-	-	-	-	-	-	0.2465	1.08	-	-				
FL-3967	FL-3967	0.75	3.30	-	-	-	-	-	-	-	-	0.2465	1.08	-	-				
FL-4967	FL-4967	1.28	5.60	-	-	-	-	-	-	-	-	0.41289	1.81	-	-				
FL-5967	FL-5967	1.28	5.60	-	-	-	-	-	-	-	-	0.41289	1.81	-	-				
FL-6967	FL-6967	1.28	5.60	-	-	-	-	-	-	-	-	0.41289	1.81	-	-				
FL-7967	FL-7967	0.08	0.37	-	-	-	-	-	-	-	-	0.00341	0.01	-	-				
DEHY-1	DEHY-1	0.38	1.66	-	-	-	-	-	-	0.09738	0.43	0.1245	0.55	0.15	0.64118				
DEHY-2	DEHY-2	0.38	1.66	-	-	-	-	-	-	0.09738	0.43	0.1245	0.55	0.15	0.64118				
DEHY-3	DEHY-3	0.38	1.66	-	-	-	-	-	-	0.09738	0.43	0.1245	0.55	0.15	0.64118				
DEHY-4	DEHY-4	0.65	2.83	-	-	-	-	-	-	0.16589	0.73	0.20853	0.91	0.25	1.10397				
DEHY-5	DEHY-5	0.65	2.83	-	-	-	-	-	-	0.16589	0.73	0.20853	0.91	0.25	1.10397				
DEHY-6	DEHY-6	0.65	2.83	-	-	-	-	-	-	0.16589	0.73	0.20853	0.91	0.25	1.10397				
TK-1900	TK-1900	0.00	0.00	-	-	-	-	-	-	0	0.00	0	0.00	0.00	0				
TK-1901	TK-1901	0.00	0.00	-	-	-	-	-	-	0	0.00	0	0.00	0.00	0				
TK-1970	TK-1970	0.00	0.00	-	-	-	-	-	-	0	0.00	0	0.00	0.00	0				
TK-1971	TK-1971	0.00	0.00	-	-	-	-	-	-	0	0.00	0	0.00	0.00	0				
TK-1980	TK-1980	0.00	0.00	-	-	-	-	-	-	0	0.00	0	0.00	0.00	0				
TK-1981	TK-1981	0.00	0.00	-	-	-	-	-	-	0	0.00	0	0.00	0.00	0				
TK-2010	TK-2010	0.00	0.00	-	-	-	-	-	-	0	0.00	0	0.00	0.00	0				
TK-2020	TK-2020	0.00	0.00	-	-	-	-	-	-	0	0.00	0	0.00	0.00	0				
TK-2030	TK-2030	0.00	0.00	-	-	-	-	-	-	0	0.00	0	0.00	0.00	0				
TK-2040	TK-2040	0.00	0.00	-	-	-	-	-	-	0	0.00	0	0.00	0.00	0				
TK-2050	TK-2050	0.00	0.00	-	-	-	-	-	-	0	0.00	0	0.00	0.00	0				
TK-2060	TK-2060	0.00	0.00	-	-	-	-	-	-	0	0.00	0	0.00	0.00	0				
TK-2070	TK-2070	0.00	0.00	-	-	-	-	-	-	0	0.00	0	0.00	0.00	0				
TK-2080	TK-2080	0.00	0.00	-	-	-	-	-	-	0	0.00	0	0.00	0.00	0				
COND-LOAD 1-3	COND-LOAD 1-3	0.00	0.00	-	-	-	-	-	-	2.4E-05	0.00	3.5E-05	0.00	0.00	0.00324				
COND-LOAD 4-6	COND-LOAD 4-6	0.00	0.02	-	-	-	-	-	-	0.00012	0.00	0.00017	0.00	0.00	0.01606				
NGL-LOAD	NGL-LOAD	0.00	0.00	-	-	-	-	-	-	-	-	-	-	-	-				
HAUL	HAUL	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
FUG	FUG	2.33	10.20	-	-	-	-	-	-	-	-	-	-	-	-				
SSM	SSM	-	1.00	-	-	-	-	-	-	-	-	-	-	-	-				
Totals:		**14.62**	**65.02**	**0.78**	**3.44**	**0.63**	**2.74**	**0.38**	**1.69**	**0.82**	**3.60**	**3.01**	**13.20**	**2.12**	**9.30**				

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	% Ash
C-1200	Natural Gas	Fuel Gas	1,251	14,961.37	131.06	5 grains S/100 scf	0
C-1210	Natural Gas	Fuel Gas	1,251	14,961.37	131.06	5 grains S/100 scf	0
C-1220	Natural Gas	Fuel Gas	1,251	14,961.37	131.06	5 grains S/100 scf	0
C-1230	Natural Gas	Fuel Gas	1,251	14,961.37	131.06	5 grains S/100 scf	0
H-1600	Natural Gas	Fuel Gas	1,251	5,570.55	48.80	5 grains S/100 scf	0
H-1620	Natural Gas	Fuel Gas	1,251	29,730.93	260.44	5 grains S/100 scf	0
H-2600	Natural Gas	Fuel Gas	1,251	22,242.25	194.84	5 grains S/100 scf	0
H-2620	Natural Gas	Fuel Gas	1,251	29,730.93	260.44	5 grains S/100 scf	0
H-3620	Natural Gas	Fuel Gas	1,251	29,730.93	260.44	5 grains S/100 scf	0
H-4620	Natural Gas	Fuel Gas	1,251	65,671.79	575.28	5 grains S/100 scf	0
H-5620	Natural Gas	Fuel Gas	1,251	71,058.53	622.47	5 grains S/100 scf	0
H-6620	Natural Gas	Fuel Gas	1,251	71,058.53	622.47	5 grains S/100 scf	0
E-1566	Natural Gas	Fuel Gas	1,251	1,198.83	10.50	5 grains S/100 scf	0
E-2566	Natural Gas	Fuel Gas	1,251	1,198.83	10.50	5 grains S/100 scf	0
E-3566	Natural Gas	Fuel Gas	1,251	1,198.83	10.50	5 grains S/100 scf	0
E-4566	Natural Gas	Fuel Gas	1,251	2,397.66	21.00	5 grains S/100 scf	0
H-1781	Natural Gas	Fuel Gas	1,251	17,614.78	154.31	5 grains S/100 scf	0
H-2781	Natural Gas	Fuel Gas	1,251	17,614.78	154.31	5 grains S/100 scf	0
H-1741	Natural Gas	Fuel Gas	1,251	7,264.90	63.64	5 grains S/100 scf	0
H-2741	Natural Gas	Fuel Gas	1,251	7,264.90	63.64	5 grains S/100 scf	0

Unit No.	Fuel Type (low sulfur Diesel, ultra low sulfur diesel, Natural Gas, Coal, …)	Fuel Source: purchased commercial, pipeline quality natural gas, residue gas, raw/field natural gas, process gas (e.g. SRU tail gas) or other	Specify Units				
			Lower Heating Value (Btu/scf)	Hourly Usage (scf/hr)	Annual Usage (MMscf/yr)	% Sulfur	% Ash
FL-1850	Natural Gas	Fuel Gas	1,251	1,665.00	14.59	5 grains S/100 scf	0
FL-1850 BD	Process Gas	Multiple Process Gas Streams	Varies	46,074.34	Varies	Varies	0
FL-1950	Natural Gas	Fuel Gas	1,251	1,680.00	14.72	5 grains S/100 scf	0
FL-1950 BD	Process Gas	Multiple Process Gas Streams	Varies	104,729.17	Varies	Varies	0
FL-2050	Natural Gas	Fuel Gas	1,251	3,195.00	27.99	5 grains S/100 scf	0
FL-2050 BD	Process Gas	Cryogenic Process Gas	Varies	1,597,020.83	Varies	Varies	0
FL-1967	Natural Gas and Process Gas	Fuel Gas and Dehy Regenerator Gas	Varies	955.15	8.37	Varies	0
FL-2967	Natural Gas and Process Gas	Fuel Gas and Dehy Regenerator Gas	Varies	955.15	8.37	Varies	0
FL-3967	Natural Gas and Process Gas	Fuel Gas and Dehy Regenerator Gas	Varies	955.15	8.37	Varies	0
FL-4967	Natural Gas and Process Gas	Fuel Gas and Dehy Regenerator Gas	Varies	1,603.54	14.05	Varies	0
FL-5967	Natural Gas and Process Gas	Fuel Gas and Dehy Regenerator Gas	Varies	1603.54	14.05	Varies	0
FL-6967	Natural Gas and Process Gas	Fuel Gas and Dehy Regenerator Gas	Varies	1603.54	14.05	Varies	0

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

For each tank, list the liquid(s) to be stored in each tank. If it is expected that a tank may store a variety of hydrocarbon liquids, enter "mixed hydrocarbons" in the Composition column for that tank and enter the corresponding data of the most volatile liquid to be stored in the tank. If tank is to be used for storage of different materials, list all the materials in the "All Calculations" attachment, run the newest version of TANKS on each, and use the material with the highest emission rate to determine maximum uncontrolled and requested allowable emissions rate. The permit will specify the most volatile category of liquids that may be stored in each tank. Include appropriate tank-flashing modeling input data. Use additional sheets if necessary. Unit and stack numbering must correspond throughout the application package.

Tank No.	SCC Code	Material Name	Composition	Liquid Density (lb/gal)	Vapor Molecular Weight (lb/lb*mol)	Average Storage Conditions		Max Storage Conditions	
						Temperature (°F)	True Vapor Pressure (psia)	Temperature (°F)	True Vapor Pressure (psia)
TK-1900	40400311	Condensate	Condensate	5.41	68.30	68.48	5.68	79.21	6.99
TK-1901	40400311	Condensate	Condensate	5.41	68.30	68.48	5.68	79.21	6.99
TK-1970	40400315	Sour Water	Sour Water	5.97	34.97	68.48	11.03	79.21	12.88
TK-1971	40400315	Sour Water	Sour Water	5.97	34.97	68.48	11.03	79.21	12.88
TK-1980	40400313	Slop	Slop	0.02	32.03	79.91	3.20	79.91	3.20
TK-1981	40400313	Slop	Slop	0.02	32.03	79.91	3.20	79.91	3.20
TK-2010	40400313	Slop	Slop	0.02	32.03	79.91	3.20	79.91	3.20
TK-2020	40400313	Slop	Slop	0.02	32.03	79.91	3.20	79.91	3.20
TK-2030	40400315	Sour Water	Sour Water	5.97	34.37	68.48	11.04	79.21	12.88
TK-2040	40400315	Sour Water	Sour Water	5.97	34.37	68.48	11.04	79.21	12.88
TK-2050	40400311	Condensate	Condensate	5.41	68.44	68.48	5.67	79.21	6.98
TK-2060	40400311	Condensate	Condensate	5.41	68.44	68.48	5.67	79.21	6.98
TK-2070	40400311	Condensate	Condensate	5.41	68.44	68.48	5.67	79.21	6.98
TK-2080	40400311	Condensate	Condensate	5.41	68.44	68.48	5.67	79.21	6.98

Table 2-L: Tank Data

Include appropriate tank-flashing modeling input data. Use an addendum to this table for unlisted data categories. Unit and stack numbering must correspond throughout the application package. Use additional sheets if necessary.
See reference Table 2-L2. Note: 1.00 bbl = 10.159 M3 = 42.0 gal

Tank No.	Date Installed	Materials Stored	Seal Type (refer to Table 2-LR below)	Roof Type (refer to Table 2-LR below)	Capacity		Diameter (M)	Vapor Space (M)	Color (from Table VI-C)		Paint Condition (from Table VI-C)	Annual Throughput (gal/yr)	Turn- overs (per year)
					(bbl)	(M^3)			Roof	Shell			
TK-1900	2021	Condensate	N/A	FX	400	64	3.66	1.83	MG	MG	Good	10,635,944	633
TK-1901	2021	Condensate	N/A	FX	400	64	3.66	1.83	MG	MG	Good	10,635,944	633
TK-1970	2021	Sour Water	N/A	FX	400	64	3.66	1.83	MG	MG	Good	4,287,868	255
TK-1971	2021	Sour Water	N/A	FX	400	64	3.66	1.83	MG	MG	Good	4,287,868	255
TK-1980	2021	Slop	N/A	FX	400	64	3.66	1.83	MG	MG	Good	1,868,226	111
TK-1981	2021	Slop	N/A	FX	400	64	3.66	1.83	MG	MG	Good	1,868,226	111
TK-2010	2024	Slop	N/A	FX	400	64	3.66	1.83	MG	MG	Good	1,868,226	111
TK-2020	2024	Slop	N/A	FX	400	64	3.66	1.83	MG	MG	Good	1,868,226	111
TK-2030	2024	Sour Water	N/A	FX	400	64	3.66	1.83	MG	MG	Good	10,901,443	649
TK-2040	2024	Sour Water	N/A	FX	400	64	3.66	1.83	MG	MG	Good	10,901,443	649
TK-2050	2024	Condensate	N/A	FX	400	64	3.66	1.83	MG	MG	Good	26,104,168	1554
TK-2060	2024	Condensate	N/A	FX	400	64	3.66	1.83	MG	MG	Good	26,104,168	1554
TK-2070	2024	Condensate	N/A	FX	400	64	3.66	1.83	MG	MG	Good	26,104,168	1554
TK-2080	2024	Condensate	N/A	FX	400	64	3.66	1.83	MG	MG	Good	26,104,168	1554

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

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

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

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

Material Processed				Material Produced			
Description	**Chemical Composition**	**Phase (Gas, Liquid, or Solid)**	**Quantity (specify units)**	**Description**	**Chemical Composition**	**Phase**	**Quantity (specify units)**
Natural Gas	Sour Natural Gas	Gas	990 MMscfd	Natural Gas	Sweet Natural Gas	Gas	990 MMscfd
				Condensate	VOCs	Liquid	2,992,585 bbl/yr
				Sour Water	CO2, H2S, VOCs	Liquid	723,301 bbl/yr

Table 2-N: CEM Equipment

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

Stack No.	Pollutant(s)	Manufacturer	Model No.	Serial No.	Sample Frequency	Averaging Time	Range	Sensitivity	Accuracy
Not applicable as there is no CEM equipment at this site.									

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
Not applicable as there is no PEM equipment at this site.								

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**							
C-1200	**mass GHG**	GHG emissions are included in the attached emissions calculations. CO2e emissions are listed here.											
	CO_2e												9608.51
C-1210	**mass GHG**												
	CO_2e												9608.51
C-1220	**mass GHG**												
	CO_2e												9608.51
C-1230	**mass GHG**												
	CO_2e												9608.51
H-1600	**mass GHG**												
	CO_2e												3574.84
H-1620	**mass GHG**												
	CO_2e												19079.47
H-2600	**mass GHG**												
	CO_2e												14273.70
H-2620	**mass GHG**												
	CO_2e												19079.47
H-3620	**mass GHG**												
	CO_2e												19079.47
H-4620	**mass GHG**												
	CO_2e												42144.09
H-5620	**mass GHG**												
	CO_2e												45600.96
H-6620	**mass GHG**												
	CO_2e												45600.96
E-1566	**mass GHG**												
	CO_2e												769.33
E-2566	**mass GHG**												
	CO_2e												769.33
E-3566	**mass GHG**												
	CO2e												769.33
E-4566	**mass GHG**												
	CO_2e												1538.67

H-1781	**mass GHG**												
	CO_2e												11304.07
H-2781	**mass GHG**												
	CO_2e												11304.07
H-1741	**mass GHG**												
	CO_2e												4662.16
H-2741	**mass GHG**												
	CO_2e												4662.16
FL-1850	**mass GHG**												
	CO_2e												1068.49
FL-1850 BD	**mass GHG**												
	CO_2e												3270.91
FL-1950	**mass GHG**												
	CO2e												1078.12
FL-1950 BD	**mass GHG**												
	CO_2e												1599.12
FL-2050	**mass GHG**												
	CO_2e												2050.35
FL-2050 BD	**mass GHG**												
	CO_2e												2124.55
FL-1967	**mass GHG**												
	CO_2e												990.95
FL-2967	**mass GHG**												
	CO_2e												990.95
FL-3967	**mass GHG**												
	CO_2e												990.95
FL-4967	**mass GHG**												
	CO_2e												1682.93
FL-5967	**mass GHG**												
	CO2e												1682.93
FL-6967	**mass GHG**												
	CO_2e												1682.93
FL-7967	**mass GHG**												
	CO_2e												858.45
DEHY-1	**mass GHG**												
	CO_2e												6.21
DEHY-2	**mass GHG**												
	CO_2e												6.21
DEHY-3	**mass GHG**												
	CO2e												6.21
DEHY-4	**mass GHG**												
	CO_2e												10.76
DEHY-5	**mass GHG**												
	CO_2e												10.76
DEHY-6	**mass GHG**												
	CO_2e												10.76
TK-1900	**mass GHG**												
	CO_2e												0.00

TK-1901	**mass GHG**												
	CO2e												0.00
TK-1970	**mass GHG**												
	CO_2e												0.00
TK-1971	**mass GHG**												
	CO_2e												0.00
TK-1980	**mass GHG**												
	CO_2e												0.00
TK-1981	**mass GHG**												
	CO_2e												0.00
TK-2010	**mass GHG**												
	CO2e												0.00
TK-2020	**mass GHG**												
	CO_2e												0.00
TK-2030	**mass GHG**												
	CO_2e												0.00
TK-2040	**mass GHG**												
	CO2e												0.00
TK-2050	**mass GHG**												
	CO_2e												0.00
TK-2060	**mass GHG**												
	CO_2e												0.00
TK-2070	**mass GHG**												
	CO_2e												0.00
TK-2080	**mass GHG**												
	CO_2e												0.00
COND-LOAD 1-3	**mass GHG**												
	CO2e												0.00
COND-LOAD 4-6	**mass GHG**												
	CO2e												0.00
NGL-LOAD	**mass GHG**												
	CO_2e												-
HAUL	**mass GHG**												
	CO_2e												-
FUG	**mass GHG**												
	CO_2e												1651.59
SSM	**mass GHG**												
	CO_2e												-
	mass GHG												
	CO2e												
Total	**mass GHG**												
	CO_2e												**304,420.28**

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

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

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

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

[5] **CO_2e** means Carbon Dioxide Equivalent and is calculated by multiplying the TPY mass emissions of the green house gas by its GWP.

Section 3

Application Summary

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

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

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

The Dark Horse Treating Facility (Dark Horse) is owned and operated by Piñon Midstream, LLC (Piñon). The site currently operates under GCP-O&G Permit Number 9058. With this application, Piñon will be adding three (3) natural gas treating trains and two processing trains to the site and will convert the current GCP-O&G Permit to a New Source Review (NSR) Permit under 20.2.72.200.A NMAC.

The Dark Horse Treating Facility (Dark Horse) is currently authorized to operate three (3) trains for treating natural gas and with this revision, plans on expanding the facility to a total of six (6) natural gas treating trains and two (2) natural gas processing trains. The site receives raw sour gas from a gathering system at high pressure and low-pressure slug catchers. Liquid dropouts are sent to bullet tanks and a condensate stabilizer and are then sent off-site via pipeline. As aback-up, the liquids may also be stored in on-site storage tanks and then trucked off-site. Low pressure rich gas is compressed and sent to the coalescing filter and is mixed with the high-pressure rich gas. The filtered gas is routed to amine units where sour gas is stripped and sent to electric compression for disposal to one of two (2) on-site Acid Gas Injection (AGI) wells (automatic redundancy system ensures no AGI well downtime). Rich gas is sent to TEG dehydration and then routed to the sales pipeline or to the cryogenic processing trains. Flares are installed onsite to control any blowdown (BD) emissions during startup, shutdown and maintenance (SSM) activities. There are multiple heaters/reboilers for the amine and dehydration units to regenerate the amine or glycol used in those units. Each dehydration unit will have its own combustor to control the regenerator emissions. The condensate storage tanks and loading will be controlled by two vapor recovery units (VRUs, automatic redundancy system ensures no VRU downtime), set up in parallel to be sure all vapors are captured and sent back to the facility inlet. As a back-up, vapors can also be sent to the flare or vapor combustor.

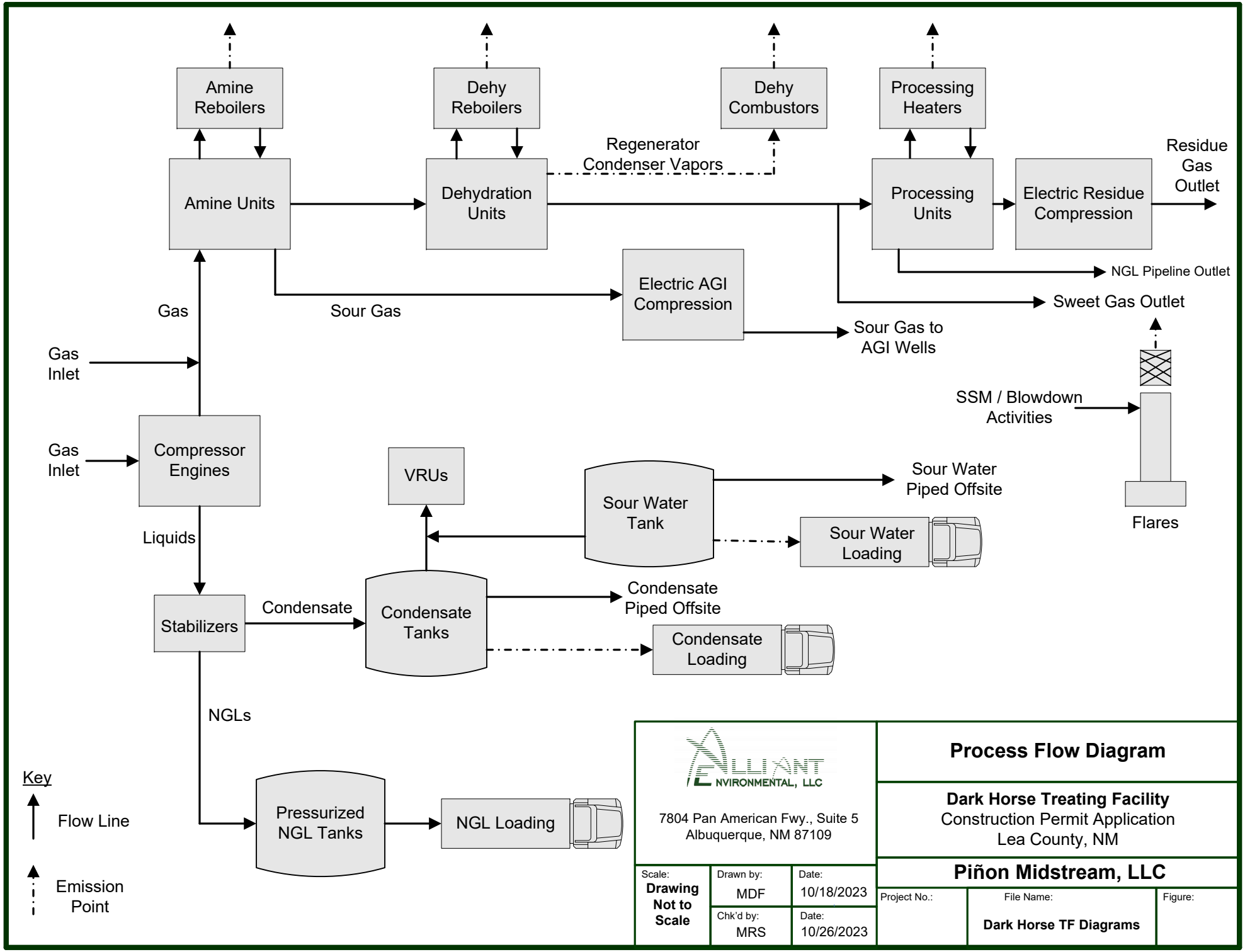
SSM emissions have been calculated for Dark Horse based on the type of equipment, the volume of gas expected to be released during SSM activities, the duration of the event, the estimated number of events to be performed annually, and the gas composition expected from that piece of equipment. Please see Section 6 for more information on SSM activities.

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.

Process flow diagrams of the Dark Horse Treating Facility are attached.


Amine Reboilers
Dehy Reboilers
Dehy Combustors
Processing Heaters
Amine Units
Dehydration Units
Regenerator Condenser Vapors
Processing Units
Electric Residue Compression
Residue Gas Outlet
NGL Pipeline Outlet
Sweet Gas Outlet
Electric AGI Compression
Sour Gas
Sour Gas to AGI Wells
Gas
Gas Inlet
Gas Inlet
Compressor Engines
SSM / Blowdown Activities
Flares
VRUs
Sour Water Tank
Sour Water Piped Offsite
Sour Water Loading
Liquids
Stabilizers
Condensate
Condensate Tanks
Condensate Piped Offsite
Condensate Loading
NGLs
Pressurized NGL Tanks
NGL Loading
Key
Flow Line
Emission Point
ALLIANT ENVIRONMENTAL, LLC
7804 Pan American Fwy., Suite 5
Albuquerque, NM 87109
Process Flow Diagram
Dark Horse Treating Facility
Construction Permit Application
Lea County, NM
Piñon Midstream, LLC
Scale: Drawing Not to Scale
Drawn by: MDF
Date: 10/18/2023
Chk'd by: MRS
Date: 10/26/2023
Project No.:
File Name: Dark Horse TF Diagrams
Figure:

Section 5

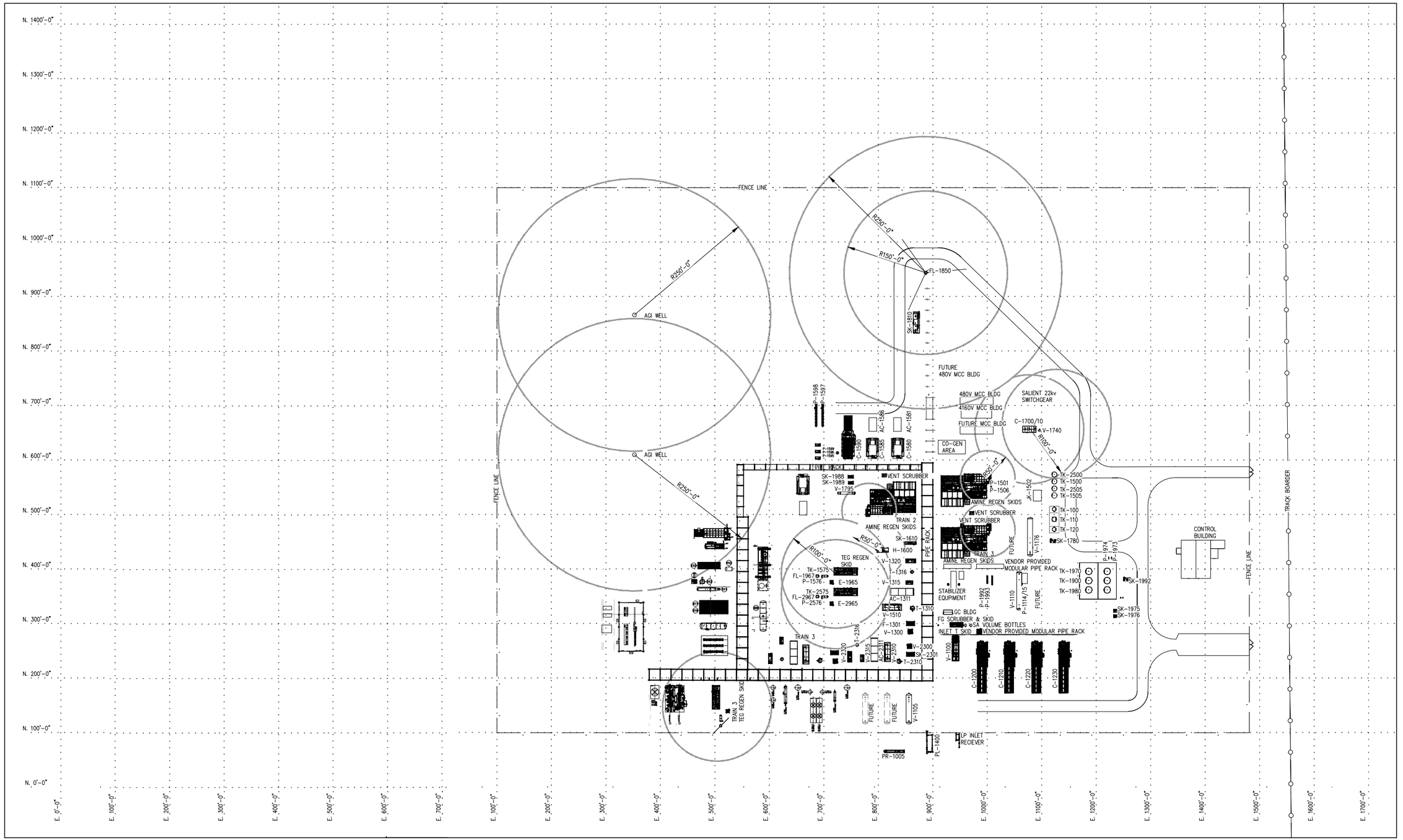
Plot Plan Drawn to Scale

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 of the Dark Horse Treating Facility is attached.

N

PLANT NORTH
LEA COUNTY
NEW MEXICO



PLOT TIME/DATE: August 2, 2023
BY: Christina Barnes
LAST SAVED: 08/02/23
FILE LOCATION: N:\PROJECTS\PIÑON MIDSTREAM\4083.0740.00 - DARK HORSE TREATING FACILITY\2000-SITE PLAN - CA'S\DHTF-PP-2000.DWG

NOTES:

REFERENCE DRAWINGS	
DWG. NO.	TITLE

REVISIONS				
NO.	DESCRIPTION	BY	DATE	APPR. DATE
3	ISSUED FOR REVIEW – TRAIN 4 REMOVAL	CB	08/02/2023	JM 08/02/2023
2	ISSUED FOR REVIEW – AGI PUMP ADDITION	CB	06/06/2023	JM 06/06/2023
1	ISSUED FOR REVIEW – TRAIN 3	CB	08/04/2022	JM 08/04/2022
0	ISSUED FOR CONSTRUCTION	CB	05/21/2021	JM 05/21/2021

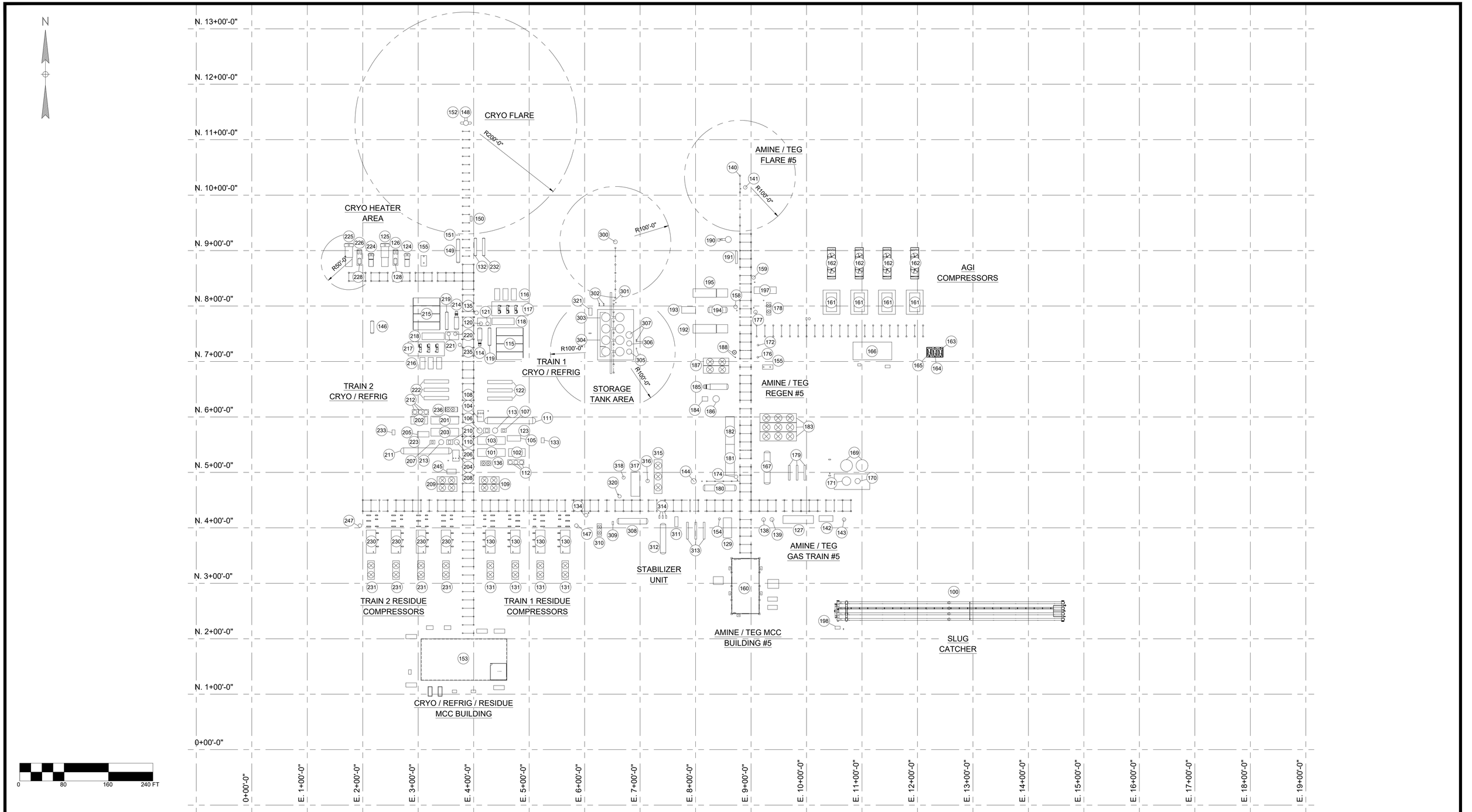
PIÑON MIDSTREAM

DARK HORSE TREATING FACILITY

KAHUNA
11400 Westmoor Cir. Ste. 325
Westminster, CO 80021
303.451.7374

PLOT PLAN
SITE INFORMATION
GENERAL ARRANGEMENT

COUNTY: LEA COUNTY	DRAWN BY: C. BARNES	APPROVED: J. CIPOLLA
STATE: NEW MEXICAO	CREATION DATE: 10/19/20	APPR. DATE: 10/19/20
Proj. No.: 4083.0740.00	DWG. No.: DHTF-PP-2000	SHEET No.: 1 OF 1
SCALE: 1"=80'-0"		3



NOTES:

STAMP & SEAL

REFERENCE DRAWINGS

NO.	TITLE
D-XXXXX-C03-101	PLOT PLAN LEGEND

REVISIONS

NO.	FIRM	DATE	DESCRIPTION	BY	CHK.	APP.
A1	SI	XX/XX/XX	-	-	-	-

SAULSBURY
ENGINEERING SERVICES
SAULSBURY.COM
TEXAS REGISTERED ENGINEERING FIRM F-518

ENGINEERING RECORD

PROJ. MANAGER:	-	SI JOB NUMBER:	
PROJ. ENGR:	-		
PROJ. DESIGN:	-		

GAS PLANT
2 X 200MMSCFD GAS PROCESSING FACILITY
PLOT PLAN

COUNTY, STATE

DWG. NO. D-XXXXX-C03-100

REV A1

C:\Jay Ward\D-XXXXX-C03-100 (9/27/2023 3:26:57 PM)

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.

Emissions calculations for all equipment included in this application are attached.

Compressor Engines:
Emissions for the compressor engines were calculated using engine and catalyst manufacturer data for NOx, CO, VOC, and formaldehyde. PM and HAP emissions were calculated using AP-42 emissions factors. And SO_2 emissions were calculated assuming the natural gas sulfur content of 5 gr/100 scf.

Heaters:
NOx, CO, VOC, and PM emissions were estimated using manufacturer guaranteed emissions factors. Hazardous air pollutant emissions were calculated using AP-42 factors for external natural gas combustion sources in Tables 1.4-1, 1.4-2 and 1.4-3. As a conservative measure, it was assumed that PM(Total) = PM_{10} and PM (condensable) = $PM_{2.5}$. SO_2 emissions were estimated assuming 5 grains of sulfur per 100 scf for natural gas. Greenhouse gas emissions were estimated using methodology from 40 CFR Part 98 and emission factors from Tables C-1 and C-2 of Part 98.

Reboilers:
NOx, CO, VOC, PM and hazardous emissions were calculated using AP-42 factors for external natural gas combustion sources in Tables 1.4-1, 1.4-2 and 1.4-3. As a conservative measure, it was assumed that PM(Total) = PM_{10} and PM (condensable) = $PM_{2.5}$. SO_2 emissions were estimated assuming 5 grains of sulfur per 100 scf for natural gas. Greenhouse gas emissions were estimated using methodology from 40 CFR Part 98 and emission factors from Tables C-1 and C-2 of Part 98.

Glycol Dehydrators:
All emissions from these units were calculated using the ProMax simulation program. The glycol flash tank emissions will be routed back to the facility inlet and therefore, no emissions are expected. The regenerator emissions will be routed to a condenser and then controlled by a combustor. As a worst-case scenario, it is assumed the combustor will be out of operation 1% of the time, and those emissions will vent through a dehydrator vent stack. The remaining 99% of the time, the dehydrator regenerator emissions will be controlled by it's associated combustor at 98% destruction removal efficiency (DRE) and those emissions are represented under the combustor used for control. Emissions during SSM events are accounted for in flare blowdown emissions.

Amine Units:
All emissions from these units are calculated using ProMax. The amine flash tank emissions are routed to a gas line. The regenerator emissions from the amine units are routed to an acid gas injection well. There are no controlled emissions associated with the amine units. Emissions during SSM events are accounted for in flare blowdown (BD) emissions. Greenhouse gas emissions were estimated using methodology from 40 CFR Part 98 and emission factors from Tables C-1 and C-2 of Part 98.

Flares:
The plant flares are used for flaring during startup, shutdown, maintenance conditions. The only steady state conditions associated with these flares are from the pilot and sweep gas streams. SSM from the plant flares are due to various maintenance activities throughout the facility. These maintenance activities include but are not limited to compressor catalyst changes, blowdowns for associated maintenance, and emissions during VRU downtime.

The basis of the flaring calculations are the expected composition and maximum expected volumes of the gas. The SO_2 composition is based on a 98% molar conversion of H_2S to SO_2. NOx and CO emissions for both scenarios are calculated using AP-42 Table 13.5-1 emission factors. VOC emissions are calculated from the VOC volume fraction of the gas to the flare based on the ProMax results for the associated gas stream, the specific volume of the VOC fraction of the gas, and a 98% destruction efficiency. The ProMax results can be found in Section 7. Emissions of greenhouse gases are calculated using methodology from 40 CFR Subpart 98.233(n).

Dehydrator Combustors:

NOx, CO, and PM emissions were calculated using AP-42 factors for external natural gas combustion sources in Tables 1.4-1 and 1.4-2. HAP, VOC and H_2S emissions were calculated using the dehydrator condenser regenerator streams from ProMax with an estimated 98% capture efficiency and 98% control efficiency. A 99% capture efficiency was assumed as the combustors are expected to be down a maximum 1% of the time. Greenhouse gas emissions were estimated using methodology from 40 CFR Part 98 and emission factors from Tables C-1 and C-2 of Part 98.

Storage Tanks:

Uncontrolled tank emissions were calculated using ProMax. Controlled emissions will be captured by two (2) vapor recovery units (VRU) operated in parallel (automatic redundancy system ensures no VRU downtime). If there is any VRU downtime (both VRUs down) due to maintenance, tank emissions for tanks from train 1-3 will be routed to flare 1850 (FL-1850-BD) and tank emissions for tanks will be routed to an enclosed combustion device.

Loading Emissions:

Loading emissions were calculated using ProMax. Controlled emissions will be captured by vapor recovery units (VRU) operated in parallel. During VRU downtime, loading emissions will be routed to an enclosed combustion device. Same as for the storage tanks above.

Fugitive Emissions:

Fugitive emissions were estimated using emission factors from Table 2-4 of EPA Protocol for Equipment Leak Emission Estimates, November 1995, EPA-453/R-95-017. Component counts were estimated based on the current site and the expected expansion. The percent VOC and HAPs used in the calculations are based on the ProMax results for the gas inlet and liquids streams.

Haul Road Emissions:

Unpaved haul road emissions were estimated based on Equations 1a and 2 of AP-42 Section 13.2.2 (11/2006). Particle size multipliers and constants for these equations are found in AP-42 Table 13.2.2-2, Industrial Roads. Silt content is taken fromAP-42 Table 13.2.2-1 and annual wet days is from AP-42 Figure 13.2.2-1.

Startup, Shutdown and Maintenance (SSM):

Emissions from various equipment blowdowns during SSM activities will be routed to and controlled by one of the three flares included in the application and represented under Units FL-1980 BD, FL-1950 BD and FL-2050 BD. For the maximum short term emission rate (lb/hr), the most conservative and highest emission rates that are possible to be flared/emitted were added. Note, not all blowdown events will or can occur at the same time.

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)

Greenhouse gas emissions for the Dark Horse Treating Facility are included in the attached emissions calculations.

Piñon Midstream - Dark Horse Treating Facility

Emission Summary

Maximum Uncontrolled Emissions

		NO_x		CO		VOC		SO_2		PM_{10}		$PM_{2.5}$		H_2S		CO_2e
Unit	Description	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	tpy
C-1200	LP Inlet Compressor	1.65	7.24	13.78	60.35	2.53	11.07	0.22	0.98	0.19	0.82	0.19	0.82	1.07E-04	4.68E-04	9608.51
C-1210	LP Inlet Compressor	1.65	7.24	13.78	60.35	2.53	11.07	0.22	0.98	0.19	0.82	0.19	0.82	1.07E-04	4.68E-04	9608.51
C-1220	LP Inlet Compressor	1.65	7.24	13.78	60.35	2.53	11.07	0.22	0.98	0.19	0.82	0.19	0.82	1.07E-04	4.68E-04	9608.51
C-1230	LP Inlet Compressor	1.65	7.24	13.78	60.35	2.53	11.07	0.22	0.98	0.19	0.82	0.19	0.82	1.07E-04	4.68E-04	9608.51
H-1600	Stabilizer Hot Oil Heater	0.28	1.22	0.28	1.24	0.134	0.59	0.08	0.36	0.109	0.48	0.109	0.48	3.98E-05	1.74E-04	3574.84
H-1620	Amine Hot Oil Heater	1.49	6.53	1.51	6.63	0.71	3.13	0.44	1.95	0.58	2.54	0.58	2.54	2.12E-04	0.0009	19079.47
H-2600	Stabilizer Hot Oil Heater	1.12	4.89	1.13	4.96	0.53	2.34	0.33	1.46	0.43	1.90	0.43	1.90	1.59E-04	0.0007	14273.70
H-2620	Amine Hot Oil Heater	1.49	6.53	1.51	6.63	0.71	3.13	0.44	1.95	0.58	2.54	0.58	2.54	2.12E-04	0.0009	19079.47
H-3620	Amine Hot Oil Heater	1.49	6.53	1.51	6.63	0.71	3.13	0.44	1.95	0.58	2.54	0.58	2.54	2.12E-04	0.0009	19079.47
H-4620	Amine Hot Oil Heater	3.30	14.43	3.34	14.65	1.58	6.91	0.98	4.30	1.28	5.61	1.28	5.61	4.69E-04	0.0021	42144.09
H-5620	Utility Hot Oil Heater	3.57	15.62	3.62	15.85	1.71	7.48	1.06	4.65	1.39	6.08	1.39	6.08	5.08E-04	0.0022	45600.96
H-6620	Utility Hot Oil Heater	3.57	15.62	3.62	15.85	1.71	7.48	1.06	4.65	1.39	6.08	1.39	6.08	5.08E-04	0.0022	45600.96
E-1566	TEG Reboiler (Direct Fired Heater)	0.15	0.64	0.12	0.54	0.008	0.035	0.018	0.08	0.011	0.049	0.011	0.049	8.56E-06	3.75E-05	769.33
E-2566	TEG Reboiler (Direct Fired Heater)	0.15	0.64	0.12	0.54	0.008	0.035	0.018	0.08	0.011	0.049	0.011	0.049	8.56E-06	3.75E-05	769.33
E-3566	TEG Reboiler (Direct Fired Heater)	0.15	0.64	0.12	0.54	0.008	0.035	0.018	0.08	0.011	0.049	0.011	0.049	8.56E-06	3.75E-05	769.33
E-4566	TEG Reboiler (Direct Fired Heater)	0.29	1.29	0.25	1.08	0.016	0.071	0.036	0.16	0.022	0.098	0.022	0.098	1.71E-05	7.50E-05	1538.67
H-1781	Cryo Trim Heater	2.16	9.46	1.82	7.95	0.119	0.521	0.263	1.15	0.164	0.719	0.164	0.719	1.26E-04	5.51E-04	11304.07
H-2781	Cryo Trim Heater	2.16	9.46	1.82	7.95	0.119	0.521	0.263	1.15	0.164	0.719	0.164	0.719	1.26E-04	5.51E-04	11304.07
H-1741	Cryo Regen Heater	0.89	3.90	0.75	3.28	0.049	0.215	0.109	0.48	0.068	0.297	0.068	0.297	5.19E-05	2.27E-04	4662.16
H-2741	Cryo Regen Heater	0.89	3.90	0.75	3.28	0.049	0.215	0.109	0.48	0.068	0.297	0.068	0.297	5.19E-05	2.27E-04	4662.16
FL-1850	Plant Flare	0.29	1.26	0.57	2.51	0.01	0.04	0.02	0.10	-	-	-	-	5.95E-04	2.60E-03	-
FL-1850 BD	FL-1850 Facility Blowdown	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FL-1950	Train 5 and 6 Process Flare	0.29	1.27	0.58	2.54	0.01	0.04	0.02	0.11	-	-	-	-	6.00E-04	2.63E-03	1078.12
FL-1950 BD	FL-1950 Blowdown	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FL-2050	Cryogenic Process Flare	0.55	2.42	1.10	4.82	0.02	0.07	0.046	0.20	-	-	-	-	1.14E-03	5.00E-03	2050.35
FL-2050 BD	FL-2050 Blowdown	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FL-1967	Dehy Regen Combustor	0.004	0.02	0.004	0.02	-	-	0.0005	0.002	0.0003	0.001	0.0003	0.001	0.00001	5.475E-05	-
FL-2967	Dehy Regen Combustor	0.004	0.02	0.004	0.02	-	-	0.0005	0.002	0.0003	0.001	0.0003	0.001	0.00001	0.00005	-
FL-3967	Dehy Regen Combustor	0.004	0.02	0.004	0.02	-	-	0.0005	0.002	0.0003	0.001	0.0003	0.001	0.00001	0.00005	-
FL-4967	Dehy Regen Combustor	0.004	0.02	0.004	0.02	-	-	0.0005	0.002	0.0003	0.001	0.0003	0.001	1.25E-05	5.48E-05	-
FL-5967	Dehy Regen Combustor	0.004	0.02	0.004	0.02	-	-	0.0005	0.002	0.0003	0.001	0.0003	0.001	0.0000	0.000	-
FL-6967	Dehy Regen Combustor	0.004	0.02	0.004	0.02	-	-	0.0005	0.002	0.0003	0.001	0.0003	0.001	0.0000	0.000	-
FL-7967	Tank Loading Combustor	0.02	0.07	0.01	0.06	-	-	0.0019	0.008	-	-	-	-	0.00005	0.005	858.45
DEHY-1	TEG Dehydrator	-	-	-	-	223.30	978.05	-	-	-	-	-	-	0.003	0.014	6,696.24
DEHY-2	TEG Dehydrator	-	-	-	-	223.30	978.05	-	-	-	-	-	-	0.0031	0.014	6,696.24
DEHY-3	TEG Dehydrator	-	-	-	-	223.30	978.05	-	-	-	-	-	-	0.0031	0.014	6,696.24
DEHY-4	TEG Dehydrator	-	-	-	-	368.20	1,612.72	-	-	-	-	-	-	0.005	0.021	11,528.99
DEHY-5	TEG Dehydrator	-	-	-	-	368.20	1,612.72	-	-	-	-	-	-	0.0047	0.021	11,528.99
DEHY-6	TEG Dehydrator	-	-	-	-	368.20	1,612.72	-	-	-	-	-	-	0.0047	0.021	11,528.99
TK-1900	Stabilized Condensate Storage Tank	-	-	-	-	2.49	10.91	-	-	-	-	-	-	2.78E-08	1.22E-07	4.11E-13
TK-1901	Stabilized Condensate Storage Tank	-	-	-	-	2.49	10.91	-	-	-	-	-	-	2.78E-08	1.22E-07	4.11E-13
TK-1970	Sour Water Storage Tank	-	-	-	-	0.05	0.20	-	-	-	-	-	-	2.78E-08	1.22E-07	4.11E-13
TK-1971	Sour Water Storage Tank	-	-	-	-	0.05	0.20	-	-	-	-	-	-	2.78E-08	1.22E-07	4.11E-13
TK-1980	Slop Tank	-	-	-	-	0.01	0.03	-	-	-	-	-	-	0.28	1.23	0.55
TK-1981	Slop Tank	-	-	-	-	0.01	0.03	-	-	-	-	-	-	0.28	1.23	0.55
TK-2010	Slop Tank	-	-	-	-	0.01	0.03	-	-	-	-	-	-	0.28	1.23	0.55
TK-2020	Slop Tank	-	-	-	-	0.01	0.03	-	-	-	-	-	-	0.28	1.23	0.55
TK-2030	Sour Water Storage Tank	-	-	-	-	0.12	0.52	-	-	-	-	-	-	2.21	9.69	20.37
TK-2040	Sour Water Storage Tank	-	-	-	-	0.12	0.52	-	-	-	-	-	-	2.21	9.69	20.37
TK-2050	Stabilized Condensate Storage Tank	-	-	-	-	5.17	22.63	-	-	-	-	-	-	4.78E-08	2.09E-07	0.00
TK-2060	Stabilized Condensate Storage Tank	-	-	-	-	5.17	22.63	-	-	-	-	-	-	4.78E-08	2.09E-07	0.00
TK-2070	Stabilized Condensate Storage Tank	-	-	-	-	5.17	22.63	-	-	-	-	-	-	4.78E-08	2.09E-07	0.00
TK-2080	Stabilized Condensate Storage Tank	-	-	-	-	5.17	22.63	-	-	-	-	-	-	4.78E-08	2.09E-07	0.00
COND-LOAD 1-3	Condensate and Sour Water Loadout	-	-	-	-	0.21	0.92	-	-	-	-	-	-	0.01	0.03	0.06
COND-LOAD 4-6	Condensate and Sour Water Loadout	-	-	-	-	1.03	4.51	-	-	-	-	-	-	0.02	0.09	0.18
NGL-LOAD	Pressurized NGL Loadout	-	-	-	-	7.66E-04	3.31E-03	-	-	-	-	-	-	5.59E-10	2.41E-09	-
HAUL	Condensate, Water and NGL Truck Haul	-	-	-	-	-	-	-	-	0.63	0.86	0.06	0.09	-	-	-
FUG	Fugitive Emissions	-	-	-	-	13.27	58.12	-	-	-	-	-	-	0.55	2.40	1651.59
SSM	Startup, Shutdown, Maintenance	-	-	-	-	-	10.00	-	-	-	-	-	-	-	1.00	-
Totals		**30.92**	**135.43**	**79.69**	**349.04**	**1,833.33**	**8,039.99**	**6.68**	**29.26**	**8.24**	**34.19**	**7.67**	**33.41**	**6.15**	**27.94**	**343,003.54**

Maximum Controlled Emissions

Unit	Description	NO_x		CO		VOC		SO_2		PM_{10}		$PM_{2.5}$		H_2S		CO_2e
		lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	tpy
C-1200	LP Inlet Compressor	1.65	7.24	1.82	7.97	1.83	8.02	0.22	0.98	0.19	0.82	0.19	0.82	1.07E-04	4.68E-04	9608.51
C-1210	LP Inlet Compressor	1.65	7.24	1.82	7.97	1.83	8.02	0.22	0.98	0.19	0.82	0.19	0.82	1.07E-04	4.68E-04	9608.51
C-1220	LP Inlet Compressor	1.65	7.24	1.82	7.97	1.83	8.02	0.22	0.98	0.19	0.82	0.19	0.82	1.07E-04	4.68E-04	9608.51
C-1230	LP Inlet Compressor	1.65	7.24	1.82	7.97	1.83	8.02	0.22	0.98	0.19	0.82	0.19	0.82	1.07E-04	4.68E-04	9608.51
H-1600	Stabilizer Hot Oil Heater	0.28	1.22	0.28	1.24	0.13	0.59	0.08	0.36	0.109	0.48	0.109	0.48	3.98E-05	1.74E-04	3574.84
H-1620	Amine Hot Oil Heater	1.49	6.53	1.51	6.63	0.71	3.13	0.44	1.95	0.58	2.54	0.58	2.54	2.12E-04	0.0009	19079.47
H-2600	Stabilizer Hot Oil Heater	1.12	4.89	1.13	4.96	0.53	2.34	0.33	1.46	0.43	1.90	0.43	1.90	1.59E-04	0.0007	14273.70
H-2620	Amine Hot Oil Heater	1.49	6.53	1.51	6.63	0.71	3.13	0.44	1.95	0.58	2.54	0.58	2.54	2.12E-04	0.0009	19079.47
H-3620	Amine Hot Oil Heater	1.49	6.53	1.51	6.63	0.71	3.13	0.44	1.95	0.58	2.54	0.58	2.54	2.12E-04	0.0009	19079.47
H-4620	Amine Hot Oil Heater	3.30	14.43	3.34	14.65	1.58	6.91	0.98	4.30	1.28	5.61	1.28	5.61	4.69E-04	0.0021	42144.09
H-5620	Utility Hot Oil Heater	3.57	15.62	3.62	15.85	1.71	7.48	1.06	4.65	1.39	6.08	1.39	6.08	5.08E-04	0.0022	45600.96
H-6620	Utility Hot Oil Heater	3.57	15.62	3.62	15.85	1.71	7.48	1.06	4.65	1.39	6.08	1.39	6.08	5.08E-04	0.0022	45600.96
E-1566	TEG Reboiler (Direct Fired Heater)	0.15	0.64	0.12	0.54	0.008	0.035	0.018	0.08	0.011	0.049	0.011	0.049	8.56E-06	3.75E-05	769.33
E-2566	TEG Reboiler (Direct Fired Heater)	0.15	0.64	0.12	0.54	0.008	0.035	0.018	0.08	0.011	0.049	0.011	0.049	8.56E-06	3.75E-05	769.33
E-3566	TEG Reboiler (Direct Fired Heater)	0.15	0.64	0.12	0.54	0.008	0.035	0.018	0.08	0.011	0.049	0.011	0.049	8.56E-06	3.75E-05	769.33
E-4566	TEG Reboiler (Direct Fired Heater)	0.29	1.29	0.25	1.08	0.016	0.071	0.036	0.16	0.022	0.098	0.022	0.098	1.71E-05	7.50E-05	1538.67
H-1781	Cryo Trim Heater	2.16	9.46	1.82	7.95	0.119	0.521	0.263	1.15	0.164	0.719	0.164	0.719	1.26E-04	5.51E-04	11304.07
H-2781	Cryo Trim Heater	2.16	9.46	1.82	7.95	0.119	0.521	0.263	1.15	0.164	0.719	0.164	0.719	1.26E-04	5.51E-04	11304.07
H-1741	Cryo Regen Heater	0.89	3.90	0.75	3.28	0.049	0.215	0.109	0.48	0.068	0.297	0.068	0.297	5.19E-05	2.27E-04	4662.16
H-2741	Cryo Regen Heater	0.89	3.90	0.75	3.28	0.049	0.215	0.109	0.48	0.068	0.297	0.068	0.297	5.19E-05	2.27E-04	4662.16
FL-1850	Plant Flare	0.29	1.26	0.57	2.51	0.01	0.04	0.02	0.10	-	-	-	-	0.001	0.003	1068.49
FL-1850 BD	FL-1850 Facility Blowdown	6.10	3.85	12.18	7.70	59.24	7.42	2,465.16	80.96	-	-	-	-	26.73	0.88	3,270.91
FL-1950	Train 5 and 6 Process Flare	0.29	1.27	0.58	2.54	0.01	0.04	0.02	0.11	-	-	-	-	0.001	0.003	1078.12
FL-1950 BD	FL-1950 Blowdown	34.53	1.88	68.94	3.76	219.27	4.24	2,430.06	61.25	-	-	-	-	26.35	0.66	1599.12
FL-2050	Cryogenic Process Flare	0.55	2.42	1.10	4.82	0.02	0.07	0.05	0.20	-	-	-	-	0.0011	0.00	2,050.35
FL-2050 BD	FL-2050 Blowdown	204.34	2.50	407.94	5.00	7.03	0.09	0.09	0.0011	-	-	-	-	9.45E-04	1.16E-05	2,124.55
FL-1967	Dehy Regen Combustor	0.19	0.85	0.16	0.71	1.85	8.12	0.005	0.02	0.01	0.06	0.01	0.06	5.83E-05	2.55E-04	990.95
FL-2967	Dehy Regen Combustor	0.19	0.85	0.16	0.71	1.85	8.12	0.005	0.02	0.01	0.06	0.01	0.06	5.83E-05	2.55E-04	990.95
FL-3967	Dehy Regen Combustor	0.19	0.85	0.16	0.71	1.85	8.12	0.005	0.02	0.01	0.06	0.01	0.06	5.83E-05	2.55E-04	990.95
FL-4967	Dehy Regen Combustor	0.33	1.43	0.27	1.20	3.15	13.79	0.007	0.03	0.02	0.11	0.02	0.11	8.10E-05	3.55E-04	1,682.93
FL-5967	Dehy Regen Combustor	0.33	1.43	0.27	1.20	3.15	13.79	0.007	0.03	0.02	0.11	0.02	0.11	8.10E-05	3.55E-04	1,682.93
FL-6967	Dehy Regen Combustor	0.33	1.43	0.27	1.20	3.15	13.79	0.007	0.03	0.02	0.11	0.02	0.11	8.10E-05	3.55E-04	1,682.93
FL-7967	Tank Loading Combustor	0.18	0.79	0.15	0.66	0.43	1.90	0.039	0.17	0.01	0.05	0.01	0.05	4.46E-04	1.95E-03	858.45
DEHY-1	TEG Dehydrator	-	-	-	-	0.94	4.10	-	-	-	-	-	-	2.31E-05	1.01E-04	6.21
DEHY-2	TEG Dehydrator	-	-	-	-	0.94	4.10	-	-	-	-	-	-	2.31E-05	1.01E-04	6.21
DEHY-3	TEG Dehydrator	-	-	-	-	0.94	4.10	-	-	-	-	-	-	2.31E-05	1.01E-04	6.21
DEHY-4	TEG Dehydrator	-	-	-	-	1.59	6.97	-	-	-	-	-	-	3.46E-05	1.52E-04	10.76
DEHY-5	TEG Dehydrator	-	-	-	-	1.59	6.97	-	-	-	-	-	-	3.46E-05	1.52E-04	10.76
DEHY-6	TEG Dehydrator	-	-	-	-	1.59	6.97	-	-	-	-	-	-	3.46E-05	1.52E-04	10.76
TK-1900	Stabilized Condensate Storage Tank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TK-1901	Stabilized Condensate Storage Tank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TK-1970	Sour Water Storage Tank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TK-1971	Sour Water Storage Tank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TK-1980	Slop Tank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TK-1981	Slop Tank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TK-2010	Slop Tank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TK-2020	Slop Tank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TK-2030	Sour Water Storage Tank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TK-2040	Sour Water Storage Tank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TK-2050	Stabilized Condensate Storage Tank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TK-2060	Stabilized Condensate Storage Tank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TK-2070	Stabilized Condensate Storage Tank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TK-2080	Stabilized Condensate Storage Tank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
COND-LOAD 1-3	Condensate and Sour Water Loadout	-	-	-	-	0.004	0.02	-	-	-	-	-	-	0.0002	0.001	0.001
COND-LOAD 4-6	Condensate and Sour Water Loadout	-	-	-	-	0.02	0.09	-	-	-	-	-	-	0.0004	0.002	0.003
NGL-LOAD	Pressurized NGL Loadout	-	-	-	-	7.66E-04	3.31E-03	-	-	-	-	-	-	5.59E-10	2.41E-09	-
HAUL	Condensate, Water and NGL Truck Haul	-	-	-	-	-	-	-	-	0.63	0.86	0.063	0.09	-	-	-
FUG	Fugitive Emissions	-	-	-	-	13.27	58.12	-	-	-	-	-	-	0.55	2.40	1651.59
SSM	Startup, Shutdown, Maintenance	-	-	-	-	-	10.00	-	-	-	-	-	-	-	1.00	-
Totals		**277.59**	**151.11**	**522.33**	**162.20**	**337.39**	**248.88**	**4,902.05**	**171.76**	**8.36**	**34.75**	**7.80**	**33.97**	**53.63**	**4.97**	**304,420.28**
Total excluding Fugitives		**277.59**	**151.11**	**522.33**	**162.20**	**324.13**	**190.76**	**4,902.05**	**171.76**	**8.36**	**34.75**	**7.80**	**33.97**	**53.08**	**2.57**	**302,768.70**

Notes:

For Units FL-1850 BD, FL-1950 BD and FL-2050 BD, the hourly emissions rate is based on the maximum hourly rate between all blowdown activties. As only one activitiy should occur at a time, this would be the worst-case scenario for emissions. The annual emissions rate is a sum of all of the blowdown activities that are expected to occur over the entire year.

Maximum Uncontrolled HAP Emissions

		HCHO		Acetaldehyde		Acrolein		Methanol		Toluene		Ethylbenzene		Xylenes		Benzene		n-Hexane		Total HAPs	
Unit	**Description**	**lb/hr**	**tpy**	**lb/hr**	**tpy**	**lb/hr**	**tpy**	**lb/hr**	**tpy**	**lb/hr**	**tpy**	**lb/hr**	**tpy**	**lb/hr**	**tpy**	**lb/hr**	**tpy**	**lb/hr**	**tpy**	**lb/hr**	**tpy**
C-1200	LP Inlet Compressor	0.88	3.86	0.16	0.69	0.096	0.42	0.047	0.20	0.0076	0.033	7.43E-04	0.0033	0.0034	0.015	0.0082	0.036	0.021	0.091	1.23	5.40
C-1210	LP Inlet Compressor	0.88	3.86	0.16	0.69	0.096	0.42	0.047	0.20	0.0076	0.033	7.43E-04	0.0033	0.0034	0.015	0.0082	0.036	0.021	0.091	1.23	5.40
C-1220	LP Inlet Compressor	0.88	3.86	0.16	0.69	0.096	0.42	0.047	0.20	0.0076	0.033	7.43E-04	0.0033	0.0034	0.015	0.0082	0.036	0.021	0.091	1.23	5.40
C-1230	LP Inlet Compressor	0.88	3.86	0.16	0.69	0.096	0.42	0.047	0.20	0.0076	0.033	7.43E-04	0.0033	0.0034	0.015	0.0082	0.036	0.021	0.091	1.23	5.40
H-1600	Stabilizer Hot Oil Heater	5.13E-04	0.0022	-	-	-	-	-	-	2.32E-05	1.02E-04	-	-	-	-	1.44E-05	6.29E-05	0.012	0.054	0.013	0.056
H-1620	Amine Hot Oil Heater	0.0027	0.012	-	-	-	-	-	-	1.24E-04	5.43E-04	-	-	-	-	7.66E-05	3.35E-04	0.066	0.29	0.069	0.30
H-2600	Stabilizer Hot Oil Heater	0.0020	0.009	-	-	-	-	-	-	9.28E-05	4.06E-04	-	-	-	-	5.73E-05	2.51E-04	0.049	0.22	0.051	0.22
H-2620	Amine Hot Oil Heater	0.0027	0.012	-	-	-	-	-	-	1.24E-04	5.43E-04	-	-	-	-	7.66E-05	3.35E-04	0.066	0.29	0.069	0.30
H-3620	Amine Hot Oil Heater	0.0027	0.012	-	-	-	-	-	-	1.24E-04	5.43E-04	-	-	-	-	7.66E-05	3.35E-04	0.066	0.29	0.069	0.30
H-4620	Amine Hot Oil Heater	0.0060	0.026	-	-	-	-	-	-	2.74E-04	1.20E-03	-	-	-	-	1.69E-04	7.41E-04	0.145	0.64	0.151	0.66
H-5620	Utility Hot Oil Heater	0.0065	0.029	-	-	-	-	-	-	2.96E-04	1.30E-03	-	-	-	-	1.83E-04	8.02E-04	0.157	0.69	0.164	0.72
H-6620	Utility Hot Oil Heater	0.0065	0.029	-	-	-	-	-	-	2.96E-04	1.30E-03	-	-	-	-	1.83E-04	8.02E-04	0.157	0.69	0.164	0.72
E-1566	TEG Reboiler (Direct Fired Heater)	1.10E-04	4.83E-04	-	-	-	-	-	-	5.00E-06	2.19E-05	-	-	-	-	3.09E-06	1.35E-05	0.0026	0.012	0.0028	0.012
E-2566	TEG Reboiler (Direct Fired Heater)	1.10E-04	4.83E-04	-	-	-	-	-	-	5.00E-06	2.19E-05	-	-	-	-	3.09E-06	1.35E-05	0.0026	0.012	0.0028	0.012
E-3566	TEG Reboiler (Direct Fired Heater)	1.10E-04	4.83E-04	-	-	-	-	-	-	5.00E-06	2.19E-05	-	-	-	-	3.09E-06	1.35E-05	0.0026	0.012	0.0028	0.012
E-4566	TEG Reboiler (Direct Fired Heater)	2.21E-04	9.66E-04	-	-	-	-	-	-	1.00E-05	4.38E-05	-	-	-	-	6.18E-06	2.71E-05	0.0053	0.023	0.0055	0.024
H-1781	Cryo Trim Heater	1.62E-03	7.10E-03	-	-	-	-	-	-	7.35E-05	3.22E-04	-	-	-	-	4.54E-05	1.99E-04	0.0389	0.170	0.0406	0.178
H-2781	Cryo Trim Heater	1.62E-03	7.10E-03	-	-	-	-	-	-	7.35E-05	3.22E-04	-	-	-	-	4.54E-05	1.99E-04	0.0389	0.170	0.0406	0.178
H-1741	Cryo Regen Heater	6.68E-04	2.93E-03	-	-	-	-	-	-	3.03E-05	1.33E-04	-	-	-	-	1.87E-05	8.20E-05	0.0160	0.070	0.0168	0.073
H-2741	Cryo Regen Heater	6.68E-04	2.93E-03	-	-	-	-	-	-	3.03E-05	1.33E-04	-	-	-	-	1.87E-05	8.20E-05	0.0160	0.070	0.0168	0.073
FL-1850	Plant Flare	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FL-1850 BD	FL-1850 Facility Blowdown	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FL-1950	Train 5 and 6 Process Flare	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FL-1950 BD	FL-1950 Blowdown	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FL-2050	Cryogenic Process Flare	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FL-2050 BD	FL-2050 Blowdown	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FL-1967	Dehy Regen Combustor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12.33	53.98	-	-	37.63	164.80
FL-2967	Dehy Regen Combustor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12.33	53.98	-	-	37.63	164.80
FL-3967	Dehy Regen Combustor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12.33	53.98	-	-	37.63	164.80
FL-4967	Dehy Regen Combustor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20.64	90.42	-	-	63.95	280.08
FL-5967	Dehy Regen Combustor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20.64	90.42	-	-	63.95	280.08
FL-6967	Dehy Regen Combustor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20.64	90.42	-	-	63.95	280.08
FL-7967	Tank Loading Combustor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.17	0.75	-	-	4.18	18.29
DEHY-1	TEG Dehydrator	-	-	-	-	-	-	-	-	34.05	149.14	2.32	10.16	7.36	32.24	23.35	102.29	26.35	115.42	93.44	409.25
DEHY-2	TEG Dehydrator	-	-	-	-	-	-	-	-	34.05	149.14	2.32	10.16	7.36	32.24	23.35	102.29	26.35	115.42	93.44	409.25
DEHY-3	TEG Dehydrator	-	-	-	-	-	-	-	-	34.05	149.14	2.32	10.16	7.36	32.24	23.35	102.29	26.35	115.42	93.44	409.25
DEHY-4	TEG Dehydrator	-	-	-	-	-	-	-	-	54.53	238.84	3.46	15.17	11.28	49.43	37.69	165.07	43.87	192.13	150.83	660.64
DEHY-5	TEG Dehydrator	-	-	-	-	-	-	-	-	54.53	238.84	3.46	15.17	11.28	49.43	37.69	165.07	43.87	192.13	150.83	660.64
DEHY-6	TEG Dehydrator	-	-	-	-	-	-	-	-	54.53	238.84	3.46	15.17	11.28	49.43	37.69	165.07	43.87	192.13	150.83	660.64
TK-1900	Stabilized Condensate Storage Tank	-	-	-	-	-	-	-	-	0.01	0.06	4.59E-04	0.002	0.001	0.006	0.02	0.09	0.44	1.93	0.48	2.08
TK-1901	Stabilized Condensate Storage Tank	-	-	-	-	-	-	-	-	0.01	0.06	4.59E-04	0.002	0.001	0.006	0.02	0.09	0.44	1.93	0.48	2.08
TK-1970	Sour Water Storage Tank	-	-	-	-	-	-	-	-	0.01	0.05	3.90E-04	0.002	0.001	0.003	0.02	0.08	0.0002	0.001	0.03	0.13
TK-1971	Sour Water Storage Tank	-	-	-	-	-	-	-	-	0.01	0.05	3.90E-04	0.002	0.001	0.003	0.02	0.08	0.0002	0.001	0.03	0.13
TK-1980	Slop Tank	-	-	-	-	-	-	-	-	0.002	0.01	6.60E-05	0.000	1.81E-04	0.0008	0.004	0.02	1.84E-06	8.08E-06	0.01	0.03
TK-1981	Slop Tank	-	-	-	-	-	-	-	-	0.002	0.01	0.000	0.000	0.000	0.001	0.004	0.02	1.84E-06	8.08E-06	0.01	0.03
TK-2010	Slop Tank	-	-	-	-	-	-	-	-	0.002	0.01	0.000	0.000	0.000	0.001	0.004	0.02	1.84E-06	8.08E-06	0.01	0.03
TK-2020	Slop Tank	-	-	-	-	-	-	-	-	0.002	0.01	0.000	0.000	0.000	0.001	0.004	0.02	1.84E-06	8.08E-06	0.01	0.03
TK-2030	Sour Water Storage Tank	-	-	-	-	-	-	-	-	0.03	0.11	0.001	0.004	0.002	0.007	0.04	0.19	0.0005	0.002	0.07	0.32
TK-2040	Sour Water Storage Tank	-	-	-	-	-	-	-	-	0.03	0.110	0.001	0.004	0.002	0.007	0.044	0.192	0.000	0.002	0.072	0.32
TK-2050	Stabilized Condensate Storage Tank	-	-	-	-	-	-	-	-	0.028	0.123	0.001	0.004	0.003	0.013	0.041	0.181	0.921	4.035	0.994	4.36
TK-2060	Stabilized Condensate Storage Tank	-	-	-	-	-	-	-	-	0.028	0.123	0.001	0.004	0.003	0.013	0.041	0.181	0.921	4.035	0.994	4.36
TK-2070	Stabilized Condensate Storage Tank	-	-	-	-	-	-	-	-	0.028	0.123	0.001	0.004	0.003	0.013	0.041	0.181	0.921	4.035	0.994	4.36
TK-2080	Stabilized Condensate Storage Tank	-	-	-	-	-	-	-	-	0.028	0.123	0.001	0.004	0.003	0.013	0.041	0.181	0.921	4.035	0.994	4.36
COND-LOAD 1-3	Condensate and Sour Water Loadout	-	-	-	-	-	-	-	-	0.001	0.01	0.0000	0.000	0.000	0.001	0.00	0.01	0.04	0.16	0.04	0.18
COND-LOAD 4-6	Condensate and Sour Water Loadout	-	-	-	-	-	-	-	-	0.01	0.03	0.0002	0.001	0.001	0.003	0.01	0.04	0.18	0.80	0.20	0.87
NGL-LOAD	Pressurized NGL Loadout	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.4E-04	6.0E-04
HAUL	Condensate, Water and NGL Truck Haul	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FUG	Fugitive Emissions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.33	10.20
SSM	Startup, Shutdown, Maintenance	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.00
Totals		**3.56**	**15.60**	**0.63**	**2.74**	**0.38**	**1.69**	**0.19**	**0.82**	**265.99**	**1,165.06**	**17.36**	**76.03**	**55.97**	**245.17**	**282.60**	**1,237.77**	**216.36**	**947.66**	**1,055.22**	**4,622.86**

Maximum Controlled HAP Emissions

		HCHO		Acetaldehyde		Acrolein		Methanol		Toluene		Ethylbenzene		Xylenes		Benzene		n-Hexane		Total HAPs	
Unit	Description	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
C-1200	LP Inlet Compressor	0.19	0.82	0.16	0.69	0.10	0.42	0.05	0.20	0.008	0.03	7.43E-04	0.003	0.003	0.02	0.008	0.04	0.02	0.091	0.54	2.35
C-1210	LP Inlet Compressor	0.19	0.82	0.16	0.69	0.10	0.42	0.05	0.20	0.008	0.03	7.43E-04	0.003	0.003	0.02	0.008	0.04	0.02	0.091	0.54	2.35
C-1220	LP Inlet Compressor	0.19	0.82	0.16	0.69	0.10	0.42	0.05	0.20	0.008	0.03	7.43E-04	0.003	0.003	0.02	0.008	0.04	0.02	0.091	0.54	2.35
C-1230	LP Inlet Compressor	0.19	0.82	0.16	0.69	0.10	0.42	0.05	0.20	0.008	0.03	7.43E-04	0.003	0.003	0.02	0.008	0.04	0.02	0.091	0.54	2.35
H-1600	Stabilizer Hot Oil Heater	5.13E-04	0.0022	-	-	-	-	-	-	2.32E-05	1.02E-04	-	-	-	-	1.44E-05	6.29E-05	0.01	0.05	0.01	0.06
H-1620	Amine Hot Oil Heater	0.0027	0.012	-	-	-	-	-	-	1.24E-04	5.43E-04	-	-	-	-	7.66E-05	3.35E-04	0.07	0.29	0.07	0.30
H-2600	Stabilizer Hot Oil Heater	0.0020	0.009	-	-	-	-	-	-	9.28E-05	4.06E-04	-	-	-	-	5.73E-05	2.51E-04	0.05	0.22	0.05	0.22
H-2620	Amine Hot Oil Heater	0.0027	0.012	-	-	-	-	-	-	1.24E-04	5.43E-04	-	-	-	-	7.66E-05	3.35E-04	0.07	0.29	0.07	0.30
H-3620	Amine Hot Oil Heater	0.0027	0.012	-	-	-	-	-	-	1.24E-04	5.43E-04	-	-	-	-	7.66E-05	3.35E-04	0.07	0.29	0.07	0.30
H-4620	Amine Hot Oil Heater	0.0060	0.026	-	-	-	-	-	-	2.74E-04	1.20E-03	-	-	-	-	1.69E-04	7.41E-04	0.15	0.64	0.15	0.66
H-5620	Utility Hot Oil Heater	0.0065	0.029	-	-	-	-	-	-	2.96E-04	1.30E-03	-	-	-	-	1.83E-04	8.02E-04	0.16	0.69	0.16	0.72
H-6620	Utility Hot Oil Heater	0.0065	0.029	-	-	-	-	-	-	2.96E-04	1.30E-03	-	-	-	-	1.83E-04	8.02E-04	0.16	0.69	0.16	0.72
E-1566	TEG Reboiler (Direct Fired Heater)	1.10E-04	4.83E-04	-	-	-	-	-	-	5.00E-06	2.19E-05	-	-	-	-	3.09E-06	1.35E-05	0.003	0.01	0.003	0.01
E-2566	TEG Reboiler (Direct Fired Heater)	1.10E-04	4.83E-04	-	-	-	-	-	-	5.00E-06	2.19E-05	-	-	-	-	3.09E-06	1.35E-05	0.003	0.01	0.003	0.01
E-3566	TEG Reboiler (Direct Fired Heater)	1.10E-04	4.83E-04	-	-	-	-	-	-	5.00E-06	2.19E-05	-	-	-	-	3.09E-06	1.35E-05	0.003	0.01	0.003	0.01
E-4566	TEG Reboiler (Direct Fired Heater)	2.21E-04	9.66E-04	-	-	-	-	-	-	1.00E-05	4.38E-05	-	-	-	-	6.18E-06	2.71E-05	0.005	0.02	0.01	0.02
H-1781	Cryo Trim Heater	1.62E-03	7.10E-03	-	-	-	-	-	-	7.35E-05	3.22E-04	-	-	-	-	4.54E-05	1.99E-04	0.039	0.17	0.04	0.18
H-2781	Cryo Trim Heater	1.62E-03	7.10E-03	-	-	-	-	-	-	7.35E-05	3.22E-04	-	-	-	-	4.54E-05	1.99E-04	0.039	0.17	0.04	0.18
H-1741	Cryo Regen Heater	6.68E-04	2.93E-03	-	-	-	-	-	-	3.03E-05	1.33E-04	-	-	-	-	1.87E-05	8.20E-05	0.016	0.07	0.02	0.07
H-2741	Cryo Regen Heater	6.68E-04	2.93E-03	-	-	-	-	-	-	3.03E-05	1.33E-04	-	-	-	-	1.87E-05	8.20E-05	0.016	0.07	0.02	0.07
FL-1850	Plant Flare	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FL-1850 BD	FL-1850 Facility Blowdown	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FL-1950	Train 5 and 6 Process Flare	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FL-1950 BD	FL-1950 Blowdown	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FL-2050	Cryogenic Process Flare	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FL-2050 BD	FL-2050 Blowdown	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FL-1967	Dehy Regen Combustor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.25	1.08	-	-	0.75	3.30
FL-2967	Dehy Regen Combustor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.25	1.08	-	-	0.75	3.30
FL-3967	Dehy Regen Combustor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.25	1.08	-	-	0.75	3.30
FL-4967	Dehy Regen Combustor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.41	1.81	-	-	1.28	5.60
FL-5967	Dehy Regen Combustor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.41	1.81	-	-	1.28	5.60
FL-6967	Dehy Regen Combustor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.41	1.81	-	-	1.28	5.60
FL-7967	Tank Loading Combustor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0034	0.015	-	-	0.08	0.37
DEHY-1	TEG Dehydrator	-	-	-	-	-	-	-	-	0.10	0.43	0.00	0.01	0.01	0.04	0.12	0.55	0.15	0.64	0.38	1.66
DEHY-2	TEG Dehydrator	-	-	-	-	-	-	-	-	0.10	0.43	0.00	0.01	0.01	0.04	0.12	0.55	0.15	0.64	0.38	1.66
DEHY-3	TEG Dehydrator	-	-	-	-	-	-	-	-	0.10	0.43	0.00	0.01	0.01	0.04	0.12	0.55	0.15	0.64	0.38	1.66
DEHY-4	TEG Dehydrator	-	-	-	-	-	-	-	-	0.17	0.73	0.00	0.02	0.01	0.06	0.21	0.91	0.25	1.10	0.65	2.83
DEHY-5	TEG Dehydrator	-	-	-	-	-	-	-	-	0.17	0.73	0.00	0.02	0.01	0.06	0.21	0.91	0.25	1.10	0.65	2.83
DEHY-6	TEG Dehydrator	-	-	-	-	-	-	-	-	0.17	0.73	0.00	0.02	0.01	0.06	0.21	0.91	0.25	1.10	0.65	2.83
TK-1900	Stabilized Condensate Storage Tank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TK-1901	Stabilized Condensate Storage Tank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TK-1970	Sour Water Storage Tank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TK-1971	Sour Water Storage Tank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TK-1980	Slop Tank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TK-1981	Slop Tank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TK-2010	Slop Tank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TK-2020	Slop Tank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TK-2030	Sour Water Storage Tank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TK-2040	Sour Water Storage Tank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TK-2050	Stabilized Condensate Storage Tank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TK-2060	Stabilized Condensate Storage Tank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TK-2070	Stabilized Condensate Storage Tank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TK-2080	Stabilized Condensate Storage Tank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
COND-LOAD 1-3	Condensate and Sour Water Loadout	-	-	-	-	-	-	-	-	0.00002	0.00011	0.00000	0.00000	0.00000	0.00001	0.00004	0.0002	0.001	0.003	0.001	0.004
COND-LOAD 4-6	Condensate and Sour Water Loadout	-	-	-	-	-	-	-	-	0.0001	0.0005	0.00000	0.00002	0.00001	0.0001	0.0002	0.001	0.004	0.02	0.004	0.02
NGL-LOAD	Pressurized NGL Loadout	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.4E-04	6.0E-04
HAUL	Condensate, Water and NGL Truck Haul	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FUG	Fugitive Emissions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.33	10.20
SSM	Startup, Shutdown, Maintenance	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.00
Totals		**0.78**	**3.44**	**0.63**	**2.74**	**0.38**	**1.69**	**0.19**	**0.82**	**0.82**	**3.60**	**0.03**	**0.11**	**0.085**	**0.373**	**3.015**	**13.20**	**2.12**	**9.30**	**14.62**	**65.02**

Piñon Midstream - Dark Horse Treating Facility

Emission Calculation Inputs

Site-Wide

Description	Value	Unit	Notes
Operating Period	Continuous		
Site Elevation	3,100	ft	
Cumulative Total Operating Hours	8,760	hr	
Gas Throughput (Trains 1-3, Each)	110	MMSCFD	ProMax Amine Treating Units Pstreams T1-3
Condensate Throughput (Trains 1-3, Each)	694	bbl/day	
Gas Throughput (Trains 4-6, Each)	220	MMSCFD	
Condensate Throughput (Trains 4-6, Each)	1,703	bbl/day	
Total Site Gas Throughput	**990**	MMSCFD	
Total Site Condensate Throughput	**8,199**	bbl/day	

Fuel Gas

Parameter	Value	Unit	Notes
Fuel Heat Value	1,251	Btu/scf	ProMax Makeup Fuel
Fuel H_2S Content	0.25	gr H_2S / 100 scf	Conservative Estimate
Fuel Sulfur Content	5.0	gr S / 100 scf	Conservative Estimate

Condensate Storage Tanks

Parameter	Value	Unit	Notes
Number of Tanks	6	units	Facility Design
Volume	400	bbl	Facility Design
Gas Capture Efficiency	100%	%	Facility Design

Other Storage Tanks

Parameter	Value	Unit	Notes
Sour Water Storage Tank	4	units	Facility Design
Sour Water Tank Volume	400	bbl	Facility Design
Slop Tank	4	units	Facility Design
Slop Tank Volume	400	bbl	Facility Design
Gas Capture Efficiency	100%	%	Facility Design

Truck Loadout

Parameter	Value	Unit	Notes
Condensate and Water per Year	3,715,885	bbl/yr	Annual Limit
NGL Volume per Year	749,017	bbl/yr	Annual Limit
Loadout Rate	100	bbl/hr	Facility Design
Capture Efficiency	100%	%	Loading emissions controlled by VRU, FL-1858-BD and FL-7967

Flares and Vapor Combustors

Parameter	Value	Unit	Notes
FL-1850 Pilot Flowrate	165	scf/hr	Manufacturer Specification
FL-1850 DRE	98%	%	Manufacturer Specification
FL-1850 Sweep Gas Flowrate	1500	scf/hr	Manufacturer Specification
FL-1950 Pilot Flowrate	180	Scf/hr	Manufacturer Specification
FL-1950 DRE	98%	%	Manufacturer Specification
FL-1950 Sweep Gas Flowrate	1500	scf/hr	Manufacturer Specification
FL-2050 Pilot Flowrate	195	Scf/hr	Manufacturer Specification
FL-2050 DRE	98%	%	Manufacturer Specification
FL-2050 Sweep Gas Flowrate	3000	scf/hr	Manufacturer Specification
Max Annual FL-1850 and FL-1950 Acid Gas Flaring Duration	9.5	hr	Facility Design
Max Hourly FL-1850 and FL-1950 Acid Gas Flaring Duration	0.25	hr	Facility Design
Max Annual FL-2050 Flaring Duration	365	hr	Assumed
Max Hourly FL-2050 Flaring Duration	0.25	hr	Assumed
Dehy Combustors' Pilot Flowrate	35	scf/hr	Design
Dehy Combustors' DRE	98%	%	Assumed
Dehy Combustors' Capture Efficiency	99%		Assumed
Tank Loading Combustor' Pilot Flowrate	130	scf/hr	Design

TEG and Amine Units

Parameter	Value	Unit	Notes
Number of TEG Dehys	6	units	Design
Number of Amine Units	6	units	Design

Heaters

Parameter	Design Heat Rate	Unit	Notes
H-1600	6.97	MMBTU/hr	Stabilizer Hot Oil Heater
H-1620	37.2	MMBTU/hr	Amine Hot Oil Heater
H-2600	27.83	MMBTU/hr	Stabilizer Hot Oil Heater
H-2620	37.2	MMBTU/hr	Amine Hot Oil Heater
H-3620	37.2	MMBTU/hr	Amine Hot Oil Heater
H-4620	82.17	MMBTU/hr	Amine Hot Oil Heater
H-5620	88.91	MMBTU/hr	Utility Hot Oil Heater
H-6620	88.91	MMBTU/hr	Utility Hot Oil Heater
E-1566	1.5	MMBTU/hr	TEG Reboiler (Direct Fired Heater)
E-2566	1.5	MMBTU/hr	TEG Reboiler (Direct Fired Heater)
E-3566	1.5	MMBTU/hr	TEG Reboiler (Direct Fired Heater)
E-4566	3.0	MMBTU/hr	TEG Reboiler (Direct Fired Heater)
H-1781	22.04	MMBTU/hr	Cryo Trim Heater
H-2781	22.04	MMBTU/hr	Cryo Trim Heater
H-1741	9.09	MMBTU/hr	Cryo Regen Heater
H-2741	9.09	MMBTU/hr	Cryo Regen Heater

Piñon Midstream - Dark Horse Treating Facility

Inlet Compressor Engines

Unit: C-1200 through C-1230
Description: Four (4) CAT G3608 A4 4SLB Inlet Gas Compressor Engines with Oxidation Catalyst

Engine Power[1]:	2500	hp	Mfg. Data - 100% Load
Fuel Consumption:	7488	Btu/hp-hr	Mfg. Data - 100% Load
Fuel Type:	NG		Mfg. Data
Fuel Heating Value:	1,251	Btu/scf	ProMax Makeup Fuel
Operating Hours:	8,760	hours	Continuous
Fuel Usage:	14961.37	scf/hr	Calculated
Annual Fuel Usage:	131.06	MMScf/yr	Calculated

Uncontrolled Emission Calculations

NO_x[2]	CO[2]	VOC[2]	SO_2[3]	PM[4,5]	H_2S[6]	HCHO[7]	Acetaldehyde[7]	Acrolein[7]	Methanol[7]	Toluene[7]	Ethylbenzene[7]	Xylenes[7]	Benzene[7]	n-Hexane[7]	1,3-Butadiene[7]	2,2,4-TMP[7]	HAPs[7]	
0.30	2.50	0.27				0.16												g/hp-hr
			5		0.25													gr/100 scf
			0.011	0.010	5.71E-06		8.36E-03	5.14E-03	2.50E-03	4.08E-04	3.97E-05	1.84E-04	4.40E-04	1.11E-03	2.67E-04	2.50E-04		lb/MMBtu
1.65	13.78	2.53	0.22	0.19	1.07E-04	0.88	0.16	0.096	0.047	0.0076	0.00074	0.0034	0.0082	0.021	0.0050	0.0047	1.23	lb/hr[8]
7.24	60.35	11.07	0.98	0.82	4.68E-04	3.86	0.69	0.42	0.20	0.033	0.0033	0.015	0.036	0.091	0.022	0.020	5.40	tpy[9]

Controlled Emission Calculations

NO_x	CO	VOC	SO_2	PM	H_2S	HCHO	Acetaldehyde	Acrolein	Methanol	Toluene	Ethylbenzene	Xylenes	Benzene	n-Hexane	1,3-Butadiene	2,2,4-TMP	HAPs[10]	
	86.8%					78.8%												Control efficiency[11]
0.30	0.33	0.27				0.034												g/hp-hr
1.65	1.82	1.83	0.22	0.19	1.07E-04	0.19	0.16	0.096	0.047	0.0076	0.00074	0.0034	0.0082	0.021	0.0050	0.0047	0.54	lb/hr[12]
7.24	7.97	8.02	0.98	0.82	4.68E-04	0.82	0.69	0.42	0.20	0.033	0.0033	0.015	0.036	0.091	0.022	0.020	2.35	tpy[9]

Greenhouse Gas Calculations[13]

CO_2	N_2O	CH_4	CO_2e	
53.1	0.0001	0.001		kg/MMBtu
1	298	25		GWP[14]
2191.46	0.0041	0.041	2193.72	lb/hr[15]
9598.607	0.018	0.18	9608.51	tpy[9]

Footnotes

[1] No derate being requested

[2] For uncontrolled and controlled emissions, emission factors are taken from catalyst data. VOC emissions factors do not include HCHO or acetaldehyde. These emissions are added to VOC calculated emissions; therefore, VOC emissions represent Total VOC.

[3] Assumes natural gas sulfur content of 5 gr/100 scf
SO_2 EF (lb/MMBtu) =[(5 gr S/100 scf * 1 lb/7000 gr * 64 lb/lbmol SO_2/32 lb/lbmol S) / HHV (Btu/scf)] * 10^6 Btu/MMBtu
Assume 100% conversion of combusted H_2S into SO_2 and 98% Combustion Efficiency. Additional SO_2 emissions from the combustion of H_2S:
SO_2 (lb/hr) from H_2S = 98%*[(0.25 gr H_2S/100 scf * 1 lb/7000 gr * 64 lb/lbmol SO_2/34 lb/lbmol H_2S) / HHV (Btu/scf)] * (Btu/hp-hr * hp)

[4] Emission Factors from AP-42 Table 3.2-2 (4SLB)

[5] PM includes Condensable + Filterable; assume PM_{10} = $PM_{2.5}$

[6] Assumes a conservative natural gas H_2S content of 0.25 gr/100 scf and 98% conversion to SO_2.
H_2S EF (lb/MMBtu) =2%*[(0.25 gr H_2S/100 scf * 1 lb/7000 gr) / HHV (Btu/scf)] * 10^6 Btu/MMbtu

[7] Uncontrolled HAP emissions based on AP-42 Table 3.2-2 (4SLB)

[8] NO_x, CO, and VOC lb/hr Emission Rate = EF * 1 lb/453.592 g * hp
PM & HAP lb/hr Emission Rate = EF * Fuel Consumption (Btu/hp-hr) * hp * 1 MMBtu/10^6 Btu

[9] tpy = lb/hr * hours of operation * 1 ton/2000 lb

[10] Controlled HAP emissions (lb/hr) = Uncontrolled Total HAPs (lb/hr) - Uncontrolled HCHO (lb/hr) + Controlled HCHO (lb/hr)

[11] Catalysts are guaranteed by manufacturer to be at least as efficient as claimed.

[12] lb/hr (controlled) = lb/hr (uncontrolled) * (1 - Control Efficiency)

[13] CO_2 emission factor from manufacturer's data. All other greenhouse gas emission factors are from 40 CFR 98 Subpart C

[14] 40 CFR 98 Subpart A, Table A-1

[15] CO_2, N_2O, and CH_4 lb/hr = EF (kg/MMBtu) * 2.20462 lb/kg * Fuel consumption (Btu/hp-hr) * Engine hp * 1 MMBtu/10^6 Btu
CO_2e lb/hr = CO_2 lb/hr + (CH_4 lb/hr * GWP) + (N_2O lb/hr * GWP)

Piñon Midstream - Dark Horse Treating Facility

Plant Flare

Unit(s):	FL-1850
Description:	Plant Flare
Destruction Efficiency:	98%
Pilot Operating Hours:	8760

Fuel Data

Flare Pilot	165	scf/hr	Design
Flare Pilot	1,251	Btu/scf	ProMax Makeup Fuel
Flare Pilot	0.21	MMBtu/hr	Calculated
Sweep Gas Flow Rate	1,500	scf/hr	Design
Sweep Gas Flow Rate	1,251	Btu/scf	ProMax Makeup Fuel
Sweep Gas	1.88	MMBtu/hr	Calculated
Total Flare Flowrate	1,665.0	scf/hr	
	0.0017	MMscf/hr	
	1,251	Btu/scf	ProMax Weighted Average
	2.1	MMBtu/hr	
	14.6	MMscf/yr	
	18,249.6	MMBtu/yr	

Emission Rates

Pilot, Acid, & Assist Gas

NOx	CO	VOC[4]	H_2S[4]	SO_2[5]	Units	
0.138	0.2755				lb/MMBtu [6]	TNRCC RG-109
			0.25	5	gr/100 scf	Assumed for Fuel Gas
		5.5			lb/MMscf	AP-42 Chapter 1.4, Natural Gas Combustion
0.03	0.06	0.001	5.89E-03	2.36E-03	lb/hr	Pilot Emissions
0.12	0.25	0.004	2.58E-04	1.03E-02	tpy	
0.26	0.52	0.01	5.36E-04	2.14E-02	lb/hr	Sweep Gas Emissions
1.13	2.26	0.04	2.35E-03	9.39E-02	tpy	

	NOx	CO	VOC	H_2S	SO_2	Units
Pilot & Sweep Gas	**0.29**	**0.57**	**0.01**	**0.001**	**0.02**	**lb/hr**
	1.26	**2.51**	**0.036**	**0.003**	**0.10**	**tpy**

Greenhouse Gas Calculations

CO_2	N_2O	CH_4	CO_2e	
53.1	0.0001	0.001		kg/MMBtu [8]
1	298	25		GWP [9]
243.70	0.00	0.00	243.9	lb/hr [10]
1067.39	0.00201	0.0201	1068.5	tpy [7]

[1] Component Molecular Weights from the following source: https://www.engineeringtoolbox.com/molecular-weight-gas-vapor-d_1156.html
Component Net Heating Values from the following source: https://www.enggcyclopedia.com/2011/09/heating-values-natural-gas/

[3] Hourly and Annual Event gas emissions calculated as follows:
Hourly Emissions (lb/hr) = Hourly Gas Volume (scf/hr) * Component Mol Wt (lb/lb-mol) * Component Mole% / 379.4 ft^3/lb mol
Annual Emissions (tpy) = Annual Gas Volume (scf/yr) * Component Mol Wt (lb/lb-mol) * Component Mole% / 379.4 ft^3/lb mol / 2000 lb/ton

[4] Assumed 98% combustion for H_2S, HAP and VOC. 98% DRE

[5] Assumed 100% conversion of combusted H_2S to SO_2. SO_2= DRE * (64/34) * uncontrolled H_2S.

[6] To be conservative the TNRCC RG-109 emission factors for high-Btu flares were used.

[8] Greenhouse gas emission factors are from 40 CFR 98 Subpart C

[9] 40 CFR 98 Subpart A, Table A-1

[10] CO_2, N_2O and CH_4 lb/hr = EF (kg/MMBtu) * 2.20462lb/kg * Fuel consumption (MMBtu/hr)
CO_2e lb/hr = CO_2 lb/hr + (CH_4 lb/hr * GWP) + (N_2O lb/hr * GWP)

Piñon Midstream - Dark Horse Treating Facility
Equipment for Blowdowns to FL-1850

Emission Unit: FL-1850 BD
Source Description: Equipment for Blowdowns to FL-1850
Destruction Efficiency: 98%

Blowdown Activities Inputs

Equipment Tag	Equipment Type	Volume Standard (ft^3)[1]	Blowdown Pressure (psig)[1]	Molecular Weight (lb/lbmol)[2]	Mass VOC Content (%)[2]	Mass HAP Content (%)[2]	Mass H_2S Content (%)[2]	Blend Gas (scf/scf)[3]	Blowdown Heating Value (BTU/ft^3)	Blowdown Duration (min)[1]	Blowdowns Per Year[1]	Promax Flow Sheet (Train I-III)	Promax Stream Number	Comments
PR-1100	LP Pig Receiver	851	35	23.42	26.44%	2.26%	1.79%	0.0	1,149.98	60	104	LP Inlet	LP Inlet	
PR-1105	HP Pig Receiver	6761	1,250	22.30	21.63%	2.09%	1.91%	0.0	1,065.47	60	72	HP Inlet	Field Gathering	
PL-1400	Grande Pig Launcher	9527	1,250	21.84	24.27%	2.17%	0.0001%	0.0	1,133.86	60	282	Dehy	12	
C-1200	LP Compressor	9,422	1,250	23.42	26.44%	2.26%	1.79%	0.0	1,149.98	60	52	LP Inlet	LP Inlet	
C-1210	LP Compressor	9,422	1,250	23.42	26.44%	2.26%	1.79%	0.0	1,149.98	60	52	LP Inlet	LP Inlet	
C-1220	LP Compressor	9,422	1,250	23.42	26.44%	2.26%	1.79%	0.0	1,149.98	60	52	LP Inlet	LP Inlet	
C-1230	LP Compressor	9,422	1,250	23.42	26.44%	2.26%	1.79%	0.0	1,149.98	60	52	LP Inlet	LP Inlet	
F-1301	Amine Inlet Coalescing Filter	718	1,250	22.54	22.68%	2.06%	1.91%	0.0	1,098.93	60	12	Amine Treating	Sour Feed	Blow down then sweet fuel purge for 1hr at 35 psi
F-1515	Amine Pre-Filter	34.56	15	21.84	24.27%	2.17%	0.0001%	0.0	1,133.86	60	52	Dehy	12	Sweet fuel purge 0.5hr at 35psi
F-1516	Amine Charcoal Filter	294.52	15	21.84	24.27%	2.17%	0.0001%	0.0	1,133.86	60	2	Dehy	12	Sweet fuel purge 0.5hr at 35psi
F-1517	Amine Post-Filter	34.56	15	21.84	24.27%	2.17%	0.0001%	0.0	1,133.86	60	52	Dehy	12	Sweet fuel purge 0.5hr at 35psi
C-1580	AGI Compressor	12,535	1,250	39.12	0.13%	0.10%	27.72%	2507.0	349.15	60	12	Acid Gas Injection	AGI Suction	Blow down then sweet fuel purge for 1hr at 35 psi
C-1585	AGI Compressor	12,535	1,250	39.12	0.13%	0.10%	27.72%	2507.0	349.15	60	12	Acid Gas Injection	AGI Suction	Blow down then sweet fuel purge for 1hr at 35 psi
C-1590	AGI Compressor	12,535	1,250	39.12	0.13%	0.10%	27.72%	2507.0	349.15	60	12	Acid Gas Injection	AGI Suction	Blow down then sweet fuel purge for 1hr at 35 psi
C-1595	AGI Compressor	12,535	1,250	39.12	0.13%	0.10%	27.72%	2507.0	349.15	60	12	Acid Gas Injection	AGI Suction	Blow down then sweet fuel purge for 1hr at 35 psi
P-1595	AGI Pump	4,704	2,500	40.48	0.13%	0.10%	28.51%	940.8	359.44	60	24	Acid Gas Injection	AG2	Blow down then sweet fuel purge for 30min at 35 psi
P-1596	AGI Pump	4,704	2,500	40.48	0.13%	0.10%	28.51%	940.8	359.44	60	24	Acid Gas Injection	AG2	Blow down then sweet fuel purge for 30min at 35 psi
P-1599	AGI Pump	4,704	2,500	40.48	0.13%	0.10%	28.51%	940.8	359.44	60	24	Acid Gas Injection	AG2	Blow down then sweet fuel purge for 30min at 35 psi
P-1597	AGI H Pump	3,402	2,500	40.48	0.13%	0.10%	28.51%	680.4	359.44	60	24	Acid Gas Injection	AG2	Blow down then sweet fuel purge for 30min at 35 psi
P-1598	AGI H Pump	3,402	2,500	40.48	0.13%	0.10%	28.51%	680.4	359.44	60	24	Acid Gas Injection	AG2	Blow down then sweet fuel purge for 30min at 35 psi
F-2301	Amine Inlet Coalescing Filter	718	1,250	22.54	22.68%	2.06%	1.91%	0.0	1,098.93	60	12	Amine Treating	Sour Feed	Blow down then sweet fuel purge for 1hr at 35 psi
F-2515	Amine Pre-Filter	34.56	15	21.84	24.27%	2.17%	0.0001%	0.0	1,133.86	60	52	Dehy	12	Sweet fuel purge 0.5hr at 35psi
F-2516	Amine Charcoal Filter	294.52	15	21.84	24.27%	2.17%	0.0001%	0.0	1,133.86	60	2	Dehy	12	Sweet fuel purge 0.5hr at 35psi
F-2517	Amine Post-Filter	34.56	15	21.84	24.27%	2.17%	0.0001%	0.0	1,133.86	60	52	Dehy	12	Sweet fuel purge 0.5hr at 35psi
F-3301	Amine Inlet Coalescing Filter	718	1,250	22.54	22.68%	2.06%	1.91%	0.0	1,098.93	60	12	Amine Treating	Sour Feed	Blow down then sweet fuel purge for 1hr at 35 psi
F-3515	Amine Pre-Filter	34.56	15	21.84	24.27%	2.17%	0.0001%	0.0	1,133.86	60	52	Dehy	12	Sweet fuel purge 0.5hr at 35psi
F-3516	Amine Charcoal Filter	294.52	15	21.84	24.27%	2.17%	0.0001%	0.0	1,133.86	60	2	Dehy	12	Sweet fuel purge 0.5hr at 35psi
F-3517	Amine Post-Filter	34.56	15	21.84	24.27%	2.17%	0.0001%	0.0	1,133.86	60	52	Dehy	12	Sweet fuel purge 0.5hr at 35psi
F-4301	Amine Inlet Coalescing Filter	1122	1,250	22.54	22.68%	2.06%	1.91%	0.0	1,098.93	60	12	Amine Treating	Sour Feed	Blow down then sweet fuel purge for 1hr at 35 psi
F-4515	Amine Pre-Filter	69.12	15	21.84	24.27%	2.17%	0.0001%	0.0	1,133.86	60	52	Dehy	12	Sweet fuel purge 0.5hr at 35psi
F-4516	Amine Charcoal Filter	863.94	15	21.84	24.27%	2.17%	0.0001%	0.0	1,133.86	60	2	Dehy	12	Sweet fuel purge 0.5hr at 35psi
F-4517	Amine Post-Filter	69.12	15	21.84	24.27%	2.17%	0.0001%	0.0	1,133.86	60	52	Dehy	12	Sweet fuel purge 0.5hr at 35psi
F-XXXX	HP Liquid Condensate Filter	538.7	1,250	21.56	20.46%	5.53%	0.43%	0.0	2,417.14	60	12	HP Inlet	_18	Blow down then sweet fuel purge for 1hr at 35 psi
C-1200	LP Comp. - Packing Purge	105	15	21.66	20.81%	1.76%	1.39%	0.0	1,087.54	60	8760	LP Inlet	Vent to VRU	Compressor packing purge volume
C-1210	LP Comp. - Packing Purge	105	15	21.66	20.81%	1.76%	1.39%	0.0	1,087.54	60	8760	LP Inlet	Vent to VRU	Compressor packing purge volume
C-1220	LP Comp. - Packing Purge	105	15	21.66	20.81%	1.76%	1.39%	0.0	1,087.54	60	8760	LP Inlet	Vent to VRU	Compressor packing purge volume
C-1230	LP Comp. - Packing Purge	105	15	21.66	20.81%	1.76%	1.39%	0.0	1,087.54	60	8760	LP Inlet	Vent to VRU	Compressor packing purge volume
C-1580	AGI Comp. - Packing Purge	105	15	32.95	0.28%	0.09%	23.66%	0.0	398.91	60	876	Acid Gas Injection	Vent to VRU	Compressor packing purge volume
C-1585	AGI Comp. - Packing Purge	105	15	32.95	0.28%	0.09%	23.66%	0.0	398.91	60	876	Acid Gas Injection	Vent to VRU	Compressor packing purge volume
C-1590	AGI Comp. - Packing Purge	105	15	32.95	0.28%	0.09%	23.66%	0.0	398.91	60	876	Acid Gas Injection	Vent to VRU	Compressor packing purge volume
C-1595	AGI Comp. - Packing Purge	105	15	32.95	0.28%	0.09%	23.66%	0.0	398.91	60	876	Acid Gas Injection	Vent to VRU	Compressor packing purge volume
COND-LOAD Train 1-3	Condensate loading Train 1-3	24	15	68.30	100.00%	19.17%	0.0002%	0.0	3,794.73	60	18	Loading	FL-1850	Back-up if VRU's are down
COND-LOAD Train 1-3	Sour Water loading Train 1-3	126	15	36.83	6.07%	1.07%	33.32%	0.0	3,794.73	60	18	Loading	FL-1850	Back-up if VRU's are down
TK-1900 to TK-1971	TK-1900 to TK-1971 Condensate	24	15	68.30	100.00%	19.17%	0.0002%	0.0	1,133.86	60	18	Tanks	FL-1850	Back-up if VRU's are down
TK-1900 to TK-1971	TK-1900 to TK-1971 Sour Water	126	15	36.83	6.07%	1.07%	33.32%	0.0	1,133.86	60	18	Tanks	FL-1850	Back-up if VRU's are down
Misc.	0.5 Hour Purge	14,431	35	21.84	24.27%	2.17%	0.0001%	0.0	1,133.86	60	1,440	Dehy	12	Sweet fuel purge calculation (2x per maint activity)
Misc.	1.0 Hour Purge	28,861	35	21.84	24.27%	2.17%	0.0001%	0.0	1,133.86	60	632	Dehy	12	Sweet fuel purge calculation (2x per maint activity)
Misc.	Train 1 Amine Still	22,760.5	10	39.12	0.13%	0.10%	27.72%	4552.1	349.15	60	12	Amine Treating	Acid Gas	Represents Maximum Rate
Misc.	Train 2 Amine Still	22,760.5	10	39.12	0.13%	0.10%	27.72%	4552.1	349.15	60	12	Amine Treating	Acid Gas	Represents Maximum Rate
Misc.	Train 3 Amine Still	22,760.5	10	39.12	0.13%	0.10%	27.72%	4552.1	349.15	60	12	Amine Treating	Acid Gas	Represents Maximum Rate
Misc.	Train 4 Amine Still	46,074.3	10	39.11	0.14%	0.11%	27.73%	9214.9	349.64	60	12	Amine Treating	Acid Gas	Train IV-VI Promax Sheet
Misc.	Amine Flash Bridle (1)	0.3	100	22.40	10.67%	0.65%	3.80%	0.0	932.67	60	52	Amine Treating	Flash Gas to Fuel	Assumes 3", 72" Average length
Misc.	Stabilizer OH to Flare	18,377.5	150	48.05	83.91%	8.44%	2.40%	0.0	2,406.04	60	12	Stabilizer	29	
Misc.	Train 1 Amine Flash to Flare	4,915.0	110	22.40	10.67%	0.65%	3.80%	0.0	932.67	60	12	Amine Treating	Flash Gas to Fuel	
Misc.	Train 2 Amine Flash to Flare	4,915.0	110	22.40	10.67%	0.65%	3.80%	0.0	932.67	60	12	Amine Treating	Flash Gas to Fuel	
Misc.	Train 3 Amine Flash to Flare	4,915.0	110	22.40	10.67%	0.65%	3.80%	0.0	932.67	60	12	Amine Treating	Flash Gas to Fuel	
Misc.	Train 4 Amine Flash to Flare	10,903.1	110	22.28	10.99%	0.67%	3.52%	0.0	938.44	60	12	Amine Treating	Flash Gas to Fuel	
Misc.	Train 1 TEG Flash to Flare	2,146.6	110	28.45	39.46%	3.92%	0.0004%	0.0	1,325.75	60	12	Dehy	Flash Gas to Fuel	
Misc.	Train 2 TEG Flash to Flare	2,146.6	110	28.45	39.46%	3.92%	0.0004%	0.0	1,325.75	60	12	Dehy	Flash Gas to Fuel	
Misc.	Train 3 TEG Flash to Flare	2,146.6	110	28.45	39.46%	3.92%	0.0004%	0.0	1,325.75	60	12	Dehy	Flash Gas to Fuel	
Misc.	Train 4 TEG Flash to Flare	3,687.1	110	28.33	39.12%	3.85%	0.0004%	0.0	1,316.61	60	12	Dehy	Flash Gas to Fuel	
Misc.	NGL Flash to Flare	200	100	30.87	47.97%	3.43%	3.29%	0.0	1,465.73	60	12	HP Inlet	14	

VOC, HAP, and H_2S Emission Calculations

Equipment Tag	Equipment Type	Mass VOC (lb/blowdown)[4]	Mass HAP (lb/blowdown)[4]	Mass H_2S (lb/blowdown)[4]	Uncontrolled [5]						Controlled [6]					
					VOC (lb/hr)	HAP (lb/hr)	H_2S (lb/hr)	VOC (tpy)	HAP (tpy)	H_2S (tpy)	VOC (lb/hr)	HAP (lb/hr)	H_2S (lb/hr)	VOC (tpy)	HAP (tpy)	H_2S (tpy)
PR-1100	LP Pig Receiver	14.09	1.20	0.95	14.09	1.20	0.95	0.73	0.06	0.05	0.28	0.02	0.02	0.01	0.00	0.001
PR-1105	HP Pig Receiver	87.21	8.43	7.71	87.21	8.43	7.71	3.14	0.30	0.28	1.74	0.17	0.15	0.06	0.01	0.006
PL-1400	Grande Pig Launcher	135.06	12.08	0.00	135.06	12.08	0.00	19.04	1.70	0.00	2.70	0.24	0.00	0.38	0.03	0.000
C-1200	LP Compressor	156.00	13.32	10.54	156.00	13.32	10.54	4.06	0.35	0.27	3.12	0.27	0.21	0.08	0.01	0.005
C-1210	LP Compressor	156.00	13.32	10.54	156.00	13.32	10.54	4.06	0.35	0.27	3.12	0.27	0.21	0.08	0.01	0.005
C-1220	LP Compressor	156.00	13.32	10.54	156.00	13.32	10.54	4.06	0.35	0.27	3.12	0.27	0.21	0.08	0.01	0.005
C-1230	LP Compressor	156.00	13.32	10.54	156.00	13.32	10.54	4.06	0.35	0.27	3.12	0.27	0.21	0.08	0.01	0.005
F-1301	Amine Inlet Coalescing Filter	9.82	0.89	0.83	9.82	0.89	0.83	0.06	0.01	0.00	0.20	0.02	0.02	0.00	0.00	0.000
F-1515	Amine Pre-Filter	0.49	0.04	0.00	0.49	0.04	0.00	0.01	0.00	0.00	0.01	0.00	0.000000	0.00	0.0000	0.0000000
F-1516	Amine Charcoal Filter	4.18	0.37	0.00	4.18	0.37	0.00	0.00	0.00	0.00	0.08	0.01	0.000000	0.00	0.0000	0.0000000
F-1517	Amine Post-Filter	0.49	0.04	0.00	0.49	0.04	0.00	0.01	0.00	0.00	0.01	0.00	0.000000	0.00	0.0000	0.0000000
C-1580	AGI Compressor	1.66	1.32	363.49	1.66	1.32	363.49	0.01	0.01	2.18	0.03	0.03	7.27	0.00	0.00	0.044
C-1585	AGI Compressor	1.66	1.32	363.49	1.66	1.32	363.49	0.01	0.01	2.18	0.03	0.03	7.27	0.00	0.00	0.044
C-1590	AGI Compressor	1.66	1.32	363.49	1.66	1.32	363.49	0.01	0.01	2.18	0.03	0.03	7.27	0.00	0.00	0.044
C-1595	AGI Compressor	1.66	1.32	363.49	1.66	1.32	363.49	0.01	0.01	2.18	0.03	0.03	7.27	0.00	0.00	0.044
P-1595	AGI Pump	0.66	0.53	145.17	0.66	0.53	145.17	0.01	0.01	1.74	0.01	0.01	2.90	0.00	0.00	0.03
P-1596	AGI Pump	0.66	0.53	145.17	0.66	0.53	145.17	0.01	0.01	1.74	0.01	0.01	2.90	0.00	0.00	0.03
P-1599	AGI Pump	0.66	0.53	145.17	0.66	0.53	145.17	0.01	0.01	1.74	0.01	0.01	2.90	0.00	0.00	0.03
P-1597	AGI H Pump	0.48	0.38	104.99	0.48	0.38	104.99	0.01	0.00	1.26	0.01	0.01	2.10	0.00	0.00	0.03
P-1598	AGI H Pump	0.48	0.38	104.99	0.48	0.38	104.99	0.01	0.00	1.26	0.01	0.01	2.10	0.00	0.00	0.03
F-2301	Amine Inlet Coalescing Filter	9.82	0.89	0.83	9.82	0.89	0.83	0.06	0.01	0.00	0.20	0.02	0.02	0.00	0.00	0.00
F-2515	Amine Pre-Filter	0.49	0.04	0.00	0.49	0.04	0.00	0.01	0.00	0.00	0.01	0.00	0.000000	0.00	0.0000	0.0000000
F-2516	Amine Charcoal Filter	4.18	0.37	0.00	4.18	0.37	0.00	0.00	0.00	0.00	0.0835	0.0075	0.00	0.000084	0.000007	0.00000
F-2517	Amine Post-Filter	0.49	0.04	0.00	0.49	0.04	0.00	0.01	0.00	0.00	0.0098	0.0009	0.00	0.000255	0.000023	0.00000
F-3301	Amine Inlet Coalescing Filter	9.82	0.89	0.83	9.82	0.89	0.83	0.06	0.01	0.00	0.20	0.02	0.02	0.00	0.00	0.00
F-3515	Amine Pre-Filter	0.49	0.04	0.00	0.49	0.04	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.000	0.00000000
F-3516	Amine Charcoal Filter	4.18	0.37	0.00	4.18	0.37	0.00	0.00	0.00	0.00	0.08	0.01	0.00	0.00	0.000	0.00000000
F-3517	Amine Post-Filter	0.49	0.04	0.00	0.49	0.04	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.000	0.00000000
F-4301	Amine Inlet Coalescing Filter	15.34	1.39	1.30	15.34	1.39	1.30	0.09	0.01	0.01	0.31	0.03	0.03	0.00	0.00	0.00
F-4515	Amine Pre-Filter	0.98	0.09	0.00	0.98	0.09	0.00	0.03	0.00	0.00	0.02	0.00	0.00000	0.00	0.000	0.0000000
F-4516	Amine Charcoal Filter	12.25	1.10	0.00	12.25	1.10	0.00	0.01	0.00	0.00	0.24	0.02	0.00000	0.00	0.000	0.0000000
F-4517	Amine Post-Filter	0.98	0.09	0.00	0.98	0.09	0.00	0.03	0.00	0.00	0.02	0.00	0.00000	0.00	0.000	0.0000000
F-XXXX	HP Liquid Condensate Filter	6.36	1.72	0.13	6.36	1.72	0.13	0.04	0.01	0.00	0.13	0.03	0.00	0.00	0.00	0.00
C-1200	LP Comp. - Packing Purge	1.27	0.11	0.08	1.27	0.11	0.08	5.54	0.47	0.37	0.03	0.00	0.00169	0.11	0.01	0.01
C-1210	LP Comp. - Packing Purge	1.27	0.11	0.08	1.27	0.11	0.08	5.54	0.47	0.37	0.03	0.00	0.00169	0.11	0.01	0.01
C-1220	LP Comp. - Packing Purge	1.27	0.11	0.08	1.27	0.11	0.08	5.54	0.47	0.37	0.03	0.00	0.00169	0.11	0.01	0.01
C-1230	LP Comp. - Packing Purge	1.27	0.11	0.08	1.27	0.11	0.08	5.54	0.47	0.37	0.03	0.00	0.00169	0.11	0.01	0.01
C-1580	AGI Comp. - Packing Purge	0.03	0.01	2.19	0.03	0.01	2.19	0.01	0.00	0.96	0.00	0.00	0.04378	0.00	0.00	0.02
C-1585	AGI Comp. - Packing Purge	0.03	0.01	2.19	0.03	0.01	2.19	0.01	0.00	0.96	0.00	0.00	0.04378	0.00	0.00	0.02
C-1590	AGI Comp. - Packing Purge	0.03	0.01	2.19	0.03	0.01	2.19	0.01	0.00	0.96	0.00	0.00	0.04378	0.00	0.00	0.02
C-1595	AGI Comp. - Packing Purge	0.03	0.01	2.19	0.03	0.01	2.19	0.01	0.00	0.96	0.00	0.00	0.04378	0.00	0.00	0.02
COND-LOAD Train 1-3	Condensate loading Train 1-3	4.45	0.85	0.00	4.45	0.85	0.00	0.04	0.01	0.00	0.09	0.02	0.00000	0.00	0.00	0.00
COND-LOAD Train 1-3	Sour Water loading Train 1-3	0.75	0.13	4.12	0.75	0.13	4.12	0.01	0.00	0.04	0.02	0.00	0.08249	0.00	0.00	0.00
TK-1900 to TK-1971	TK-1900 to TK-1971 Condensate	4.45	0.85	0.00	4.45	0.85	0.00	0.04	0.01	0.00	0.09	0.02	0.00000	0.00	0.00	0.00
TK-1900 to TK-1971	TK-1900 to TK-1971 Sour Water	0.75	0.13	4.12	0.75	0.13	4.12	0.01	0.00	0.04	0.02	0.00	0.08249	0.00	0.00	0.00
Misc.	0.5 Hour Purge	204.57	18.30	0.00	204.57	18.30	0.00	147.29	13.18	0.00	4.09	0.37	0.00001	2.95	0.26	0.00
Misc.	1.0 Hour Purge	409.13	36.60	0.00	409.13	36.60	0.00	129.29	11.57	0.00	8.18	0.73	0.00003	2.59	0.23	0.00
Misc.	Train 1 Amine Still	3.02	2.39	660.02	3.02	2.39	660.02	0.02	0.01	3.96	0.06	0.05	13.20	0.0004	0.000	0.08
Misc.	Train 2 Amine Still	3.02	2.39	660.02	3.02	2.39	660.02	0.02	0.01	3.96	0.06	0.05	13.20	0.0004	0.000	0.08
Misc.	Train 3 Amine Still	3.02	2.39	660.02	3.02	2.39	660.02	0.02	0.01	3.96	0.06	0.05	13.20	0.0004	0.000	0.08
Misc.	Train 4 Amine Still	6.69	5.22	1336.34	6.69	5.22	1,336.34	0.04	0.03	8.02	0.13	0.10	26.73	0.00	0.00	0.16
Misc.	Amine Flash Bridle (1)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	0.00000	0.0000	0.00000	0.0000001	0.000000
Misc.	Stabilizer OH to Flare	1981.72	199.43	56.65	1,981.72	199.43	56.65	11.89	1.20	0.34	39.63	3.99	1.13	0.24	0.02	0.01
Misc.	Train 1 Amine Flash to Flare	31.41	1.93	11.20	31.41	1.93	11.20	0.19	0.01	0.07	0.63	0.04	0.22	0.00	0.000	0.00
Misc.	Train 2 Amine Flash to Flare	31.41	1.93	11.20	31.41	1.93	11.20	0.19	0.01	0.07	0.63	0.04	0.22	0.00	0.000	0.00
Misc.	Train 3 Amine Flash to Flare	31.41	1.93	11.20	31.41	1.93	11.20	0.19	0.01	0.07	0.63	0.04	0.22	0.00	0.000	0.00
Misc.	Train 4 Amine Flash to Flare	71.43	4.32	22.85	71.43	4.32	22.85	0.43	0.03	0.14	1.43	0.09	0.46	0.01	0.001	0.00
Misc.	Train 1 TEG Flash to Flare	64.46	6.40	0.00	64.46	6.40	0.00	0.39	0.04	0.00	1.29	0.13	0.0000	0.01	0.00	0.000000
Misc.	Train 2 TEG Flash to Flare	64.46	6.40	0.00	64.46	6.40	0.00	0.39	0.04	0.00	1.29	0.13	0.0000	0.01	0.00	0.000000
Misc.	Train 3 TEG Flash to Flare	64.46	6.40	0.00	64.46	6.40	0.00	0.39	0.04	0.00	1.29	0.13	0.0000	0.01	0.00	0.000000
Misc.	Train 4 TEG Flash to Flare	109.30	10.75	0.00	109.30	10.75	0.00	0.66	0.06	0.00	2.19	0.22	0.0000	0.01	0.00	0.000000
Misc.	NGL Flash to Flare	2961.92	211.60	0.54	2,961.92	211.60	0.54	17.77	1.27	0.00	59.24	4.23	0.01	0.36	0.03	0.0001
				Totals:	**7,007.80**	**611.87**	**5,601.54**	**371.14**	**32.99**	**43.89**	**140.16**	**12.24**	**112.03**	**7.42**	**0.66**	**0.88**

Emission Factors

Pollutant	NOx	CO	CO_2	N_2O	CH_4
Factor (lb/MMBTU) [7]	0.138	0.2755	-	-	-
Factor (kg/MMBTU) [8]	-	-	53.06	0.0001	0.001
GWP [8]	-	-	1	298	25

NOx, CO, SO_2 and GHG Emission Calculations

Equipment Tag	Equipment Type	Volume Standard (ft^3) [1]	Blowdown Heating Value (BTU/ft^3) [2]	Hourly Emission Rate (lb/hr) [9]						Annual Emission Rate (tpy) [10]						
				NOx	CO	SO_2	CO_2	N_2O	CH_4	NOx	CO	SO_2	CO_2	N_2O	CH_4	CO_2e
PR-1100	LP Pig Receiver	851	1149.98	0.14	0.27	1.76	114.48	0.0002	0.0022	0.01	0.01	0.09	5.95	0.00001	0.00011	5.96
PR-1105	HP Pig Receiver	6761	1065.47	0.99	1.98	14.23	842.66	0.0016	0.0159	0.04	0.07	0.51	30.34	0.00006	0.00057	30.37
PL-1400	Grande Pig Launcher	9527	1133.86	1.49	2.98	0.00	1,263.62	0.0024	0.0238	0.21	0.42	0.00	178.17	0.00034	0.00336	178.35
C-1200	LP Compressor	9422	1149.98	1.50	2.99	19.43	1,267.46	0.0024	0.0239	0.04	0.08	0.51	32.95	0.00006	0.00062	32.99
C-1210	LP Compressor	9422	1149.98	1.50	2.99	19.43	1,267.46	0.0024	0.0239	0.04	0.08	0.51	32.95	0.00006	0.00062	32.99
C-1220	LP Compressor	9422	1149.98	1.50	2.99	19.43	1,267.46	0.0024	0.0239	0.04	0.08	0.51	32.95	0.00006	0.00062	32.99
C-1230	LP Compressor	9422	1149.98	1.50	2.99	19.43	1,267.46	0.0024	0.0239	0.04	0.08	0.51	32.95	0.00006	0.00062	32.99
F-1301	Amine Inlet Coalescing Filter	718	1098.93	0.11	0.22	1.53	92.30	0.0002	0.0017	0.0007	0.0013	0.01	0.55	0.00000	0.00001	0.55
F-1515	Amine Pre-Filter	35	1133.86	0.01	0.01	0.00	4.58	0.0000	0.0001	0.0001	0.0003	0.0000	0.12	0.00000	0.00000	0.12
F-1516	Amine Charcoal Filter	295	1133.86	0.05	0.09	0.00	39.06	0.0001	0.0007	0.0000	0.0001	0.0000	0.04	0.00000	0.00000	0.04
F-1517	Amine Post-Filter	35	1133.86	0.01	0.01	0.00	4.58	0.0000	0.0001	0.0001	0.0003	0.0000	0.12	0.00000	0.00000	0.12
C-1580	AGI Compressor	12535	192.21	0.33	0.66	670.54	281.84	0.0005	0.0053	0.0020	0.0040	4.02	1.69	0.00000	0.00003	1.69
C-1585	AGI Compressor	12535	192.21	0.33	0.66	670.54	281.84	0.0005	0.0053	0.0020	0.0040	4.02	1.69	0.00000	0.00003	1.69
C-1590	AGI Compressor	12535	192.21	0.33	0.66	670.54	281.84	0.0005	0.0053	0.0020	0.0040	4.02	1.69	0.00000	0.00003	1.69
C-1595	AGI Compressor	12535	192.21	0.33	0.66	670.54	281.84	0.0005	0.0053	0.0020	0.0040	4.02	1.69	0.00000	0.00003	1.69
P-1595	AGI Pump	4704	204.56	0.13	0.27	267.79	112.56	0.0002	0.0021	0.0016	0.0032	3.21	1.35	0.00000	0.00003	1.35
P-1596	AGI Pump	4704	204.56	0.13	0.27	267.79	112.56	0.0002	0.0021	0.0016	0.0032	3.21	1.35	0.00000	0.00003	1.35
P-1599	AGI Pump	4704	204.56	0.13	0.27	267.79	112.56	0.0002	0.0021	0.0016	0.0032	3.21	1.35	0.00000	0.00003	1.35
P-1597	AGI H Pump	3402	204.56	0.10	0.19	193.67	81.40	0.0002	0.0015	0.0012	0.0023	2.32	0.98	0.00000	0.00002	0.98
P-1598	AGI H Pump	3402	204.56	0.10	0.19	193.67	81.40	0.0002	0.0015	0.0012	0.0023	2.32	0.98	0.00000	0.00002	0.98
F-2301	Amine Inlet Coalescing Filter	718	1098.93	0.11	0.22	1.53	92.30	0.0002	0.0017	0.0007	0.0013	0.01	0.55	0.00000	0.00001	0.55
F-2515	Amine Pre-Filter	35	1133.86	0.01	0.01	0.00	4.58	0.0000	0.0001	0.0001	0.0003	0.00	0.12	0.00000	0.00000	0.12
F-2516	Amine Charcoal Filter	295	1133.86	0.05	0.09	0.00	39.06	0.0001	0.0007	0.0000	0.0001	0.00	0.04	0.00000	0.00000	0.04
F-2517	Amine Post-Filter	35	1133.86	0.01	0.01	0.00	4.58	0.0000	0.0001	0.0001	0.0003	0.00	0.12	0.00000	0.00000	0.12
F-3301	Amine Inlet Coalescing Filter	718	1098.93	0.11	0.22	1.53	92.30	0.0002	0.0017	0.0007	0.0013	0.01	0.55	0.00000	0.00001	0.55
F-3515	Amine Pre-Filter	35	1133.86	0.01	0.01	0.00	4.58	0.0000	0.0001	0.0001	0.0003	0.0000	0.12	0.00000	0.00000	0.12
F-3516	Amine Charcoal Filter	295	1133.86	0.05	0.09	0.00	39.06	0.0001	0.0007	0.0000	0.0001	0.0000	0.04	0.00000	0.00000	0.04
F-3517	Amine Post-Filter	35	1133.86	0.01	0.01	0.00	4.58	0.0000	0.0001	0.0001	0.0003	0.0000	0.12	0.00000	0.00000	0.12
F-4301	Amine Inlet Coalescing Filter	1122	1098.93	0.17	0.34	2.39	144.23	0.0003	0.0027	0.0010	0.0020	0.01	0.87	0.00000	0.00002	0.87
F-4515	Amine Pre-Filter	69	1133.86	0.01	0.02	0.00	9.17	0.0000	0.0002	0.0003	0.0006	0.0000	0.24	0.00000	0.00000	0.24
F-4516	Amine Charcoal Filter	864	1133.86	0.14	0.27	0.00	114.59	0.0002	0.0022	0.0001	0.0003	0.0000	0.11	0.00000	0.00000	0.11
F-4517	Amine Post-Filter	69	1133.86	0.01	0.02	0.00	9.17	0.0000	0.0002	0.0003	0.0006	0.0000	0.24	0.00000	0.00000	0.24
F-XXXX	HP Liquid Condensate Filter	539	2417.14	0.18	0.36	0.24	152.32	0.0003	0.0029	0.0011	0.0022	0.00	0.91	0.00000	0.00002	0.91
C-1200	LP Comp. - Packing Purge	105	1087.54	0.02	0.03	0.16	13.36	0.0000	0.0003	0.0690	0.1378	0.6821	58.51	0.00011	0.00110	58.57
C-1210	LP Comp. - Packing Purge	105	1087.54	0.02	0.03	0.16	13.36	0.0000	0.0003	0.0690	0.1378	0.6821	58.51	0.00011	0.00110	58.57
C-1220	LP Comp. - Packing Purge	105	1087.54	0.02	0.03	0.16	13.36	0.0000	0.0003	0.0690	0.1378	0.6821	58.51	0.00011	0.00110	58.57
C-1230	LP Comp. - Packing Purge	105	1087.54	0.02	0.03	0.16	13.36	0.0000	0.0003	0.0690	0.1378	0.6821	58.51	0.00011	0.00110	58.57
C-1580	AGI Comp. - Packing Purge	105	398.91	0.01	0.01	4.04	4.90	0.0000	0.0001	0.0025	0.0051	1.7689	2.15	0.00000	0.00004	2.15
C-1585	AGI Comp. - Packing Purge	105	398.91	0.01	0.01	4.04	4.90	0.0000	0.0001	0.0025	0.0051	1.7689	2.15	0.00000	0.00004	2.15
C-1590	AGI Comp. - Packing Purge	105	398.91	0.01	0.01	4.04	4.90	0.0000	0.0001	0.0025	0.0051	1.7689	2.15	0.00000	0.00004	2.15
C-1595	AGI Comp. - Packing Purge	105	398.91	0.01	0.01	4.04	4.90	0.0000	0.0001	0.0025	0.0051	1.7689	2.15	0.00000	0.00004	2.15
COND-LOAD Train 1-3	Condensate loading Train 1-3	24	3794.73	0.01	0.03	0.00	10.82	0.0000	0.0002	0.0001	0.0002	0.0000	0.10	0.00000	0.00000	0.10
COND-LOAD Train 1-3	Sour Water loading Train 1-3	126	509.00	0.01	0.02	7.61	7.48	0.0000	0.0001	0.0001	0.0002	0.0685	0.07	0.00000	0.00000	0.07
TK-1900 to TK-1971	TK-1900 to TK-1971 Condensate	24	3794.73	0.01	0.03	0.00	10.82	0.0000	0.0002	0.0001	0.0002	0.0000	0.10	0.00000	0.00000	0.10
TK-1900 to TK-1971	TK-1900 to TK-1971 Sour Water	126	509.00	0.01	0.02	7.61	7.48	0.0000	0.0001	0.0001	0.0002	0.0685	0.07	0.00000	0.00000	0.07
Misc.	0.5 Hour Purge	14431	1133.86	2.26	4.51	0.00	1,914.06	0.0036	0.0361	1.6258	3.2457	0.0010	1,378.12	0.00260	0.02597	1,379.54
Misc.	1.0 Hour Purge	28861	1133.86	4.52	9.02	0.00	3,827.98	0.0072	0.0721	1.4270	2.8489	0.0008	1,209.64	0.00228	0.02280	1,210.89
Misc.	Train 1 Amine Still	22760	192.21	0.60	1.21	1,217.54	511.76	0.0010	0.0096	0.0036	0.0072	7.31	3.07	0.00001	0.00006	3.07
Misc.	Train 2 Amine Still	22760	192.21	0.60	1.21	1,217.54	511.76	0.0010	0.0096	0.0036	0.0072	7.31	3.07	0.00001	0.00006	3.07
Misc.	Train 3 Amine Still	22760	192.21	0.60	1.21	1,217.54	511.76	0.0010	0.0096	0.0036	0.0072	7.31	3.07	0.00001	0.00006	3.07
Misc.	Train 4 Amine Still	46074	192.80	1.23	2.45	2,465.16	1,039.12	0.0020	0.0196	0.0074	0.0147	14.79	6.23	0.00001	0.00012	6.24
Misc.	Amine Flash Bridle (1)	0.3	932.67	0.00	0.00	0.00	0.03	0.0000	0.0000	0.0000	0.0000	0.0000	0.00	0.00000	0.00000	0.00
Misc.	Stabilizer OH to Flare	18378	2406.04	6.10	12.18	104.49	5,172.39	0.0097	0.0975	0.0366	0.0731	0.63	31.03	0.00006	0.00058	31.07
Misc.	Train 1 Amine Flash to Flare	4915	932.67	0.63	1.26	20.66	536.23	0.0010	0.0101	0.0038	0.0076	0.12	3.22	0.00001	0.00006	3.22
Misc.	Train 2 Amine Flash to Flare	4915	932.67	0.63	1.26	20.66	536.23	0.0010	0.0101	0.0038	0.0076	0.12	3.22	0.00001	0.00006	3.22
Misc.	Train 3 Amine Flash to Flare	4915	932.67	0.63	1.26	20.66	536.23	0.0010	0.0101	0.0038	0.0076	0.12	3.22	0.00001	0.00006	3.22
Misc.	Train 4 Amine Flash to Flare	10903	938.44	1.41	2.82	42.15	1,196.90	0.0023	0.0226	0.0085	0.0169	0.25	7.18	0.00001	0.00014	7.19
Misc.	Train 1 TEG Flash to Flare	2147	1325.75	0.39	0.78	0.00	332.90	0.0006	0.0063	0.0024	0.0047	0.0000	2.00	0.00000	0.00004	2.00
Misc.	Train 2 TEG Flash to Flare	2147	1325.75	0.39	0.78	0.00	332.90	0.0006	0.0063	0.0024	0.0047	0.0000	2.00	0.00000	0.00004	2.00
Misc.	Train 3 TEG Flash to Flare	2147	1325.75	0.39	0.78	0.00	332.90	0.0006	0.0063	0.0024	0.0047	0.0000	2.00	0.00000	0.00004	2.00
Misc.	Train 4 TEG Flash to Flare	3687	1316.61	0.67	1.34	0.00	567.86	0.0011	0.0107	0.0040	0.0080	0.0000	3.41	0.00001	0.00006	3.41
Misc.	NGL Flash to Flare	200	1465.73	0.04	0.08	1.00	34.29	0.0001	0.0006	0.0002	0.0005	0.01	0.21	0.00000	0.00000	0.21
			Totals:	**32.77**	**65.41**	**10,333.20**	**27,774.46**	**0.05**	**0.52**	**3.85**	**7.70**	**80.96**	**3,267.54**	**0.006**	**0.06**	**3,270.91**

[1] Facility blowdowns listed above are routed to FL-1850. Blowdown volumes, pressues, durations, and number per year are conservatively estimated based on facility and equipment design.
[2] ProMax simulation of the facility used to estimate density, composition, and heating value for each blowdown activity.
[3] Quantity of blend gas is estimated for each activity to reduce the H_2S content of the stream to the required 6% based on facility design, as well as the composition and quantity of each stream.
[4] Emissions (Lb/Blowdown) = Volume (scf) * Molecular Weight (lb/lbmol) / 379.3 (scf/lbmol) * Component Mass Fraction (%)
[5] Uncontrolled Hourly Emissions (lb/hr) = Emissions (lb/blowdown) * Blowdown Duration (hr/blowdown)
Uncontrolled Annual Emissions (tpy) = Emissions (lb/blowdown) * Number of Blowdowns per Year / 2000 lb/ton
[6] Controlled Emissions = Uncontrolled Emissions * (1 - DRE)
[7] TNRCC RG-109 emission factors for high-Btu flares
[8] 40 CFR 98 Subpart A, Table A-1, and Subpart C
[9] Hourly NOx and CO Emissions (lb/hr) = Emission Factor (lb/MMBTU) * Volume (scf) * Blowdown Heating Value (BTU/scf) / 10^6 (BTU/MMBTU)
Hourly SO_2 Emissions (lb/hr) = DRE * (64 lb/lbmol SO_2/34 lb/lbmol H_2S) * Uncontrolled H_2S (lb/hr).
CO_2, N_2O and CH_4 lb/hr = EF (kg/MMBtu) * 2.20462lb/kg * Fuel consumption (MMBtu/hr)
CO_2e lb/hr = CO_2 lb/hr + (CH_4 lb/hr * GWP) + (N_2O lb/hr * GWP)
[10] Annual Emissions (tpy) = Emissions (lb/blowdown) * Number of Blowdowns per Year / 2000 lb/ton

Piñon Midstream - Dark Horse Treating Facility

Train 5 and 6 Process Flare

Unit(s):	FL-1950
Description:	5 and 6 Process Flare
Destruction Efficiency:	98%
Pilot Operating Hours:	8760

Fuel Data

Flare Pilot	180	scf/hr	Design
Flare Pilot	1,251	Btu/scf	ProMax Makeup Fuel
Flare Pilot	0.23	MMBtu/hr	Calculated
Sweep Gas Flow Rate	1,500	scf/hr	Design
Sweep Gas Flow Rate	1,251	Btu/scf	ProMax Makeup Fuel
Sweep Gas	1.88	MMBtu/hr	Calculated
Total Flare Flowrate	1,680.0	scf/hr	
	0.0017	MMscf/hr	
	1,251	Btu/scf	ProMax Weighted Average
	2.1	MMBtu/hr	
	14.7	MMscf/yr	
	18,414.0	MMBtu/yr	

Emission Rates

Pilot, Acid, & Assist Gas

NOx	CO	VOC[4]	H_2S[4]	SO_2[5]	Units	
0.138	0.2755				lb/MMBtu [6]	TNRCC RG-109
			0.25	5	gr/100 scf	Assumed for Fuel Gas
		5.5			lb/MMscf	AP-42 Chapter 1.4, Natural Gas Combustion
0.03	0.06	0.001	6.43E-03	2.57E-03	lb/hr	Pilot Emissions
0.14	0.27	0.004	2.82E-04	1.13E-02	tpy	
0.26	0.52	0.01	5.36E-04	2.14E-02	lb/hr	Sweep Gas Emissions
1.13	2.26	0.04	2.35E-03	9.39E-02	tpy	

	NOx	CO	VOC	H_2S	SO_2	Units
Pilot & Sweep Gas	**0.29**	**0.58**	**0.01**	**0.001**	**0.02**	**lb/hr**
	1.27	**2.54**	**0.036**	**0.003**	**0.11**	**tpy**

Greenhouse Gas Calculations

CO_2	N_2O	CH_4	CO_2e	
53.1	0.0001	0.001		kg/MMBtu [8]
1	298	25		GWP [9]
245.89	0.00	0.00	246.1	lb/hr [10]
1077.01	0.00203	0.0203	1078.1	tpy [7]

[1] Component Molecular Weights from the following source: https://www.engineeringtoolbox.com/molecular-weight-gas-vapor-d_1156.html
Component Net Heating Values from the following source: https://www.enggcyclopedia.com/2011/09/heating-values-natural-gas/

[3] Hourly and Annual Event gas emissions calculated as follows:
Hourly Emissions (lb/hr) = Hourly Gas Volume (scf/hr) * Component Mol Wt (lb/lb-mol) * Component Mole% / 379.4 ft^3/lb mol
Annual Emissions (tpy) = Annual Gas Volume (scf/yr) * Component Mol Wt (lb/lb-mol) * Component Mole% / 379.4 ft^3/lb mol / 2000 lb/ton

[4] Assumed 98% combustion for H_2S, HAP and VOC. 98% DRE

[5] Assumed 100% conversion of combusted H_2S to SO_2. SO_2= DRE * (64/34) * uncontrolled H_2S.

[6] To be conservative the TNRCC RG-109 emission factors for high-Btu flares were used.

[8] Greenhouse gas emission factors are from 40 CFR 98 Subpart C

[9] 40 CFR 98 Subpart A, Table A-1

[10] CO_2, N_2O and CH_4 lb/hr = EF (kg/MMBtu) * 2.20462lb/kg * Fuel consumption (MMBtu/hr)
CO_2e lb/hr = CO_2 lb/hr + (CH_4 lb/hr * GWP) + (N_2O lb/hr * GWP)

Piñon Midstream - Dark Horse Treating Facility
Equipment for Blowdowns to FL-1950

Emission Unit: FL-1950 BD
Source Description: Equipment for Blowdowns to FL-1950
Destruction Efficiency: 98%

Blowdown Activities Inputs

Equipment Tag	Equipment Type	Volume Standard (ft^3)[1]	Blowdown Pressure (psig)[1]	Molecular Weight (lb/lbmol)[2]	Mass VOC Content (%)[2]	Mass HAP Content (%)[2]	Mass H_2S Content (%)[2]	Blend Gas (scf/scf)[3]	Blowdown Heating Value (BTU/ft^3)	Blowdown Duration (min)[1]	Blowdowns Per Year[1]	Promax Flow Sheet (Train IV-VI)	Promax Stream Number	Comments
PR-XXXX	LP Pig Receiver	851.0	35	24.58	31.55%	2.76%	1.87%	0.0	1,207.68	60	104	LP Inlet	LP Inlet	
PR-XXXX	HP Pig Receiver	6761.0	1250	22.30	21.63%	2.09%	1.91%	0.0	1,065.51	60	72	HP Inlet	Field Gathering	
PL-XXXX	Treated Gas Pig Launcher	9527.0	1250	21.79	24.16%	2.15%	0.0001%	0.0	1,131.18	60	282	Dehy	To Cryo	
C-1680	AGI Compressor	12535.0	1,250	39.11	0.14%	0.11%	27.73%	2507.0	349.64	60	12	Acid Gas Injection	AGI Suction	Blow down then sweet fuel purge for 1hr at 35 psi
C-1685	AGI Compressor	12535.0	1,250	39.11	0.14%	0.11%	27.73%	2507.0	349.64	60	12	Acid Gas Injection	AGI Suction	Blow down then sweet fuel purge for 1hr at 35 psi
C-1690	AGI Compressor	12535.0	1,250	39.11	0.14%	0.11%	27.73%	2507.0	349.64	60	12	Acid Gas Injection	AGI Suction	Blow down then sweet fuel purge for 1hr at 35 psi
C-1695	AGI Compressor	12535.0	1,250	39.11	0.14%	0.11%	27.73%	2507.0	349.64	60	12	Acid Gas Injection	AGI Suction	Blow down then sweet fuel purge for 1hr at 35 psi
P-1697	AGI H-Pump	3402.0	2,500	40.47	0.14%	0.11%	28.52%	680.4	359.97	60	24	Acid Gas Injection	AG2	Blow down then sweet fuel purge for 30min at 35 psi
P-1698	AGI H-Pump	3402.0	2,500	40.47	0.14%	0.11%	28.52%	680.4	359.97	60	24	Acid Gas Injection	AG2	Blow down then sweet fuel purge for 30min at 35 psi
F-5301	Amine Inlet Coalescing Filter	1122.0	1250	22.50	22.55%	2.04%	1.94%	0.0	1,095.90	60	12	Amine Treating	Sour Feed	Blow down then sweet fuel purge for 1hr at 35 psi
F-5515	Amine Pre-Filter	69.1	15	21.79	24.16%	2.15%	0.0001%	0.0	1,131.18	60	52	Dehy	To Cryo	Sweet fuel purge 0.5hr at 35psi
F-5516	Amine Charcoal Filter	863.9	15	21.79	24.16%	2.15%	0.0001%	0.0	1,131.18	60	2	Dehy	To Cryo	Sweet fuel purge 0.5hr at 35psi
F-5517	Amine Post-Filter	69.1	15	21.79	24.16%	2.15%	0.0001%	0.0	1,131.18	60	52	Dehy	To Cryo	Sweet fuel purge 0.5hr at 35psi
F-6301	Amine Inlet Coalescing Filter	1122.0	1250	22.50	22.55%	2.04%	1.94%	0.0	1,095.90	60	12	Amine Treating	Sour Feed	Blow down then sweet fuel purge for 1hr at 35 psi
F-6515	Amine Pre-Filter	69.1	15	21.79	24.16%	2.15%	0.0001%	0.0	1,131.18	60	52	Dehy	To Cryo	Sweet fuel purge 0.5hr at 35psi
F-6516	Amine Charcoal Filter	863.9	15	21.79	24.16%	2.15%	0.0001%	0.0	1,131.18	60	2	Dehy	To Cryo	Sweet fuel purge 0.5hr at 35psi
F-6517	Amine Post-Filter	69.1	15	21.79	24.16%	2.15%	0.0001%	0.0	1,131.18	60	52	Dehy	To Cryo	Sweet fuel purge 0.5hr at 35psi
F-6001	HP Liquid Condensate Filters	157.0	1250	21.56	20.47%	5.54%	0.43%	0.0	2,417.20	60	12	HP Inlet	_18	Blow down then sweet fuel purge for 1hr at 35 psi
C-1680	AGI Comp. - Packing Purge	105.0	15	32.95	0.29%	0.10%	23.67%	0.0	399.33	60	876	Acid Gas Injection	Vent to VRU	Compressor packing purge volume
C-1685	AGI Comp. - Packing Purge	105.0	15	32.95	0.29%	0.10%	23.67%	0.0	399.33	60	876	Acid Gas Injection	Vent to VRU	Compressor packing purge volume
C-1690	AGI Comp. - Packing Purge	105.0	15	32.95	0.29%	0.10%	23.67%	0.0	399.33	60	876	Acid Gas Injection	Vent to VRU	Compressor packing purge volume
C-1695	AGI Comp. - Packing Purge	105.0	15	32.95	0.29%	0.10%	23.67%	0.0	399.33	60	876	Acid Gas Injection	Vent to VRU	Compressor packing purge volume
Misc.	0.5 Hour Purge	14,431	35	21.79	24.16%	2.15%	0.00%	0.0	1,131.18	60	872	Dehy	To Cryo	Sweet fuel purge calculation (2x per maint activity)
Misc.	1.0 Hour Purge	28,861	35	21.79	24.16%	2.15%	0.00%	0.0	1,131.18	60	168	Dehy	To Cryo	Sweet fuel purge calculation (2x per maint activity)
Misc.	Train 5 Amine Still	46074.3	10	39.11	0.14%	0.11%	27.73%	9214.9	349.64	60	12	Amine Treating	Acid Gas	EST 0.25HR downtime per month
Misc.	Train 6 Amine Still	46074.3	10	39.11	0.14%	0.11%	27.73%	9214.9	349.64	60	12	Amine Treating	Acid Gas	EST 0.25HR downtime per month
Misc.	Amine Flash Bridle (1)	0.3	100	22.28	10.99%	0.67%	3.52%	0.0	938.44	60	52	Amine Treating	Flash Gas to Fuel	Assumes 3", 72" Average length
Misc.	Stabilizer OH to Flare	104729.2	150	47.70	83.24%	8.18%	2.42%	0.0	2,389.27	60	12	Stabilizer	29	EST 1HR downtime per month
Misc.	Train 5 Amine Flash to Flare	10903.1	110	22.28	10.99%	0.67%	3.52%	0.0	938.44	60	12	Amine Treating	Flash Gas to Fuel	EST 1HR downtime per month
Misc.	Train 6 Amine Flash to Flare	10903.1	110	22.28	10.99%	0.67%	3.52%	0.0	938.44	60	12	Amine Treating	Flash Gas to Fuel	EST 1HR downtime per month
Misc.	Train 5 TEG Flash to Flare	3687.1	110	28.33	39.12%	3.85%	0.0004%	0.0	1,316.61	60	12	Dehy	Flash Gas to Fuel	EST 1HR downtime per month
Misc.	Train 6 TEG Flash to Flare	3687.1	110	28.33	39.12%	3.85%	0.00%	0.0	1,316.61	60	12	Dehy	Flash Gas to Fuel	EST 1HR downtime per month

VOC, HAP, and H_2S Emission Calculations

Equipment Tag	Equipment Type	Mass VOC (lb/blowdown)[4]	Mass HAP (lb/blowdown)[4]	Mass H_2S (lb/blowdown)[4]	Uncontrolled[5]						Controlled[6]					
					VOC (lb/hr)	HAP (lb/hr)	H_2S (lb/hr)	VOC (tpy)	HAP (tpy)	H_2S (tpy)	VOC (lb/hr)	HAP (lb/hr)	H_2S (lb/hr)	VOC (tpy)	HAP (tpy)	H_2S (tpy)
PR-XXXX	LP Pig Receiver	17.40	1.52	1.03	17.40	1.52	1.03	0.90	0.08	0.05	0.35	0.03	0.02	0.02	0.00	0.00
PR-XXXX	HP Pig Receiver	85.97	8.31	7.60	85.97	8.31	7.60	3.09	0.30	0.27	1.72	0.17	0.15	0.06	0.01	0.01
PL-XXXX	Treated Gas Pig Launcher	132.19	11.79	0.00	132.19	11.79	0.00	18.64	1.66	0.00	2.64	0.24	0.00	0.37	0.03	0.00
C-1680	AGI Compressor	1.79	1.40	358.39	1.79	1.40	358.39	0.01	0.01	2.15	0.04	0.03	7.17	0.000	0.000	0.043
C-1685	AGI Compressor	1.79	1.40	358.39	1.79	1.40	358.39	0.01	0.01	2.15	0.04	0.03	7.17	0.000	0.000	0.043
C-1690	AGI Compressor	1.79	1.40	358.39	1.79	1.40	358.39	0.01	0.01	2.15	0.04	0.03	7.17	0.000	0.000	0.043
C-1695	AGI Compressor	1.79	1.40	358.39	1.79	1.40	358.39	0.01	0.01	2.15	0.04	0.03	7.17	0.000	0.000	0.043
P-1697	AGI H-Pump	0.52	0.40	103.52	0.52	0.40	103.52	0.01	0.00	1.24	0.01	0.01	2.07	0.00	0.00	0.02
P-1698	AGI H-Pump	0.52	0.40	103.52	0.52	0.40	103.52	0.01	0.00	1.24	0.01	0.01	2.07	0.00	0.00	0.02
F-5301	Amine Inlet Coalescing Filter	15.01	1.36	1.29	15.01	1.36	1.29	0.09	0.01	0.01	0.30	0.03	0.03	0.00	0.00	0.00
F-5515	Amine Pre-Filter	0.96	0.09	0.00	0.96	0.09	0.00	0.02	0.00	0.00	0.02	0.00	0.00	0.00	0.000	0.0000
F-5516	Amine Charcoal Filter	11.99	1.07	0.00	11.99	1.07	0.00	0.01	0.00	0.00	0.24	0.02	0.00	0.00	0.000	0.0000
F-5517	Amine Post-Filter	0.96	0.09	0.00	0.96	0.09	0.00	0.02	0.00	0.00	0.02	0.00	0.00	0.00	0.000	0.0000
F-6301	Amine Inlet Coalescing Filter	15.01	1.36	1.29	15.01	1.36	1.29	0.09	0.01	0.01	0.30	0.03	0.03	0.00	0.00	0.00
F-6515	Amine Pre-Filter	0.96	0.09	0.00	0.96	0.09	0.00	0.02	0.00	0.00	0.02	0.00	0.0000	0.00	0.000	0.0000
F-6516	Amine Charcoal Filter	11.99	1.07	0.00	11.99	1.07	0.00	0.01	0.00	0.00	0.24	0.02	0.0000	0.00	0.000	0.0000
F-6517	Amine Post-Filter	0.96	0.09	0.00	0.96	0.09	0.00	0.02	0.00	0.00	0.02	0.00	0.0000	0.00	0.000	0.0000
F-6001	HP Liquid Condensate Filters	1.83	0.49	0.04	1.83	0.49	0.04	0.01	0.00	0.00	0.04	0.01	0.00	0.00	0.00	0.00
C-1680	AGI Comp. - Packing Purge	0.03	0.01	2.16	0.03	0.01	2.16	0.01	0.00	0.95	0.00	0.00	0.0432	0.00	0.00	0.01891
C-1685	AGI Comp. - Packing Purge	0.03	0.01	2.16	0.03	0.01	2.16	0.01	0.00	0.95	0.00	0.00	0.04	0.00	0.00	0.02
C-1690	AGI Comp. - Packing Purge	0.03	0.01	2.16	0.03	0.01	2.16	0.01	0.00	0.95	0.00	0.00	0.0432	0.00	0.00	0.0189
C-1695	AGI Comp. - Packing Purge	0.03	0.01	2.16	0.03	0.01	2.16	0.01	0.00	0.95	0.00	0.00	0.04	0.00	0.00	0.02
Misc.	0.5 Hour Purge	200.24	17.86	0.00	200.24	17.86	0.00	87.30	7.79	0.00	4.00	0.36	0.00	1.75	0.16	0.00
Misc.	1.0 Hour Purge	400.47	35.72	0.00	400.47	35.72	0.00	33.64	3.00	0.00	8.01	0.71	0.00	0.67	0.06	0.00
Misc.	Train 5 Amine Still	6.59	5.15	1317.32	6.59	5.15	1,317.32	0.04	0.03	7.90	0.13	0.10	26.35	0.00	0.00	0.16
Misc.	Train 6 Amine Still	6.59	5.15	1317.32	6.59	5.15	1,317.32	0.04	0.03	7.90	0.13	0.10	26.35	0.00	0.00	0.16
Misc.	Amine Flash Bridle (1)	0.00	0.00	0.00	0.00	0.00	0.00	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Misc.	Stabilizer OH to Flare	10963.36	1077.91	318.72	10,963.36	1,077.91	318.72	65.78	6.47	1.91	219.27	21.56	6.37	1.32	0.13	0.04
Misc.	Train 5 Amine Flash to Flare	70.41	4.26	22.52	70.41	4.26	22.52	0.42	0.03	0.14	1.41	0.09	0.45	0.01	0.00	0.00
Misc.	Train 6 Amine Flash to Flare	70.41	4.26	22.52	70.41	4.26	22.52	0.42	0.03	0.14	1.41	0.09	0.45	0.01	0.00	0.00
Misc.	Train 5 TEG Flash to Flare	107.74	10.60	0.00	107.74	10.60	0.00	0.65	0.06	0.0000	2.15	0.21	0.0000	0.01	0.00	0.0000
Misc.	Train 6 TEG Flash to Flare	107.74	10.60	0.00	107.74	10.60	0.00	0.65	0.06	0.0000	2.15	0.21	0.0000	0.01	0.00	0.0000
	Totals:				**12,237.10**	**1,205.27**	**4,658.89**	**212.00**	**19.63**	**33.20**	**244.74**	**24.11**	**93.18**	**4.24**	**0.39**	**0.66**

Emission Factors

Pollutant	NOx	CO	CO_2	N_2O	CH_4
Factor (lb/MMBTU) [7]	0.138	0.2755	-	-	-
Factor (kg/MMBTU) [8]	-	-	53.06	0.0001	0.001
GWP [6]	-	-	1	298	25

NOx, CO, SO_2 and GHG Emission Calculations

Equipment Tag	Equipment Type	Volume Standard (ft3)1	Blowdown Heating Value (BTU/ft^3) [2]	Hourly Emission Rate (lb/hr) [9]						Annual Emission Rate (tpy) [10]						
				NOx	CO	SO_2	CO_2	N_2O	CH_4	NOx	CO	SO_2	CO_2	N_2O	CH_4	CO_2e
PR-XXXX	LP Pig Receiver	851	1207.68	0.14	0.28	1.90	120.22	0.0002	0.0023	0.01	0.01	0.10	6.25	0.00001	0.00012	6.26
PR-XXXX	HP Pig Receiver	6761	1065.51	0.99	1.98	14.02	842.69	0.0016	0.0159	0.04	0.07	0.50	30.34	0.00006	0.00057	30.37
PL-XXXX	Treated Gas Pig Launcher	9527	1131.18	1.49	2.97	0.00	1,260.63	0.0024	0.0238	0.21	0.42	0.00	177.75	0.00033	0.00335	177.93
C-1680	AGI Compressor	12535	192.80	0.33	0.67	661.12	282.70	0.0005	0.0053	0.00	0.00	3.97	1.70	0.00000	0.00003	1.70
C-1685	AGI Compressor	12535	192.80	0.33	0.67	661.12	282.70	0.0005	0.0053	0.00	0.00	3.97	1.70	0.00000	0.00003	1.70
C-1690	AGI Compressor	12535	192.80	0.33	0.67	661.12	282.70	0.0005	0.0053	0.00	0.00	3.97	1.70	0.00000	0.00003	1.70
C-1695	AGI Compressor	12535	192.80	0.33	0.67	661.12	282.70	0.0005	0.0053	0.00	0.00	3.97	1.70	0.00000	0.00003	1.70
P-1697	AGI H-Pump	3402	205.19	0.10	0.19	190.96	81.66	0.0002	0.0015	0.0012	0.0023	2.29	0.98	0.00000	0.00002	0.98
P-1698	AGI H-Pump	3402	205.19	0.10	0.19	190.96	81.66	0.0002	0.0015	0.0012	0.0023	2.29	0.98	0.00000	0.00002	0.98
F-5301	Amine Inlet Coalescing Filter	1122	1095.90	0.17	0.34	2.39	143.84	0.0003	0.0027	0.0010	0.0020	0.01	0.86	0.00000	0.00002	0.86
F-5515	Amine Pre-Filter	69	1131.18	0.01	0.02	0.00	9.15	0.0000	0.0002	0.0003	0.0006	0.0000	0.24	0.00000	0.00000	0.24
F-5516	Amine Charcoal Filter	864	1131.18	0.13	0.27	0.00	114.32	0.0002	0.0022	0.0001	0.0003	0.0000	0.11	0.00000	0.00000	0.11
F-5517	Amine Post-Filter	69	1131.18	0.01	0.02	0.00	9.15	0.0000	0.0002	0.0003	0.0006	0.0000	0.24	0.00000	0.00000	0.24
F-6301	Amine Inlet Coalescing Filter	1122	1095.90	0.17	0.34	2.39	143.84	0.0003	0.0027	0.0010	0.0020	0.01	0.86	0.00000	0.00002	0.86
F-6515	Amine Pre-Filter	69	1131.18	0.01	0.02	0.00	9.15	0.0000	0.0002	0.0003	0.0006	0.0000	0.24	0.00000	0.00000	0.24
F-6516	Amine Charcoal Filter	864	1131.18	0.13	0.27	0.00	114.32	0.0002	0.0022	0.0001	0.0003	0.0000	0.11	0.00000	0.00000	0.11
F-6517	Amine Post-Filter	69	1131.18	0.01	0.02	0.00	9.15	0.0000	0.0002	0.0003	0.0006	0.0000	0.24	0.00000	0.00000	0.24
F-6001	HP Liquid Condensate Filters	157	2417.20	0.05	0.10	0.07	44.39	0.0001	0.0008	0.0003	0.0006	0.00	0.27	0.00000	0.00001	0.27
C-1680	AGI Comp. - Packing Purge	105	399.33	0.01	0.01	3.98	4.90	0.0000	0.0001	0.0025	0.0051	1.7440	2.15	0.00000	0.00004	2.15
C-1685	AGI Comp. - Packing Purge	105	399.33	0.01	0.01	3.98	4.90	0.0000	0.0001	0.0025	0.0051	1.7440	2.15	0.00000	0.00004	2.15
C-1690	AGI Comp. - Packing Purge	105	399.33	0.01	0.01	3.98	4.90	0.0000	0.0001	0.0025	0.0051	1.7440	2.15	0.00000	0.00004	2.15
C-1695	AGI Comp. - Packing Purge	105	399.33	0.01	0.01	3.98	4.90	0.0000	0.0001	0.0025	0.0051	1.7440	2.15	0.00000	0.00004	2.15
Misc.	0.5 Hour Purge	14431	1131.18	2.25	4.50	0.00	1,909.54	0.0036	0.0360	0.9822	1.9608	0.0005	832.56	0.00157	0.01569	833.42
Misc.	1.0 Hour Purge	28861	1131.18	4.51	8.99	0.00	3,818.95	0.0072	0.0720	0.3784	0.7555	0.0002	320.79	0.00060	0.00605	321.12
Misc.	Train 5 Amine Still	46074	192.80	1.23	2.45	2,430.06	1,039.12	0.0020	0.0196	0.0074	0.0147	14.58	6.23	0.00001	0.00012	6.24
Misc.	Train 6 Amine Still	46074	192.80	1.23	2.45	2,430.06	1,039.12	0.0020	0.0196	0.0074	0.0147	14.58	6.23	0.00001	0.00012	6.24
Misc.	Amine Flash Bridle (1)	0	938.44	0.00	0.00	0.00	0.03	0.0000	0.0000	0.0000	0.0000	0.0000	0.0009	0.00000	0.00000	0.0009
Misc.	Stabilizer OH to Flare	104729	2389.27	34.53	68.94	587.94	29,270.74	0.0552	0.5517	0.2072	0.4136	3.53	175.62	0.00033	0.00331	175.81
Misc.	Train 5 Amine Flash to Flare	10903	938.44	1.41	2.82	41.55	1,196.90	0.0023	0.0226	0.0085	0.0169	0.25	7.18	0.00001	0.00014	7.19
Misc.	Train 6 Amine Flash to Flare	10903	938.44	1.41	2.82	41.55	1,196.90	0.0023	0.0226	0.0085	0.0169	0.25	7.18	0.00001	0.00014	7.19
Misc.	Train 5 TEG Flash to Flare	3687	1316.61	0.67	1.34	0.00	567.86	0.0011	0.0107	0.0040	0.0080	0.0000	3.41	0.00001	0.00006	3.41
Misc.	Train 6 TEG Flash to Flare	3687	1316.61	0.67	1.34	0.00	567.86	0.0011	0.0107	0.0040	0.0080	0.00	3.41	0.00001	0.00006	3.41
			Totals:	**52.78**	**105.37**	**8,594.28**	**44,741.61**	**0.08**	**0.84**	**1.88**	**3.76**	**61.25**	**1,597.47**	**0.003**	**0.03**	**1,599.12**

[1] Facility blowdowns listed above are routed to FL-1950. Blowdown volumes, pressues, durations, and number per year are conservatively estimated based on facility and equipment design.
[2] ProMax simulation of the facility used to estimate density, composition, and heating value for each blowdown activity.
[3] Quantity of blend gas is estimated for each activity to reduce the H2S content of the stream to the required 6% based on facility design, as well as the composition and quantity of each stream.
[4] Emissions (Lb/Blowdown) = Volume (scf) * Molecular Weight (lb/lbmol) / 379.3 (scf/lbmol) * Component Mass Fraction (%)
[5] Uncontrolled Hourly Emissions (lb/hr) = Emissions (lb/blowdown) * Blowdown Duration (hr/blowdown)
Uncontrolled Annual Emissions (tpy) = Emissions (lb/blowdown) * Number of Blowdowns per Year / 2000 lb/ton
[6] Controlled Emissions = Uncontrolled Emissions * (1 - DRE)
[7] TNRCC RG-109 emission factors for high-Btu flares
[8] 40 CFR 98 Subpart A, Table A-1, and Subpart C
[9] Hourly NOx and CO Emissions (lb/hr) = Emission Factor (lb/MMBTU) * Volume (scf) * Blowdown Heating Value (BTU/scf) / 10^6 (BTU/MMBTU)
Hourly SO_2 Emissions (lb/hr) = DRE * (64 lb/lbmol SO_2/34 lb/lbmol H_2S) * Uncontrolled H_2S (lb/hr).
CO_2, N_2O and CH_4 lb/hr = EF (kg/MMBtu) * 2.20462lb/kg * Fuel consumption (MMBtu/hr)
CO_2e lb/hr = CO_2 lb/hr + (CH_4 lb/hr * GWP) + (N_2O lb/hr * GWP)
[10] Annual Emissions (tpy) = Emissions (lb/blowdown) * Number of Blowdowns per Year / 2000 lb/ton

Piñon Midstream - Dark Horse Treating Facility

Cryogenic Process Flare

Unit(s):	FL-2050
Description:	Cryogenic Process Flare
Destruction Efficiency:	98%
Pilot Operating Hours:	8760

Fuel Data

Flare Pilot	195	scf/hr	Design
Flare Pilot	1,251	Btu/scf	ProMax Makeup Fuel
Flare Pilot	0.24	MMBtu/hr	Calculated
Sweep Gas Flow Rate	3,000	scf/hr	Design
Sweep Gas Flow Rate	1,251	Btu/scf	ProMax Makeup Fuel
Sweep Gas	3.75	MMBtu/hr	Calculated
Total Flare Flowrate	3,195.0	scf/hr	
	0.0032	MMscf/hr	
	1,251	Btu/scf	ProMax Weighted Average
	4.0	MMBtu/hr	
	28.0	MMscf/yr	
	35,019.5	MMBtu/yr	

Emission Rates

Pilot, Acid, & Assist Gas

NOx	CO	VOC[4]	H_2S[4]	SO_2[5]	Units	
0.138	0.2755				lb/MMBtu [6]	TNRCC RG-109
			0.25	5	gr/100 scf	Assumed for Fuel Gas
		5.5			lb/MMscf	AP-42 Chapter 1.4, Natural Gas Combustion
0.03	0.07	0.001	6.96E-03	2.79E-03	lb/hr	Pilot Emissions
0.15	0.29	0.005	3.05E-04	1.22E-02	tpy	
0.52	1.03	0.02	1.07E-03	4.29E-02	lb/hr	Sweep Gas Emissions
2.27	4.53	0.07	4.69E-03	1.88E-01	tpy	

	NOx	CO	VOC	H_2S	SO_2	Units
Pilot & Sweep Gas	**0.55**	**1.10**	**0.02**	**0.001**	**0.05**	**lb/hr**
	2.42	**4.82**	**0.072**	**0.005**	**0.20**	**tpy**

Greenhouse Gas Calculations

CO_2	N_2O	CH_4	CO_2e	
53.1	0.0001	0.001		kg/MMBtu [8]
1	298	25		GWP [9]
467.63	0.00	0.01	468.1	lb/hr [10]
2048.24	0.00386	0.0386	2050.4	tpy [7]

[1] Component Molecular Weights from the following source: https://www.engineeringtoolbox.com/molecular-weight-gas-vapor-d_1156.html
Component Net Heating Values from the following source: https://www.enggcyclopedia.com/2011/09/heating-values-natural-gas/

[3] Hourly and Annual Event gas emissions calculated as follows:
Hourly Emissions (lb/hr) = Hourly Gas Volume (scf/hr) * Component Mol Wt (lb/lb-mol) * Component Mole% / 379.4 ft^3/lb mol
Annual Emissions (tpy) = Annual Gas Volume (scf/yr) * Component Mol Wt (lb/lb-mol) * Component Mole% / 379.4 ft^3/lb mol / 2000 lb/ton

[4] Assumed 98% combustion for H_2S, HAP and VOC. 98% DRE

[5] Assumed 100% conversion of combusted H_2S to SO_2. SO_2= DRE * (64/34) * uncontrolled H_2S.

[6] To be conservative the TNRCC RG-109 emission factors for high-Btu flares were used.

[8] Greenhouse gas emission factors are from 40 CFR 98 Subpart C

[9] 40 CFR 98 Subpart A, Table A-1

[10] CO_2, N_2O and CH_4 lb/hr = EF (kg/MMBtu) * 2.20462lb/kg * Fuel consumption (MMBtu/hr)
CO_2e lb/hr = CO_2 lb/hr + (CH_4 lb/hr * GWP) + (N_2O lb/hr * GWP)

Piñon Midstream - Dark Horse Treating Facility
Equipment for Blowdowns to FL-2050

Emission Unit: FL-2050 BD
Source Description: Equipment for Blowdowns to FL-2050
Destruction Efficiency: 98%

Blowdown Activities Inputs

Equipment Tag	Equipment Type	Volume (ft^3)[1]	Blowdown Pressure (psig)[1]	Molecular Weight (lb/lbmol)[2]	Mass VOC Content (%)[2]	Mass HAP Content (%)[2]	Mass H_2S Content (%)[2]	Blowdown Duration (min)[1]	Blowdowns Per Year[1]	Promax Flow Sheet (Cryo_Rej Train I-II)	Promax Stream Number	Comments
C-1200	Residue Compressor	8,364	255	17.88	0.47%	0.00001%	0.0001%	60	12	Residue Compression	1	Blowdown to atmosphere
C-1225	Residue Compressor	8,364	255	17.88	0.47%	0.00001%	0.0001%	60	12	Residue Compression	1	Blowdown to atmosphere
C-1250	Residue Compressor	8,364	255	17.88	0.47%	0.00001%	0.0001%	60	12	Residue Compression	1	Blowdown to atmosphere
C-1275	Residue Compressor	8,364	255	17.88	0.47%	0.00001%	0.0001%	60	12	Residue Compression	1	Blowdown to atmosphere
C-2200	Residue Compressor	8,364	255	17.88	0.47%	0.00001%	0.0001%	60	12	Residue Compression	1	Blowdown to atmosphere
C-2225	Residue Compressor	8,364	255	17.88	0.47%	0.00001%	0.0001%	60	12	Residue Compression	1	Blowdown to atmosphere
C-2250	Residue Compressor	8,364	255	17.88	0.47%	0.00001%	0.0001%	60	12	Residue Compression	1	Blowdown to atmosphere
C-2275	Residue Compressor	8,364	255	17.88	0.47%	0.00001%	0.0001%	60	12	Residue Compression	1	Blowdown to atmosphere
T-1501	Demethanizer Blowdown	1,597,021	275	17.88	0.47%	0.00001%	0.0001%	60	12	Cryo Plant	16	Blowdown to flare
T-2501	Demethanizer Blowdown	1,597,021	275	17.88	0.47%	0.00001%	0.0001%	60	12	Cryo Plant	16	Blowdown to flare
F-1441	Mol Sieve Inlet Coalescing Filter	1122	800	21.79	24.16%	2.15%	0.0001%	60	2	Cryo Plant	7	Blowdown to flare
F-1445/6	Mol Sieve Dust Filter	69.12	800	21.79	24.16%	2.16%	0.0001%	60	4	Cryo Plant	40	Blowdown to flare
F-2441	Mol Sieve Inlet Coalescing Filter	863.94	800	21.79	24.16%	2.15%	0.0001%	60	2	Cryo Plant	7	Blowdown to flare
F-2445/6	Mol Sieve Dust Filter	69.12	800	21.79	24.16%	2.16%	0.0001%	60	4	Cryo Plant	40	Blowdown to flare

VOC, HAP, and H_2S Emission Calculations

Equipment Tag	Equipment Type	Mass VOC (lb/blowdown)[4]	Mass HAP (lb/blowdown)[4]	Mass H_2S (lb/blowdown)[4]	Uncontrolled[5]						Controlled[6]					
					VOC (lb/hr)	HAP (lb/hr)	H_2S (lb/hr)	VOC (tpy)	HAP (tpy)	H_2S (tpy)	VOC (lb/hr)	HAP (lb/hr)	H_2S (lb/hr)	VOC (tpy)	HAP (tpy)	H_2S (tpy)
C-1200	Residue Compressor	1.84	0.00	0.00	1.84	0.00	0.00	0.01	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.000
C-1225	Residue Compressor	1.84	0.00	0.00	1.84	0.00	0.00	0.01	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.000
C-1250	Residue Compressor	1.84	0.00	0.00	1.84	0.00	0.00	0.01	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.000
C-1275	Residue Compressor	1.84	0.00	0.00	1.84	0.00	0.00	0.01	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.000
C-2200	Residue Compressor	1.84	0.00	0.00	1.84	0.00	0.00	0.01	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.000
C-2225	Residue Compressor	1.84	0.00	0.00	1.84	0.00	0.00	0.01	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.000
C-2250	Residue Compressor	1.84	0.00	0.00	1.84	0.00	0.00	0.01	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.000
C-2275	Residue Compressor	1.84	0.00	0.00	1.84	0.00	0.00	0.01	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.000
T-1501	Demethanizer Blowdown	351.64	0.01	0.05	351.64	0.01	0.05	2.11	0.00	0.00	7.03	0.00	0.00	0.04	0.00	0.000
T-2501	Demethanizer Blowdown	351.64	0.01	0.05	351.64	0.01	0.05	2.11	0.00	0.00	7.03	0.00	0.00	0.04	0.00	0.000
F-1441	Mol Sieve Inlet Coalescing Filter	15.57	1.39	0.00	15.57	1.39	0.0000	0.02	0.00	0.000000	0.31	0.03	0.000001	0.00	0.0000	0.0000000
F-1445/6	Mol Sieve Dust Filter	0.96	0.09	0.00	0.96	0.09	0.0000	0.00	0.00	0.000000	0.02	0.00	0.000000	0.00	0.0000	0.0000000
F-2441	Mol Sieve Inlet Coalescing Filter	11.99	1.07	0.00	11.99	1.07	0.0000	0.01	0.00	0.000000	0.24	0.02	0.000001	0.00	0.0000	0.0000000
F-2445/6	Mol Sieve Dust Filter	0.96	0.09	0.00	0.96	0.09	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.000
			Totals:		**747.49**	**2.64**	**0.10**	**4.34**	**0.003**	**0.00058**	**14.95**	**0.05**	**0.002**	**0.09**	**0.0001**	**0.000012**

Emission Factors

Pollutant	NOx	CO	CO_2	N_2O	CH_4
Factor (lb/MMBTU)[7]	0.138	0.2755	-	-	-
Factor (kg/MMBTU)[8]	-	-	53.06	0.0001	0.001
GWP[8]	-	-	1	298	25

NOx, CO, SO_2 and GHG Emission Calculations

Equipment Tag	Equipment Type	Volume (ft^3)[1]	Blowdown Heating Value (BTU/ft^3)[2]	Hourly Emission Rate (lb/hr)[9]						Annual Emission Rate (tpy)[10]						
				NOx	CO	SO_2	CO_2	N_2O	CH_4	NOx	CO	SO_2	CO_2	N_2O	CH_4	CO_2e
C-1200	Residue Compressor	8364	927.17	1.07	2.14	0.00	907.14	0.0017	0.0171	0.01	0.01	0.00000	5.44	0.00001	0.00010	5.45
C-1225	Residue Compressor	8364	927.17	1.07	2.14	0.00	907.14	0.0017	0.0171	0.01	0.01	0.00000	5.44	0.00001	0.00010	5.45
C-1250	Residue Compressor	8364	927.17	1.07	2.14	0.00	907.14	0.0017	0.0171	0.01	0.01	0.00000	5.44	0.00001	0.00010	5.45
C-1275	Residue Compressor	8364	927.17	1.07	2.14	0.00	907.14	0.0017	0.0171	0.01	0.01	0.00000	5.44	0.00001	0.00010	5.45
C-2200	Residue Compressor	8364	927.17	1.07	2.14	0.00	907.14	0.0017	0.0171	0.01	0.01	0.00000	5.44	0.00001	0.00010	5.45
C-2225	Residue Compressor	8364	927.17	1.07	2.14	0.00	907.14	0.0017	0.0171	0.01	0.01	0.00000	5.44	0.00001	0.00010	5.45
C-2250	Residue Compressor	8364	927.17	1.07	2.14	0.00	907.14	0.0017	0.0171	0.01	0.01	0.00000	5.44	0.00001	0.00010	5.45
C-2275	Residue Compressor	8364	927.17	1.07	2.14	0.00	907.14	0.0017	0.0171	0.0064	0.0128	0.00000	5.44	0.00001	0.00010	5.45
T-1501	Demethanizer Blowdown	1597021	927.17	204.34	407.94	0.09	173,209.78	0.3264	3.2644	1.2260	2.4476	0.00052	1,039.26	0.00196	0.01959	1,040.33
T-2501	Demethanizer Blowdown	1597021	927.17	204.34	407.94	0.09	173,209.78	0.3264	3.2644	1.2260	2.4476	0.00052	1,039.26	0.00196	0.01959	1,040.33
F-1441	Mol Sieve Inlet Coalescing Filter	1122	1131.18	0.18	0.35	0.00	148.47	0.0003	0.0028	0.0002	0.0003	0.00000	0.15	0.00000	0.00000	0.15
F-1445/6	Mol Sieve Dust Filter	69	1131.32	0.01	0.02	0.00	9.15	0.0000	0.0002	0.0000	0.0000	0.00000	0.02	0.00000	0.00000	0.02
F-2441	Mol Sieve Inlet Coalescing Filter	864	1131.18	0.13	0.27	0.00	114.32	0.0002	0.0022	0.0001	0.0003	0.00000	0.11	0.00000	0.00000	0.11
F-2445/6	Mol Sieve Dust Filter	69	1131.32	0.01	0.02	0.00	9.15	0.0000	0.0002	0.0000	0.0000	0.00000	0.02	0.00000	0.00000	0.02
			Totals:	**417.57**	**833.63**	**0.18**	**353,957.78**	**0.67**	**6.67**	**2.50**	**5.00**	**0.0011**	**2,122.36**	**0.004**	**0.04**	**2,124.55**

[1] Facility blowdowns listed above are routed to FL-2050. Blowdown volumes, pressues, durations, and number per year are conservatively estimated based on facility and equipment design.
[2] ProMax simulation of the facility used to estimate density, composition, and heating value for each blowdown activity.
[4] Emissions (Lb/Blowdown) = Volume (scf) * Molecular Weight (lb/lbmol) / 379.3 (scf/lbmol) * Component Mass Fraction (%)
[5] Uncontrolled Hourly Emissions (lb/hr) = Emissions (lb/blowdown) * Blowdown Duration (hr/blowdown)
Uncontrolled Annual Emissions (tpy) = Emissions (lb/blowdown) * Number of Blowdowns per Year / 2000 lb/ton
[6] Controlled Emissions = Uncontrolled Emissions * (1 - DRE)
[7] TNRCC RG-109 emission factors for high-Btu flares
[8] 40 CFR 98 Subpart A, Table A-1, and Subpart C
[9] Hourly NOx and CO Emissions (lb/hr) = Emission Factor (lb/MMBTU) * Volume (scf) * Blowdown Heating Value (BTU/scf) / 10^6 (BTU/MMBTU)
Hourly SO_2 Emissions (lb/hr) = DRE * (64 lb/lbmol SO_2/34 lb/lbmol H_2S) * Uncontrolled H_2S (lb/hr).
CO_2, N_2O and CH_4 lb/hr = EF (kg/MMBtu) * 2.20462lb/kg * Fuel consumption (MMBtu/hr)
CO_2e lb/hr = CO_2 lb/hr + (CH_4 lb/hr * GWP) + (N_2O lb/hr * GWP)
[10] Annual Emissions (tpy) = Emissions (lb/blowdown) * Number of Blowdowns per Year / 2000 lb/ton

Piñon Midstream - Dark Horse Treating Facility

Heaters and Reboilers

Emission Unit	Source Description
H-1600	Stabilizer Hot Oil Heater
H-1620	Amine Hot Oil Heater
H-2600	Stabilizer Hot Oil Heater
H-2620	Amine Hot Oil Heater
H-3620	Amine Hot Oil Heater
H-4620	Amine Hot Oil Heater
H-5620	Utility Hot Oil Heater
H-6620	Utility Hot Oil Heater
E-1566	TEG Reboiler (Direct Fired Heater)
E-2566	TEG Reboiler (Direct Fired Heater)
E-3566	TEG Reboiler (Direct Fired Heater)
E-4566	TEG Reboiler (Direct Fired Heater)
H-1781	Cryo Trim Heater
H-2781	Cryo Trim Heater
H-1741	Cryo Regen Heater
H-2741	Cryo Regen Heater

Fuel Inputs

Annual op hours:	8,760			
Fuel heat value	1251	Btu/scf	ProMax Makeup Fuel	
Fuel H_2S Content	0.25	gr H_2S / 100 scf	Estimated	
Fuel Sulfur Content	5.00	gr S / 100 scf	Estimated	0.0980

Emission Factors

Source	NO_x[1]	CO[1]	VOC[1]	SO_2[2]	PM[1,3]	H_2S[4]	HCHO[5]	Toluene[5]	Benzene[5]	n-Hexane[5]	HAPs[5]	Units
AP-42 Tables 1.4-1 and 1.4-2	100	84	5.5		7.6		0.075	0.0034	0.0021	1.80		lb/MMscf
Adjusted Factor	122.7	103.0	6.7		9.3		0.092	0.0042	0.0026	2.21		lb/MMscf
H-1600 (Manufacturer Guaranteed Factors)	0.0401	0.0407	0.0192		0.0156							lb/MMBtu
H-1620 (Manufacturer Guaranteed Factors)	0.0401	0.0407	0.0192		0.0156							lb/MMBtu
H-1620 (Manufacturer Guaranteed Factors)	0.0401	0.0407	0.0192		0.0156							lb/MMBtu
H-2620 (Manufacturer Guaranteed Factors)	0.0401	0.0407	0.0192		0.0156							lb/MMBtu
H-3620 (Manufacturer Guaranteed Factors)	0.0401	0.0407	0.0192		0.0156							lb/MMBtu
H-4620 (Manufacturer Guaranteed Factors)	0.0401	0.0407	0.0192		0.0156							lb/MMBtu
H-5620 (Manufacturer Guaranteed Factors)	0.0401	0.0407	0.0192		0.0156							lb/MMBtu
H-6620 (Manufacturer Guaranteed Factors)	0.0401	0.0407	0.0192		0.0156							lb/MMBtu
H-1781 (Manufacturer Guaranteed Factors)	0.0401	0.0407	0.0192		0.0132							lb/MMBtu
H-2781 (Manufacturer Guaranteed Factors)	0.0401	0.0407	0.0192		0.0132							lb/MMBtu
H-1741 (Manufacturer Guaranteed Factors)	0.0401	0.0407	0.0192		0.0132							lb/MMBtu
H-2741 (Manufacturer Guaranteed Factors)	0.0401	0.0407	0.0192		0.0132							lb/MMBtu

Hourly Emission Rates

Unit	Heat Rate (MMBTU/hr)	NO_x[1]	CO[1]	VOC[1]	SO_2[2]	PM[1,3]	H_2S[4]	HCHO[5]	Toluene[5]	Benzene[5]	n-Hexane[5]	HAPs[5]	Units
H-1600	6.97	0.28	0.28	0.13	0.08	0.11	3.98E-05	5.13E-04	2.32E-05	1.44E-05	1.23E-02	1.29E-02	lb/hr[6]
H-1620	37.20	1.49	1.51	0.71	0.44	0.58	2.12E-04	2.74E-03	1.24E-04	7.66E-05	6.56E-02	6.86E-02	lb/hr[6]
H-2600	27.83	1.12	1.13	0.53	0.33	0.43	1.59E-04	2.05E-03	9.28E-05	5.73E-05	4.91E-02	5.13E-02	lb/hr[6]
H-2620	37.20	1.49	1.51	0.71	0.44	0.58	2.12E-04	2.74E-03	1.24E-04	7.66E-05	6.56E-02	6.86E-02	lb/hr[6]
H-3620	37.20	1.49	1.51	0.71	0.44	0.58	2.12E-04	2.74E-03	1.24E-04	7.66E-05	6.56E-02	6.86E-02	lb/hr[6]
H-4620	82.17	3.30	3.34	1.58	0.98	1.28	4.69E-04	6.04E-03	2.74E-04	1.69E-04	1.45E-01	1.51E-01	lb/hr[6]
H-5620	88.91	3.57	3.62	1.71	1.06	1.39	5.08E-04	6.54E-03	2.96E-04	1.83E-04	1.57E-01	1.64E-01	lb/hr[6]
H-6620	88.91	3.57	3.62	1.71	1.06	1.39	5.08E-04	6.54E-03	2.96E-04	1.83E-04	1.57E-01	1.64E-01	lb/hr[6]
E-1566	1.50	0.15	0.12	0.01	0.02	0.01	8.56E-06	1.10E-04	5.00E-06	3.09E-06	2.65E-03	2.77E-03	lb/hr[6]
E-2566	1.50	0.15	0.12	0.01	0.02	0.01	8.56E-06	1.10E-04	5.00E-06	3.09E-06	2.65E-03	2.77E-03	lb/hr[6]
E-3566	1.50	0.15	0.12	0.01	0.02	0.01	8.56E-06	1.10E-04	5.00E-06	3.09E-06	2.65E-03	2.77E-03	lb/hr[6]
E-4566	3.00	0.29	0.25	0.02	0.04	0.02	1.71E-05	2.21E-04	1.00E-05	6.18E-06	5.29E-03	5.53E-03	lb/hr[6]
H-1781	22.04	2.16	1.82	0.12	0.26	0.16	1.26E-04	1.62E-03	7.35E-05	4.54E-05	3.89E-02	4.06E-02	lb/hr[6]
H-2781	22.04	2.16	1.82	0.12	0.26	0.16	1.26E-04	1.62E-03	7.35E-05	4.54E-05	3.89E-02	4.06E-02	lb/hr[6]
H-1741	9.09	0.89	0.75	0.05	0.11	0.07	5.19E-05	6.68E-04	3.03E-05	1.87E-05	1.60E-02	1.68E-02	lb/hr[6]
H-2741	9.09	0.89	0.75	0.05	0.11	0.07	5.19E-05	6.68E-04	3.03E-05	1.87E-05	1.60E-02	1.68E-02	lb/hr[6]

Annual Emission Rates

Unit	Heat Rate (MMBTU/hr)	NO_x[1]	CO[1]	VOC[1]	SO_2[2]	PM[1,3]	H_2S[4]	HCHO[5]	Toluene[5]	Benzene[5]	n-Hexane[5]	HAPs[5]	Units
H-1600	6.97	1.22	1.24	0.586	0.365	0.476	1.74E-04	2.24E-03	1.02E-04	6.29E-05	5.39E-02	5.63E-02	tons/yr[7]
H-1620	37.20	6.53	6.63	3.128	1.946	2.542	9.30E-04	1.20E-02	5.43E-04	3.35E-04	2.88E-01	3.00E-01	tons/yr[7]
H-2600	27.83	4.89	4.96	2.340	1.456	1.902	6.96E-04	8.96E-03	4.06E-04	2.51E-04	2.15E-01	2.25E-01	tons/yr[7]
H-2620	37.20	6.53	6.63	3.128	1.946	2.542	9.30E-04	1.20E-02	5.43E-04	3.35E-04	2.88E-01	3.00E-01	tons/yr[7]
H-3620	37.20	6.53	6.63	3.128	1.946	2.542	9.30E-04	1.20E-02	5.43E-04	3.35E-04	2.88E-01	3.00E-01	tons/yr[7]
H-4620	82.17	14.43	14.65	6.910	4.299	5.615	2.05E-03	2.65E-02	1.20E-03	7.41E-04	6.35E-01	6.64E-01	tons/yr[7]
H-5620	88.91	15.62	15.85	7.477	4.651	6.075	2.22E-03	2.86E-02	1.30E-03	8.02E-04	6.87E-01	7.18E-01	tons/yr[7]
H-6620	88.91	15.62	15.85	7.477	4.651	6.075	2.22E-03	2.86E-02	1.30E-03	8.02E-04	6.87E-01	7.18E-01	tons/yr[7]
E-1566	1.50	0.64	0.54	0.035	0.078	0.049	3.75E-05	4.83E-04	2.19E-05	1.35E-05	1.16E-02	1.21E-02	tons/yr[7]
E-2566	1.50	0.64	0.54	0.035	0.078	0.049	3.75E-05	4.83E-04	2.19E-05	1.35E-05	1.16E-02	1.21E-02	tons/yr[7]
E-3566	1.50	0.64	0.54	0.035	0.078	0.049	3.75E-05	4.83E-04	2.19E-05	1.35E-05	1.16E-02	1.21E-02	tons/yr[7]
E-4566	3.00	1.29	1.08	0.071	0.157	0.098	7.50E-05	9.66E-04	4.38E-05	2.71E-05	2.32E-02	2.42E-02	tons/yr[7]
H-1781	22.04	9.46	7.95	0.521	1.153	0.719	5.51E-04	7.10E-03	3.22E-04	1.99E-04	1.70E-01	1.78E-01	tons/yr[7]
H-2781	22.04	9.46	7.95	0.521	1.153	0.719	5.51E-04	7.10E-03	3.22E-04	1.99E-04	1.70E-01	1.78E-01	tons/yr[7]
H-1741	9.09	3.90	3.28	0.215	0.476	0.297	2.27E-04	2.93E-03	1.33E-04	8.20E-05	7.03E-02	7.34E-02	tons/yr[7]
H-2741	9.09	3.90	3.28	0.215	0.476	0.297	2.27E-04	2.93E-03	1.33E-04	8.20E-05	7.03E-02	7.34E-02	tons/yr[7]

Greenhouse Gas Calculations

Emission Factors

Source	CO_2	N_2O	CH_4	CO_2e	Units
40 CFR 98 Subpart C	53.06	0.00010	0.0010		kg/MMBtu[8]
40 CFR 98 Subpart A, Table A-1	1	298	25		GWP[9]

Hourly Emission Rates

Unit	Heat Rate (MMBTU/hr)	CO_2	N_2O	CH_4	CO_2e	Units
H-1600	6.97	815.33	0.00154	0.0154	-	lb/hr[10]
H-1620	37.20	4351.55	0.00820	0.0820	-	lb/hr[10]
H-2600	27.83	3255.47	0.00614	0.0614	-	lb/hr[10]
H-2620	37.20	4351.55	0.00820	0.0820	-	lb/hr[10]
H-3620	37.20	4351.55	0.00820	0.0820	-	lb/hr[10]
H-4620	82.17	9612.01	0.01812	0.1812	-	lb/hr[10]
H-5620	88.91	10400.44	0.01960	0.1960	-	lb/hr[10]
H-6620	88.91	10400.44	0.01960	0.1960	-	lb/hr[10]
E-1566	1.50	175.47	0.00033	0.0033	-	lb/hr[10]
E-2566	1.50	175.47	0.00033	0.0033	-	lb/hr[10]
E-3566	1.50	175.47	0.00033	0.0033	-	lb/hr[10]
E-4566	3.00	350.93	0.00066	0.0066	-	lb/hr[10]
H-1781	22.04	2578.18	0.00486	0.0486	-	lb/hr[10]
H-2781	22.04	2578.18	0.00486	0.0486	-	lb/hr[10]
H-1741	9.09	1063.32	0.00200	0.0200	-	lb/hr[10]
H-2741	9.09	1063.32	0.00200	0.0200	-	lb/hr[10]

Annual Emission Rates

Unit	Heat Rate (MMBTU/hr)	CO_2	N_2O	CH_4	CO_2e	Units
H-1600	6.97	3571.15	0.0067	0.067	3574.84	tpy[11]
H-1620	37.20	19059.79	0.03592	0.3592	19079.47	tpy[11]
H-2600	27.83	14258.97	0.02687	0.2687	14273.70	tpy[11]
H-2620	37.20	19059.79	0.03592	0.3592	19079.47	tpy[11]
H-3620	37.20	19059.79	0.03592	0.3592	19079.47	tpy[11]
H-4620	82.17	42100.61	0.07935	0.7935	42144.09	tpy[11]
H-5620	88.91	45553.92	0.08585	0.8585	45600.96	tpy[11]
H-6620	88.91	45553.92	0.08585	0.8585	45600.96	tpy[11]
E-1566	1.50	768.54	0.00145	0.0145	769.33	tpy[11]
E-2566	1.50	768.54	0.00145	0.0145	769.33	tpy[11]
E-3566	1.50	768.54	0.00145	0.0145	769.33	tpy[11]
E-4566	3.00	1537.08	0.00290	0.0290	1538.67	tpy[11]
E-4567	22.04	11292.41	0.02128	0.2128	11304.07	tpy[11]
E-4568	22.04	11292.41	0.02128	0.2128	11304.07	tpy[11]
E-4569	9.09	4657.35	0.00878	0.0878	4662.16	tpy[11]
E-4570	9.09	4657.35	0.00878	0.0878	4662.16	tpy[11]

[1] Emission factors from AP-42 Tables 1.4-1 and 1.4-2 (7/98)
Emission factors have been adjusted according to AP-42: EF (at fuel heating value) = Fuel Heat Value / EF Heat Value (1020 Btu/scf) * EF (at 1020 Btu/scf)
[2] SO_2 emissions based on fuel content of 5 grains of sulfur per 100 scf
SO_2 lb/hr = 5gr S/100 scf * Fuel usage (scf/hr) * 1 lb/7000 gr * 64lb SO2/ 32lb S
Assume 100% conversion of combusted H_2S into SO_2 and 98% Combustion Efficiency. Additional SO_2 emissions from the combustion of H_2S:
SO_2 (lb/hr) from H_2S = 98%*[(0.25 gr H_2S/100 scf * 1 lb/7000 gr * 64 lb/lbmol SO_2/34 lb/lbmol H_2S*scf/hr)]
[3] Assumes PM (Total) = PM-10 = PM-2.5
[4] H_2S emissions fuel content of 0.25 grains of hydrogen sulfide per 100 scf and combustion efficiency of 98%
H_2S lb/hr = (1-0.98) * 0.25 gr H_2S/100 scf * Fuel usage (scf/hr) * 1 lb/7000 gr
[5] HAP emission factors from AP-42 Table 1.4-3
Emission factors have been adjusted according to AP-42: EF (at fuel heating value) = Fuel Heat Value / EF Heat Value (1020 Btu/scf) * EF (at 1020 Btu/scf)
[6] Hourly emission rates calculated as follows:
NOx, CO, VOC, PM, HAP lb/hr = EF (lb/MMscf) * Fuel usage (MMscf/hr)
[7] Annual emissions calculated as follows:
tons/yr = Hourly emissions (lb/hr) * Hours of operation * 1 ton/2000 lb
[8] Greenhouse gas emission factors are from 40 CFR 98 Subpart C
[9] 40 CFR 98 Subpart A, Table A-1
[10] GHG lb/hr = EF (kg/MMBtu) * Heat input (MMBtu/hr) * 2.20462lb/kg
[11] CO_2, N_2O, CH_4 tpy = Hourly emission rate (lb/hr) * Hours of operation * 1ton/2000lb
CO_2e tpy = CO_2 Emission Rate + (N_2O Emission Rate * GWP) + (CH_4 Emission Rate * GWP)

Exhaust Parameters

Exhaust temp	600	°F	Engineering Estimate
Stack height	17	ft	Engineering Estimate
Stack diameter	0.67	ft	Engineering Estimate
Exhaust flow	4847	acfm	*Flow (acfm) = Flow (scfm) * (Stack Temp + 460) / 528 * 29.92 / Site Bar. Pres. / (100% - Moisture%)*
Exhaust velocity	229.1	ft/sec	Exhaust flow / stack area
O2 F factor	8710	dscf/MMBtu	Method 9
Moisture	0.1		nominal
	1940.1	dscfm	= heat input * O2 F * [20.9 / (20.9 - O2%)]
O2 %	10	%	
Site Elevation	3,100	ft MSL	
Pressure at Elevation	26.71	in Hg	

Piñon Midstream - Dark Horse Treating Facility

Trains 1-3 TEG Dehydrators

Emission Unit: DEHY-1 through DEHY-3
Number of Identical Units: 3
Source Description: Trains 1-3 TEG Dehydrators
Annual Operating Hours: 8760 hr
Wet Gas Flow Rate per Dehy: 110 MMscf/day
Capture Efficiency: 99%

Criteria Pollutant Emissions (per Dehydrator Unit)

Compound	Uncontrolled Flash Tank Emissions[1] (Flash Gas to Fuel Stream)		Uncontrolled Regenerator Emissions[2] ("_1" Stream)		Total Uncontrolled Emissions[3]		Controlled Regenerator Emissions[4] (Condenser Emissions, "T12" Stream)		Controlled Flash Tank Emissions[5]		Total Pre-Combustor Emissions		Vented Pre-Combustor Emissions[9]	
	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr
Methane	54.59	239.12	5.07	22.21	**59.66**	**261.33**	5.07	22.19	0.0000	0.0000	5.07	22.19	**0.051**	**0.222**
Ethane	27.39	119.98	8.05	35.26	**35.44**	**155.23**	8.01	35.07	0.0000	0.0000	8.01	35.07	**0.080**	**0.351**
Propane	26.80	117.40	14.43	63.19	**41.23**	**180.59**	14.21	62.25	0.0000	0.0000	14.21	62.25	**0.142**	**0.622**
i-Butane	6.57	28.77	4.68	20.51	**11.25**	**49.28**	4.54	19.90	0.0000	0.0000	4.54	19.90	**0.045**	**0.199**
n-Butane	15.27	66.90	15.65	68.56	**30.93**	**135.46**	14.94	65.45	0.0000	0.0000	14.94	65.45	**0.149**	**0.655**
Neo-Pentane	0.11	0.47	0.09	0.41	**0.20**	**0.87**	0.09	0.39	0.0000	0.0000	0.09	0.39	**0.001**	**0.004**
i-Pentane	5.99	26.23	9.29	40.70	**15.28**	**66.92**	8.30	36.37	0.0000	0.0000	8.30	36.37	**0.083**	**0.364**
n-Pentane	5.13	22.45	9.38	41.07	**14.50**	**63.52**	8.12	35.57	0.0000	0.0000	8.12	35.57	**0.081**	**0.356**
n-Hexane	5.61	24.59	20.74	90.83	**26.35**	**115.42**	14.64	64.12	0.0000	0.0000	14.64	64.12	**0.146**	**0.641**
nC7	1.78	7.80	9.92	43.45	**11.70**	**51.25**	4.55	19.93	0.0000	0.0000	4.55	19.93	**0.046**	**0.199**
nC8	0.36	1.59	3.22	14.09	**3.58**	**15.68**	0.75	3.27	0.0000	0.0000	0.75	3.27	**0.007**	**0.033**
nC10	0.00	0.01	0.06	0.27	**0.06**	**0.28**	0.00	0.01	0.0000	0.0000	0.00	0.01	**0.000**	**0.000**
nC9	0.07	0.32	1.05	4.62	**1.13**	**4.94**	0.12	0.51	0.0000	0.0000	0.12	0.51	**0.001**	**0.005**
Benzene	0.61	2.69	22.74	99.61	**23.35**	**102.29**	12.45	54.53	0.0000	0.0000	12.45	54.53	**0.124**	**0.545**
Toluene	0.53	2.30	33.52	146.83	**34.05**	**149.14**	9.74	42.65	0.0000	0.0000	9.74	42.65	**0.097**	**0.427**
Ethylbenzene	0.02	0.10	2.30	10.05	**2.32**	**10.16**	0.28	1.25	0.0000	0.0000	0.28	1.25	**0.003**	**0.012**
o-Xylene	0.01	0.06	1.78	7.79	**1.79**	**7.86**	0.22	0.95	0.0000	0.0000	0.22	0.95	**0.002**	**0.010**
m-Xylene	0.03	0.12	2.82	12.34	**2.85**	**12.46**	0.34	1.50	0.0000	0.0000	0.34	1.50	**0.003**	**0.015**
p-Xylene	0.03	0.12	2.69	11.80	**2.72**	**11.92**	0.33	1.46	0.0000	0.0000	0.33	1.46	**0.003**	**0.015**
Nitrogen	0.48	2.10	0.01	0.06	**0.49**	**2.15**	0.01	0.06	0.0000	0.0000	0.01	0.06	**0.000**	**0.001**
Carbon Dioxide	22.07	96.68	15.13	66.25	**37.20**	**162.94**	15.04	65.86	0.0000	0.0000	15.04	65.86	**0.150**	**0.659**
Hydrogen Sulfide	0.00	0.003	0.00	0.01	**0.00**	**0.01**	0.00	0.01	0.0000	0.0000	0.00	0.01	**0.000**	**0.000**
He	0.00	0.008	0.00	0.00	**0.00**	**0.01**	0.00	0.0003	0.0000	0.0000	0.00	0.00	**0.000**	**0.000**
O2	0.00	0.0000	0.00	0.00	**0.00**	**0.00**	0.00	0.0000	0.0000	0.0000	0.00	0.00	**0.000**	**0.000**
H2O	1.20	5.25	428.25	1875.74	**429.45**	**1880.99**	4.93	21.60	0.0000	0.0000	4.93	21.60	**0.049**	**0.216**
CHEMTHERM 650	0.00	0.0000	0.00	0.00	**0.00**	**0.00**	0.00	0.0000	0.0000	0.0000	0.00	0.00	**0.000**	**0.000**
MDEA	0.00	0.0000	0.00	0.02	**0.00**	**0.02**	0.00	0.0005	0.0000	0.0000	0.00	0.00	**0.000**	**0.000**
MeOH	0.00	0.0000	0.00	0.00	**0.00**	**0.00**	0.00	0.0000	0.0000	0.0000	0.00	0.00	**0.000**	**0.000**
SO2	0.00	0.0000	0.00	0.00	**0.00**	**0.00**	0.00	0.0000	0.0000	0.0000	0.00	0.00	**0.000**	**0.000**
Triethylene Glycol	0.01	0.04	0.12	0.53	**0.13**	**0.57**	0.00	0.0000	0.0000	0.0000	0.00	0.00	**0.000**	**0.000**
Piperazine	0.00	0.0000	0.00	0.00	**0.00**	**0.00**	0.00	0.0000	0.0000	0.0000	0.00	0.00	**0.000**	**0.000**
Hydrogen Sulfide (H2S2)	0.00	0.0000	0.00	0.00	**0.00**	**0.00**	0.00	0.0000	0.0000	0.0000	0.00	0.00	**0.000**	**0.000**
JEFFTREAT® MS-300 Solvent	0.01	0.04	4.22	18.47	**4.23**	**18.51**	0.11	0.46	0.0000	0.0000	0.11	0.46	**0.001**	**0.005**
VOC	**68.94**	**301.94**	**154.36**	**676.11**	**223.30**	**978.05**	**93.63**	**410.12**	**0.0000**	**0.0000**	**93.63**	**410.12**	**0.94**	**4.10**
HAP	**6.85**	**30.00**	**86.59**	**379.25**	**93.44**	**409.25**	**38.01**	**166.46**	**0.0000**	**0.0000**	**38.01**	**166.46**	**0.38**	**1.66**

Greenhouse Gas Emissions per DEHY

CO_2	CH_4	CO_2e	
0.66	0.22		tons/yr[6]
1	25		GWP[7]
0.66	5.55	6.21	tons/yr CO_2e[8]

[1] From "Flash Gas to Fuel" stream in ProMax Report.
[2] From "_1" stream in ProMax Report (Glycol Regenerator Overheads stream).
[3] Summation of the Uncontrolled Flash Tank and Regenerator Emissions. A 7.5% safety factor is included to account for variations in composition and flow rate.
[4] As shown in the ProMax report, regenerator overheads are sent to a condenser. The emissions above are post-condenser, pre-conbustor and reference the "T12" stream in ProMax Report. These emissions are then routed to the combustor for additional control and are represented at unit FL-1981.
[5] Controlled maximum potential hourly emission rate = (Uncontrolled Flash Tank Emissions) * (1-DRE).
There will be zero controlled emissions associated with the dehydrator flash tank as the flash tank emissions are routed back to the facility inlet.
The post-condenser regenerator emissions are routed to the combustor for control.
[6] Carbon Dioxide emissions from ProMax report. A DRE of 0% is assumed for CO_2.
[7] 40 CFR 98 Subpart A, Table A-1
[8] CO_2e tons/yr = tons/yr * GWP
[9] Vented pre-combustor dehydrator emissions are assumed to occur during combustor downtime (2%). These emissions will be vented through a dehydrator vent stack and not the combustor.

Piñon Midstream - Dark Horse Treating Facility

Dehy Regen Combustor

Unit(s):	FL-1967, FL-2967, FL-3967
Description:	Dehy Regen Combustor
Capture Efficiency:	99%
Destruction Efficiency:	98%
Operating Hours:	8760

Input Data

Combustor Pilot	35.0	scf/hr	Design
Combustor Pilot [1]	1,251	Btu/scf	ProMax Makeup Fuel
Combustor Pilot	0.044	MMBtu/hr	Calculated
TEG Dehy Regen Overheads to Combustor	920.15	scf/hr	ProMax (Stream T12)
Total Hourly Flow Rate	0.000920	MMscf/hr	Calculated
Total Annual Flow Rate	8.061	MMscf/yr	Calculated
TEG Dehy Regen Overheads to Combustor	2,099.76	BTU/scf	ProMax (Stream T12)
Hourly Heat Rate	1.932	MMBtu/hr	Calculated

Emission Rates (per combustor)

Pilot and Dehy Condenser

NOx[2]	CO[2]	VOC[3]	PM[2]	H_2S[3]	SO_2[4]	HAPs[3]	Benzene[3]	Units	
100	84		7.6					lb/MMscf	AP-42 Table 1.4-1 & 2
122.7	103.0		9.3					lb/MMscf	Corrected Factor for Pilot Gas
205.9	172.9		15.6					lb/MMscf	Corrected Factor for Process Gas
				0.25	5			gr/100 scf	Assumed for Fuel Gas
		92.70		0.0023		37.63	12.33	lb/hr	TEG Dehy Regen Overheads
0.0043	0.0036	-	3.26E-04	1.25E-05	5.00E-04	-	-	lb/hr	Combustor Pilot
0.019	0.016	-	1.43E-03	5.48E-05	0.0022	-	-	tpy	
0.19	0.16	1.85	0.01	4.58E-05	0.004	0.75	0.25	lb/hr	Controlled Emission Rate
0.83	0.70	8.12	0.06	2.00E-04	0.02	3.30	1.08	tpy	

	NOx	CO	VOC	PM	H_2S	SO_2	HAPs	Benzene	Units	
Pilot Gas + Regenerator	**0.19**	**0.16**	**1.85**	**0.01**	**5.83E-05**	**0.0047**	**0.75**	**0.25**	**lb/hr**	Controlled Emission Rate
	0.85	**0.71**	**8.12**	**0.06**	**2.55E-04**	**0.021**	**3.30**	**1.08**	**tpy**	

Greenhouse Gas Calculations[6]

CO_2	N_2O	CH_4	CO_2e	
53.1	0.0001	0.001		kg/MMBtu
1	298	25		GWP[7]
226.0	0.0004	0.004	226.2	lb/hr[8]
989.9	0.002	0.019	990.9	tpy[5]

[1] Based on facility fuel gas analysis.

[2] NOx, CO and PM emissions are based on AP-42 Table 1.4-1 & 2 emission factors. lb/MMscf emission factors were corrected by multiplying the emission factor by the ratio of the heat value to the reference heat value of 1020 Btu/scf

[3] Assumed 98% capture and then 98% control for VOC, H_2S and HAPs. Pilot H_2S emissions calculated based on 0.25 gr H_2S/100 scf.

[4] Assumed 100% conversion of combusted H_2S to SO_2. SO_2 (lb/hr)= 98% * (64 lb/lbmol SO_2/34 lb/lbmol H_2S)*Uncontrolled H_2S (lb/hr). Pilot SO_2 emissions based on assumption of 5 gr S/100 scf.

[5] ton/yr = lb/hr * Hours of operation (hr/yr) * 1ton/2000lb

[6] Greenhouse gas emission factors are from 40 CFR 98 Subpart C

[7] 40 CFR 98 Subpart A, Table A-1

[8] CO_2, N_2O and CH_4 lb/hr = EF (kg/MMBtu) * 2.20462lb/kg * Fuel consumption (MMBtu/hr)
CO_2e lb/hr = CO_2 lb/hr + (CH_4 lb/hr * GWP) + (N_2O lb/hr * GWP)

Piñon Midstream - Dark Horse Treating Facility

Trains 4-6 TEG Dehydrators

Emission Unit: DEHY-4 through DEHY-6
Number of Identical Units: 3
Source Description: Trains 4-6 TEG Dehydrators
Annual Operating Hours: 8760 hr
Wet Gas Flow Rate per Dehy: 220 MMscf/day
Capture Efficiency: 99%

Criteria Pollutant Emissions (per Dehydrator Unit)

Compound	Uncontrolled Flash Tank Emissions[1] (Flash Gas to Fuel Stream)		Uncontrolled Regenerator Emissions[2] ("_1" Stream)		Total Uncontrolled Emissions[3]		Controlled Regenerator Emissions[4] (Condenser Emissions, "T12" Stream)		Controlled Flash Tank Emissions[5]		Total Pre-Combustor Emissions		Vented Pre-Combustor Emissions[9]	
	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr
Methane	93.919	411.37	8.787	38.49	**102.71**	**449.86**	8.778	38.45	0.0000	0.0000	8.78	38.45	**0.088**	**0.384**
Ethane	45.697	200.15	13.435	58.84	**59.13**	**259.00**	13.369	58.56	0.0000	0.0000	13.37	58.56	**0.134**	**0.586**
Propane	44.883	196.59	24.066	105.41	**68.95**	**302.00**	23.744	104.00	0.0000	0.0000	23.74	104.00	**0.237**	**1.040**
i-Butane	11.257	49.31	7.965	34.89	**19.22**	**84.19**	7.754	33.96	0.0000	0.0000	7.75	33.96	**0.078**	**0.340**
n-Butane	25.818	113.08	26.288	115.14	**52.11**	**228.22**	25.223	110.48	0.0000	0.0000	25.22	110.48	**0.252**	**1.105**
Neo-Pentane	0.193	0.84	0.168	0.73	**0.36**	**1.58**	0.159	0.70	0.0000	0.0000	0.16	0.70	**0.002**	**0.007**
i-Pentane	10.292	45.08	15.813	69.26	**26.10**	**114.34**	14.308	62.67	0.0000	0.0000	14.31	62.67	**0.143**	**0.627**
n-Pentane	8.700	38.10	15.722	68.86	**24.42**	**106.97**	13.832	60.59	0.0000	0.0000	13.83	60.59	**0.138**	**0.606**
n-Hexane	9.459	41.43	34.406	150.70	**43.87**	**192.13**	25.205	110.40	0.0000	0.0000	25.20	110.40	**0.252**	**1.104**
nC7	2.951	12.93	16.134	70.67	**19.09**	**83.60**	7.951	34.82	0.0000	0.0000	7.95	34.82	**0.080**	**0.348**
nC8	0.569	2.49	4.935	21.62	**5.50**	**24.11**	1.277	5.59	0.0000	0.0000	1.28	5.59	**0.013**	**0.056**
nC10	0.102	0.45	1.442	6.32	**1.54**	**6.76**	0.182	0.80	0.0000	0.0000	0.18	0.80	**0.002**	**0.008**
nC9	0.003	0.01	0.069	0.30	**0.07**	**0.31**	0.004	0.02	0.0000	0.0000	0.00	0.02	**0.000**	**0.000**
Benzene	0.990	4.33	36.698	160.74	**37.69**	**165.07**	20.853	91.34	0.0000	0.0000	20.85	91.34	**0.209**	**0.913**
Toluene	0.841	3.68	53.689	235.16	**54.53**	**238.84**	16.589	72.66	0.0000	0.0000	16.59	72.66	**0.166**	**0.727**
Ethylbenzene	0.035	0.15	3.428	15.02	**3.46**	**15.17**	0.461	2.02	0.0000	0.0000	0.46	2.02	**0.005**	**0.020**
o-Xylene	0.021	0.09	2.713	11.88	**2.73**	**11.98**	0.358	1.57	0.0000	0.0000	0.36	1.57	**0.004**	**0.016**
m-Xylene	0.043	0.19	4.324	18.94	**4.37**	**19.13**	0.570	2.50	0.0000	0.0000	0.57	2.50	**0.006**	**0.025**
p-Xylene	0.043	0.19	4.141	18.14	**4.18**	**18.33**	0.554	2.43	0.0000	0.0000	0.55	2.43	**0.006**	**0.024**
Nitrogen	0.811	3.55	0.022	0.10	**0.83**	**3.65**	0.022	0.10	0.0000	0.0000	0.02	0.10	**0.000**	**0.001**
Carbon Dioxide	38.125	166.99	26.395	115.61	**64.52**	**282.60**	26.230	114.89	0.0000	0.0000	26.23	114.89	**0.262**	**1.149**
Hydrogen Sulfide	0.001	0.005	0.004	0.02	**0.00**	**0.02**	0.003	0.02	0.0000	0.0000	0.00	0.02	**0.000**	**0.000**
He	0.003	0.013	0.000	0.0006	**0.00**	**0.01**	0.000	0.0006	0.0000	0.0000	0.00	0.00	**0.000**	**0.000**
O2	0.000	0.0000	0.000	0.0000	**0.00**	**0.00**	0.000	0.0000	0.0000	0.0000	0.00	0.00	**0.000**	**0.000**
H2O	2.233	9.78	853.570	3738.64	**855.80**	**3748.42**	8.405	36.81	0.0000	0.0000	8.40	36.81	**0.084**	**0.368**
CHEMTHERM 650	0.000	0.0000	0.000	0.0000	**0.00**	**0.00**	0.000	0.0000	0.0000	0.0000	0.00	0.00	**0.000**	**0.000**
MDEA	0.000	0.0000	0.000	0.0014	**0.00**	**0.00**	0.000	0.0000	0.0000	0.0000	0.00	0.00	**0.000**	**0.000**
MeOH	0.000	0.0000	0.000	0.0000	**0.00**	**0.00**	0.000	0.0000	0.0000	0.0000	0.00	0.00	**0.000**	**0.000**
SO2	0.000	0.0000	0.000	0.0000	**0.00**	**0.00**	0.000	0.0000	0.0000	0.0000	0.00	0.00	**0.000**	**0.000**
Triethylene Glycol	0.016	0.07	0.222	0.97	**0.24**	**1.04**	0.000	0.0000	0.0000	0.0000	0.00	0.00	**0.000**	**0.000**
Piperazine	0.000	0.0000	0.000	0.0000	**0.00**	**0.00**	0.000	0.0000	0.0000	0.0000	0.00	0.00	**0.000**	**0.000**
Hydrogen Sulfide (H2S2)	0.000	0.0000	0.000	0.0000	**0.00**	**0.00**	0.000	0.0000	0.0000	0.0000	0.00	0.00	**0.000**	**0.000**
JEFFTREAT® MS-300 Solvent	0.013	0.06	8.198	35.91	**8.21**	**35.96**	0.199	0.87	0.0000	0.0000	0.20	0.87	**0.002**	**0.009**
VOC	**116.20**	**508.96**	**252.00**	**1103.77**	**368.20**	**1612.72**	**159.02**	**696.53**	**0.0000**	**0.0000**	**159.02**	**696.53**	**1.59**	**6.97**
HAP	**11.43**	**50.07**	**139.40**	**610.57**	**150.83**	**660.64**	**64.59**	**282.91**	**0.0000**	**0.0000**	**64.59**	**282.91**	**0.65**	**2.83**

Greenhouse Gas Emissions per DEHY

CO_2	CH_4	CO_2e	
1.15	0.38		tons/yr[6]
1	25		GWP[7]
1.15	9.61	10.76	tons/yr CO_2e[8]

[1] From "Flash Gas to Fuel" stream in ProMax Report.
[2] From "_1" stream in ProMax Report (Glycol Regenerator Overheads stream).
[3] Summation of the Uncontrolled Flash Tank and Regenerator Emissions. A 7.5% safety factor is included to account for variations in composition and flow rate.
[4] As shown in the ProMax report, regenerator overheads are sent to a condenser. The emissions above are post-condenser, pre-conbustor and reference the "T12" stream in ProMax Report. These emissions are then routed to the combustor for additional control and are represented at unit FL-1981.
[5] Controlled maximum potential hourly emission rate = (Uncontrolled Flash Tank Emissions) * (1-DRE).
There will be zero controlled emissions associated with the dehydrator flash tank as the flash tank emissions are routed back to the facility inlet.
The post-condenser regenerator emissions are routed to the combustor for control.
[6] Carbon Dioxide emissions from ProMax report. A DRE of 0% is assumed for CO_2.
[7] 40 CFR 98 Subpart A, Table A-1
[8] CO_2e tons/yr = tons/yr * GWP
[9] Vented pre-combustor dehydrator emissions are assumed to occur during combustor downtime (2%). These emissions will be vented through a dehydrator vent stack and not the combustor.

Piñon Midstream - Dark Horse Treating Facility

Dehy Regen Combustor

Unit(s):	FL-4967, FL-5967, FL-6967
Description:	Dehy Regen Combustor
Capture Efficiency:	99%
Destruction Efficiency:	98%
Operating Hours:	8760

Input Data

Combustor Pilot	35.0 scf/hr	Design
Combustor Pilot [1]	1,251 Btu/scf	ProMax Makeup Fuel
Combustor Pilot	0.044 MMBtu/hr	Calculated
TEG Dehy Regen Overheads to Combustor	1,568.54 scf/hr	ProMax (Stream T12)
Total Hourly Flow Rate	0.001569 MMscf/hr	Calculated
Total Annual Flow Rate	13.740 MMscf/yr	Calculated
TEG Dehy Regen Overheads to Combustor	2,091.94 BTU/scf	ProMax (Stream T12)
Hourly Heat Rate	3.281 MMBtu/hr	Calculated

Emission Rates (per combustor)

Pilot and Dehy Condenser

NOx[2]	CO[2]	VOC[3]	PM[2]	H_2S[3]	SO_2[4]	HAPs[3]	Benzene[3]	Units	
100	84		7.6					lb/MMscf	AP-42 Table 1.4-1 & 2
122.7	103.0		9.3					lb/MMscf	Corrected Factor for Pilot Gas
205.1	172.3		15.6					lb/MMscf	Corrected Factor for Process Gas
				0.25	5			gr/100 scf	Assumed for Fuel Gas
		157.43		0.0034		63.95	20.64	lb/hr	TEG Dehy Regen Overheads
0.004	0.004	-	3.26E-04	1.25E-05	5.00E-04	-	-	lb/hr	Combustor Pilot
0.02	0.02	-	1.43E-03	5.48E-05	0.0022	-	-	tpy	
0.32	0.27	3.15	0.02	6.85E-05	0.006	1.28	0.41	lb/hr	Controlled Emission Rate
1.41	1.18	13.79	0.11	3.00E-04	0.03	5.60	1.81	tpy	

	NOx	CO	VOC	PM	H_2S	SO_2	HAPs	Benzene	Units	
Pilot Gas + Regenerator	**0.33**	**0.27**	**3.15**	**0.02**	**8.10E-05**	**0.007**	**1.28**	**0.41**	**lb/hr**	Controlled Emission Rate
	1.43	**1.20**	**13.79**	**0.11**	**3.55E-04**	**0.03**	**5.60**	**1.81**	**tpy**	

Greenhouse Gas Calculations[6]

CO_2	N_2O	CH_4	CO_2e	
53.1	0.0001	0.001		kg/MMBtu
1	298	25		GWP[7]
383.8	0.0007	0.007	384.2	lb/hr[8]
1681.2	0.003	0.032	1682.9	tpy[5]

[1] Based on facility fuel gas analysis.

[2] NOx, CO and PM emissions are based on AP-42 Table 1.4-1 & 2 emission factors. lb/MMscf emission factors were corrected by multiplying the emission factor by the ratio o

[3] Assumed 98% capture and then 98% control for VOC, H_2S and HAPs. Pilot H_2S emissions calculated based on 0.25 gr H_2S/100 scf.

[4] Assumed 100% conversion of combusted H_2S to SO_2. SO_2 (lb/hr)= 98% * (64 lb/lbmol SO_2/34 lb/lbmol H_2S)*Uncontrolled H_2S (lb/hr).
Pilot SO_2 emissions based on assumption of 5 gr S/100 scf.

[5] ton/yr = lb/hr * Hours of operation (hr/yr) * 1ton/2000lb

[6] Greenhouse gas emission factors are from 40 CFR 98 Subpart C

[7] 40 CFR 98 Subpart A, Table A-1

[8] CO_2, N_2O and CH_4 lb/hr = EF (kg/MMBtu) * 2.20462lb/kg * Fuel consumption (MMBtu/hr)
CO_2e lb/hr = CO_2 lb/hr + (CH_4 lb/hr * GWP) + (N_2O lb/hr * GWP)

Piñon Midstream - Dark Horse Treating Facility

400 bbl Condensate Storage Tanks

Unit: TK-1900 through TK-1901

Description: 400 bbl Condensate Storage Tanks

Number of Tanks: 2
Capture Efficiency: 100%
Operating hours: 8,760

Uncontrolled Emissions[1,2]

VOC	Benzene	Toluene	Ethylbenzene	Xylenes	n-Hexane	Total HAPs	H_2S	Units	Notes	
4.98	0.04	0.03	0.0009	0.0028	0.88	0.95	0.0000	lb/hr	ProMax Report	
21.81	0.17	0.12	0.0040	0.0125	3.86	4.17	0.0000	tpy	ProMax Report	
2.49	0.02	0.01	0.0005	0.0014	0.44	0.48	0.0000	lb/hr	Per Tank	Uncontrolled
10.91	0.09	0.06	0.0020	0.0062	1.93	2.08	0.0000	tpy	Per Tank	Uncontrolled
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	lb/hr	Per Tank	Controlled[3]
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	tpy	Per Tank	Controlled[3]

CO_2	Methane	Units	Notes	
0.0000	0.00	lb/hr	Uncontrolled	ProMax Report
0.0000	0.00	tpy	Uncontrolled	ProMax Report
0.0000	0.00	tpy	Controlled[3]	

CO_2e[4]	Units	Notes	
0.0000	tpy	Uncontrolled	ProMax Report
0.0000	tpy	Uncontrolled per tank	ProMax Report
0.0000	tpy	Controlled[3]	ProMax Report

Notes

[1] ProMax simulation utilized estimates the following conservative throughput:

694 bbl/day condensate.

[2] Emissions include working, breathing and flash.

[3] Emissions from the tanks are controlled by two (2) VRUs. Automatic redundancy system ensures no VRU downtime.

100% Capture effciency of tank gas is assumed.

[4] CO_2e tpy Emission Rate = CO_2 Emission Rate + CH_4 Emission Rate *GWP Factor

Piñon Midstream - Dark Horse Treating Facility

400 bbl Sour Water Storage Tanks

Unit: TK-1970 through TK-1971
Description: 400 bbl Sour Water Storage Tanks
Number of Tanks: 2
Capture Efficiency: 100%
Operating hours: 8,760

Uncontrolled Emissions[1,2]

VOC	Benzene	Toluene	Ethylbenzene	Xylenes	n-Hexane	Total HAPs	H_2S	Units	Notes	
0.09	0.04	0.021	0.001	0.001	0.000	0.06	2.14	lb/hr	ProMax Report	
0.40	0.16	0.093	0.003	0.006	0.001	0.26	9.36	tpy	ProMax Report	
0.05	0.02	0.011	0.000	0.001	0.000	0.03	1.07	lb/hr	Per Tank	Uncontrolled
0.20	0.08	0.046	0.002	0.003	0.001	0.13	4.68	tpy	Per Tank	Uncontrolled
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	lb/hr	Per Tank	Controlled[3]
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	tpy	Per Tank	Controlled[3]

CO_2	Methane	Units	Notes	
1.65	0.01	lb/hr	Uncontrolled	ProMax Report
7.23	0.06	tpy	Uncontrolled	ProMax Report
0.0000	0.0000	tpy	Controlled[3]	

CO_2e[4]	Units	Notes	
8.70	tpy	Uncontrolled	ProMax Report
8.70	tpy	Uncontrolled per tank	ProMax Report
0.00	tpy	Controlled[3]	ProMax Report

Notes

[1] ProMax simulation utilized estimates the following conservative throughput:
280 bbl/day condensate.

[2] Emissions include working, breathing and flash.

[3] Emissions from the tanks are controlled by two (2) VRUs. Automatic redundancy system ensures no VRU downtime.
100% Capture effciency of tank gas is assumed.

[4] CO_2e tpy Emission Rate = CO_2 Emission Rate + CH_4 Emission Rate *GWP Factor

Piñon Midstream - Dark Horse Treating Facility

400 bbl Sour Water Storage Tanks

Unit: TK-2030 through TK-2040
Description: 400 bbl Sour Water Storage Tanks
Number of Tanks: 2
Capture Efficiency: 100%
Operating hours: 8,760

Uncontrolled Emissions[1,2]

VOC	Benzene	Toluene	Ethylbenzene	Xylenes	n-Hexane	Total HAPs	H_2S	Units	Notes	
0.24	0.09	0.05	0.002	0.003	0.0009	0.14	4.43	lb/hr	ProMax Report	
1.04	0.38	0.22	8.05E-03	1.39E-02	0.004	0.63	19.38	tpy	ProMax Report	
0.12	0.04	0.03	0.001	0.002	0.000	0.07	2.21	lb/hr	Per Tank	Uncontrolled
0.52	0.19	0.11	0.004	0.007	0.002	0.32	9.69	tpy	Per Tank	Uncontrolled
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	lb/hr	Per Tank	Controlled[3]
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	tpy	Per Tank	Controlled[3]

CO_2	Methane	Units	Notes	
7.30	0.08	lb/hr	Uncontrolled	ProMax Report
31.99	0.35	tpy	Uncontrolled	ProMax Report
0.00	0.00	tpy	Controlled[3]	

CO_2e[4]	Units	Notes	
40.73	tpy	Uncontrolled	ProMax Report
20.37	tpy	Uncontrolled per tank	ProMax Report
0.00	tpy	Controlled[3]	ProMax Report

Notes

[1] ProMax simulation utilized estimates the following conservative throughput:
711 bbl/day condensate.

[2] Emissions include working, breathing and flash.

[3] Emissions from the tanks are controlled by two (2) VRUs. Automatic redundancy system ensures no VRU downtime.
100% Capture effciency of tank gas is assumed.

[4] CO_2e tpy Emission Rate = CO_2 Emission Rate + CH_4 Emission Rate *GWP Factor

Piñon Midstream - Dark Horse Treating Facility

400 bbl Condensate Storage Tanks

Unit: TK-2050 through TK-2080
Description: 400 bbl Condensate Storage Tanks
Number of Tanks: 4
Capture Efficiency: 100%
Operating hours: 8,760

Uncontrolled Emissions[1,2]

VOC	Benzene	Toluene	Ethylbenzene	Xylenes	n-Hexane	Total HAPs	H_2S	Units	Notes	
20.66	0.16	0.11	0.004	0.012	3.68	3.98	0.0000	lb/hr	ProMax Report	
90.51	0.72	0.49	0.016	0.05	16.14	17.42	0.0000	tpy	ProMax Report	
5.17	0.04	0.03	0.001	0.003	0.92	0.99	0.0000	lb/hr	Per Tank	Uncontrolled
22.63	0.18	0.12	0.004	0.013	4.03	4.36	0.0000	tpy	Per Tank	Uncontrolled
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	lb/hr	Per Tank	Controlled[3]
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	tpy	Per Tank	Controlled[3]

CO_2	Methane	Units	Notes	
0.0000	0.00	lb/hr	Uncontrolled	ProMax Report
0.0000	0.00	tpy	Uncontrolled	ProMax Report
0.0000	0.00	tpy	Controlled[3]	

CO_2e[4]	Units	Notes	
0.0000	tpy	Uncontrolled	ProMax Report
0.0000	tpy	Uncontrolled per tank	ProMax Report
0.0000	tpy	Controlled[3]	ProMax Report

Notes

[1] ProMax simulation utilized estimates the following conservative throughput:
1,703 bbl/day condensate.

[2] Emissions include working, breathing and flash.

[3] Emissions from the tanks are controlled by two (2) VRUs. Automatic redundancy system ensures no VRU downtime.
100% Capture effciency of tank gas is assumed.

[4] CO_2e tpy Emission Rate = CO_2 Emission Rate + CH_4 Emission Rate *GWP Factor

Piñon Midstream - Dark Horse Treating Facility

400 bbl Slop Tank

Unit: TK-1980, TK-1981, TK-2010, and TK-2020
Description: 400 bbl Slop Tank
Number of Tanks: 4
Capture Efficiency: 100%
Operating hours: 8,760

Uncontrolled Emissions[1,2]

VOC	Benzene	Toluene	Ethylbenzene	Xylenes	n-Hexane	Total HAPs	H_2S	Units	Notes	
0.026	0.017	0.007	0.000	0.001	0.000	0.024	1.119	lb/hr	ProMax Report	
0.115	0.073	0.030	0.001	0.003	0.000	0.107	4.902	tpy	ProMax Report	
0.007	0.004	0.002	0.000	0.000	0.000	0.006	0.280	lb/hr	Per Tank	Uncontrolled
0.029	0.018	0.008	0.000	0.001	0.000	0.027	1.225	tpy	Per Tank	Uncontrolled
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	lb/hr	Per Tank	Controlled[3]
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	tpy	Per Tank	Controlled[3]

CO_2	Methane	Units	Notes	
0.477	0.001	lb/hr	Uncontrolled	ProMax Report
2.089	0.005	tpy	Uncontrolled	ProMax Report
0.000	0.000	tpy	Controlled[3]	

CO_2e[4]	Units	Notes	
2.206	tpy	Uncontrolled	ProMax Report
0.552	tpy	Uncontrolled per tank	ProMax Report
0.000	tpy	Controlled[3]	ProMax Report

Notes

[1] ProMax simulation utilized estimates the following conservative throughput:
157 bbl/day sour water.

[2] Emissions include working, breathing and flash and are per tank.

[3] Emissions from the tank are controlled by two (2) VRUs. Automatic redundancy system ensures no VRU downtime.
100% Capture effciency of tank gas is assumed.

[4] CO_2e tpy Emission Rate = CO_2 Emission Rate + CH_4 Emission Rate *GWP Factor

Piñon Midstream - Dark Horse Treating Facility

Atmospheric Condensate and Sour Water Loadout

Unit:	COND-LOAD 1-3		
Description:	Atmospheric Condensate and Sour Water Loadout		
Condensate Throughput:	1,388	bbl/day	ProMax
Sour Water Throughput:	559	bbl/day	ProMax
Operating hours:	8,760		
Capture/Control Efficiency:	98%		

Total (Condensate and Sour Water) Uncontrolled Loading Emissions[1]

VOC	Benzene	Toluene	Ethylbenzene	Xylenes	n-Hexane	Total HAPs	H_2S	Units	Notes	
0.21	0.002	0.001	0.00004	0.0001	0.04	0.04	0.01	lb/hr	ProMax	Uncontrolled
0.92	0.01	0.01	0.0002	0.001	0.16	0.18	0.03	tpy	ProMax	Uncontrolled
0.004	0.00004	0.00002	0.000001	0.000002	0.001	0.001	0.0002	lb/hr		Controlled[3]
0.02	0.0002	0.0001	0.000004	0.00001	0.003	0.004	0.001	tpy		Controlled[3]

CO_2	Methane		
0.01	0.0001	lb/hr	ProMax Report
0.05	4.33E-04	tpy	ProMax Report
1.06E-03	8.66E-06	tpy	Controlled[3]

CO_2e^2	Units	Notes	
0.06	tpy	Uncontrolled	ProMax Report
1.28E-03	tpy	Controlled[3]	ProMax Report

Notes

[1] Loading emissions from atmospheric condensate and sour water tanks estimated using ProMax.

[2] CO_2e tpy Emission Rate = CO_2 Emission Rate + CH_4 Emission Rate *GWP Factor

[3] Emissions from loadout are controlled by VRU or FL-1850.

98% Capture or destruction efficiency of tank gas.

Total Condensate Uncontrolled Loading Emissions[1]

VOC	Benzene	Toluene	Ethylbenzene	Xylenes	n-Hexane	Total HAPs	H_2S	Units	Notes	
0.21	0.002	0.001	0.00004	0.0001	0.04	0.04	0.00	lb/hr	ProMax	Uncontrolled
0.92	0.01	0.01	0.0002	0.001	0.16	0.18	0.00	tpy	ProMax	Uncontrolled
0.004	0.00003	0.00002	0.000001	0.000002	0.001	0.001	0.00	lb/hr		Controlled[3]
0.02	0.0001	0.0001	0.000003	0.00001	0.003	0.004	0.00	tpy		Controlled[3]

Total (Sour Water) Uncontrolled Loading Emissions[1]

VOC	Benzene	Toluene	Ethylbenzene	Xylenes	n-Hexane	Total HAPs	H_2S	Units	Notes	
0.0003	0.0001	0.0001	0.0000	0.0000	0.0000	0.0002	0.01	lb/hr	ProMax	Uncontrolled
0.001	0.0006	0.0003	0.0000	0.0000	0.0000	0.0010	0.03	tpy	ProMax	Uncontrolled
0.00001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0002	lb/hr		Controlled[3]
0.00003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.001	tpy		Controlled[3]

Piñon Midstream - Dark Horse Treating Facility

Atmospheric Condensate and Sour Water Loadout

Unit:	COND-LOAD 4-6		
Description:	Atmospheric Condensate and Sour Water Loadout		
Condensate Throughput:	6,811	bbl/day	ProMax
Sour Water Throughput:	1422	bbl/day	ProMax
Operating hours:	8,760		
Capture/Control Efficiency:	98%		

Uncontrolled Loading Emissions[1]

VOC	Benzene	Toluene	Ethylbenzene	Xylenes	n-Hexane	Total HAPs	H_2S	Units	Notes	
1.03	0.01	0.01	0.0002	0.001	0.18	0.20	0.02	lb/hr	ProMax	Uncontrolled
4.51	0.04	0.03	0.0009	0.003	0.80	0.87	0.09	tpy	ProMax	Uncontrolled
0.02	0.0002	0.0001	0.000004	0.00001	0.004	0.004	0.0004	lb/hr		Controlled[3]
0.09	0.001	0.0005	0.00002	0.00005	0.02	0.02	0.002	tpy		Controlled[3]

CO_2	Methane		
0.03	0.0004	lb/hr	ProMax Report
0.14	1.58E-03	tpy	ProMax Report
2.89E-03	3.16E-05	tpy	Controlled[3]

CO_2e^2	Units	Notes	
0.18	tpy	Uncontrolled	ProMax Report
3.68E-03	tpy	Controlled[3]	ProMax Report

Notes

[1] Loading emissions from atmospheric condensate and sour water tanks estimated using ProMax.

[2] CO_2e tpy Emission Rate = CO_2 Emission Rate + CH_4 Emission Rate *GWP Factor

[3] Emissions from loadout are controlled by VRU or Vapor Combustor FL-7967.

98% Capture or destruction efficiency of tank gas.

Piñon Midstream - Dark Horse Treating Facility

Tank Loading Combustor

Unit(s):	FL-7967	
Description:	Tank Loading Combustor	VRU back-up
Capture Efficiency:	100%	
Destruction Efficiency:	98%	
Operating Hours:	8760	

Input Data

Combustor Pilot	130.0	scf/hr	Design
Combustor Pilot [1]	1,251	Btu/scf	ProMax Makeup Fuel
Combustor Pilot	0.163	MMBtu/hr	Calculated
Condensate loading vapors to Combustor	384.58	scf/hr	ProMax
Total Hourly Flow Rate	0.000385	MMscf/hr	Calculated
Total Annual Flow Rate	3.369	MMscf/yr	Calculated
Tank and Loading Vapors to Combustor	4,352.10	BTU/scf	ProMax
Hourly Heat Rate	1.674	MMBtu/hr	Calculated

Emission Rates (per combustor)

Pilot and Dehy Condenser

NO_x [2]	CO [2]	VOC [3]	PM [2]	H_2S [3]	SO_2 [4]	HAPs [3]	Benzene [3]	Units	
100	84		7.6					lb/MMscf	AP-42 Table 1.4-1 & 2
122.7	103.0		9.3					lb/MMscf	Corrected Factor for Pilot Gas
426.7	358.4		32.4					lb/MMscf	Corrected Factor for Process Gas
				0.25	5			gr/100 scf	Assumed for Fuel Gas
		21.69		0.02		4.18	0.17	lb/hr	Tank and Loading Vapors
0.02	0.01	-	1.21E-03	4.64E-05	1.86E-03	-	-	lb/hr	Combustor Pilot
0.07	0.06	-	5.31E-03	2.03E-04	0.0081	-	-	tpy	
0.164	0.138	0.43	0.01	4.00E-04	0.037	0.08	0.00	lb/hr	Controlled Emission Rate
0.72	0.604	1.90	0.05	1.75E-03	0.16	0.37	0.01	tpy	

	NOx	CO	VOC	PM	H_2S	SO_2	HAPs	Benzene	Units	
Pilot Gas + Tank + Loading	**0.18**	**0.15**	**0.43**	**0.01**	**4.46E-04**	**0.04**	**0.084**	**0.0034**	**lb/hr**	Controlled Emission Rate
	0.79	**0.66**	**1.90**	**0.05**	**1.95E-03**	**0.17**	**0.37**	**0.015**	**tpy**	

Greenhouse Gas Calculations [6]

CO_2	N_2O	CH_4	CO_2e	
53.1	0.0001	0.001		kg/MMBtu
1	298	25		GWP [7]
195.8	0.0004	0.004	196.0	lb/hr [8]
857.6	0.002	0.016	858.4	tpy [5]

[1] Based on facility fuel gas analysis.

[2] NOx, CO and PM emissions are based on AP-42 Table 1.4-1 & 2 emission factors. lb/MMscf emission factors were corrected by multiplying the emission factor by the ratio of the heat value to the reference heat value of 1020 Btu/scf

[3] Assumed 100% capture and then 98% control for VOC, H_2S and HAPs. Pilot H_2S emissions calculated based on 0.25 gr H_2S/100 scf.

[4] Assumed 100% conversion of combusted H_2S to SO_2, SO_2 (lb/hr)= 98% * (64 lb/lbmol SO_2/34 lb/lbmol H_2S)*Uncontrolled H_2S (lb/hr). Pilot SO_2 emissions based on assumption of 5 gr S/100 scf.

[5] ton/yr = lb/hr * Hours of operation (hr/yr) * 1ton/2000lb

[6] Greenhouse gas emission factors are from 40 CFR 98 Subpart C

[7] 40 CFR 98 Subpart A, Table A-1

[8] CO_2, N_2O and CH_4 lb/hr = EF (kg/MMBtu) * 2.20462lb/kg * Fuel consumption (MMBtu/hr)
CO_2e lb/hr = CO_2 lb/hr + (CH_4 lb/hr * GWP) + (N_2O lb/hr * GWP)

Piñon Midstream - Dark Horse Treating Facility

Pressurized NGL Loadout

Unit: NGL-LOAD
Description: Pressurized NGL Loadout
Operating hours: 8,760

Hose Parameters

Vapor Hose Diameter	2	inches	Engineering judgment
Vapor Hose Length	1	foot	Engineering judgment
Hose Volume	0.022	ft^3	
Number of Hoses	2		
Total Hose Volume	0.044	ft^3	

NGL Data[1]

NGL Tank Pressure	94.70	psia	
NGL Throughput	2052.10	bbl/day	ProMax NGL Product (Stabilizer Pstreams, Stream 16)
NGL Throughput	2,585,647	gal/month	
Capacity of Tank	9000	gal/load	Standard
NGL Throughput	288.00	loads/month	
VOC Mass %	99.999%	%	ProMax NGL Product
HAP Mass %	18.2%	%	ProMax NGL Product
H_2S Mass %	0.0004%	%	ProMax NGL Product

[1] Values obtained from ProMax simulation of the facility.

Physical Data

Loadout Temperature (T)	580.383	R
Molecular Weight	66.17	lb/lbmol
Moles in the vapor phase (n)	6.64E-04	lbmol/ft^3
Vapor Density[2]	4.39E-02	lb/ft^3

[2] Calculated using PV = nRT, where R = Universal Gas Constant 10.73 cubic feet *psi/lbmole * deg R

VOC Emissions from Pressurized NGL Loadout

Source	Density (lb/ft^3)	Hose Volume (ft^3/load)	Loads per month	Monthly Emissions (lb/month)[3]	Annual Emissions (tpy)[4]
Vapor Hoses	0.044	0.044	288.00	0.552	3.31E-03
			Total VOC	5.52E-01	3.31E-03
			Total HAP	1.01E-01	6.03E-04
			Total H_2S	4.02E-07	2.41E-09

[3] Monthly Emissions (lb/month) = Density (lb/ft^3) x Hose Volume (ft^3/load) x Loads per month (load/month)

$$\text{Monthly Emission Rate (lb/month)} = \frac{0.04\ \text{lb}}{ft^3} \times \frac{0.044}{\text{load}} \times \frac{288}{\text{month}} = \frac{0.55\ \text{lb}}{\text{month}}$$

[4] Annual Emission Rate (tpy) = Uncontrolled emission rate (lb/hr) x (8,760 hr/yr) / (2,000 lb/ton).

$$\text{Annual Emission Rate (tpy)} = \frac{0.55}{\text{month}} \times \frac{12\ \text{months}}{\text{yr}} \times \frac{1\ \text{ton}}{2{,}000\ \text{lb}} = \frac{3.31\text{E-}03\ \text{lb}}{\text{yr}}$$

Emissions multiplied by component mass fractions to determine VOC, HAP and H_2S emissions.

Piñon Midstream - Dark Horse Treating Facility

Condensate, Water and NGL Truck Haul

Unit: HAUL
Description: Condensate, Water and NGL Truck Haul

Haul Road Inputs

Max Facility Throughput:

		bbl/week	bbl/yr	Truck Capacity (bbl)	Vehicles Per Day (VPD)[5]
Haul-1	Condensate + Sour Water	5953.8	309599.7556	200	4.24
Haul-2	NGL	14364.7	746964.6	200	10.23
	Total	20318.5	1056564.322	200	14.47

	Weight (tons)					
Vehicle Type	Empty Vehicle[1]	Load Size[2]	Loaded Vehicle[3]	Mean Vehicle[4]	Segments per trip	Trips per hour[6]
Haul-1	16	22.0	38.0	27.0	1	1.0
Haul-2	16	24.5	40.5	28.3	1	1.0

	Haul-1	Haul-2
Hours of Operation per Day	24	24
Total Vehicles Per Day	5.00	11.00
Mean Vehicle Weight (tons)	27.0	28.3
Total Trips per Hour	1.00	1.00

Footnotes

[1] Empty vehicle weight includes driver and occupants and full fuel load.
[2] Cargo, transported materials, etc. (Water Density*SG*8400 gal truck/ 2000lb/ton)
[3] Loaded vehicle weight = Empty + Load Size
[4] Mean Vehicle weight = (Loaded Weight + Empty Weight) / 2
[5] Vehicles per day = Maximum Facility Throughput per year*(1/Truck Capacity)*(1 year/365 days)
[6] Trips per hour = Vehicles per day * Segments per trip ÷ Hours of Operation per Day

Haul Road Emission Factor Calculation

Emission Factor Calculation (AP-42 Sec. 13.2.2.3 November, 2006, Equation 2)

Unit	Operating Hours	s, silt content[1] %	W, Avg. Veh. Wt. tons	k, PM-10 lb/VMT	k, PM-2.5 lb/VMT	a, PM-10 lb/VMT	a, PM-2.5 lb/VMT	b, PM-10 lb/VMT	b, PM-2.5 lb/VMT
Haul-1	8760	4.8	27.0	1.5	0.15	0.9	0.9	0.45	0.45
Haul-2	8760	4.8	28.3	1.5	0.15	0.9	0.9	0.45	0.45

	Hourly Emission Factor[2]		Wet Day, Adjusted Emission Factor[3]		
	E, PM-10 lb/VMT	E, PM-2.5 lb/VMT	Wet Days	E, PM-10 lb/VMT	E, PM-2.5 lb/VMT
Haul-1	1.77	0.18	70	1.43	0.14
Haul-2	1.80	0.18	70	1.46	0.15

Haul Road Emission Calculations

Unit	Avg. Trips per Hour T	Avg. Trips per Day T	Segment Length mi	Average VMT/hr[4] mi/hr	Average VMT/yr[5] mi/yr	PM-10[6] lb/hr	PM-10[6] tpy	PM-2.5[6] lb/hr	PM-2.5[6] tpy
Haul-1	1.00	5.00	0.10	0.1000	182.50	0.18	0.13	0.018	0.01
Haul-2	1.00	11.00	0.25	0.2500	1003.75	0.45	0.73	0.045	0.073
		Total HAUL				**0.63**	**0.86**	**0.06**	**0.09**

Footnotes

[1] Surface silt = % of 75 micron diameter and smaller particles (NMED Default)
[2] E = k x (s/12)^a x (W/3)^b (AP-42 page 13.2.2-4 Equation 1a, November 2006)
E= Size Specific Emission Factor (lb/VMT)
s = surface material silt content (%)
k, a, b = constants from AP-42 Table 13.2.2-2
W = Weighted Mean Vehicle Weight from Haul Road Inputs (tons)
[3] Wet Day Emission Factor = E * (365 - Wet Days)/365. Wet days value is the NM default allowed by NMED without additional justification.
[4] VMT/hr = Vehicle Miles Travelled per hour= Trips per hour * Segment Length
[5] VMT/yr = Vehicle Miles Travelled per year = Trips per day * 365 days per year * Segment Length
[6] lb/hr PM = lb/VMT * VMT/hr
tpy PM = lb/VMT * VMT/yr * 1 ton/2000 lb

Piñon Midstream - Dark Horse Treating Facility

Fugitive Emissions

Component Source Counts for Treater Facility

Equipment Type	Compressors	Separators	Tanks	TEG Units	DEA Units	C3 Refrig Skid	Expan Demeth	Mole Sieve System	Flares/ Combustors
For this facility, Number of Units	20	18	10	6	0	2	2	2	10
Valves - Inlet Gas	40	6	4	75	15	40	40	25	8
Valves - Liquid	5	4	6	20	60	35	35	0	2
Relief Valves	2	2	2	4	4	6	6	4	2
Pump Seals - Liquid	0	0	2	4	4	0	0	0	0
Flanges/Connectors - Inlet Gas	150	150	20	250	250	250	250	100	75
Flanges/Connectors - Liquid	10	10	40	20	20	20	20	20	10
Compressor Seals	6	0	0	0	0	6	0	0	0

Fugitive Emissions

Equipment Type	Emission Factor (lb/hr/ source)	Source Count *	% VOC C3+	VOC Emission Rate (lb/hr)	VOC Emission Rate (tpy)	H_2S Emission Rate (lb/hr)	H_2S Emission Rate (tpy)	HAP Emission Rate (lb/hr)	HAP Emission Rate (tpy)	CO_2 Emission Rate (tpy)	CH_4 Emission Rate (tpy)	CO_2e Emission Rate (tpy)
Valves - Inlet Gas	0.00992	1688	29.08%	4.87	21.33	0.30	1.31	0.42	1.82	5.65	35.83	901.32
Valves - Liquid	0.00550	512	100.00%	2.82	12.33	0.00	0.00	1.02	4.45	0.00	0.00	0.00
Relief Valves	0.01940	172	29.08%	0.97	4.25	0.06	0.26	0.08	0.36	1.13	7.14	179.61
Pump Seals - Liquid	0.02866	44	100.00%	1.26	5.52	0.00	0.00	0.45	1.99	0.00	0.00	0.00
Flanges/Connectors - Inlet Gas	0.00086	9350	29.08%	2.34	10.24	0.14	0.63	0.20	0.87	2.71	17.20	432.82
Flanges/Connectors - Liquid	0.00024	1120	100.00%	0.27	1.18	0.00	0.00	0.10	0.42	0.00	0.00	0.00
Compressor Seals	0.01940	132	29.08%	0.74	3.26	0.05	0.20	0.06	0.28	0.86	5.48	137.84
Total				**13.27**	**58.12**	0.55	2.40	2.33	10.20	10.35	65.65	1,651.59

* Source counts estimated from similar facilities. These counts are not actuals.
Source: EPA Protocol for Equipment Leak Emission Estimates, November, 1995, EPA-453/R-95-017

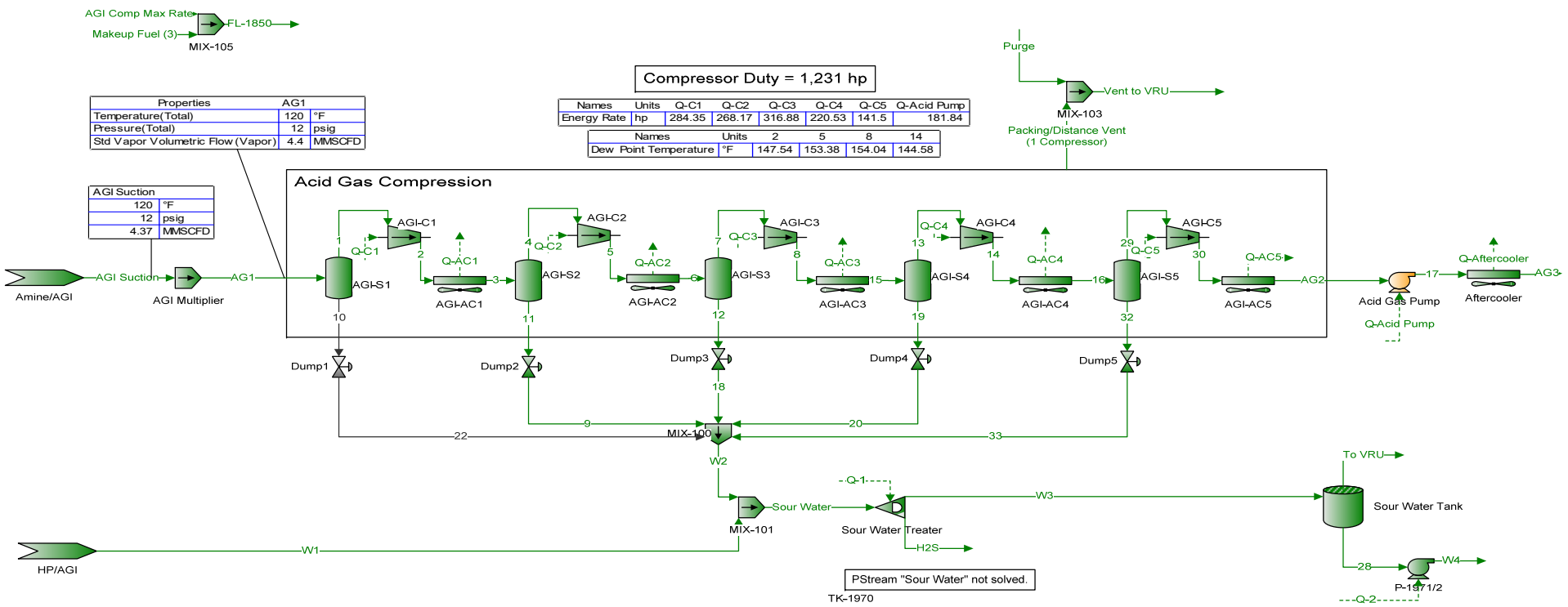
Gas Composition for Fugitive Emissions Estimate

	Molecular Wt (lb/lb-mole)	Mass Fraction (%)
Methane	16.0	***48.85%***
Ethane	30.0	13.73%
Total HC (non-VOC)		***62.58%***
Propane	44.0	11.63%
i-Butane	58.0	2.60%
n-Butane	58.0	5.39%
i-Pentane	72.0	2.09%
n-Pentane	72.0	1.69%
Heptanes Plus	86.0	0.79%
n-Hexane	86.0	2.01%
Benzene	78.0	0.12%
Ethylbenzene	116.0	0.01%
Toluene	92.0	0.11%
Xylenes	106.0	0.02%
Total VOC		***26.44%***
Carbon Dioxide	44.0	***7.70%***
Hydrogen Sulfide	34.1	***1.79%***
Helium	4.0	0.00%
Nitrogen	28.0	1.48%
	Totals	99.99%
Total VOC Wt % plus 10% **		**29.08%**
Total HAP Wt % plus 10% **		**2.48%**
Total HAP Wt % liquid		**36.05%**
Total H_2S Wt % liquid		**0.00%**
Total CO_2 Wt % liquid		**0.00%**
Total CH_4 Wt % liquid		**0.00%**

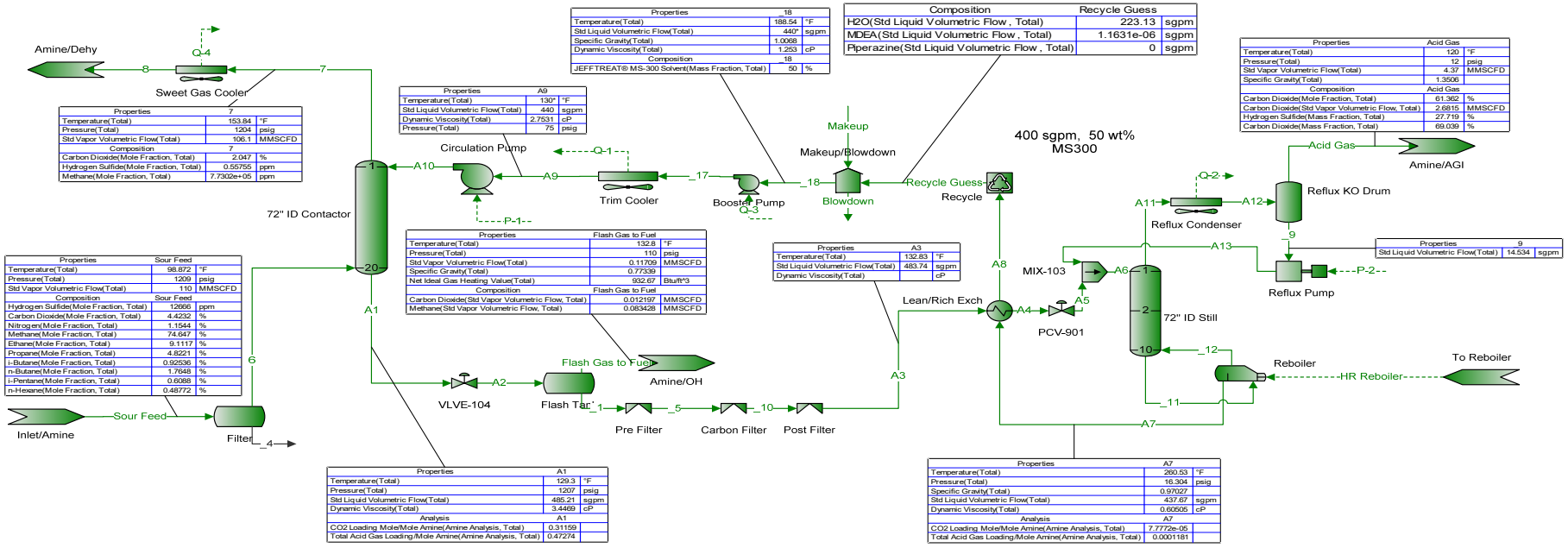
** 10% added to Gas/Vapor Weight % VOC to account for variability in the gas.

Pinon Midstream
Dark Horse
Acid Gas Injection

Pinon Midstream
Dark Horse
Acid Gas Flare Max Rate



Pinon Midstream
Dark Horse Treating Facility
Amine Plant
400 GPM



Properties	18	
Temperature(Total)	188.54	°F
Std Liquid Volumetric Flow(Total)	440*	sgpm
Specific Gravity(Total)	1.0068	
Dynamic Viscosity(Total)	1.253	cP
Composition	18	
JEFFTREAT® MS-300 Solvent(Mass Fraction, Total)	50	%

Composition	Recycle Guess	
H2O(Std Liquid Volumetric Flow , Total)	223.13	sgpm
MDEA(Std Liquid Volumetric Flow , Total)	1.1631e-06	sgpm
Piperazine(Std Liquid Volumetric Flow , Total)	0	sgpm

Properties	Acid Gas	
Temperature(Total)	120	°F
Pressure(Total)	12	psig
Std Vapor Volumetric Flow(Total)	4.37	MMSCFD
Specific Gravity(Total)	1.3506	
Composition	Acid Gas	
Carbon Dioxide(Mole Fraction, Total)	61.362	%
Carbon Dioxide(Std Vapor Volumetric Flow, Total)	2.6815	MMSCFD
Hydrogen Sulfide(Mass Fraction, Total)	27.719	%
Carbon Dioxide(Mass Fraction, Total)	69.039	%

Properties	A9	
Temperature(Total)	130*	°F
Std Liquid Volumetric Flow(Total)	440	sgpm
Dynamic Viscosity(Total)	2.7531	cP
Pressure(Total)	75	psig

Properties	7	
Temperature(Total)	153.84	°F
Pressure(Total)	1204	psig
Std Vapor Volumetric Flow(Total)	106.1	MMSCFD
Composition	7	
Carbon Dioxide(Mole Fraction, Total)	2.047	%
Hydrogen Sulfide(Mole Fraction, Total)	0.55755	ppm
Methane(Mole Fraction, Total)	7.7302e+05	ppm

Properties	Flash Gas to Fuel	
Temperature(Total)	132.8	°F
Pressure(Total)	110	psig
Std Vapor Volumetric Flow(Total)	0.11709	MMSCFD
Specific Gravity(Total)	0.77339	
Net Ideal Gas Heating Value(Total)	932.67	Btu/ft^3
Composition	Flash Gas to Fuel	
Carbon Dioxide(Std Vapor Volumetric Flow, Total)	0.012197	MMSCFD
Methane(Std Vapor Volumetric Flow, Total)	0.083428	MMSCFD

Properties	A3	
Temperature(Total)	132.83	°F
Std Liquid Volumetric Flow(Total)	483.74	sgpm
Dynamic Viscosity(Total)		cP

Properties	9	
Std Liquid Volumetric Flow(Total)	14.534	sgpm

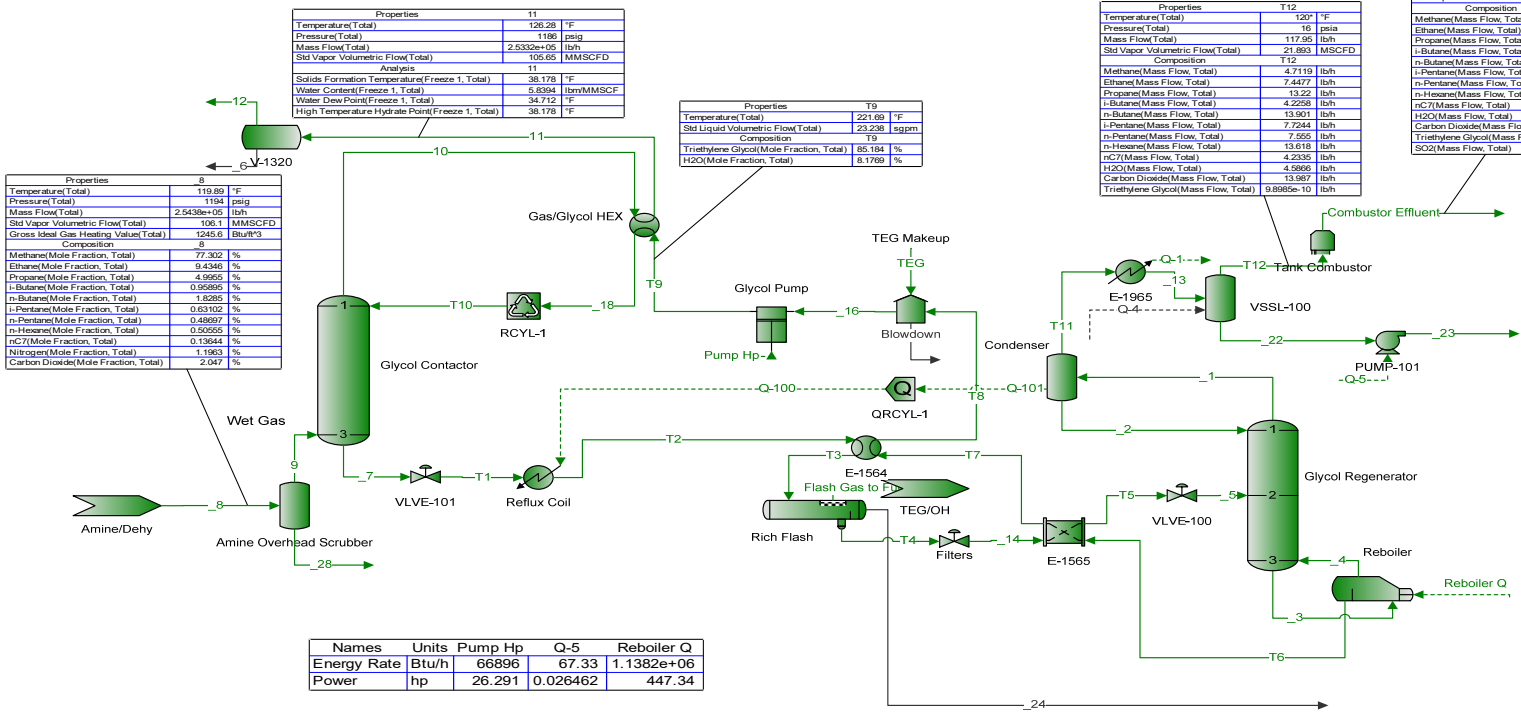
Properties	Sour Feed	
Temperature(Total)	98.872	°F
Pressure(Total)	1209	psig
Std Vapor Volumetric Flow(Total)	110	MMSCFD
Composition	Sour Feed	
Hydrogen Sulfide(Mole Fraction, Total)	12666	ppm
Carbon Dioxide(Mole Fraction, Total)	4.4232	%
Nitrogen(Mole Fraction, Total)	1.1544	%
Methane(Mole Fraction, Total)	74.647	%
Ethane(Mole Fraction, Total)	9.1117	%
Propane(Mole Fraction, Total)	4.8221	%
i-Butane(Mole Fraction, Total)	0.92536	%
n-Butane(Mole Fraction, Total)	1.7648	%
i-Pentane(Mole Fraction, Total)	0.6088	%
n-Hexane(Mole Fraction, Total)	0.48772	%

Properties	A1	
Temperature(Total)	129.3	°F
Pressure(Total)	1207	psig
Std Liquid Volumetric Flow(Total)	485.21	sgpm
Dynamic Viscosity(Total)	3.4469	cP
Analysis	A1	
CO2 Loading Mole/Mole Amine(Amine Analysis, Total)	0.31159	
Total Acid Gas Loading/Mole Amine(Amine Analysis, Total)	0.47274	

Properties	A7	
Temperature(Total)	260.53	°F
Pressure(Total)	16.304	psig
Specific Gravity(Total)	0.97027	
Std Liquid Volumetric Flow(Total)	437.67	sgpm
Dynamic Viscosity(Total)	0.60505	cP
Analysis	A7	
CO2 Loading Mole/Mole Amine(Amine Analysis, Total)	7.7772e-05	
Total Acid Gas Loading/Mole Amine(Amine Analysis, Total)	0.0001181	

Names	Units	Reboiler	72" ID Still	72" ID Contactor	Circulation Pump	Lean/Rich Exch - A	Lean/Rich Exch - B
Heat Duty	MMBtu/h	29.325			1.2433	14.388	-14.388
Number of Stages			10*	20*			

100-MMSCFD Dehy Package



Properties	11	
Temperature(Total)	126.28	°F
Pressure(Total)	1186	psig
Mass Flow(Total)	2.5332e+05	lb/h
Std Vapor Volumetric Flow(Total)	105.65	MMSCFD
Analysis	11	
Solids Formation Temperature(Freeze 1, Total)	38.178	°F
Water Content(Freeze 1, Total)	5.8394	lbm/MMSCF
Water Dew Point(Freeze 1, Total)	34.712	°F
High Temperature Hydrate Point(Freeze 1, Total)	38.178	°F

Properties	T9	
Temperature(Total)	221.69	°F
Std Liquid Volumetric Flow(Total)	23.238	sgpm
Composition	T9	
Triethylene Glycol(Mole Fraction, Total)	85.184	%
H2O(Mole Fraction, Total)	8.1769	%

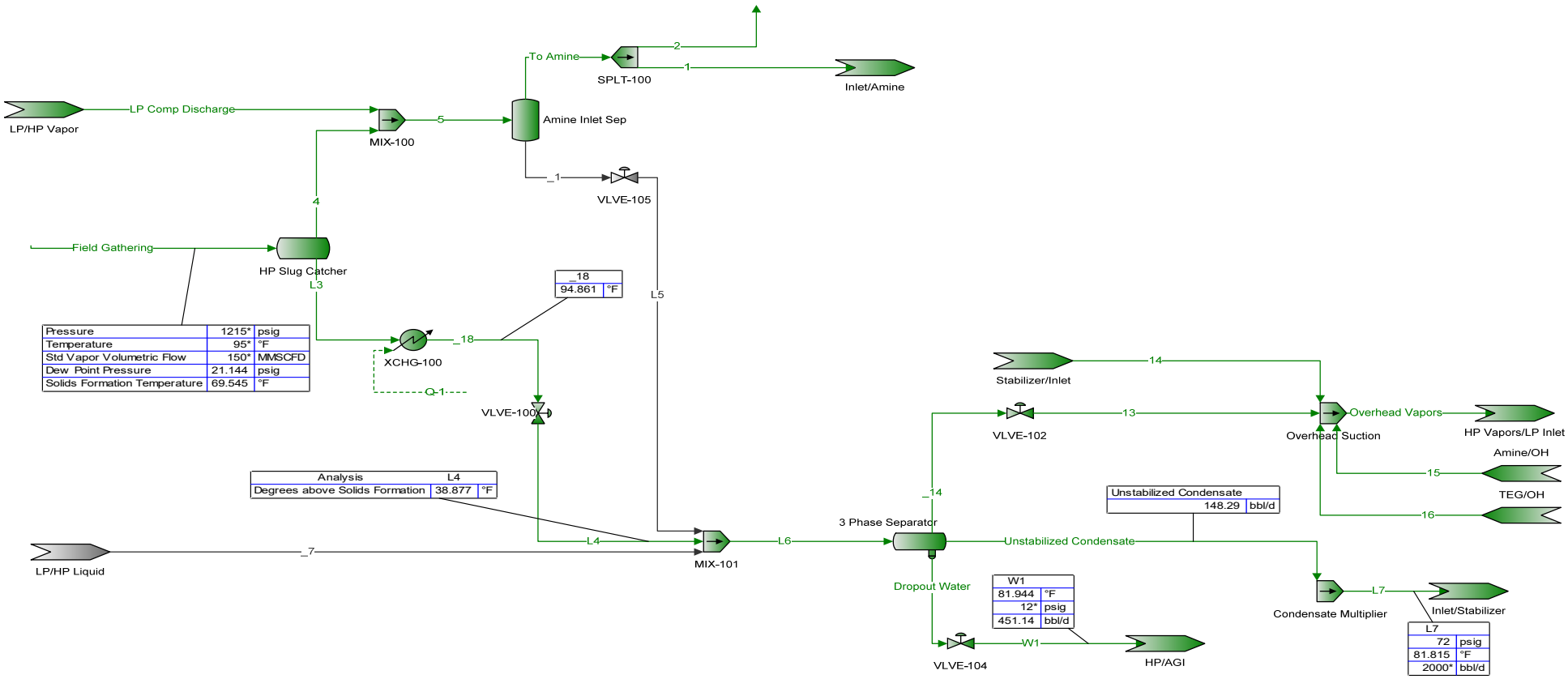
Properties	T12	
Temperature(Total)	120*	°F
Pressure(Total)	16	psia
Mass Flow(Total)	117.95	lb/h
Std Vapor Volumetric Flow(Total)	21.893	MSCFD
Composition	T12	
Methane(Mass Flow, Total)	4.7119	lb/h
Ethane(Mass Flow, Total)	7.4477	lb/h
Propane(Mass Flow, Total)	13.22	lb/h
i-Butane(Mass Flow, Total)	4.2258	lb/h
n-Butane(Mass Flow, Total)	13.901	lb/h
i-Pentane(Mass Flow, Total)	7.7244	lb/h
n-Pentane(Mass Flow, Total)	7.555	lb/h
n-Hexane(Mass Flow, Total)	13.618	lb/h
nC7(Mass Flow, Total)	4.2335	lb/h
H2O(Mass Flow, Total)	4.5866	lb/h
Carbon Dioxide(Mass Flow, Total)	13.987	lb/h
Triethylene Glycol(Mass Flow, Total)	9.8985e-10	lb/h

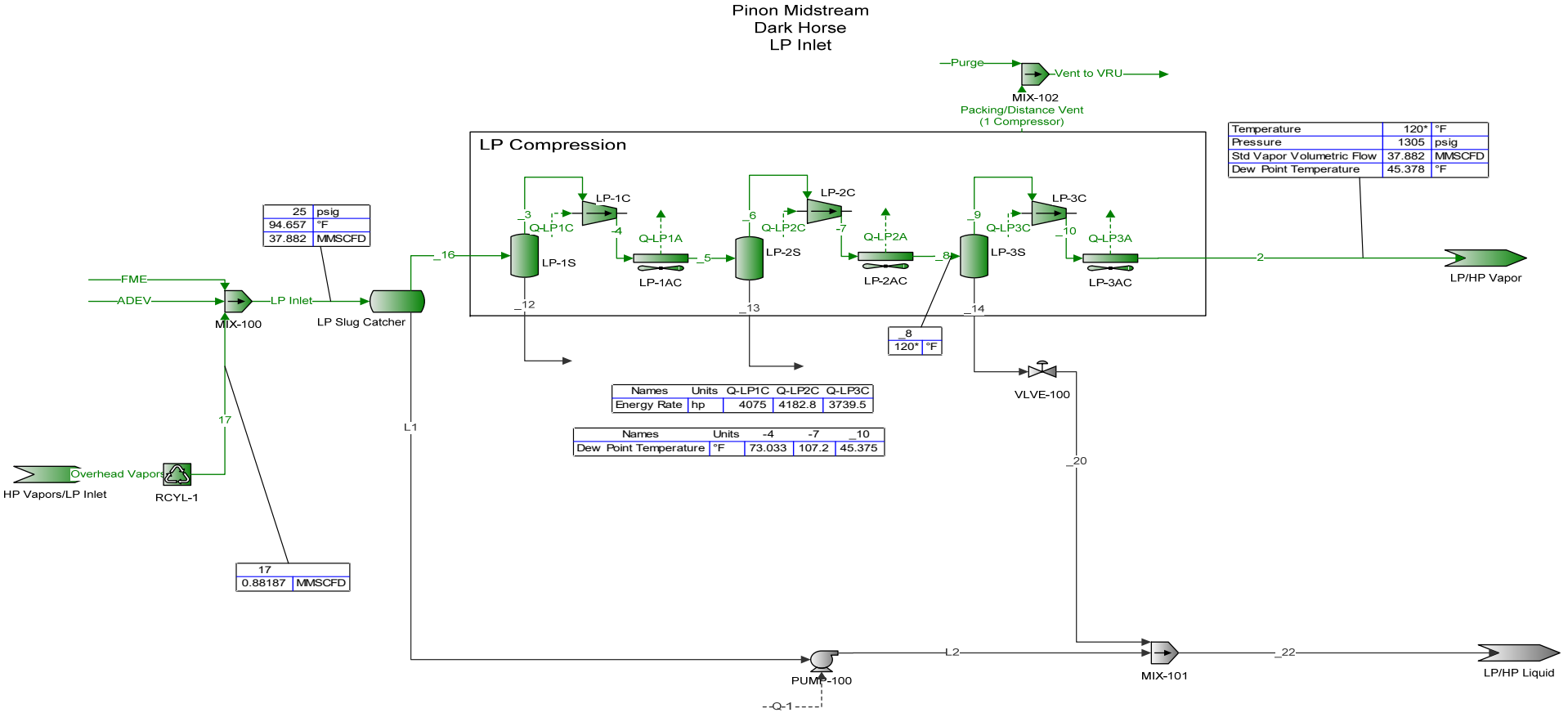
Properties	Combustor Effluent	
Temperature(Total)	2240	°F
Pressure(Total)	14.696	psia
Mass Flow(Total)	1580.7	lb/h
Std Vapor Volumetric Flow(Total)	502.02	MSCFD
Composition	Combustor Effluent	
Methane(Mass Flow, Total)	0.094237	lb/h
Ethane(Mass Flow, Total)	0.14895	lb/h
Propane(Mass Flow, Total)	0.1322	lb/h
i-Butane(Mass Flow, Total)	0.084515	lb/h
n-Butane(Mass Flow, Total)	0.27803	lb/h
i-Pentane(Mass Flow, Total)	0.15449	lb/h
n-Pentane(Mass Flow, Total)	0.1511	lb/h
n-Hexane(Mass Flow, Total)	0.27235	lb/h
nC7(Mass Flow, Total)	0.084969	lb/h
H2O(Mass Flow, Total)	141.97	lb/h
Carbon Dioxide(Mass Flow, Total)	314.8	lb/h
Triethylene Glycol(Mass Flow, Total)	1.9797e-11	lb/h
SO2(Mass Flow, Total)	0.0039601	lb/h

Properties	8	
Temperature(Total)	119.89	°F
Pressure(Total)	1194	psig
Mass Flow(Total)	2.5438e+05	lb/h
Std Vapor Volumetric Flow(Total)	106.1	MMSCFD
Gross Ideal Gas Heating Value(Total)	1245.6	Btu/ft^3
Composition	8	
Methane(Mole Fraction, Total)	77.302	%
Ethane(Mole Fraction, Total)	9.4348	%
Propane(Mole Fraction, Total)	4.9955	%
i-Butane(Mole Fraction, Total)	0.95895	%
n-Butane(Mole Fraction, Total)	1.8285	%
i-Pentane(Mole Fraction, Total)	0.63102	%
n-Pentane(Mole Fraction, Total)	0.48697	%
n-Hexane(Mole Fraction, Total)	0.50555	%
nC7(Mole Fraction, Total)	0.13644	%
Nitrogen(Mole Fraction, Total)	1.1963	%
Carbon Dioxide(Mole Fraction, Total)	2.047	%

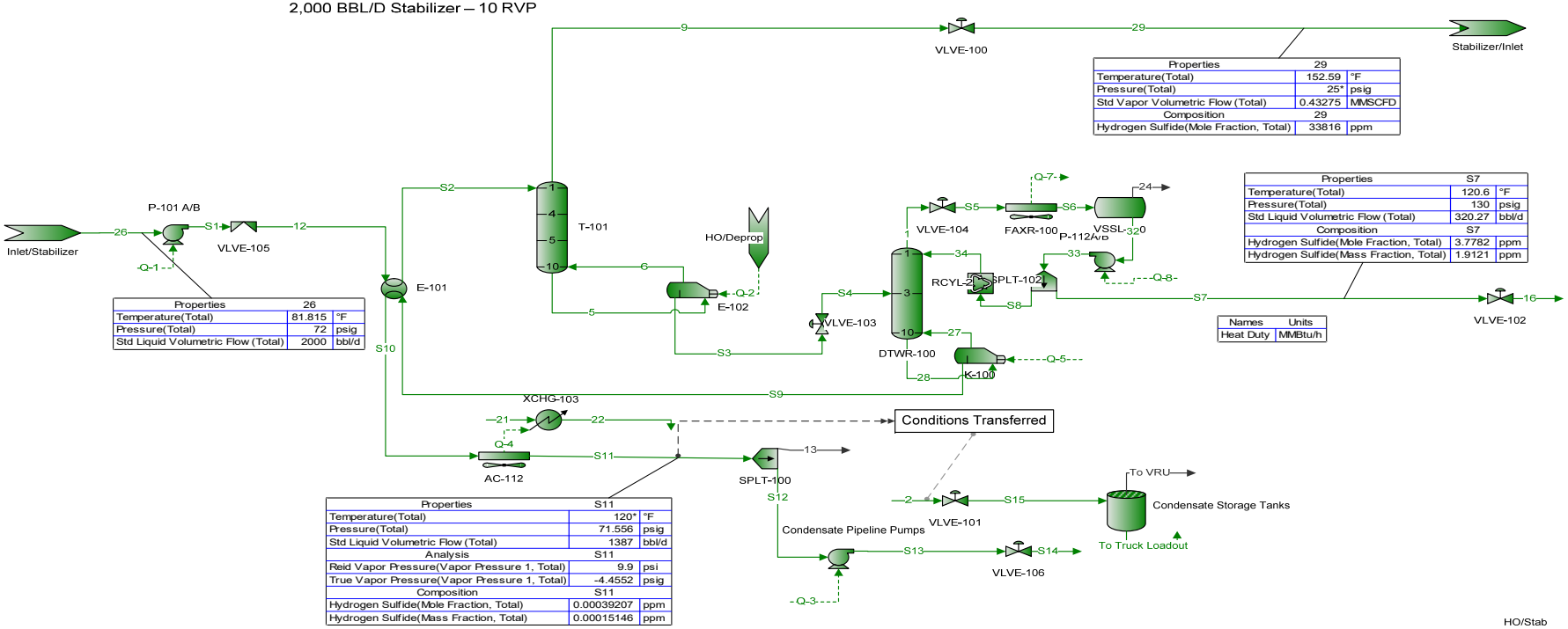
Names	Units	Pump Hp	Q-5	Reboiler Q
Energy Rate	Btu/h	66896	67.33	1.1382e+06
Power	hp	26.291	0.026462	447.34

Pinon Midstream
Dark Horse
HP Inlet/Liquids Handling




Pinon Midstream
Dark Horse
LP Inlet
Purge
Vent to VRU
MIX-102
Packing/Distance Vent
(1 Compressor)
LP Compression
LP-1C
LP-2C
LP-3C
Q-LP1C
Q-LP2C
Q-LP3C
Q-LP1A
Q-LP2A
Q-LP3A
LP-1S
LP-2S
LP-3S
LP-1AC
LP-2AC
LP-3AC
_3
_4
_5
_6
_7
_8
_9
_10
_12
_13
_14
_16
2
Temperature 120* °F
Pressure 1305 psig
Std Vapor Volumetric Flow 37.882 MMSCFD
Dew Point Temperature 45.378 °F
LP/HP Vapor
25 psig
94.657 °F
37.882 MMSCFD
FME
ADEV
MIX-100
LP Inlet
LP Slug Catcher
_8
120* °F
VLVE-100
Names Units Q-LP1C Q-LP2C Q-LP3C
Energy Rate hp 4075 4182.8 3739.5
Names Units -4 -7 _10
Dew Point Temperature °F 73.033 107.2 45.375
17
Overhead Vapors
HP Vapors/LP Inlet
RCYL-1
17
0.88187 MMSCFD
L1
_20
L2
PUMP-100
Q-1
MIX-101
_22
LP/HP Liquid

Pinon Midstream
Dark Horse
2,000 BBL/D Stabilizer – 10 RVP



Properties	26	
Temperature(Total)	81.815	°F
Pressure(Total)	72	psig
Std Liquid Volumetric Flow (Total)	2000	bbl/d

Properties	29	
Temperature(Total)	152.59	°F
Pressure(Total)	25*	psig
Std Vapor Volumetric Flow (Total)	0.43275	MMSCFD
Composition	29	
Hydrogen Sulfide(Mole Fraction, Total)	33816	ppm

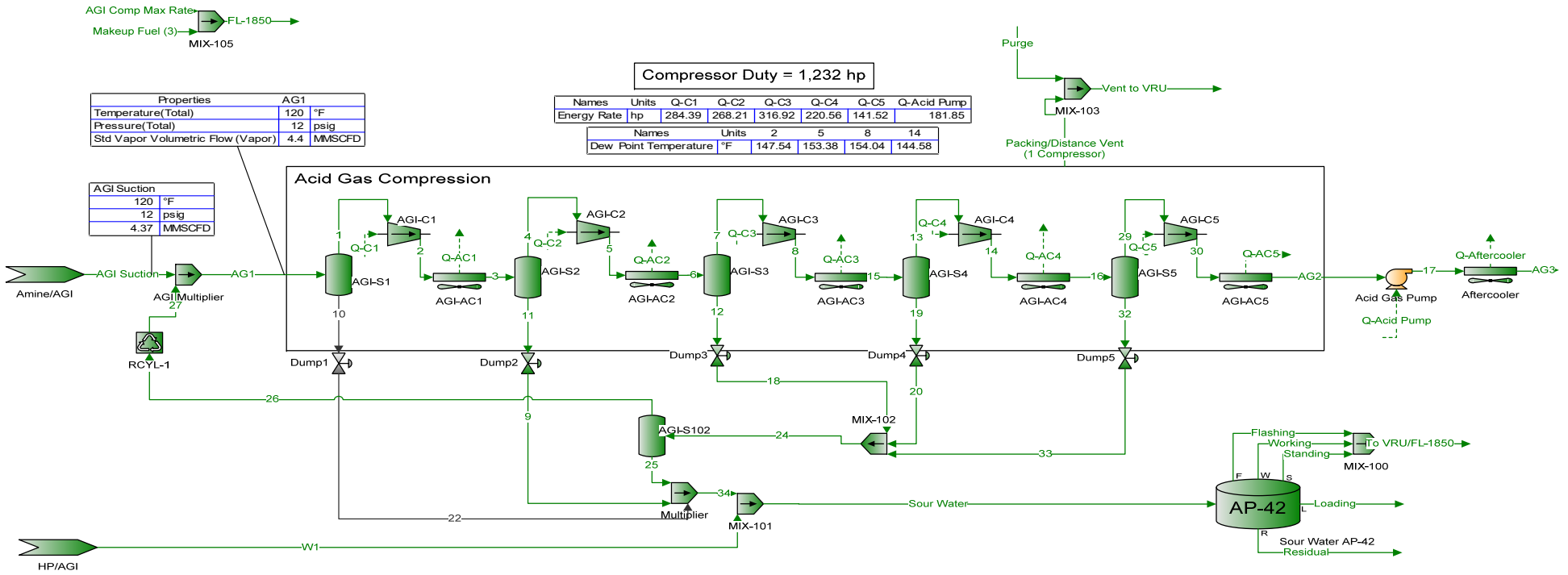
Properties	S7	
Temperature(Total)	120.6	°F
Pressure(Total)	130	psig
Std Liquid Volumetric Flow (Total)	320.27	bbl/d
Composition	S7	
Hydrogen Sulfide(Mole Fraction, Total)	3.7782	ppm
Hydrogen Sulfide(Mass Fraction, Total)	1.9121	ppm

Names	Units
Heat Duty	MMBtu/h

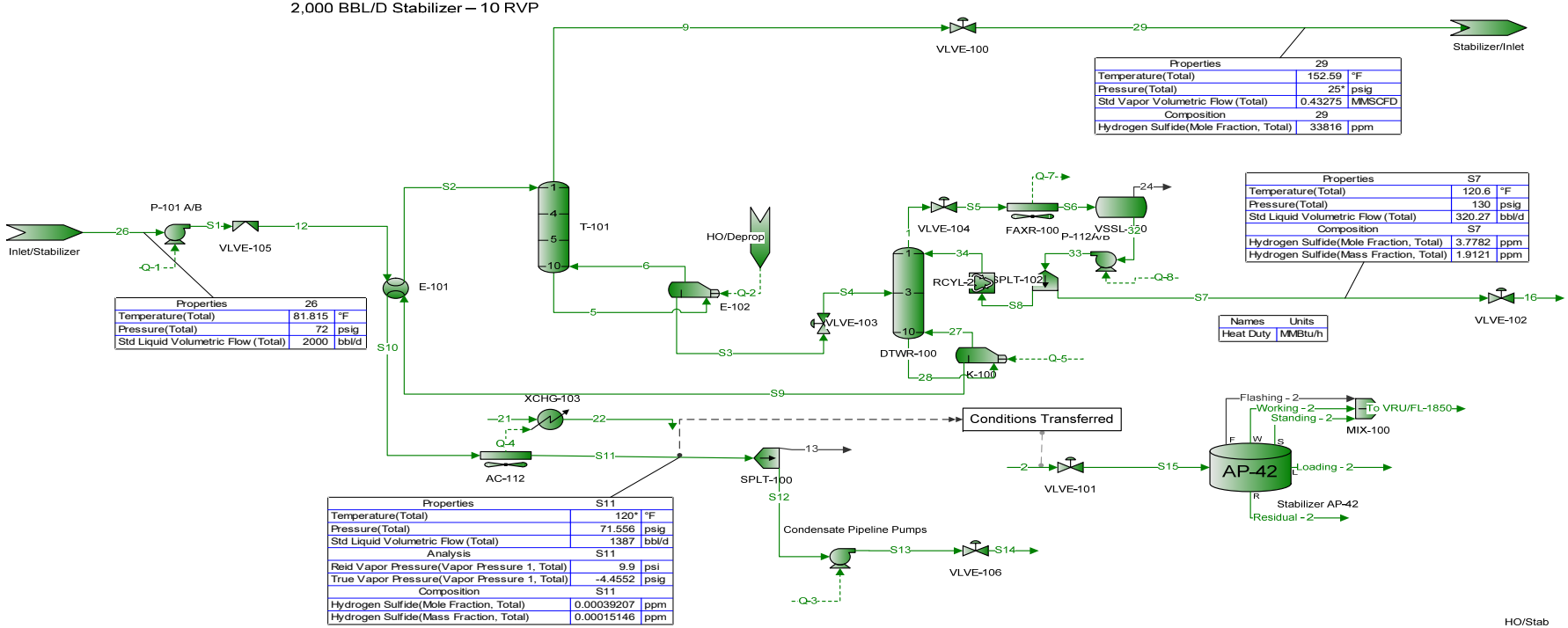
Properties	S11	
Temperature(Total)	120*	°F
Pressure(Total)	71.556	psig
Std Liquid Volumetric Flow (Total)	1387	bbl/d
Analysis	S11	
Reid Vapor Pressure(Vapor Pressure 1, Total)	9.9	psi
True Vapor Pressure(Vapor Pressure 1, Total)	-4.4552	psig
Composition	S11	
Hydrogen Sulfide(Mole Fraction, Total)	0.00039207	ppm
Hydrogen Sulfide(Mass Fraction, Total)	0.00015146	ppm

Pinon Midstream
Dark Horse
Acid Gas Injection

Pinon Midstream
Dark Horse
Acid Gas Flare Max Rate

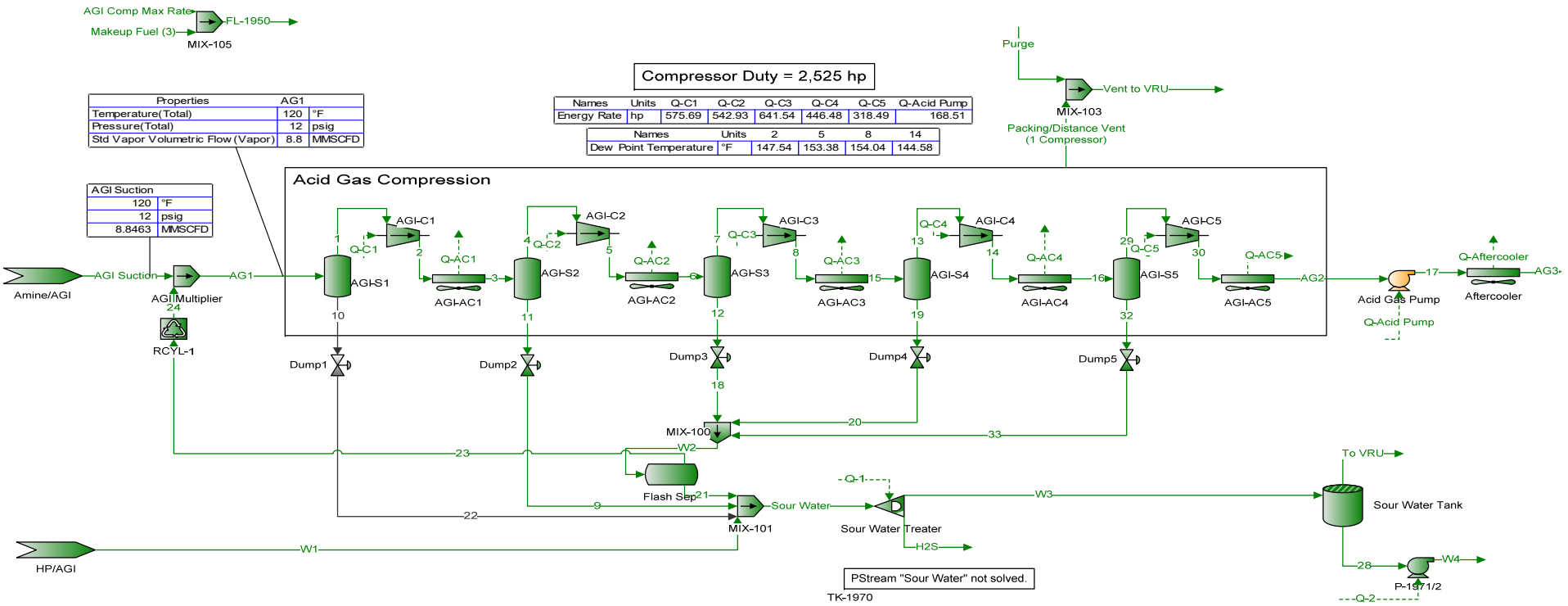


Pinon Midstream
Dark Horse
2,000 BBL/D Stabilizer – 10 RVP

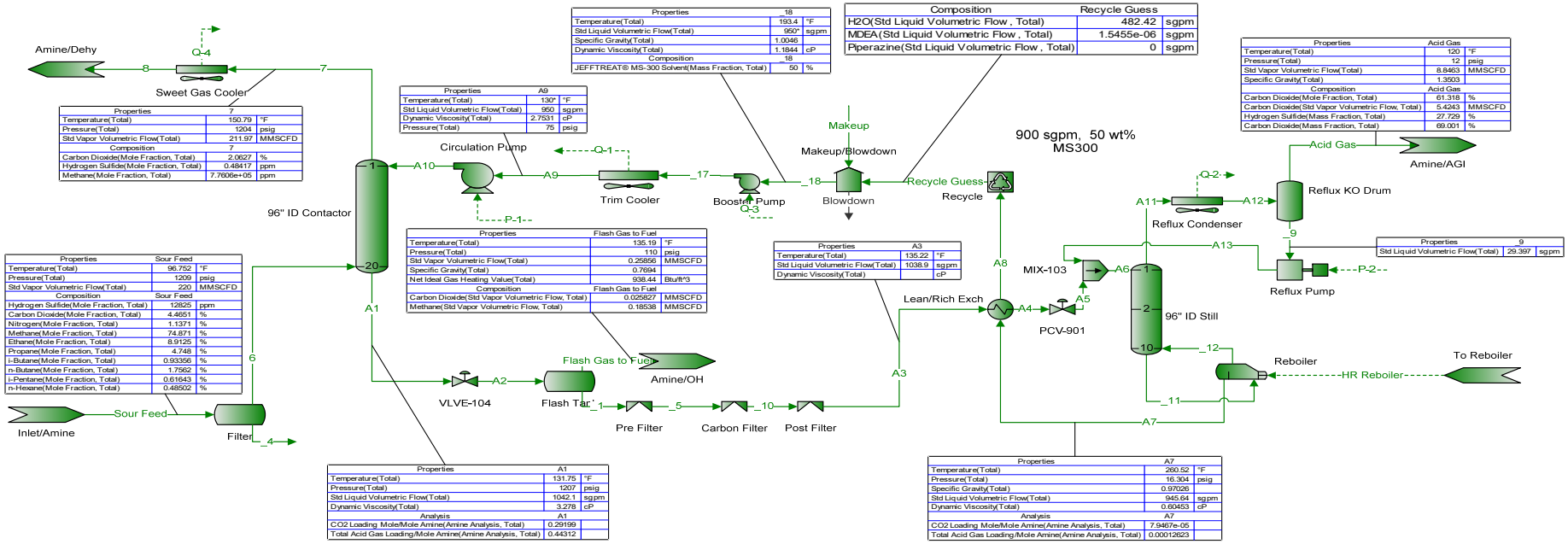


HO/Stab

Pinon Midstream
Dark Horse
Acid Gas Injection

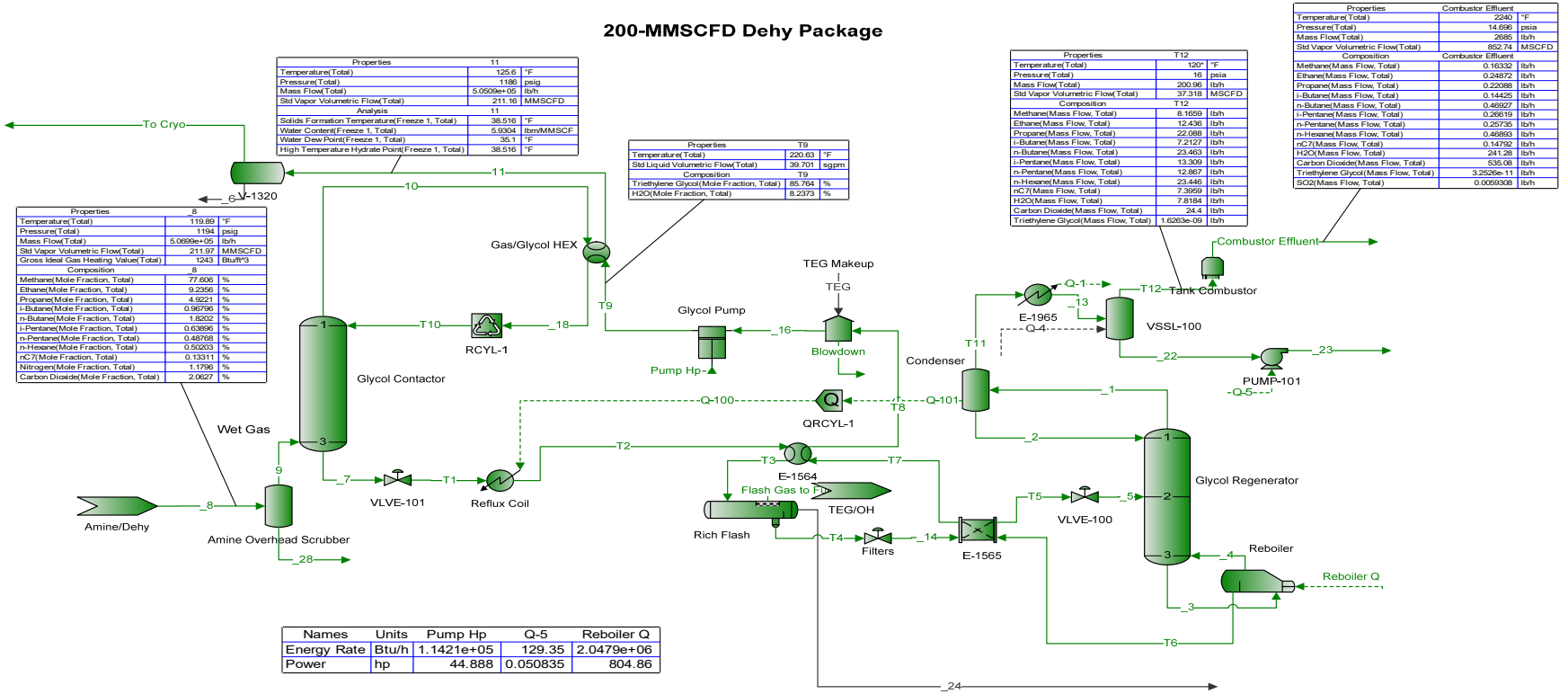


Pinon Midstream
Dark Horse Treating Facility
Amine Plant
900 GPM



Names	Units	Reboiler	96" ID Still	96" ID Contactor	Circulation Pump	Lean/Rich Exch - A	Lean/Rich Exch - B
Heat Duty	MMBtu/h	62.054			2.6843	29.041	-29.041
Number of Stages			10*	20*			

200-MMSCFD Dehy Package



Properties	11	
Temperature(Total)	125.6	°F
Pressure(Total)	1186	psig
Mass Flow(Total)	5.0509e+05	lb/h
Std Vapor Volumetric Flow(Total)	211.16	MMSCFD
Analysis	11	
Solids Formation Temperature(Freeze 1, Total)	38.516	°F
Water Content(Freeze 1, Total)	5.9304	lbm/MMSCF
Water Dew Point(Freeze 1, Total)	35.1	°F
High Temperature Hydrate Point(Freeze 1, Total)	38.516	°F

Properties	T9	
Temperature(Total)	220.63	°F
Std Liquid Volumetric Flow(Total)	39.701	sgpm
Composition	T9	
Triethylene Glycol(Mole Fraction, Total)	85.764	%
H2O(Mole Fraction, Total)	8.2373	%

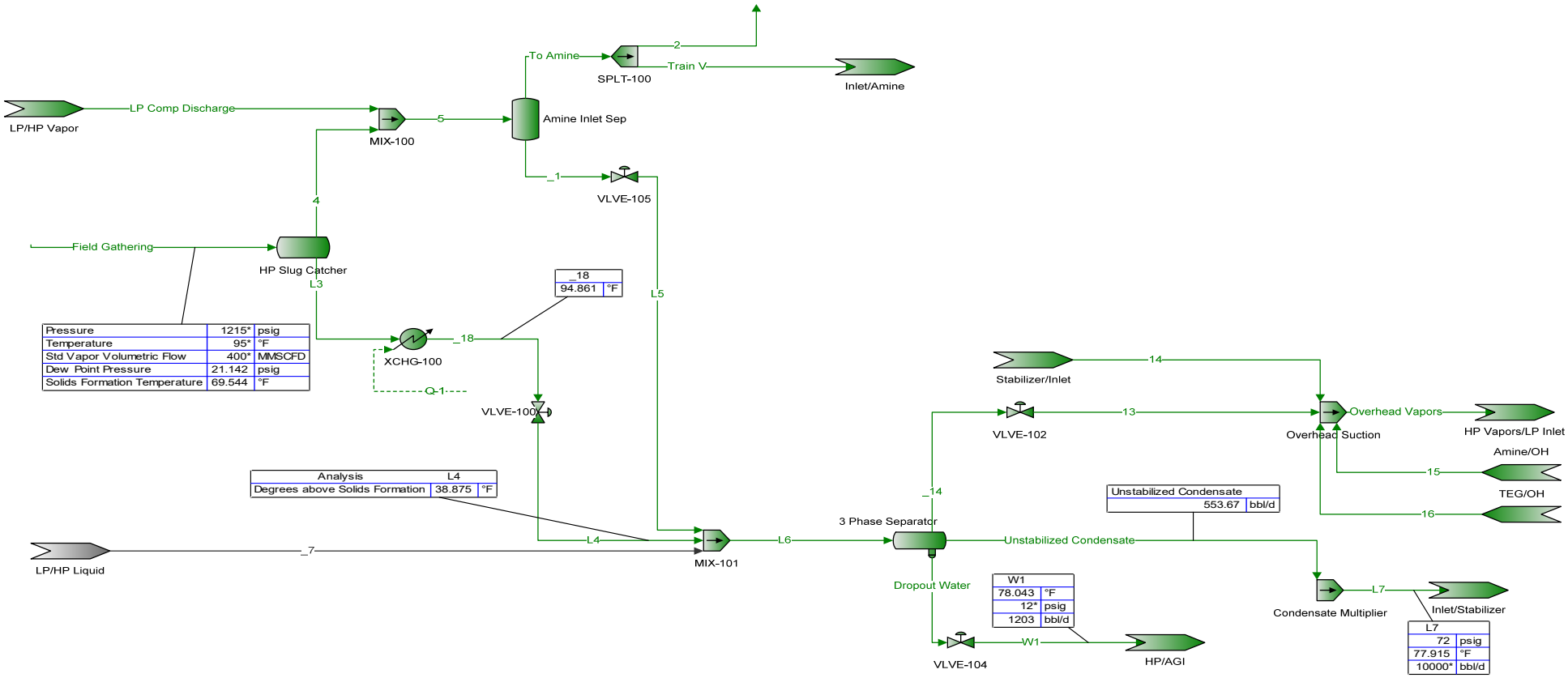
Properties	_8	
Temperature(Total)	119.89	°F
Pressure(Total)	1194	psig
Mass Flow(Total)	5.0699e+05	lb/h
Std Vapor Volumetric Flow(Total)	211.97	MMSCFD
Gross Ideal Gas Heating Value(Total)	1243	Btu/ft^3
Composition	_8	
Methane(Mole Fraction, Total)	77.606	%
Ethane(Mole Fraction, Total)	9.2356	%
Propane(Mole Fraction, Total)	4.9221	%
i-Butane(Mole Fraction, Total)	0.96796	%
n-Butane(Mole Fraction, Total)	1.8202	%
i-Pentane(Mole Fraction, Total)	0.63896	%
n-Pentane(Mole Fraction, Total)	0.48768	%
n-Hexane(Mole Fraction, Total)	0.50203	%
nC7(Mole Fraction, Total)	0.13311	%
Nitrogen(Mole Fraction, Total)	1.1796	%
Carbon Dioxide(Mole Fraction, Total)	2.0627	%

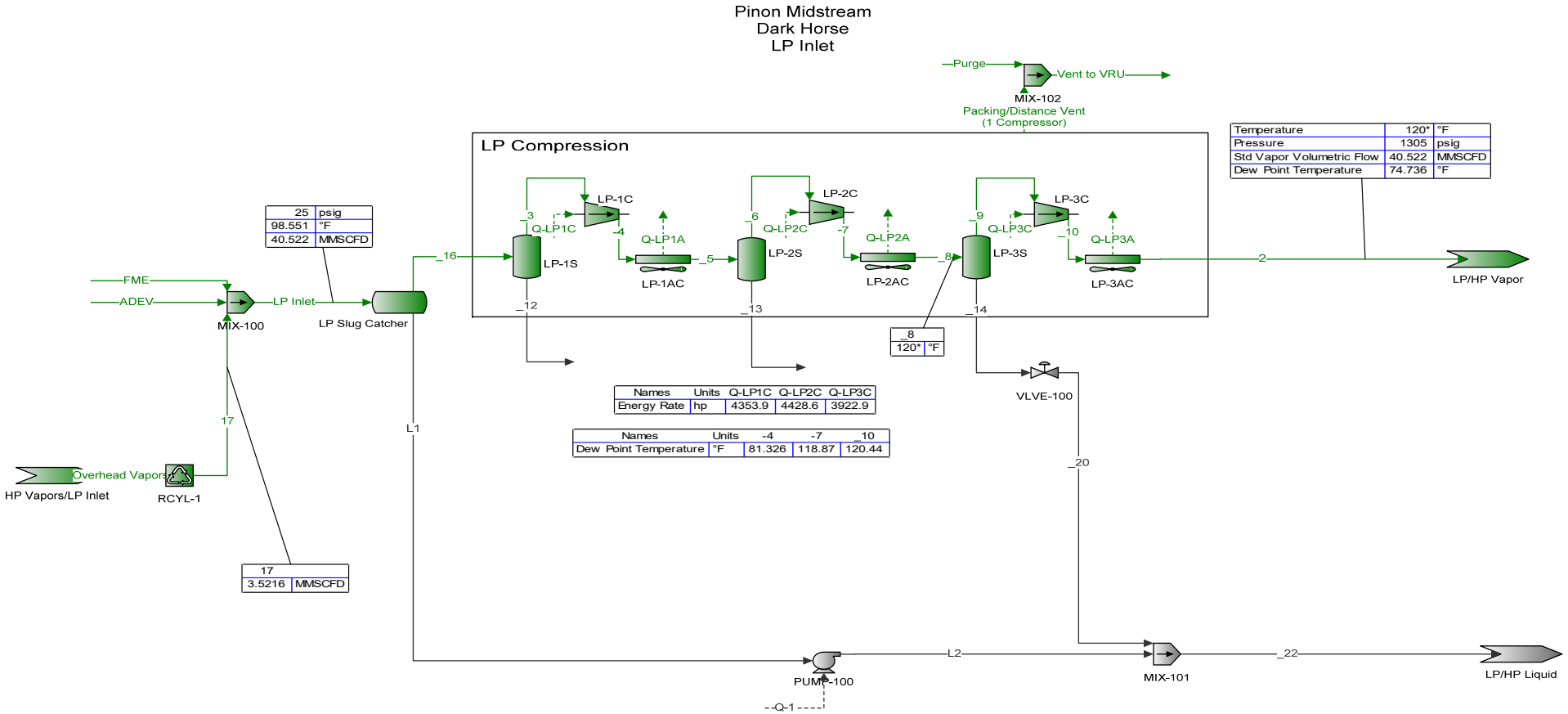
Properties	T12	
Temperature(Total)	120*	°F
Pressure(Total)	16	psia
Mass Flow(Total)	200.96	lb/h
Std Vapor Volumetric Flow(Total)	37.318	MSCFD
Composition	T12	
Methane(Mass Flow, Total)	8.1659	lb/h
Ethane(Mass Flow, Total)	12.436	lb/h
Propane(Mass Flow, Total)	22.088	lb/h
i-Butane(Mass Flow, Total)	7.2127	lb/h
n-Butane(Mass Flow, Total)	23.463	lb/h
i-Pentane(Mass Flow, Total)	13.309	lb/h
n-Pentane(Mass Flow, Total)	12.867	lb/h
n-Hexane(Mass Flow, Total)	23.446	lb/h
nC7(Mass Flow, Total)	7.3959	lb/h
H2O(Mass Flow, Total)	7.8184	lb/h
Carbon Dioxide(Mass Flow, Total)	24.4	lb/h
Triethylene Glycol(Mass Flow, Total)	1.6263e-09	lb/h

Properties	Combustor Effluent	
Temperature(Total)	2240	°F
Pressure(Total)	14.696	psia
Mass Flow(Total)	2685	lb/h
Std Vapor Volumetric Flow(Total)	852.74	MSCFD
Composition	Combustor Effluent	
Methane(Mass Flow, Total)	0.16332	lb/h
Ethane(Mass Flow, Total)	0.24872	lb/h
Propane(Mass Flow, Total)	0.22088	lb/h
i-Butane(Mass Flow, Total)	0.14425	lb/h
n-Butane(Mass Flow, Total)	0.46927	lb/h
i-Pentane(Mass Flow, Total)	0.26619	lb/h
n-Pentane(Mass Flow, Total)	0.25735	lb/h
n-Hexane(Mass Flow, Total)	0.46893	lb/h
nC7(Mass Flow, Total)	0.14792	lb/h
H2O(Mass Flow, Total)	241.28	lb/h
Carbon Dioxide(Mass Flow, Total)	535.08	lb/h
Triethylene Glycol(Mass Flow, Total)	3.2526e-11	lb/h
SO2(Mass Flow, Total)	0.0059308	lb/h

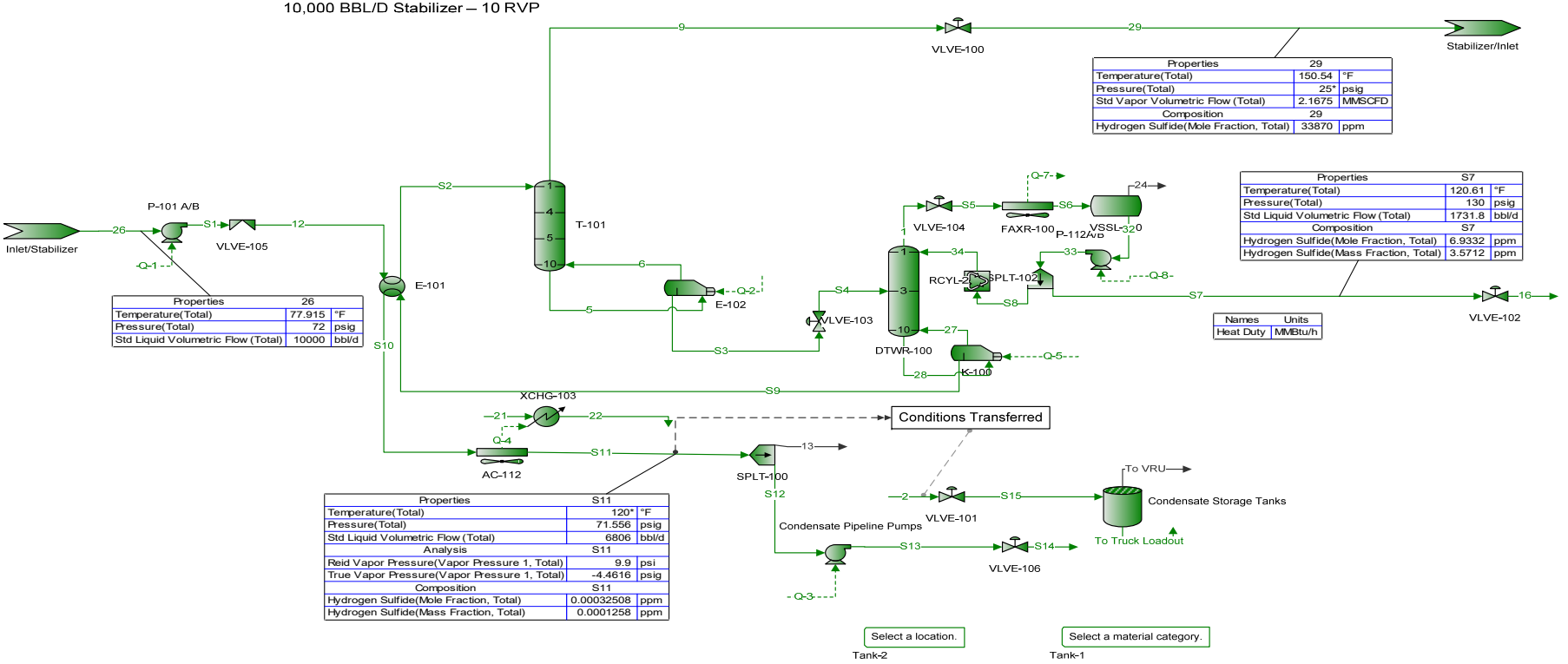
Names	Units	Pump Hp	Q-5	Reboiler Q
Energy Rate	Btu/h	1.1421e+05	129.35	2.0479e+06
Power	hp	44.888	0.050835	804.86

Pinon Midstream
Dark Horse
HP Inlet/Liquids Handling

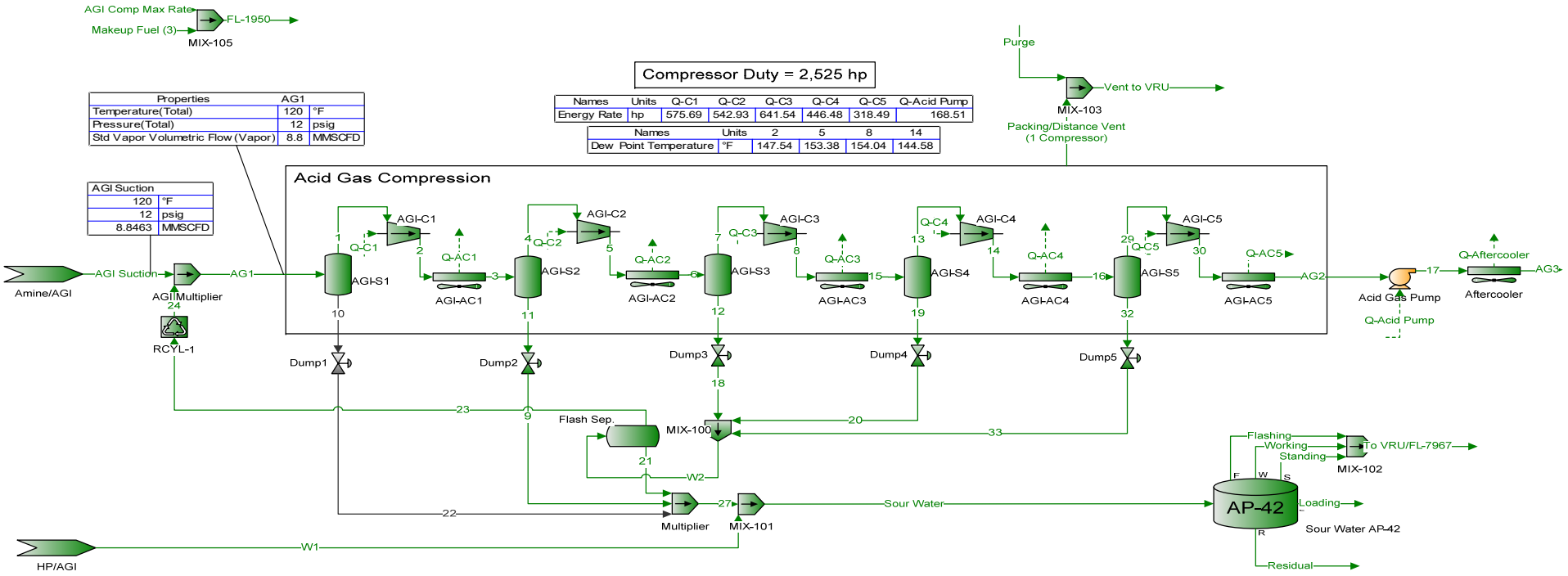



Pinon Midstream
Dark Horse
LP Inlet
Purge
Vent to VRU
MIX-102
Packing/Distance Vent
(1 Compressor)
LP Compression
LP-1C
LP-2C
LP-3C
Q-LP1C
Q-LP2C
Q-LP3C
Q-LP1A
Q-LP2A
Q-LP3A
LP-1S
LP-2S
LP-3S
LP-1AC
LP-2AC
LP-3AC
_3
_4
_5
_6
_7
_8
_9
_10
_12
_13
_14
_16
2
Temperature 120* °F
Pressure 1305 psig
Std Vapor Volumetric Flow 40.522 MMSCFD
Dew Point Temperature 74.736 °F
LP/HP Vapor
25 psig
98.551 °F
40.522 MMSCFD
FME
ADEV
MIX-100
LP Inlet
LP Slug Catcher
_8
120* °F
VLVE-100
Names Units Q-LP1C Q-LP2C Q-LP3C
Energy Rate hp 4353.9 4428.6 3922.9
Names Units -4 -7 _10
Dew Point Temperature °F 81.326 118.87 120.44
17
Overhead Vapors
HP Vapors/LP Inlet
RCYL-1
17
3.5216 MMSCFD
L1
_20
L2
PUMP-100
MIX-101
_22
LP/HP Liquid
Q-1

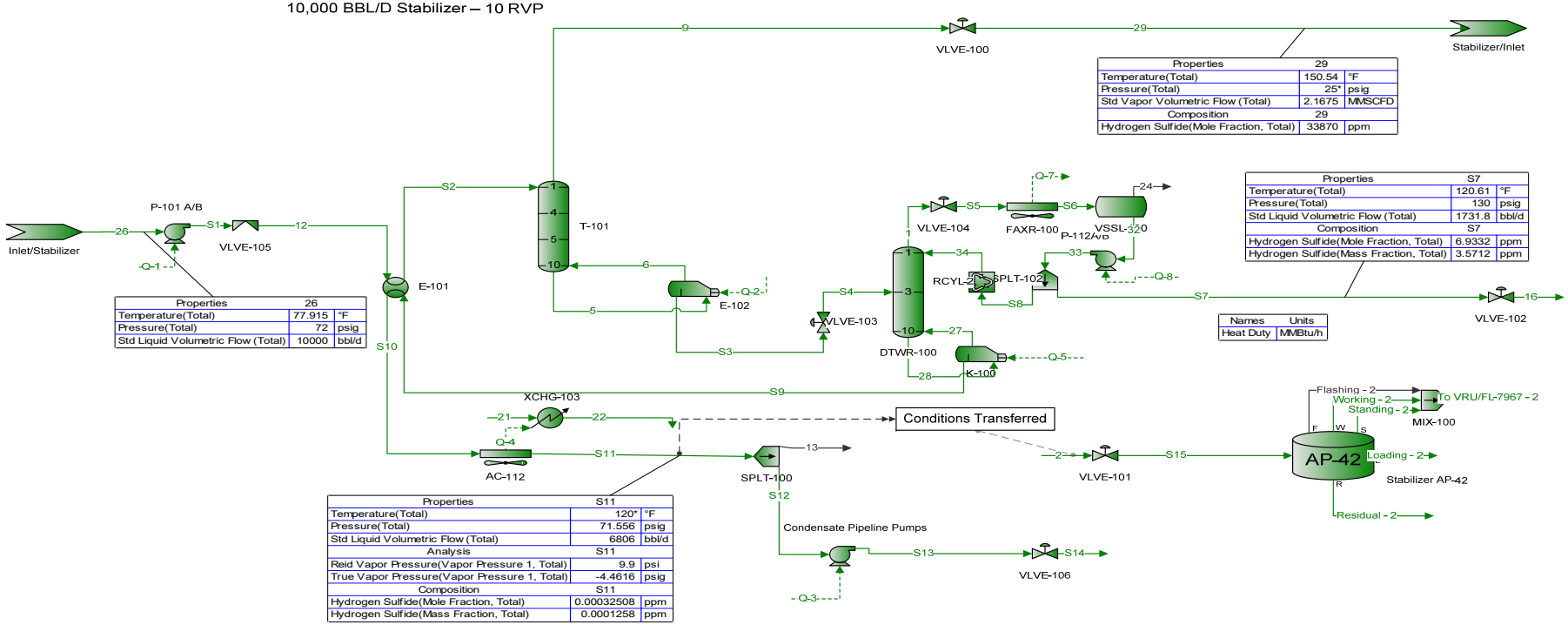
Pinon Midstream
Dark Horse
10,000 BBL/D Stabilizer – 10 RVP

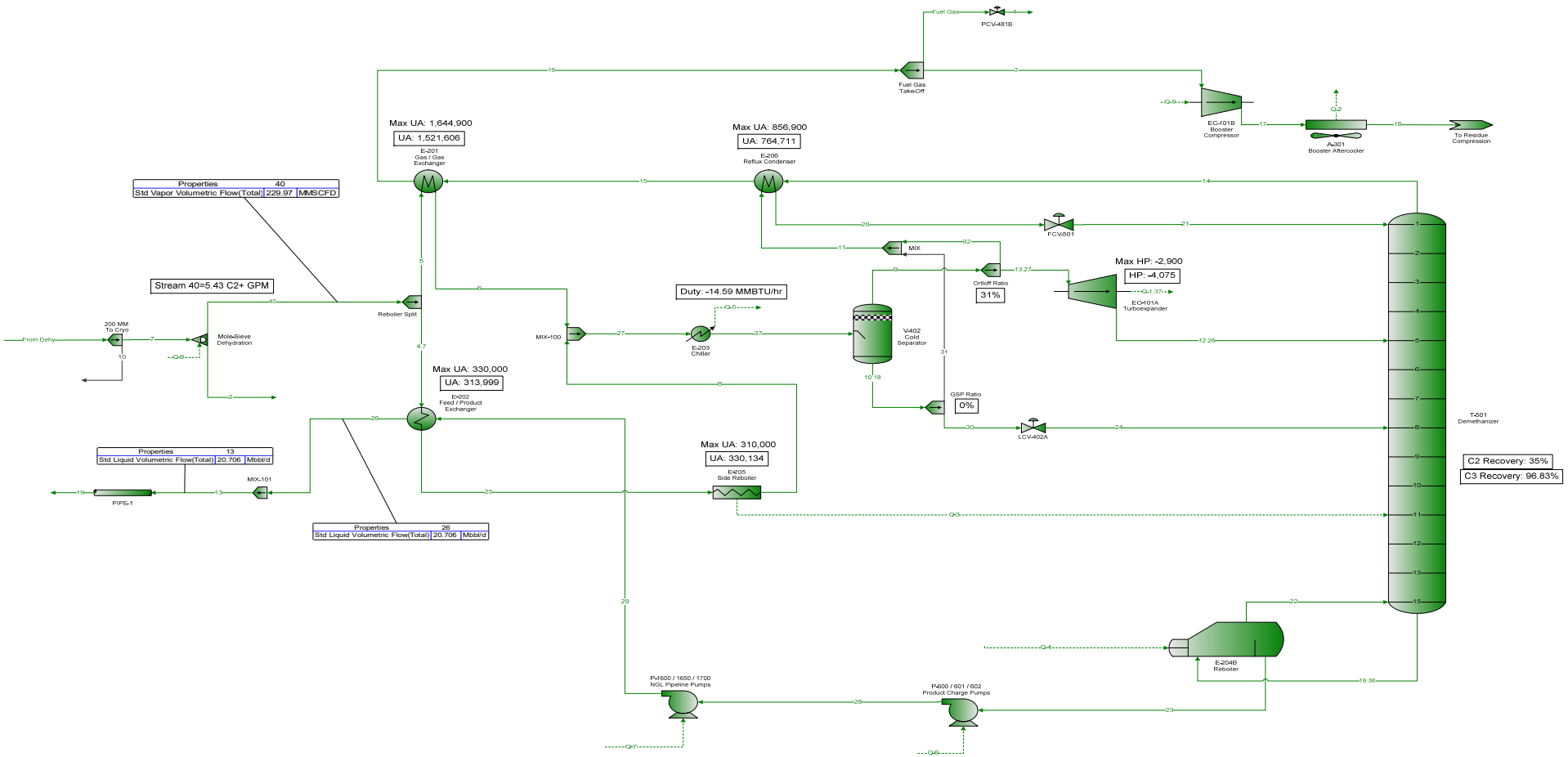


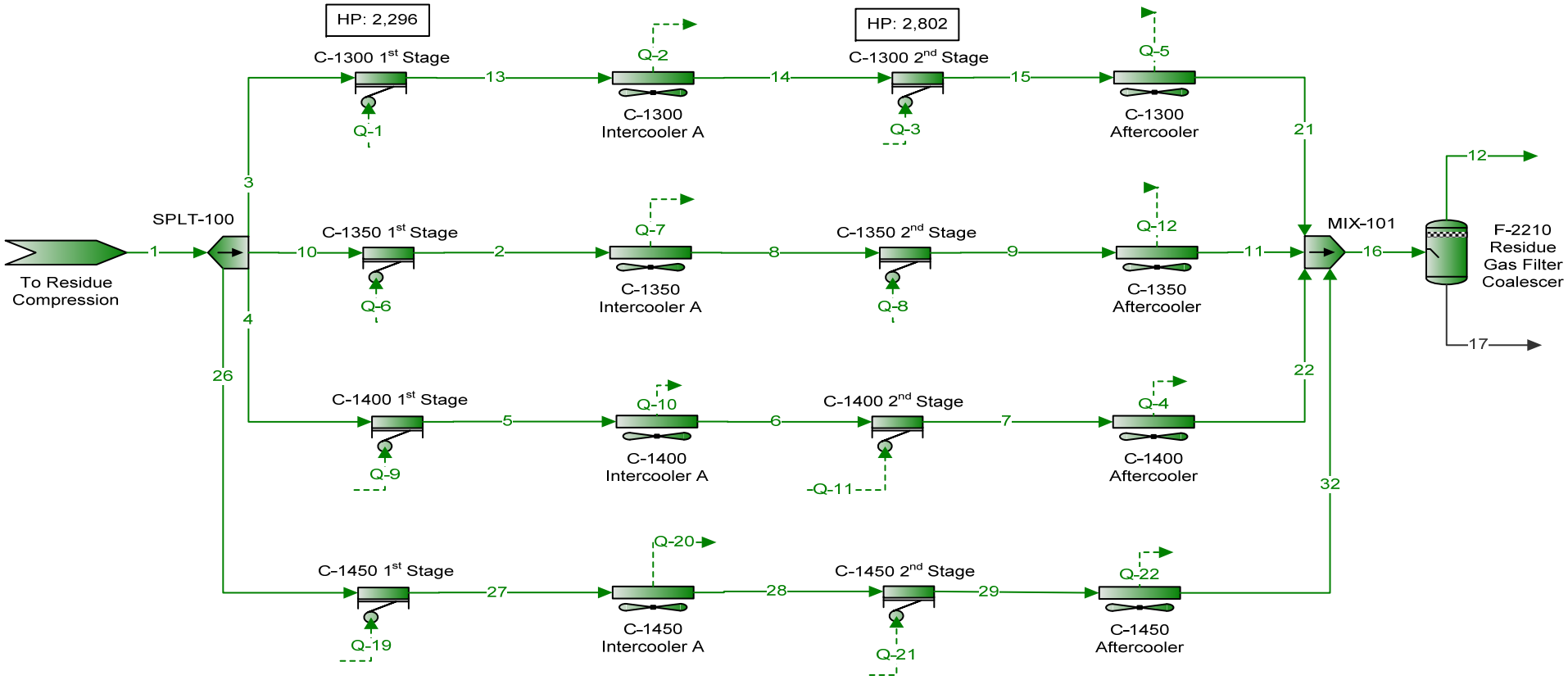
Pinon Midstream
Dark Horse
Acid Gas Injection



Pinon Midstream
Dark Horse
10,000 BBL/D Stabilizer – 10 RVP




Fuel Gas
PCV-481B
Fuel Gas Take-Off
EC-101B Booster Compressor
A-201 Booster Aftercooler
To Residue Compression
Max UA: 1,644,900
UA: 1,521,606
E-201 Gas / Gas Exchanger
Max UA: 856,900
UA: 764,711
E-206 Reflux Condenser
Properties 40
Std Vapor Volumetric Flow(Total) 229.97 MMSCFD
FCV-501
MIX
Orifice Ratio
31%
Max HP: -2,900
HP: -4,075
EC-101A Turboexpander
Stream 40=5.43 C2+ GPM
Reboiler Split
200 MM To Cryo
From Dehy
Mole-Sieve Dehydration
MIX-100
Duty: -14.59 MMBTU/hr
E-203 Chiller
V-402 Cold Separator
GSP Ratio
0%
LCV-402A
T-501 Demethanizer
C2 Recovery: 35%
C3 Recovery: 96.83%
Max UA: 330,000
UA: 313,999
E-202 Feed / Product Exchanger
Max UA: 310,000
UA: 330,134
E-205 Side Reboiler
Properties 13
Std Liquid Volumetric Flow(Total) 20.706 Mbbl/d
MIX-101
PIPE-1
Properties 26
Std Liquid Volumetric Flow(Total) 20.706 Mbbl/d
E-204B Reboiler
P-1600 / 1650 / 1700 NGL Pipeline Pumps
P-600 / 601 / 602 Product Charge Pumps


HP: 2,296
HP: 2,802
C-1300 1st Stage
C-1300 2nd Stage
C-1300 Intercooler A
C-1300 Aftercooler
C-1350 1st Stage
C-1350 2nd Stage
C-1350 Intercooler A
C-1350 Aftercooler
C-1400 1st Stage
C-1400 2nd Stage
C-1400 Intercooler A
C-1400 Aftercooler
C-1450 1st Stage
C-1450 2nd Stage
C-1450 Intercooler A
C-1450 Aftercooler
SPLT-100
MIX-101
To Residue Compression
F-2210 Residue Gas Filter Coalescer
Q-1
Q-2
Q-3
Q-4
Q-5
Q-6
Q-7
Q-8
Q-9
Q-10
Q-11
Q-12
Q-19
Q-20
Q-21
Q-22
1
2
3
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32

Section 7

Information Used to Determine Emissions

Information Used to Determine Emissions shall include the following:

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

The following pages include manufacturer data, ProMax results, AP-42 Chapters referenced, and EPA guidance documents for estimating emissions.

KODIAK GAS SERVICES, LLC

ICE Catalyst Sizing Program

ENGINE INPUT (Manufacturer, Model, Type) - Caterpillar G3608 A4 Caterpillar G3608 A4 2500 bhp @ 1000 rpm - EXPERT MODE

Input Mass Flow Rate

	lbs/hr	scfm	scfh	"acfm"	"acfh"	Estimated Exhaust Gas Composition		
	28,550	6,433	385,976	15,753.4	945,204	N2	72.7	vol%
Brake Horse Power:	2500					O2	11.3	vol%
			Maximum Pressure Drop (in)		0	H2O	10	vol%
Molecular weight:	28.50		Exhaust Density (lbs/ft3)		0.031	CO2	6	vol%
			mol% propane in fuel gas:		.3700			

Inlet Temperature

Process Temperature (F)
833

Permitted Emissions (g/bhp-hr)

NOx**	CO**	VOC(NMNE)**	H2CO**
.3	.33	.13	.034

Catalyst Type

CO/DOC Catalyst

Catalyst Module Details

Module Shape		Modules/Layer	3	Layers	1
Square				cpsi	300
Guard Bed - No	X&Y (inch)	15	36	Depth	3.5
	Part Number:			Part Weight (lbs)	63.6
				Total Weight (lbs)	190.9

Space Velocity

Open area for gas flow (ft2):	10.21				
Linear Velocity (ft/min):	1,543	Calculated Space Velocity:	129,634	Safety Value	2
Foil thickness (inches):	0.002				

Pressure Drop

300 cpsi — Pressure Drop (in wc): 2.57

Inlet Pollutants

	g/bhp-hr	lb/hr	tons/year	ppmv	ppmvd%O2*
NOx	.30	1.65	7.24	35.30	24.11
CO	2.50	13.78	60.35	483.21	329.97
VOC	.27	1.49	6.52	33.13	22.62
H2CO	.16	0.88	3.86	28.86	19.71

Target Conversions

		Required Output Pollutants	g/bhp-hr	lb/hr	tons/year	ppmv	ppmvd%O2*
NOx	0.0%	NOx	<.3	1.65	7.24	35.30	24.11
CO	86.8%	CO	<.33	1.82	7.97	63.78	43.56
VOC(NMNE)	51.9%	VOC	<.13	0.72	3.14	15.95	10.89
H2CO	78.8%	H2CO	<.034	0.19	0.82	6.13	4.19

Conversions Catalyst Design

		Output Pollutants with Catalyst Sizing	g/bhp-hr	lb/hr	tons/year	ppmv	ppmvd%O2*
NOx	0.0%	NOx	.3	1.65	7.24	35.30	24.11
CO	86.8%	CO	.33	1.82	7.97	63.78	43.56
VOC(NMNE)	51.9%	VOC	.13	0.72	3.14	15.95	10.89
H2CO	78.8%	H2CO	.034	0.19	0.82	6.13	4.19

Notes:

Customer:	Kodiak Gas Services, LLC			Project:	Pinon - Mars
Sales Person:		Date:	12-9-20	Contact:	Justin Head / Robert Caffey
Housing:		Element:		Description:	

* Calculated ppm at 15% Oxygen. Estimated with O2 value provided in "Estimated Exhaust Gas Composition". For accurate value insert actual engine O2.

** Insert required conversion rates.

G3608

GAS COMPRESSION APPLICATION

GAS ENGINE SITE SPECIFIC TECHNICAL DATA

CATERPILLAR®

ENGINE SPEED (rpm):	1000	RATING STRATEGY:	STANDARD
COMPRESSION RATIO:	7.6	RATING LEVEL:	CONTINUOUS
AFTERCOOLER TYPE:	SCAC	FUEL SYSTEM:	GAV
AFTERCOOLER - STAGE 2 INLET (°F):	130		WITH AIR FUEL RATIO CONTROL
AFTERCOOLER - STAGE 1 INLET (°F):	174	**SITE CONDITIONS:**	
JACKET WATER OUTLET (°F):	190	FUEL:	Gas Analysis
ASPIRATION:	TA	FUEL PRESSURE RANGE(psig): (See note 1)	58.0-70.3
COOLING SYSTEM:	JW+1AC, OC+2AC	FUEL METHANE NUMBER:	85.1
CONTROL SYSTEM:	ADEM4	FUEL LHV (Btu/scf):	930
EXHAUST MANIFOLD:	DRY	ALTITUDE(ft):	3500
COMBUSTION:	LOW EMISSION	INLET AIR TEMPERATURE(°F):	100
NOx EMISSION LEVEL (g/bhp-hr NOx):	0.3	STANDARD RATED POWER:	2500 bhp@1000rpm
SET POINT TIMING:	18		

				MAXIMUM RATING	SITE RATING AT MAXIMUM INLET AIR TEMPERATURE		
RATING		**NOTES**	**LOAD**	**100%**	**100%**	**75%**	**50%**
ENGINE POWER	(WITHOUT FAN)	(2)	bhp	2500	2500	1875	1250
INLET AIR TEMPERATURE			°F	100	100	100	100
ENGINE DATA							
FUEL CONSUMPTION (LHV)		(3)	Btu/bhp-hr	6848	6848	7075	7573
FUEL CONSUMPTION (HHV)		(3)	Btu/bhp-hr	7592	7592	7843	8396
AIR FLOW (@inlet air temp, 14.7 psia)	(WET)	(4)(5)	ft3/min	6520	6520	4941	3359
AIR FLOW	(WET)	(4)(5)	lb/hr	27722	27722	21009	14283
FUEL FLOW (60ºF, 14.7 psia)			scfm	307	307	238	170
INLET MANIFOLD PRESSURE		(6)	in Hg(abs)	104.4	104.4	78.9	55.1
EXHAUST TEMPERATURE - ENGINE OUTLET		(7)	°F	833	833	876	941
EXHAUST GAS FLOW (@engine outlet temp, 14.5 psia)	(WET)	(8)(5)	ft3/min	16070	16070	12601	9005
EXHAUST GAS MASS FLOW	(WET)	(8)(5)	lb/hr	28550	28550	21650	14741
EMISSIONS DATA - ENGINE OUT							
NOx (as NO2)		(9)(10)	g/bhp-hr	0.30	0.30	0.30	0.30
CO		(9)(10)	g/bhp-hr	2.50	2.50	2.50	2.50
THC (mol. wt. of 15.84)		(9)(10)	g/bhp-hr	4.42	4.42	4.69	4.76
NMHC (mol. wt. of 15.84)		(9)(10)	g/bhp-hr	0.47	0.47	0.50	0.51
NMNEHC (VOCs) (mol. wt. of 15.84)		(9)(10)(11)	g/bhp-hr	0.27	0.27	0.29	0.30
HCHO (Formaldehyde)		(9)(10)	g/bhp-hr	0.16	0.16	0.17	0.20
CO2		(9)(10)	g/bhp-hr	426	426	442	470
EXHAUST OXYGEN		(9)(12)	% DRY	11.3	11.3	11.1	10.7
HEAT REJECTION							
HEAT REJ. TO JACKET WATER (JW)		(13)	Btu/min	27699	27699	23042	18866
HEAT REJ. TO ATMOSPHERE		(13)	Btu/min	11113	11113	11058	10385
HEAT REJ. TO LUBE OIL (OC)		(13)	Btu/min	12553	12553	11937	10885
HEAT REJ. TO A/C - STAGE 1 (1AC)		(13)(14)	Btu/min	26187	26187	13138	3583
HEAT REJ. TO A/C - STAGE 2 (2AC)		(13)(14)	Btu/min	8852	8852	5580	2808

COOLING SYSTEM SIZING CRITERIA			
TOTAL JACKET WATER CIRCUIT (JW+1AC)	(14)(15)	Btu/min	57965
TOTAL STAGE 2 AFTERCOOLER CIRCUIT (OC+2AC)	(14)(15)	Btu/min	24358
A cooling system safety factor of 0% has been added to the cooling system sizing criteria.			

CONDITIONS AND DEFINITIONS

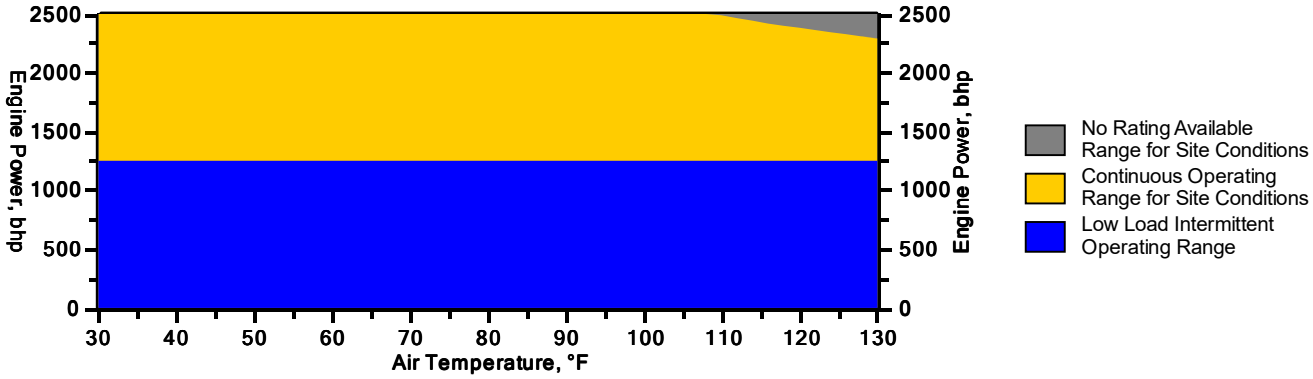
Engine rating obtained and presented in accordance with ISO 3046/1, adjusted for fuel, site altitude and site inlet air temperature. 100% rating at maximum inlet air temperature is the maximum engine capability for the specified fuel at site altitude and maximum site inlet air temperature. Maximum rating is the maximum capability at the specified aftercooler inlet temperature for the specified fuel at site altitude and reduced inlet air temperature. Lowest load point is the lowest continuous duty operating load allowed. No overload permitted at rating shown.

For notes information consult page three.

PREPARED BY:
Data generated by Gas Engine Rating Pro Version 7.00.03
Ref. Data Set EM1410-04-001, Printed 06Nov2020

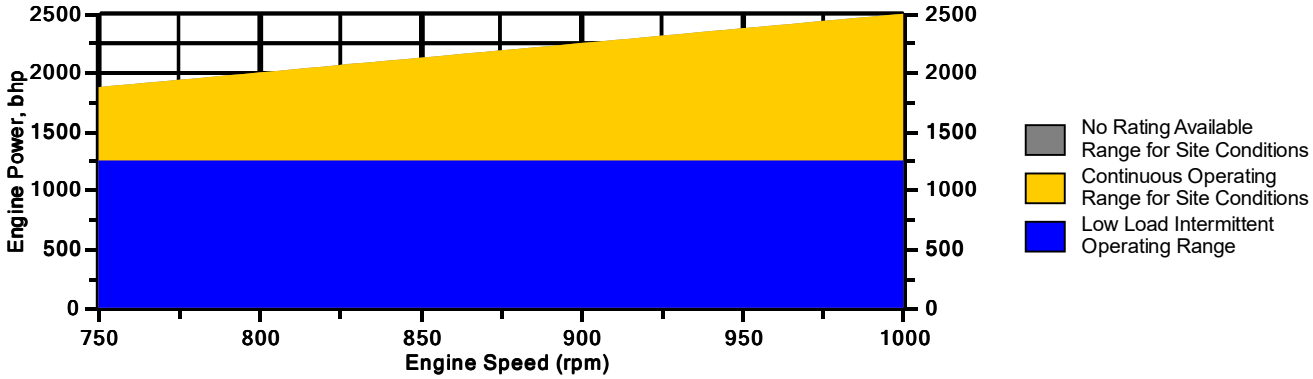
Engine Power vs. Inlet Air Temperature

Data represents temperature sweep at 3500 ft and 1000 rpm



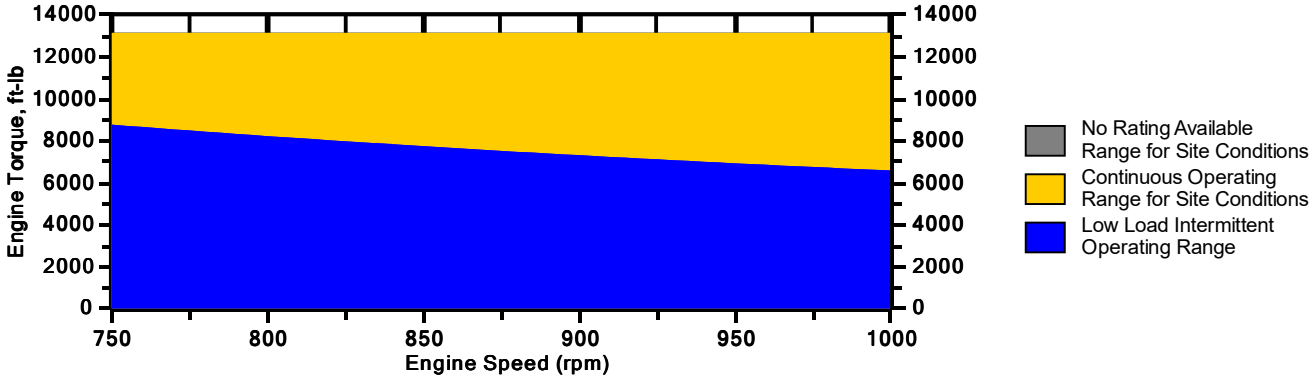
Engine Power vs. Engine Speed

Data represents speed sweep at 3500 ft and 100 ºF



Engine Torque vs. Engine Speed

Data represents speed sweep at 3500 ft and 100 ºF



Note: At site conditions of 3500 ft and 100°F inlet air temp., constant torque can be maintained down to 750 rpm. The minimum speed for loading at these conditions is 750 rpm.

Deign Data Sheet

Process Design Conditions

Waste Flare Stream	Flow Rate *(MMSCFD)*	Smokeless Flow Rate *(MMSCFD)*	Smokeless Rate	MW	Lower Heating Value *(Btu/SCF)*	Inlet Press. *(psig)*	Temp. *(F)*
Case 1 – Fire, Sure Tanks	10.4	10.4	100%	52.94	2187	25	70
Case 2 – Full System Relief	40	40	100%	24.40	1302	25	70
Case 3 – AGI Blowdown	50.97	50.97	100%	25.57	1120	25	70
Case 4 – Fire, NGL Tanks	13.6	8.67	64%	66.54	3425	25	70
Purge Gas: At low flow rates the flare will require purge gas to increase the exist velocity out of the tip. Estimated purge flow rate 240 SCFH.							

Utilities

Pilot Gas (per pilot)	78 scfh at 5 psig. Clean, dry natural gas.
Plant Air	No Plant Air Required
Electricity	120V / 1 Phase / 10 Amps is required to operate pilot ignition system
Blowers	Electric: 480V / 3 Phase / 60Hz Blower Size:125 HP

Mechanical

Design Wind Speed	120 mph ASCE 7-10
Site Conditions	Temp: 0 to 120°F Elevation: 12.884 Psia
Corrosion Allowance	1/16” (standard)
Electrical Area	Non-classified area
Control Panel Type	Nema 4X (Stainless Steel)
Blower Motor	TEFC, Premium duty suitable for VFD

Emission & Performance Guarantees

Destruction	98% or greater hydrocarbon destruction efficiency will be achieved
Stability	Flare will be stable over the entire operating range
Smokeless Rate	See smokeless rates in table above.
Max Radiation	Less than 500 Btu/hr/SF at normal & 1500 Btu/hr at max flow rates
Tip Velocity	Meets EPA regulations over normal operating range

Flare Construction

Component	Dimension	Material	Conn. @ Joints	Connection Type	Connection Elevation
Flare Stack Height	110’	A-36	Full Pen. Buttweld	----	----
Inner Gas Riser	16” Diameter	A106B	Full Pen Buttweld	----	
Inlet Flange	16” Diameter	CS	---	150# RFSO	15’
Flare Tip	42”	304SS	Full Pen.	integral	---
Pilots	Hero HES	Stainless Steel	NPT / SW	---	flare tip
Pilot Tubing Ø	3/8”	SS tubing or SS flexhose	Swagelok	NPT at regulator	2.5’
Pilot Conduit	---	rigid conduit or flexible SO cord	NPT	NPT	stack base

Air Assisted Flare Tip Specification Sheet

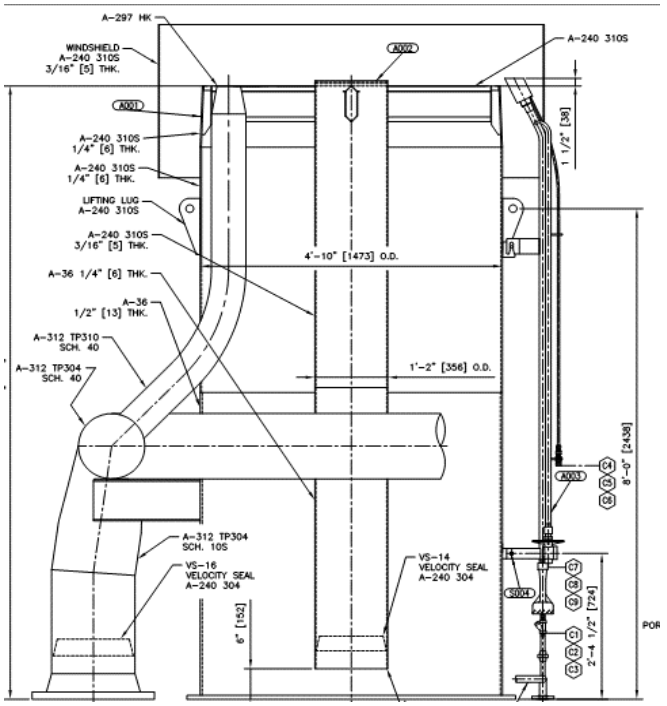
Client:	Zeeco Ref.:	Date: 21-May-19
Location: Jal, NM	Client Ref.:	Rev. 0

General Information:

Tag No.:	FL-2050		
Model:	AFDSMJW-20/80 - 26	Type:	Air-Assisted
Length:	10'- 0 "		
Weight:	6000 lbs		
No. of Pilots	3		

Design Case:

Governing Case:	Cold Case 1	
Molecular weight:	21.2	
L. H. V. :	1,104	BTU/SCF
Temperature:	9	Deg. F
Available Static Pressure:	40.0	psig
Design Flow Rate:	1,052,040	lbs/hr
Governing Smokeless Case:	Case A	
Design Smokeless Rate:	210,408	lbs/hr
Approximate Exit Velocity:	1194	ft/s
Mach No.:	1.00	
Approx. Tip Press. Drop:	14.54	psig



(Typical drawing only)

Construction:

Upper Section:	310 SS	Flame Retention Hub:	310 SS
Warm / Air Riser Lower Section:	Carbon Steel	Lifting Lugs:	YES - C.S. Type
Cold Riser Lower Section:	304 SS	Refractory:	None
Windshield:	YES	Refractory Thk:	N/A

Surface Finish (Carbon Steel Surfaces):

Surface Preparation:	SSPC-SP6	Primer:	Inorganic Zinc
Paint (c. s. surfaces):	High Heat Aluminum		

Connections:

	Qty.	Size	Type	Material
N1 - Warm Flare Gas Inlet:	1	20 "	Beveled ; Weld	Carbon Steel
N2 - Cold Flare Gas Inlet	1	26 "	150# RFWN	304 SS
N3 - Combustion Air Inlet:	1	80 "	Fab. Plate Flange	Carbon Steel
N4 - Pilot Gas Manifold:	1	1 "	150# RFSW	Carbon Steel

Miscellaneous Notes:

1. Includes Integral Purge Reducing Velocity Seals.
2. Warm Flare Required Fuel Gas Purge Rate = 1200 SCFH.
3. Cold Flare Required Fuel Gas Purge Rate = 1050 SCFH.

Note: Design case shown is for Cold flare only, please refer to process conditions for warm flare design conditions.

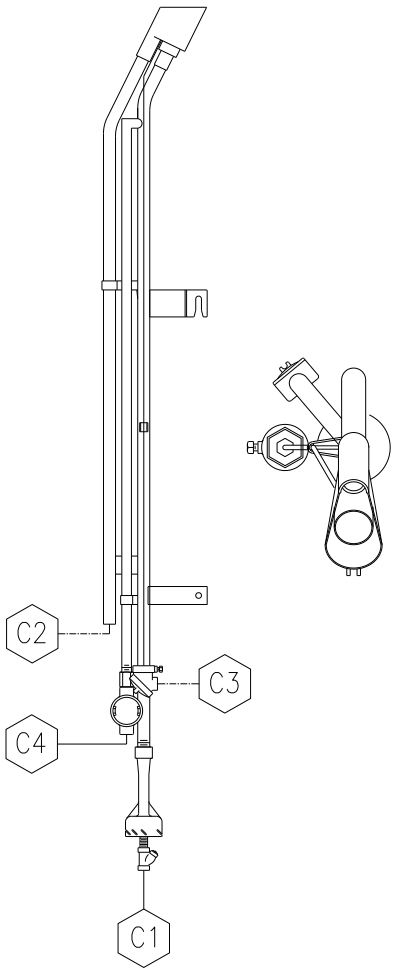
Pre-Mix Flare Pilot Assembly Specification Sheet

Client:		Zeeco Ref.:	Date: 21-May-19
Location:	Jal, NM	Client Ref.:	Rev. 0

General Information:		
Tag No.:	FP-1	
Model:	HSLF	
Length:	9.135	feet
Weight:	68	lbs.
Pilot Type:	Pre-Mix	High Stability
Ignition Type:	High Energy Spark	

Process Design Data:		
Design Heat Release:	65,000	BTU/hr
Fuel Gas MW:	18.00	
Fuel Gas LHV:	1,000	BTU/SCF
Fuel Gas Temperature:	100	Deg. F
Fuel Gas Inlet Pressure:	15.00	psig
Fuel Gas Flow rate:	65.0	SCFH
Design Wind Velocity:	150	mph
Design Rainfall:	50.00	inches/hr
Mounting Position:	Vertical	
Thermocouple Type:	K	Ungrounded

Construction:	
Pilot Firing Tip:	HK
Windshield Assembly:	HK
Integral Thermowell:	HK
Mounting Brackets:	HK
Premix Fuel Line:	310 SS
Thermocouple Sheath:	310 SS
Thermocouple Head:	316 SS
Fuel Mixer / Spud Assembly:	CF-3M / 18-8
Fuel Strainer Assembly:	CF-8M
HEI Probe and Support:	310 SS
HEI Junction Head:	CF-3M



Connections:	**Qty.**	**Size**	**Type**	**Material**
C1 - Fuel Gas Inlet:	1	1/2"	FNPT	CF8M
C3 - Thermocouple:	1	1/2"	Tube	316 SS
C4 - HEI Ignition:	1	3/4"	FNPT	Cast Iron

Misc. Notes: (see ignition system datasheet for type applicable to this quote)

1. Upper mounting bracket is reinforced hook type for pilot removal from platform.
2. Pilot mounting brackets and thermocouple mounting brackets are investment cast assemblies.
3. Pilot mixer assembly is investment cast, high efficiency computer modeled venturi section.
4. Thermocouples are simplex, retractable type (replaceable from grade).

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Air Permit Technical Guidance for Chemical Sources:

Flares and Vapor Oxidizers

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Air Permits Division

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Technical Disclaimer

This document is intended as guidance to explain the specific requirements for new source review permitting of flares and vapor oxidizers; it does not supersede or replace any state or federal law, regulation, or rule. References to abatement equipment technologies are not intended to represent minimum or maximum levels of Best Available Control Technology (BACT). Determinations of BACT are made on a case-by-case basis as part of the New Source Review of permit applications. BACT determinations are always subject to adjustment in consideration of specific process requirements, air quality concerns, and recent developments in abatement technology. Additionally, specific health effects concerns may indicate stricter abatement than required by the BACT determination.

The represented calculation methods are intended as an aid in the completion of acceptable submittals; alternate calculation methods may be equally acceptable if they are based upon, and adequately demonstrate, sound engineering assumptions or data.

These guidelines are applicable as of this document's publication date but are subject to revision during the permit application preparation and review period. It is the responsibility of the applicants to remain abreast of any guideline or regulation developments that may affect their industries.

The electronic version of this document may not contain attachments or forms (such as the PI-1, Standard Exemptions, or tables) that can be obtained electronically elsewhere on the TNRCC Web site.

The special conditions included with these guidelines are for purposes of example only. Special conditions included in an actual permit are written by the reviewing engineer to address specific permit requirements and operating conditions.

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Chapter 2—Types of Flare and Oxidizer Systems

This document provides guidance for two classes of vapor combustion control devices: flares and vapor oxidizers. While there may be some overlap between the two, flares have generally been treated separately by the EPA and the TNRCC, in large part because flares have an open flame and often cannot be sampled, so emissions are estimated based on the results of flare testing performed in the early 1980s. Each of the two classes will be dealt with separately in each of the chapters of this document.

Combustion Control Devices NOT Discussed. This document will not cover permitting of RCRA or BIF units because the requirements for these units often go beyond the requirements for state air permitting. Incinerators used to treat solid wastes are covered in another technical guidance document, *Incinerators*. Guidance for combustion control devices associated with spray paint booths, coatings operations, and semiconductor facilities should be obtained by calling the TNRCC New Source Review Permits Division at (512) 239-1250.

Flares

Flare systems generally are open-flame control devices used for disposing of waste gas streams during both routine process and emergency or upset conditions. In addition to simple, unassisted flares, typical smokeless flare systems include, but are not limited to, the following:

- ***Enclosed Flares/Vapor Combustors.*** Enclosed flares are used in disposing of waste gas streams in instances where a visible flame is unacceptable. Applications include chemical processing, petroleum refining and production, and municipal waste gas treatment. These may be referred to as vapor combustors and can have more than one burner in the stack.

- ***Steam-Assisted Flares***. Steam-assisted flares are used in disposing of low-pressure waste gas streams when steam is available and practical to minimize smoking from the flare. Applications are similar to those of enclosed flares. Flares might also be assisted with natural gas if readily available on site; these flares would undergo a case-by-case review.

- ***Air-Assisted Flares.*** Air-assisted flares are used in disposing of low-pressure waste gas streams when practical or when steam utilities are not available to minimize smoking from the flare. Applications include chemical processing, petroleum refining and production, and pipeline transportation.

- ***Sonic Flares.*** Sonic flares are used in disposing of high-pressure waste gas streams. Applications include gas production, pipeline transportation, and treatment plants.

- ***Multipoint Flare Systems.*** Multipoint flare systems are used in disposing of both high- and low-pressure waste gas streams. Multiple burner tips in conjunction with a staged control system provide for controlled combustion. Applications are similar to those of air-assisted flares.

Vapor Oxidizers

These devices generally do not have an open flame but have an exhaust stack which allows for sampling and monitoring of exhaust emissions. The most common type, thermal, relies on the combustion heat of the waste gas and assist fuel (if required) to oxidize the waste gas air contaminants. Other types include:

- ***Recuperative.*** In this case, the waste gas is directed to a heat exchanger to be preheated by the exhaust gas, to minimize the need for additional assist fuel. Recuperative oxidizers are considered a subset of thermal oxidizers in this document.

- ***Regenerative***. Combustion takes place in a chamber with a heat sink, such as ceramic saddles, which retains the heat of combustion, allowing for combustion of more dilute vapor streams (which have a low heat of combustion) at a lower cost. These units generally have multiple chambers, which allow for the preheat of one chamber by exhaust gases while combustion takes place in another chamber.

- ***Catalytic.*** Combustion takes place over a catalyst that allows for combustion at a lower temperature (in the range of 600 to 800°F as opposed to greater than 1400°F for many thermal oxidizers). Catalytic oxidizers function best with a waste stream with constant flow and composition.

This chapter provides detailed instructions for the calculations necessary to verify BACT and estimate emissions from flares and vapor oxidizers. Flares must be checked to determine whether they will satisfy the flow and thermal requirements of 40 CFR § 60.18, and their emissions are determined by the use of emission factors. Example calculations are provided for these flare calculations.

Oxidizer emissions are determined by using previous sampling results or emission factors from the manufacturer or AP-42. These calculations are very similar to the flare calculations and are only discussed in general terms.

Flares: Introduction

Although emissions from emergency flares are not included in a permit when it is issued, emissions should be estimated for both routine process flares and emergency flares. Sometimes, emissions of routine pilot gas combustion may be included in an issued permit for emergency flares (although not required).

In this section, the *flare* emission factors and destruction efficiencies are presented first. This information is followed by sample *calculations* that demonstrate how to ensure that the requirements of 40 CFR § 60.18 are satisfied and how to estimate emissions from a flare. Flare data in Attachment B (typical refinery flare) will be used as a basis in most of the following calculations. Flare data in Attachment C (acid gas flare) will be used as a basis in the example calculations for SO_2 emissions.

Flare Emission Factors

The usual flare destruction efficiencies and emission factors are provided in Table 4. The high-Btu waste streams referred to in the table have a heating value greater than 1,000 Btu/scf.

Flare Destruction Efficiencies

Claims for destruction efficiencies greater than those listed in Table 4 will be considered on a case-by-case basis. The applicant may make one of the three following demonstrations to justify the higher destruction efficiency: (1) general method, (2) 99.5 percent justification, or (3) flare stack sampling.

Table 4. Flare Factors

Waste Stream	Destruction/Removal Efficiency (DRE)		
VOC	98 percent (generic) 99 percent for compounds containing no more than 3 carbons that contain no elements other than carbon and hydrogen in addition to the following compounds: methanol, ethanol, propanol, ethylene oxide and propylene oxide		
H_2S	98 percent		
NH_3	case by case		
CO	case by case		
Air Contaminants	**Emission Factors**		
thermal NO_x	steam-assist:	high Btu	0.0485 lb/MMBtu
		low Btu	0.068 lb/MMBtu
	other:	high Btu	0.138 lb/MMBtu
		low Btu	0.0641 lb/MMBtu
fuel NO_x	NO_x is 0.5 wt percent of inlet NH_3, other fuels case by case		
CO	steam-assist:	high Btu	0.3503 lb/MMBtu
		low Btu	0.3465 lb/MMBtu
	other:	high Btu	0.2755 lb/MMBtu
		low Btu	0.5496 lb/MMBtu
PM	none, required to be smokeless		
SO_2	100 percent S in fuel to SO_2		

*The only exeption ot this is if inorganics might be emitted from the flare. In the case of landfills, the AP-42 PM factor may be used. In other cases, the emissions should be based on the composition of the waste stream routed to the flare.

Table 1.4-1. EMISSION FACTORS FOR NITROGEN OXIDES (NO_x) AND CARBON MONOXIDE (CO) FROM NATURAL GAS COMBUSTION[a]

Combustor Type (MMBtu/hr Heat Input) [SCC]	NO_x[b]		CO	
	Emission Factor ($lb/10^6$ scf)	Emission Factor Rating	Emission Factor ($lb/10^6$ scf)	Emission Factor Rating
Large Wall-Fired Boilers (>100) [1-01-006-01, 1-02-006-01, 1-03-006-01]				
Uncontrolled (Pre-NSPS)[c]	280	A	84	B
Uncontrolled (Post-NSPS)[c]	190	A	84	B
Controlled - Low NO_x burners	140	A	84	B
Controlled - Flue gas recirculation	100	D	84	B
Small Boilers (<100) [1-01-006-02, 1-02-006-02, 1-03-006-02, 1-03-006-03]				
Uncontrolled	100	B	84	B
Controlled - Low NO_x burners	50	D	84	B
Controlled - Low NO_x burners/Flue gas recirculation	32	C	84	B
Tangential-Fired Boilers (All Sizes) [1-01-006-04]				
Uncontrolled	170	A	24	C
Controlled - Flue gas recirculation	76	D	98	D
Residential Furnaces (<0.3) [No SCC]				
Uncontrolled	94	B	40	B

[a] Reference 11. Units are in pounds of pollutant per million standard cubic feet of natural gas fired. To convert from $lb/10^6$ scf to $kg/10^6$ m^3, multiply by 16. Emission factors are based on an average natural gas higher heating value of 1,020 Btu/scf. To convert from $lb/10^6$ scf to lb/MMBtu, divide by 1,020. The emission factors in this table may be converted to other natural gas heating values by multiplying the given emission factor by the ratio of the specified heating value to this average heating value. SCC = Source Classification Code. ND = no data. NA = not applicable.

[b] Expressed as NO_2. For large and small wall fired boilers with SNCR control, apply a 24 percent reduction to the appropriate NO_X emission factor. For tangential-fired boilers with SNCR control, apply a 13 percent reduction to the appropriate NO_X emission factor.

[c] NSPS=New Source Performance Standard as defined in 40 CFR 60 Subparts D and Db. Post-NSPS units are boilers with greater than 250 MMBtu/hr of heat input that commenced construction modification, or reconstruction after August 17, 1971, and units with heat input capacities between 100 and 250 MMBtu/hr that commenced construction modification, or reconstruction after June 19, 1984.

TABLE 1.4-2. EMISSION FACTORS FOR CRITERIA POLLUTANTS AND GREENHOUSE GASES FROM NATURAL GAS COMBUSTION[a]

Pollutant	Emission Factor ($lb/10^6$ scf)	Emission Factor Rating
CO_2[b]	120,000	A
Lead	0.0005	D
N_2O (Uncontrolled)	2.2	E
N_2O (Controlled-low-NO_X burner)	0.64	E
PM (Total)[c]	7.6	D
PM (Condensable)[c]	5.7	D
PM (Filterable)[c]	1.9	B
SO_2[d]	0.6	A
TOC	11	B
Methane	2.3	B
VOC	5.5	C

[a] Reference 11. Units are in pounds of pollutant per million standard cubic feet of natural gas fired. Data are for all natural gas combustion sources. To convert from $lb/10^6$ scf to $kg/10^6$ m^3, multiply by 16. To convert from $lb/10^6$ scf to 1b/MMBtu, divide by 1,020. The emission factors in this table may be converted to other natural gas heating values by multiplying the given emission factor by the ratio of the specified heating value to this average heating value. TOC = Total Organic Compounds. VOC = Volatile Organic Compounds.

[b] Based on approximately 100% conversion of fuel carbon to CO_2. $CO_2[lb/10^6 \text{ scf}] = (3.67)(CON)(C)(D)$, where CON = fractional conversion of fuel carbon to CO_2, C = carbon content of fuel by weight (0.76), and D = density of fuel, 4.2×10^4 $lb/10^6$ 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 3.2-2. UNCONTROLLED EMISSION FACTORS FOR 4-STROKE LEAN-BURN ENGINES (Continued)

Pollutant	Emission Factor (lb/MMBtu)[b] (fuel input)	Emission Factor Rating
Acenaphthylene[k]	5.53 E-06	C
Acetaldehyde[k,l]	8.36 E-03	A
Acrolein[k,l]	5.14 E-03	A
Benzene[k]	4.40 E-04	A
Benzo(b)fluoranthene[k]	1.66 E-07	D
Benzo(e)pyrene[k]	4.15 E-07	D
Benzo(g,h,i)perylene[k]	4.14 E-07	D
Biphenyl[k]	2.12 E-04	D
Butane	5.41 E-04	D
Butyr/Isobutyraldehyde	1.01 E-04	C
Carbon Tetrachloride[k]	<3.67 E-05	E
Chlorobenzene[k]	<3.04 E-05	E
Chloroethane	1.87 E-06	D
Chloroform[k]	<2.85 E-05	E
Chrysene[k]	6.93 E-07	C
Cyclopentane	2.27 E-04	C
Ethane	1.05 E-01	C
Ethylbenzene[k]	3.97 E-05	B
Ethylene Dibromide[k]	<4.43 E-05	E
Fluoranthene[k]	1.11 E-06	C
Fluorene[k]	5.67 E-06	C
Formaldehyde[k,l]	5.28 E-02	A
Methanol[k]	2.50 E-03	B
Methylcyclohexane	1.23 E-03	C
Methylene Chloride[k]	2.00 E-05	C
n-Hexane[k]	1.11 E-03	C
n-Nonane	1.10 E-04	C

Table 3.2-2. UNCONTROLLED EMISSION FACTORS FOR 4-STROKE LEAN-BURN ENGINES
(Continued)

Pollutant	Emission Factor (lb/MMBtu)[b] (fuel input)	Emission Factor Rating
n-Octane	3.51 E-04	C
n-Pentane	2.60 E-03	C
Naphthalene[k]	7.44 E-05	C
PAH[k]	2.69 E-05	D
Phenanthrene[k]	1.04 E-05	D
Phenol[k]	2.40 E-05	D
Propane	4.19 E-02	C
Pyrene[k]	1.36 E-06	C
Styrene[k]	<2.36 E-05	E
Tetrachloroethane[k]	2.48 E-06	D
Toluene[k]	4.08 E-04	B
Vinyl Chloride[k]	1.49 E-05	C
Xylene[k]	1.84 E-04	B

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

[b] Emission factors were calculated in units of (lb/MMBtu) based on procedures in EPA Method 19. To convert from (lb/MMBtu) to (lb/10^6 scf), multiply by the heat content of the fuel. If the heat content is not available, use 1020 Btu/scf. To convert from (lb/MMBtu) to (lb/hp-hr) use the following equation:

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

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

[d] Based on 99.5% conversion of the fuel carbon to CO_2. CO_2 [lb/MMBtu] = (3.67)(%CON)(C)(D)(1/h), where %CON = percent conversion of fuel carbon to CO_2, C = carbon content of fuel by weight (0.75), D = density of fuel, 4.1 E+04 lb/10^6 scf, and

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Protocol for Equipment Leak Emission Estimates

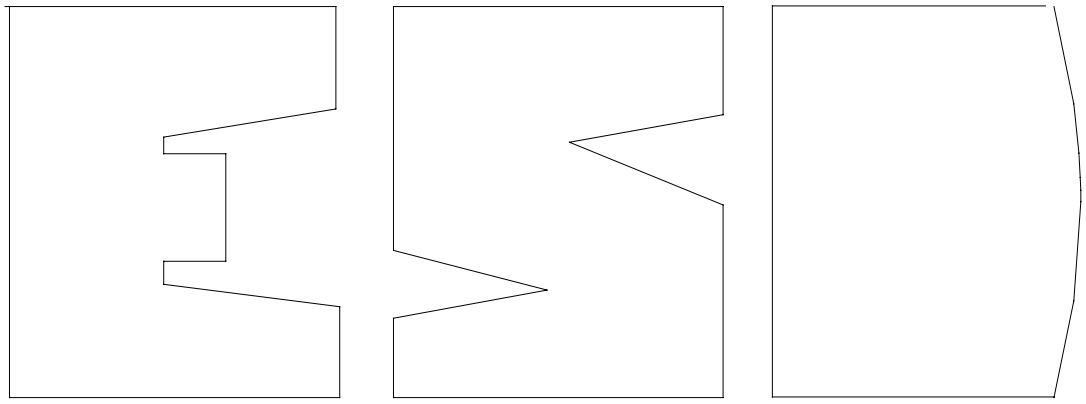


TABLE 2-4. OIL AND GAS PRODUCTION OPERATIONS AVERAGE EMISSION FACTORS (kg/hr/source)

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.

The following empirical expressions may be used to estimate the quantity in pounds (lb) of size-specific particulate emissions from an unpaved road, per vehicle mile traveled (VMT):

For vehicles traveling on unpaved surfaces at industrial sites, emissions are estimated from the following equation:

$$E = k\,(s/12)^a (W/3)^b \quad (1a)$$

and, for vehicles traveling on publicly accessible roads, dominated by light duty vehicles, emissions may be estimated from the following:

$$E = \frac{k\,(s/12)^a (S/30)^d}{(M/0.5)^c} - C \quad (1b)$$

where k, a, b, c and d are empirical constants (Reference 6) given below and

E = size-specific emission factor (lb/VMT)
s = surface material silt content (%)
W = mean vehicle weight (tons)
M = surface material moisture content (%)
S = mean vehicle speed (mph)
C = emission factor for 1980's vehicle fleet exhaust, brake wear and tire wear.

The source characteristics s, W and M are referred to as correction parameters for adjusting the emission estimates to local conditions. The metric conversion from lb/VMT to grams (g) per vehicle kilometer traveled (VKT) is as follows:

1 lb/VMT = 281.9 g/VKT

The constants for Equations 1a and 1b based on the stated aerodynamic particle sizes are shown in Tables 13.2.2-2 and 13.2.2-4. The PM-2.5 particle size multipliers (k-factors) are taken from Reference 27.

Table 13.2.2-2. CONSTANTS FOR EQUATIONS 1a AND 1b

Constant	Industrial Roads (Equation 1a)			Public Roads (Equation 1b)		
	PM-2.5	PM-10	PM-30*	PM-2.5	PM-10	PM-30*
k (lb/VMT)	0.15	1.5	4.9	0.18	1.8	6.0
a	0.9	0.9	0.7	1	1	1
b	0.45	0.45	0.45	-	-	-
c	-	-	-	0.2	0.2	0.3
d	-	-	-	0.5	0.5	0.3
Quality Rating	B	B	B	B	B	B

*Assumed equivalent to total suspended particulate matter (TSP)
"-" = not used in the emission factor equation

Table 13.2.2-2 also contains the quality ratings for the various size-specific versions of Equation 1a and 1b. The equation retains the assigned quality rating, if applied within the ranges of source conditions, shown in Table 13.2.2-3, that were tested in developing the equation:

Table 13.2.2-3. RANGE OF SOURCE CONDITIONS USED IN DEVELOPING EQUATION 1a AND 1b

Emission Factor	Surface Silt Content, %	Mean Vehicle Weight		Mean Vehicle Speed		Mean No. of Wheels	Surface Moisture Content, %
		Mg	ton	km/hr	mph		
Industrial Roads (Equation 1a)	1.8-25.2	1.8-260	2-290	8-69	5-43	4-17[a]	0.03-13
Public Roads (Equation 1b)	1.8-35	1.4-2.7	1.5-3	16-88	10-55	4-4.8	0.03-13

[a] See discussion in text.

As noted earlier, the models presented as Equations 1a and 1b were developed from tests of traffic on unpaved surfaces. Unpaved roads have a hard, generally nonporous surface that usually dries quickly after a rainfall or watering, because of traffic-enhanced natural evaporation. (Factors influencing how fast a road dries are discussed in Section 13.2.2.3, below.) The quality ratings given above pertain to the mid-range of the measured source conditions for the equation. A higher mean vehicle weight and a higher than normal traffic rate may be justified when performing a worst-case analysis of emissions from unpaved roads.

The emission factors for the exhaust, brake wear and tire wear of a 1980's vehicle fleet (*C*) was obtained from EPA's MOBILE6.2 model [23]. The emission factor also varies with aerodynamic size range

as shown in Table 13.2.2-4

Table 13.2.2-4. EMISSION FACTOR FOR 1980'S VEHICLE FLEET EXHAUST, BRAKE WEAR AND TIRE WEAR

Particle Size Range[a]	*C*, Emission Factor for Exhaust, Brake Wear and Tire Wear[b] lb/VMT
$PM_{2.5}$	0.00036
PM_{10}	0.00047
PM_{30}[c]	0.00047

[a] Refers to airborne particulate matter (PM-x) with an aerodynamic diameter equal to or less than x micrometers.
[b] Units shown are pounds per vehicle mile traveled (lb/VMT).
[c] PM-30 is sometimes termed "suspendable particulate" (SP) and is often used as a surrogate for TSP.

It is important to note that the vehicle-related source conditions refer to the average weight, speed, and number of wheels for all vehicles traveling the road. For example, if 98 percent of traffic on the road are 2-ton cars and trucks while the remaining 2 percent consists of 20-ton trucks, then the mean weight is 2.4 tons. More specifically, Equations 1a and 1b are *not* intended to be used to calculate a separate emission factor for each vehicle class within a mix of traffic on a given unpaved road. That is, in the example, one should *not* determine one factor for the 2-ton vehicles and a second factor for the 20-ton trucks. Instead, only one emission factor should be calculated that represents the "fleet" average of 2.4 tons for all vehicles traveling the road.

Moreover, to retain the quality ratings when addressing a group of unpaved roads, it is necessary that reliable correction parameter values be determined for the road in question. The field and laboratory procedures for determining road surface silt and moisture contents are given in AP-42 Appendices C.1 and C.2. Vehicle-related parameters should be developed by recording visual observations of traffic. In some cases, vehicle parameters for industrial unpaved roads can be determined by reviewing maintenance records or other information sources at the facility.

In the event that site-specific values for correction parameters cannot be obtained, then default values may be used.In the absence of site-specific silt content information, an appropriate mean value from Table 13.2.2-1 may be used as a default value, but the quality rating of the equation is reduced by two letters. Because of significant differences found between different types of road surfaces and between different areas of the country, use of the default moisture content value of 0.5 percent in Equation 1b is discouraged. The quality rating should be downgraded two letters when the default moisture content value is used. (It is assumed that readers addressing industrial roads have access to the information needed to develop average vehicle information in Equation 1a for their facility.)

The effect of routine watering to control emissions from unpaved roads is discussed below in Section 13.2.2.3, “Controls”. However, all roads are subject to some natural mitigation because of rainfall and other precipitation. The Equation 1a and 1b emission factors can be extrapolated to annual

Owner:	TBD		Owner Ref.:	H-101	
Purchaser:	Spitzer Industries		Purchaser Ref.:	J6867	
Manufacturer:	Tulsa Heaters Midstream		THM Ref.:	MJ20-451	
Service:	Hot Oil Heater		Project:	TBD	
Number:	1		Location:	TBD	
SHO Duty:	5.00	MMBTU/ hr	SHO Model:	SHO500	

Guarantees:

NOx	0.0401	Lb/MMBTU	30	ppm
SOx	no quote	Lb/MMBTU	-	ppm
CO	0.0407	Lb/MMBTU	50	ppm
VOC	0.0192	Lb/MMBTU	15	ppm
UHC	0.007	Lb/MMBTU	15	ppm
SPM	0.0156	Lb/MMBTU	18	ppm

			Design Case				Maximum Case			
Heat Release	LHV Basis		6.33	MMBTU/hr			6.97	MMBTU/hr		
Products of Combustion		MW								
	O2	32.00	176	Lbm/ hr			193	Lbm/ hr		
	N2 + Ar	28.15	4,462	Lbm/ hr			4,908	Lbm/ hr		
	CO2	44.01	855	Lbm/ hr			941	Lbm/ hr		
	H2O	18.02	651	Lbm/ hr			716	Lbm/ hr		
	NOx	46.01	0.25	Lbm/ hr /	30	ppm	0.28	Lbm/ hr /	30	ppm
	SOx	64.06	0.00	Lbm/ hr /	0	ppm	0.00	Lbm/ hr /	0	ppm
	CO	28.01	0.26	Lbm/ hr /	50	ppm	0.28	Lbm/ hr /	50	ppm
	VOC	44.10	0.12	Lbm/ hr /	15	ppm	0.13	Lbm/ hr /	15	ppm
	UHC	16.04	0.04	Lbm/ hr /	15	ppm	0.05	Lbm/ hr /	15	ppm
	SPM		0.10	Lbm/ hr /	18	ppm	0.11	Lbm/ hr /	18	ppm
	Total		6,145	Lbm/ hr			6,760	Lbm/ hr		
Flue Gas Exit Temp.			493	°F						
Flue Gas Exit Velocity			35.9	Ft/sec			39.5	Ft/sec		
Stack Height			19.9	ft			19.9	ft		
Stack ID			16	in			16	in		

NOTE:
THM emissions guarantees applicable between 50-100% of Design Case combustion conditions w/ 15% excess air.

THM emissions guarantees applicable for firebox temperatures above 1100°F.

Emissions above are for Design Case operation with air and fuel in ratio control. Upset conditions, such as operation outside the design, high turndown or start-up are not considered as guaranteed emissions cases.

The Maximum Case is the the specified heat release for the burner purchased. Extra duty is spec'd into the burner to ensure that the burner is never the limiting factor on duty.

revision	date	description	by	chk'd	appv'd
Rev. 0	15-Dec-20	Issued for Approval	JF	JDC	

Owner:	TBD		Owner Ref.:	H-101
Purchaser:	Spitzer		Purchaser Ref.:	J6653
Manufacturer:	Tulsa Heaters Midstream		THM Ref.:	MJ19-416
Service:	Hot Oil Heater		Project:	TBD
Number:	1		Location:	TBD
SHO Duty:	30.00	MMBTU/ hr	SHO Model:	SHO3000

Guarantees:

NOx	0.0401	Lb/MMBTU	30	ppm
SOx	no quote	Lb/MMBTU	-	ppm
CO	0.0407	Lb/MMBTU	50	ppm
VOC	0.0192	Lb/MMBTU	15	ppm
UHC	0.007	Lb/MMBTU	15	ppm
SPM	0.0156	Lb/MMBTU	18	ppm

		Design Case				Maximum Case			
Heat Release	LHV Basis	33.82	MMBTU/hr			37.20	MMBTU/hr		
Products of Combustion									
	MW								
O2	32.00	938	Lbm/ hr			1,032	Lbm/ hr		
N2 + Ar	28.15	23,829	Lbm/ hr			26,212	Lbm/ hr		
CO2	44.01	4,568	Lbm/ hr			5,025	Lbm/ hr		
H2O	18.02	3,476	Lbm/ hr			3,824	Lbm/ hr		
NOx	46.01	1.36	Lbm/ hr /	30	ppm	1.49	Lbm/ hr /	30	ppm
SOx	64.06	0.00	Lbm/ hr /	0	ppm	0.00	Lbm/ hr /	0	ppm
CO	28.01	1.37	Lbm/ hr /	50	ppm	1.51	Lbm/ hr /	50	ppm
VOC	44.10	0.65	Lbm/ hr /	15	ppm	0.71	Lbm/ hr /	15	ppm
UHC	16.04	0.24	Lbm/ hr /	15	ppm	0.26	Lbm/ hr /	15	ppm
SPM		0.53	Lbm/ hr /	18	ppm	0.58	Lbm/ hr /	18	ppm
Total		32,815	Lbm/ hr			36,097	Lbm/ hr		
Flue Gas Exit Temp.		426	°F						
Flue Gas Exit Velocity		34.8	Ft/sec			38.3	Ft/sec		
Stack Height		28.6	ft			28.6	ft		
Stack ID		36	in			36	in		

NOTE:
THM emissions guarantees applicable between 50-100% of Design Case combustion conditions w/ 15% excess air.

THM emissions guarantees applicable for firebox temperatures above 1100°F.

Emissions above are for Design Case operation with air and fuel in ratio control. Upset conditions, such as operation outside the design, high turndown or start-up are not considered as guaranteed emissions cases.

The Maximum Case is the the specified heat release for the burner purchased. Extra duty is spec'd into the burner to ensure that the burner is never the limiting factor on duty.

revision	date	description	by	chk'd	appv'd

Owner:	TBD		Owner Ref.:	H-101
Purchaser:	Spitzer		Purchaser Ref.:	6928000
Manufacturer:	Tulsa Heaters Midstream		THM Ref.:	MJ21-454
Service:	Hot Oil Heater		Project:	TBD
Number:	1		Location:	TBD
SHO Duty:	30.00	MMBTU/ hr	SHO Model:	SHO3000

Guarantees:

NOx	0.0401	Lb/MMBTU	30 ppm
SOx	no quote	Lb/MMBTU	- ppm
CO	0.0407	Lb/MMBTU	50 ppm
VOC	0.0192	Lb/MMBTU	15 ppm
UHC	0.007	Lb/MMBTU	15 ppm
SPM	0.0156	Lb/MMBTU	18 ppm

		MW	Design Case				Maximum Case			
Heat Release	LHV Basis		33.82	MMBTU/hr			37.20	MMBTU/hr		
Products of Combustion										
	O2	32.00	938	Lbm/ hr			1,032	Lbm/ hr		
	N2 + Ar	28.15	23,829	Lbm/ hr			26,212	Lbm/ hr		
	CO2	44.01	4,568	Lbm/ hr			5,025	Lbm/ hr		
	H2O	18.02	3,476	Lbm/ hr			3,824	Lbm/ hr		
	NOx	46.01	1.36	Lbm/ hr /	30	ppm	1.49	Lbm/ hr /	30	ppm
	SOx	64.06	0.00	Lbm/ hr /	0	ppm	0.00	Lbm/ hr /	0	ppm
	CO	28.01	1.37	Lbm/ hr /	50	ppm	1.51	Lbm/ hr /	50	ppm
	VOC	44.10	0.65	Lbm/ hr /	15	ppm	0.71	Lbm/ hr /	15	ppm
	UHC	16.04	0.24	Lbm/ hr /	15	ppm	0.26	Lbm/ hr /	15	ppm
	SPM		0.53	Lbm/ hr /	18	ppm	0.58	Lbm/ hr /	18	ppm
	Total		32,815	Lbm/ hr			36,097	Lbm/ hr		
Flue Gas Exit Temp.			426	°F						
Flue Gas Exit Velocity			34.8	Ft/sec			38.3	Ft/sec		
Stack Height			28.6	ft			28.6	ft		
Stack ID			36	in			36	in		

NOTE:

THM emissions guarantees applicable between 50-100% of Design Case combustion conditions w/ 15% excess air.

THM emissions guarantees applicable for firebox temperatures above 1100°F.

Emissions above are for Design Case operation with air and fuel in ratio control. Upset conditions, such as operation outside the design, high turndown or start-up are not considered as guaranteed emissions cases.

The Maximum Case is the the specified heat release for the burner purchased. Extra duty is spec'd into the burner to ensure that the burner is never the limiting factor on duty.

revision	date	description	by	chk'd	appv'd
Rev. 0	15-Feb-21	Issued with Proposal	JF	JDC	

Owner:	TBD		Owner Ref.:	H-101
Purchaser:	Spitzer		Purchaser Ref.:	8008001
Manufacturer:	Tulsa Heaters Midstream		THM Ref.:	MJ22-482
Service:	Hot Oil Heater		Project:	TBD
Number:	1		Location:	Jal, NM
SHO Duty:	30.00	MMBTU/ hr	SHO Model:	SHO3000

Guarantees:

NOx	0.0401	Lb/MMBTU	30 ppm
SOx	no quote	Lb/MMBTU	- ppm
CO	0.0407	Lb/MMBTU	50 ppm
VOC	0.0192	Lb/MMBTU	15 ppm
UHC	0.007	Lb/MMBTU	15 ppm
SPM	0.0156	Lb/MMBTU	18 ppm

		MW	Design Case				Maximum Case			
Heat Release	LHV Basis		33.82	MMBTU/hr			37.20	MMBTU/hr		
Products of Combustion										
	O2	32.00	938	Lbm/ hr			1,032	Lbm/ hr		
	N2 + Ar	28.15	23,829	Lbm/ hr			26,212	Lbm/ hr		
	CO2	44.01	4,568	Lbm/ hr			5,025	Lbm/ hr		
	H2O	18.02	3,476	Lbm/ hr			3,824	Lbm/ hr		
	NOx	46.01	1.36	Lbm/ hr /	30	ppm	1.49	Lbm/ hr /	30	ppm
	SOx	64.06	0.00	Lbm/ hr /	0	ppm	0.00	Lbm/ hr /	0	ppm
	CO	28.01	1.37	Lbm/ hr /	50	ppm	1.51	Lbm/ hr /	50	ppm
	VOC	44.10	0.65	Lbm/ hr /	15	ppm	0.71	Lbm/ hr /	15	ppm
	UHC	16.04	0.24	Lbm/ hr /	15	ppm	0.26	Lbm/ hr /	15	ppm
	SPM		0.53	Lbm/ hr /	18	ppm	0.58	Lbm/ hr /	18	ppm
	Total		32,815	Lbm/ hr			36,097	Lbm/ hr		
Flue Gas Exit Temp.			426	°F						
Flue Gas Exit Velocity			34.8	Ft/sec			38.3	Ft/sec		
Stack Height			28.6	ft			28.6	ft		
Stack ID			36	in			36	in		

NOTE:

THM emissions guarantees applicable between 50-100% of Design Case combustion conditions w/ 15% excess air.

THM emissions guarantees applicable for firebox temperatures above 1100°F.

Emissions above are for Design Case operation with air and fuel in ratio control. Upset conditions, such as operation outside the design, high turndown or start-up are not considered as guaranteed emissions cases.

The Maximum Case is the the specified heat release for the burner purchased. Extra duty is spec'd into the burner to ensure that the burner is never the limiting factor on duty.

Rev. 0	5-Jan-22	Issued for Approval	JF	JDC	
revision	date	description	by	chk'd	appv'd

Owner:	Pinon Midstream		Owner Ref.:	H-101
Purchaser:	Pinon Midstream		Purchaser Ref.:	TBD
Manufacturer:	Tulsa Heaters Midstream		THM Ref.:	P23-0908
Service:	Hot Oil Heater		Project:	Train V 70 Amine
Number:	1		Location:	South TX
SHO Duty:	65.00	MMBTU/ hr	SHO Model:	SHO5000

Guarantees:

NOx	0.0401	Lb/MMBTU	30	ppm
SOx	no quote	Lb/MMBTU	-	ppm
CO	0.0407	Lb/MMBTU	50	ppm
VOC	0.0192	Lb/MMBTU	15	ppm
UHC	0.007	Lb/MMBTU	15	ppm
SPM	0.0156	Lb/MMBTU	17	ppm

		Design Case				Maximum Case			
Heat Release	LHV Basis	74.70	MMBTU/hr			82.17	MMBTU/hr		
Products of Combustion									
	MW								
O2	32.00	3,445	Lbm/ hr			3,790	Lbm/ hr		
N2 + Ar	28.15	57,209	Lbm/ hr			62,930	Lbm/ hr		
CO2	44.01	10,089	Lbm/ hr			11,098	Lbm/ hr		
H2O	18.02	7,713	Lbm/ hr			8,485	Lbm/ hr		
NOx	46.01	2.99	Lbm/ hr /	30	ppm	3.29	Lbm/ hr /	30	ppm
SOx	64.06	0.00	Lbm/ hr /	0	ppm	0.00	Lbm/ hr /	0	ppm
CO	28.01	3.04	Lbm/ hr /	50	ppm	3.34	Lbm/ hr /	50	ppm
VOC	44.10	1.43	Lbm/ hr /	15	ppm	1.58	Lbm/ hr /	15	ppm
UHC	16.04	0.52	Lbm/ hr /	15	ppm	0.57	Lbm/ hr /	15	ppm
SPM		1.16	Lbm/ hr /	17	ppm	1.28	Lbm/ hr /	17	ppm
Total		78,466	Lbm/ hr			86,312	Lbm/ hr		
Flue Gas Exit Temp.		457	°F						
Flue Gas Exit Velocity		48.1	Ft/sec			52.9	Ft/sec		
Stack Height		41.0	ft			41.0	ft		
Stack ID		48	in			48	in		

NOTE:
THM emissions guarantees applicable between 50-100% of Design Case combustion conditions w/ 15% excess air.

THM emissions guarantees applicable for firebox temperatures above 1100°F.

Emissions above are for Design Case operation with air and fuel in ratio control. Upset conditions, such as operation outside the design, high turndown or start-up are not considered as guaranteed emissions cases.

The Maximum Case is the the specified heat release for the burner purchased. Extra duty is spec'd into the burner to ensure that the burner is never the limiting factor on duty.

Rev. 0	20-Sep-22	Issued for Approval	JF	JDC	
revision	date	description	by	chk'd	appv'd

Owner:	TBD		Owner Ref.:	H-101
Purchaser:	TBD		Purchaser Ref.:	TBD
Manufacturer:	Tulsa Heaters Midstream		THM Ref.:	TBD
Service:	Hot Oil Heater		Project:	TBD
Number:	1		Location:	TBD
SHO Duty:	20.00	MMBTU/ hr	SHO Model:	SHO2000

Guarantees:

NOx	0.040	Lb/MMBTU	30	ppm
SOx	no quote	Lb/MMBTU	-	ppm
CO	0.0407	Lb/MMBTU	50	ppm
VOC	0.0192	Lb/MMBTU	15	ppm
UHC	0.007	Lb/MMBTU	15	ppm
SPM	0.0156	Lb/MMBTU	18	ppm

1

		Design Case				Maximum Case				
Heat Release	LHV Basis	25.30	MMBTU/hr			27.83	MMBTU/hr			
Products of Combustion										
	MW									
O2	32.00	702	Lbm/ hr			772	Lbm/ hr			
N2 + Ar	28.15	17,828	Lbm/ hr			19,611	Lbm/ hr			1
CO2	44.01	3,418	Lbm/ hr			3,759	Lbm/ hr			1
H2O	18.02	2,601	Lbm/ hr			2,861	Lbm/ hr			1
NOx	46.01	1.01	Lbm/ hr /	30	ppm	1.12	Lbm/ hr /	30	ppm	
SOx	64.06	0.00	Lbm/ hr /	0	ppm	0.00	Lbm/ hr /	0	ppm	
CO	28.01	1.03	Lbm/ hr /	50	ppm	1.13	Lbm/ hr /	50	ppm	
VOC	44.10	0.49	Lbm/ hr /	15	ppm	0.53	Lbm/ hr /	15	ppm	
UHC	16.04	0.18	Lbm/ hr /	15	ppm	0.19	Lbm/ hr /	15	ppm	
SPM		0.39	Lbm/ hr /	18	ppm	0.43	Lbm/ hr /	18	ppm	1
Total		24,552	Lbm/ hr			27,007	Lbm/ hr			1
Flue Gas Exit Temp.		490	°F							
Flue Gas Exit Velocity		40.1	Ft/sec			44.1	Ft/sec			1
Stack Height		25.5	ft			25.5	ft			
Stack ID		30	in			30	in			

NOTE:
THM emissions guarantees applicable between 50-100% of Design Case combustion conditions w/ 15% excess air.

THM emissions guarantees applicable for firebox temperatures above 1100°F.

Emissions above are for Design Case operation with air and fuel in ratio control. Upset conditions, such as operation outside the design, high turndown or start-up are not considered as guaranteed emissions cases.

The Maximum Case is the the specified heat release for the burner purchased. Extra duty is spec'd into the burner to ensure that the burner is never the limiting factor on duty.

revision	date	description	by	chk'd	appv'd
Rev. 1	28-Jul-23	Revised Fuel Gas Comp	JF	EH	
Rev. 0	15-Dec-20	Issued for Approval	JF	JDC	

Owner:	Pinon Midstream		Owner Ref.:	H-101
Purchaser:	Pinon Midstream		Purchaser Ref.:	TBD
Manufacturer:	Tulsa Heaters Midstream		THM Ref.:	P23-0909
Service:	Hot Oil Heater		Project:	Train V 70 Amine
Number:	1		Location:	South TX
SHO Duty:	70.00	MMBTU/ hr	SHO Model:	SHO5000

Guarantees:

NOx	0.0401	Lb/MMBTU	30 ppm
SOx	no quote	Lb/MMBTU	- ppm
CO	0.0407	Lb/MMBTU	50 ppm
VOC	0.0192	Lb/MMBTU	15 ppm
UHC	0.007	Lb/MMBTU	15 ppm
SPM	0.0156	Lb/MMBTU	17 ppm

		Design Case				Maximum Case			
Heat Release	LHV Basis	80.83	MMBTU/hr			88.91	MMBTU/hr		
Products of Combustion									
	MW								
O2	32.00	3,728	Lbm/ hr			4,101	Lbm/ hr		
N2 + Ar	28.15	61,908	Lbm/ hr			68,099	Lbm/ hr		
CO2	44.01	10,918	Lbm/ hr			12,010	Lbm/ hr		
H2O	18.02	8,347	Lbm/ hr			9,182	Lbm/ hr		
NOx	46.01	3.24	Lbm/ hr /	30	ppm	3.56	Lbm/ hr /	30	ppm
SOx	64.06	0.00	Lbm/ hr /	0	ppm	0.00	Lbm/ hr /	0	ppm
CO	28.01	3.29	Lbm/ hr /	50	ppm	3.62	Lbm/ hr /	50	ppm
VOC	44.10	1.55	Lbm/ hr /	15	ppm	1.71	Lbm/ hr /	15	ppm
UHC	16.04	0.56	Lbm/ hr /	15	ppm	0.62	Lbm/ hr /	15	ppm
SPM		1.26	Lbm/ hr /	17	ppm	1.39	Lbm/ hr /	17	ppm
Total		84,911	Lbm/ hr			93,403	Lbm/ hr		
Flue Gas Exit Temp.		472	°F						
Flue Gas Exit Velocity		52.9	Ft/sec			58.2	Ft/sec		
Stack Height		41.0	ft			41.0	ft		
Stack ID		48	in			48	in		

NOTE:
THM emissions guarantees applicable between 50-100% of Design Case combustion conditions w/ 15% excess air.

THM emissions guarantees applicable for firebox temperatures above 1100°F.

Emissions above are for Design Case operation with air and fuel in ratio control. Upset conditions, such as operation outside the design, high turndown or start-up are not considered as guaranteed emissions cases.

The Maximum Case is the the specified heat release for the burner purchased. Extra duty is spec'd into the burner to ensure that the burner is never the limiting factor on duty.

Rev. 0	20-Sep-22	Issued for Approval	JF	JDC	
revision	date	description	by	chk'd	appv'd

Owner:	Pinon Midstream		Owner Ref.:	H-741
Purchaser:	Pinon Midstream		Purchaser Ref.:	TBD
Manufacturer:	Tulsa Heaters Midstream		THM Ref.:	P23-0910
Service:	Regen Gas Heater		Project:	RSV 230
Number:	1		Location:	South TX
SHO Duty:	7.29	MMBTU/ hr	SHO Model:	SHO500

Guarantees:

NOx	0.0401	Lb/MMBTU	30	ppm
SOx	no quote	Lb/MMBTU	-	ppm
CO	0.0407	Lb/MMBTU	50	ppm
VOC	0.0192	Lb/MMBTU	15	ppm
UHC	0.007	Lb/MMBTU	15	ppm
SPM	0.0132	Lb/MMBTU	15	ppm

			Design Case				Maximum Case			
Heat Release	LHV Basis		8.26	MMBTU/hr			9.09	MMBTU/hr		
Products of Combustion		MW								
	O2	32.00	229	Lbm/ hr			252	Lbm/ hr		
	N2 + Ar	28.15	5,859	Lbm/ hr			6,445	Lbm/ hr		
	CO2	44.01	1,067	Lbm/ hr			1,174	Lbm/ hr		
	H2O	18.02	896	Lbm/ hr			985	Lbm/ hr		
	NOx	46.01	0.33	Lbm/ hr /	30	ppm	0.36	Lbm/ hr /	30	ppm
	SOx	64.06	0.00	Lbm/ hr /	0	ppm	0.00	Lbm/ hr /	0	ppm
	CO	28.01	0.34	Lbm/ hr /	50	ppm	0.37	Lbm/ hr /	50	ppm
	VOC	44.10	0.16	Lbm/ hr /	15	ppm	0.17	Lbm/ hr /	15	ppm
	UHC	16.04	0.06	Lbm/ hr /	15	ppm	0.06	Lbm/ hr /	15	ppm
	SPM		0.11	Lbm/ hr /	15	ppm	0.12	Lbm/ hr /	15	ppm
	Total		8,052	Lbm/ hr			8,857	Lbm/ hr		
Flue Gas Exit Temp.			442	°F						
Flue Gas Exit Velocity			44.8	Ft/sec			49.3	Ft/sec		
Stack Height			20.3	ft			20.3	ft		
Stack ID			16	in			16	in		

NOTE:
THM emissions guarantees applicable between 50-100% of Design Case combustion conditions w/ 15% excess air.

THM emissions guarantees applicable for firebox temperatures above 1100°F.

Emissions above are for Design Case operation with air and fuel in ratio control. Upset conditions, such as operation outside the design, high turndown or start-up are not considered as guaranteed emissions cases.

The Maximum Case is the the specified heat release for the burner purchased. Extra duty is spec'd into the burner to ensure that the burner is never the limiting factor on duty.

revision	date	description	by	chk'd	appv'd

Owner:	Pinon Midstream		Owner Ref.:	H-781
Purchaser:	Pinon Midstream		Purchaser Ref.:	TBD
Manufacturer:	Tulsa Heaters Midstream		THM Ref.:	P23-0911
Service:	Heat Medium Heater		Project:	RSV 230
Number:	1		Location:	South TX
SHO Duty:	17.55	MMBTU/ hr	SHO Model:	SHO1750

Guarantees:

NOx	0.0401	Lb/MMBTU	30	ppm
SOx	no quote	Lb/MMBTU	-	ppm
CO	0.0407	Lb/MMBTU	50	ppm
VOC	0.0192	Lb/MMBTU	15	ppm
UHC	0.007	Lb/MMBTU	15	ppm
SPM	0.0132	Lb/MMBTU	15	ppm

			Design Case				Maximum Case			
Heat Release	LHV Basis		20.04	MMBTU/hr			22.04	MMBTU/hr		
Products of Combustion		MW								
	O2	32.00	556	Lbm/ hr			612	Lbm/ hr		
	N2 + Ar	28.15	14,210	Lbm/ hr			15,631	Lbm/ hr		
	CO2	44.01	2,588	Lbm/ hr			2,847	Lbm/ hr		
	H2O	18.02	2,173	Lbm/ hr			2,390	Lbm/ hr		
	NOx	46.01	0.80	Lbm/ hr /	30	ppm	0.88	Lbm/ hr /	30	ppm
	SOx	64.06	0.00	Lbm/ hr /	0	ppm	0.00	Lbm/ hr /	0	ppm
	CO	28.01	0.81	Lbm/ hr /	50	ppm	0.90	Lbm/ hr /	50	ppm
	VOC	44.10	0.38	Lbm/ hr /	15	ppm	0.42	Lbm/ hr /	15	ppm
	UHC	16.04	0.14	Lbm/ hr /	15	ppm	0.15	Lbm/ hr /	15	ppm
	SPM		0.26	Lbm/ hr /	15	ppm	0.29	Lbm/ hr /	15	ppm
	Total		19,530	Lbm/ hr			21,483	Lbm/ hr		
Flue Gas Exit Temp.			467	°F						
Flue Gas Exit Velocity			35.9	Ft/sec			39.5	Ft/sec		
Stack Height			24.3	ft			24.3	ft		
Stack ID			28	in			28	in		

NOTE:
THM emissions guarantees applicable between 50-100% of Design Case combustion conditions w/ 15% excess air.

THM emissions guarantees applicable for firebox temperatures above 1100°F.

Emissions above are for Design Case operation with air and fuel in ratio control. Upset conditions, such as operation outside the design, high turndown or start-up are not considered as guaranteed emissions cases.

The Maximum Case is the the specified heat release for the burner purchased. Extra duty is spec'd into the burner to ensure that the burner is never the limiting factor on duty.

revision	date	description	by	chk'd	appv'd

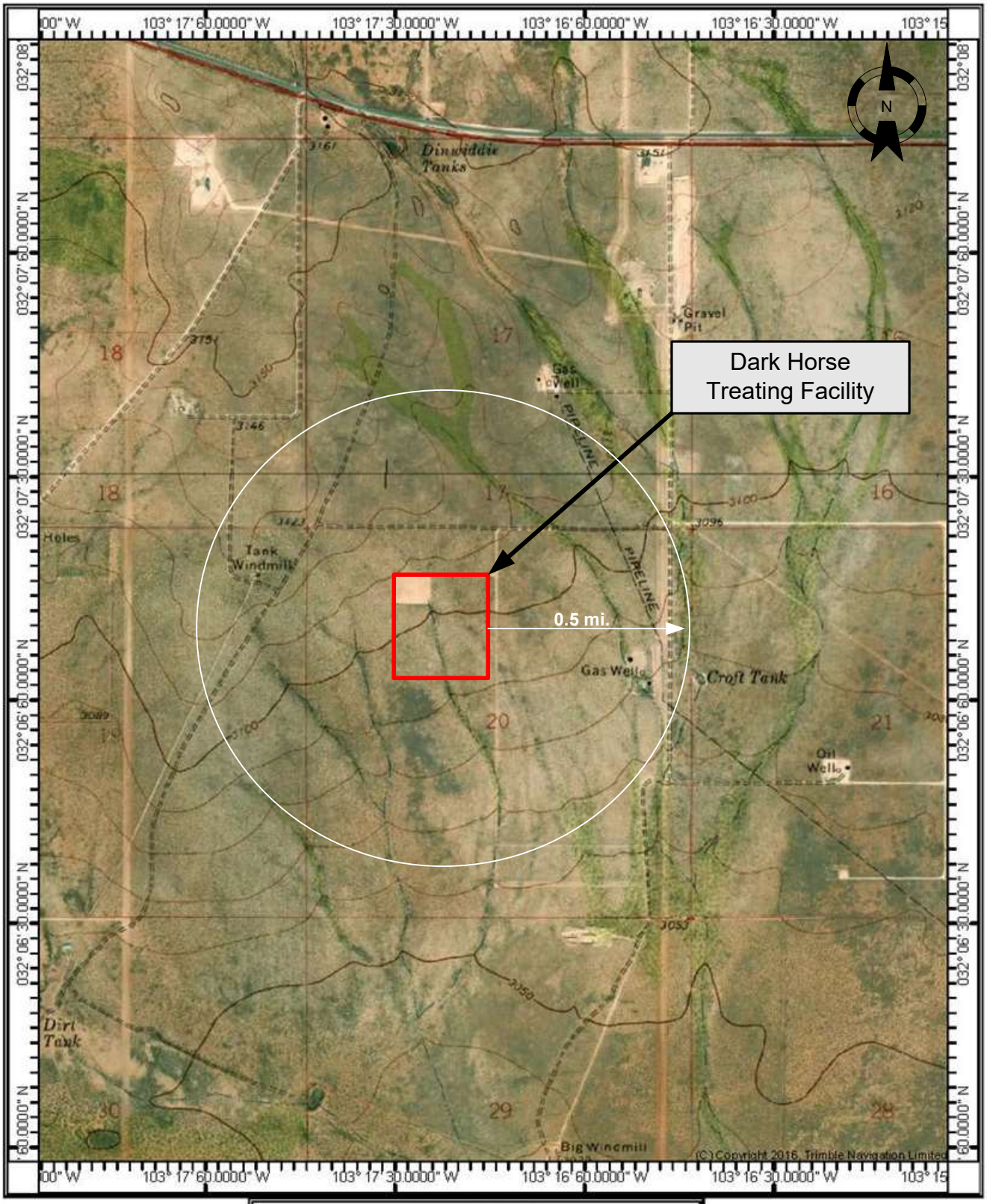
Section 8

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	

An area map of the Dark Horse Treating Facility is attached.



ALLIANT ENVIRONMENTAL, LLC			**Area Map**	**Piñon Midstream, LLC**	
Scale: **1:20,000**	Drawn by: MDF	Date: 10/18/2023	**Dark Horse Treating Facility** N 32° 7' 12.40" Latitude W 103° 17' 22.79" Longitude	Project No.:	File Name: **Dark Horse TF Diagrams**	Figure:
	Chk'd by:	Date:				

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.

All required documentation for proof of public notice is attached.

Nearby Property Owners (within 0.5 mile of the property boundary) and Municipalities/Counties (within 10 miles):

Name	Mailing Address	Category of PN
Lea County	Lea County Manager (Mike Gallagher) 100 N. Main Ave, Suite 4 Lovington, NM 88260	County
City of Jal	Jal Mayor - Stephen Aldridge PO Drawer 340 710 W. Wyoming Jal, NM 88252	Municipality
Fulfer Ranch, LLC	PO Box 1224 Jal, NM 88252	Surrounding Property Owner
Oscar Rodriguez	PO Box 549 Jal, NM 88252	Surrounding Property Owner
Juanita Railey	3613 Jonette Dr Ft Worth, TX 76118	Surrounding Property Owner
Wayne W Webster	14 Gasoline Alley Rd Jal, NM 88252	Surrounding Property Owner
Billy Ralph Emerson	PO Box 75 Jal, NM 88252	Surrounding Property Owner
Plains Pipeline LP	Attn: Property Tax Department 333 Clay Street, Suite 1600 Houston, TX 77002	Surrounding Property Owner
El Paso Natural Gas Co	PO Box 4372 Houston, TX 77210	Surrounding Property Owner
New Mexico State Land Office	PO Box 1148 Santa Fe, NM 87504	Surrounding Property Owner
USA - Bureau of Land Management	BLM-New Mexico State Office 301 Dinosaur Trail Santa Fe, NM 87508	Surrounding Property Owner
Intrepid Potash-New Mexico, LLC	707 17th St., Ste. 4200 Denver, CO 80202	Surrounding Property Owner

Newspaper: Hobbs News Sun

Radio: KIXN 102.9 FM

Posting Locations:

1. Facility Entrance
2. Woolworth Community Library - 100 E Utah Ave, Jal, NM 88252
3. Jal City Hall - 710 W Wyoming Ave, Jal, NM 88252
4. USPS - 111 S 4th St, Jal, NM 88252

General Posting of Notices – Certification

I, Nicholas G Brown, the undersigned, certify that on 10/23/2023, posted a true and correct copy of the attached Public Notice in the following publicly accessible and conspicuous places in Jal of Lea County, State of New Mexico on the following dates:

1. Facility entrance 10/20/2023
2. Woolworth Community Library, 100 E Utah Ave., Jal, NM 88252 10/20/2023
3. Jal City Hall, 710 W Wyoming Ave., Jal, NM 88252 10/23/2023
4. USPS, 111 S 4th St., Jal, NM 88252 10/20/2023

Signed this 23rd day of October, 2023.

Signature

10-23-23
Date

Nicholas Brown
Printed Name

Asset Manager
Title {APPLICANT OR RELATIONSHIP TO APPLICANT}

NOTICE

Pinon Midstream, LLC announces its application to the New Mexico Environment Department for an air quality permit for the modification of its existing Dark Horse Treating Facility. The Dark Horse Treating Facility currently operates under GCP-O&G Permit number 9058 but as the proposed modifications will no longer allow the site to qualify under the GCP-O&G, a New Source Review Permit application is being submitted. The expected date of application submittal to the Air Quality Bureau is October 27, 2023.

The exact location for the proposed facility known as, Dark Horse Treating Facility, is at latitude 32.120112 dec deg North and longitude -103.289663 dec deg West. The approximate location of this facility is 5.9 miles west of Jal in Lea County.

The proposed modification consists of expanding the existing gas treating and CO_2 sequestration facility by adding three (3) additional natural gas processing trains and two (2) flares to the site.

The estimated maximum quantities of any regulated air contaminants will be as follows in pound per hour (pph) and tons per year (tpy). These reported emissions could change slightly during the course of the Department's review:

Pollutant:	Pounds per hour	Tons per year
Particulate Matter (PM)	10.0 pph	37.0 tpy
PM_{10}	10.0 pph	37.0 tpy
$PM_{2.5}$	9.0 pph	36.0 tpy
Sulfur Dioxide (SO_2)	5393.0 pph	189.0 tpy
Nitrogen Oxides (NO_x)	306.0 pph	167.0 tpy
Carbon Monoxide (CO)	575.0 pph	179.0 tpy
Volatile Organic Compounds (VOC)	372.0 pph	249.0 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	17.0 pph	69.0 tpy
Toxic Air Pollutant (TAP)	n/a pph	n/a tpy
Green House Gas Emissions as Total CO_2e	n/a	350,100.0 tpy

The standard and maximum operating schedule of the facility will be 24 hours a day, 7 days a week, and a maximum of 52 weeks per year.

The owner and/or operator of the Facility is: Pinon Midstream, LLC, 20445 SH 249, Suite 300, Houston, TX 77070.

If you have any comments about the construction or operation of this facility, and you want your comments to be made as part of the permit review process, you must submit your comments in writing to this address: Permit Programs Manager; New Mexico Environment Department; Air Quality Bureau; 525 Camino de los Marquez, Suite 1; Santa Fe, New Mexico; 87505-1816. Other comments and questions may be submitted verbally. (505) 476-4300; 1 800 224-7009.

With your comments, please refer to the company name and facility name, or send a copy of this notice along with your comments. This information is necessary since the Department may have not yet received the permit application. Please include a legible return mailing address. Once the Department has completed its preliminary review of the application and its air quality impacts, the Department's notice will be published in the legal section of a newspaper circulated near the facility location.

Attención

Este es un aviso de la oficina de Calidad del Aire del Departamento del Medio Ambiente de Nuevo México, acerca de las emisiones producidas por un establecimiento en esta área. Si usted desea información en español, por favor comuníquese con esa oficina al teléfono 505-629-3395.

Notice of Non-Discrimination

NMED does not discriminate on the basis of race, color, national origin, disability, age or sex in the administration of its programs or activities, as required by applicable laws and regulations. NMED is responsible for coordination of compliance efforts and receipt of inquiries concerning non-discrimination requirements implemented by 40 C.F.R. Part 7, including Title VI of the Civil Rights Act of 1964, as amended; Section 504 of the Rehabilitation Act of 1973; the Age Discrimination Act of 1975, Title IX of the Education Amendments of 1972, and Section 13 of the Federal Water Pollution Control Act Amendments of 1972. If you have any questions about this notice or any of NMED's non-discrimination programs, policies or procedures, or if you believe that you have been discriminated against with respect to a NMED program or activity, you may contact: Non-Discrimination Coordinator, NMED, 1190 St. Francis Dr., Suite N4050, P.O. Box 5469, Santa Fe, NM 87502, (505) 827-2855, nd.coordinator@env.nm.gov. You may also visit our website at https://www.env.nm.gov/non-employee-discrimination-complaint-page/ to learn how and where to file a complaint of discrimination.

Hurdle

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ing operations in New Mexico. However, it should be pointed out the report does state PFAS chemicals are found in everything from recycled paper products to Styrofoam food containers.

"Paper bags are high in PFAS," Shoup said. "There is a lot of well-known health impacts, some of the ones they outlined that are well studied include: increased risk of high blood pressure, low birth weight, kidney cancer increase and testicular cancer."

In New Mexico in particular, the report states that from 2013-2022 261 wells were injected with 9,000 pounds of PFAS chemicals.

"Those are just the ones they have to disclose," Shoup said. "The concern is the thousands of wells that we don't know about."

She said New Mexico law does not require oil and gas companies to disclose if PFAS chemicals are in their fracturing fluids, used to crack open underground reservoirs to increase oil and gas production.

Colorado recently passed a law banning PFAS chemicals in fracking fluids and restricts the sale of PFAS in consumer products like carpets, furniture, cosmetics, food packaging and children's products. It is the first state to have done so.

California is also requiring the disclosure of PFAS chemicals in fracking fluids, Shoup said.

"In Colorado, they just want the ingredient list, not the recipe," Shoup said. "To the best of my knowledge, it has not been all that controversial."

However, the issue did get stirred up in Colorado. An editorial published in the Denver Post in March 2022 from API Colorado, a division of the American Petroleum Institute, highlights the political posturing around the issue.

"In response to a recent Denver Post editorial, Colorado's natural gas and oil industry would like to respond. We couldn't agree more with the headline — 'PFAS should not be used in hydraulic fracturing,'" reads the editorial, written by Lynn Granger, executive director of API Colorado. "The report, paid for by the Sierra Club, insinuates citing records from a disclosure website that PFAS have been used in Colorado hydraulic fracturing operations, and without any evidence concluded that companies that fail to disclose trade secrets or intellectual property information might be hiding other uses of PFAS, which is simply untrue."

"It is important to clarify the motivation of the report," the editorial continues. "The Sierra Club and Physicians for Social Responsibility are committed to stopping responsible oil and natural gas development in Colorado and across the United States. It's little surprise, then, that the final recommendation from the analysis is that lawmakers and regulators 'Limit or ban drilling and fracking.'"

"… when political agendas motivate science, a report like this is the result," the editorial sums up.

That is the concern of Sen. David Gallegos, R-Eunice, a member of the hazardous materials committee.

"I think it was about giving us a black eye on the fracking side even though she lives in oil country," Gallegos said of the presentation. "It is almost demonizing the fracking and oil and gas."

New Mexico's Oil Conservation Division of the New Mexico Environment Department has granted a rule-making process on the PFAS issue that should be taken up sometime early next year.

Shoup said the proposed rule would not only ban use of the chemicals, but force oil and gas companies to report all the chemicals contained in fracking fluids.

Gallegos points out the issue is not an oil and gas issue. The PFAS chemicals are in the compounds provided to oil and gas companies from chemical companies and it is they who refuse to disclose the presence of PFAS chemicals in their compounds.

"The industry is being blamed for manufacturing," Gallegos said. "They are not talking about Dow Chemical. They are talking about the oil and gas industry. We are getting the black eye, but it is happening before the industry has anything to do with it. They want the industry to disclose it, but the industry doesn't have access to it."

At the Oct. 10 meeting Rep. Cathrynn Brown, R-Carlsbad, argued against a motion proposed by Democrat leaders that the committee write a letter of support for the ban on PFAS in the oil and gas industry.

She argued much like Gallegos that the issue has little to do with the oil and gas industry and more to do with chemical manufacturers.

New Mexico is part of a national lawsuit against 3M, DuPont and 19 other manufacturers of PFAS chemicals. New Mexico filed suit in 2019 against the United State for PFAS contamination caused at Cannon and Holloman Air Force Bases seeking a determination that an imminent and substantial endangerment exists at these bases.

Shoup said the issue of PFAS chemicals is straightforward but is being politicized.

"We need to protect people from the unintended use of the chemicals," she said. "I encourage anyone who finds this concerning or wants to be heard to make sure you are aware when the comments are being taken."

The New Mexico Oil and Gas Association said it plans to work with OCD in the rule making and said oil and gas companies are already working to be more environmentally friendly.

"NMOGA recognizes that HF service providers have spent significant time and resources developing better, more effective, more environmentally friendly additives," a NMOGA statement reads. "NMOGA intends to work closely with OCD to ensure that companies' proprietary information can be protected along with the environment and ensure continuous best and safe practices."

The OCD hearings on PFAS are expected to take place Feb. 26 to March 1 next year.

Levi Hill's *email is managingeditor@hobbsnews.com.*

Hicks

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they're really good at being resilient. I want New Mexico to be that way as well."

She said she hopes enough legislators want New Mexico to succeed, instead of being involved for personal political gain.

"I just have to believe that along the way we're going to pick up enough people who believe that New Mexico should be here to stay," she said. "And the people in New Mexico should be convinced to stay, because … we have people leaving on a regular basis."

And, Hicks said she understands why most people leave New Mexico for Texas.

"The taxes are more friendly — most of them, with the exception of real estate taxes — it's more friendly to businesses," she said.

She said one of the biggest challenges the state faces is finding a governor who has New Mexico's best interests in mind.

"Finding … a governor who is looking for a sustainable New Mexico, who doesn't just obliterate oil and gas," she said.

For the Legislature, there are a number of challenges Hicks said.

"Education is the biggest challenge," she said. "I've served on education committees for a long time and, the biggest challenge, to me, happened just three weeks ago when one of my employees came to me and said, 'I'm trying to figure out which elementary school I want to take my child to, and the schools are not rated well.' It broke my heart."

She said one of the biggest hurdles is Spanish being a first language and many students getting all the way to third or fourth grade and not being able to read English.

"We have some great programs that address that … but it's not all the way across, so kids get left behind."

The Legislature should also be addressing tax reform, Hicks said. "That's key to every business owner and every employee in the state." But she said they probably won't take that up and instead will "be facing how to spend more and more money. And then, what trust fund we're going to put it in, then not use it effectively."

And, while this is the first time she has announced running for a seat in the Roundhouse, her plans started in 2008.

"In 2008, Sen. Gay Kernan came to me and asked me if I would serve as her assistant in the capitol. And after some thought, … decided the answer would be yes," Hicks told the News-Sun. "I spent that whole session working with Gay. (She said) if this is the journey you're going to go on, the path you're looking at taking, you will learn more in that position than you will as an analyst."

And Hicks said she has learned a lot from being involved in almost every session at the Roundhouse since then.

"I saw the sausage being made on a regular basis," she said. "I think now, we're talking more than 10 years later, that people understand that most legislators, if not all, spend many hours deliberating on how a law should read, and what should go into a law. … there's always going to be problems with it because a law can't cover everything."

Because so much effort goes into every bill being presented, it is necessary to work across the aisle in Santa Fe.

"Jim Townsend (Rep. Dist. 54, R-Artesia) visited a while back, and his words were very poignant to me, and very similar to what I say. You have to go back down to the lowest common denominator, find common ground and work from there," Hicks said. "There's not any way Republicans can pass legislation without having middle of the road Democrats working with them."

Hicks has also talked about the seat and the difficulties faced in the N.M. House with its current holder, Scott, who has announced his running for the N.M. Senate District 42.

"Larry's words were, 'It ain't easy. This is not a field trip,'" Hicks said.

Hicks also noted she has been appointed by three different New Mexican governors to various boards, and it is precisely her being able to work with all political affiliations — and her work ethic and knowledge — she credits for those appointments.

"Every one of those (boards) has to have Democrats and Republicans," she said. "When you get there, you're not really supposed to talk about it, but they are all appointed 3-2, or 2-3, … they will have a majority (party) of whichever governor appoints you, but I've been reaching across the aisle for more than 15 years.

"That's what it takes. You're coming from different walks of life, whether you call yourself Democrats or Republicans, or Hispanic and Caucasian, or whatever you call yourself, you're reaching across the aisle. And that's the only way it works."

Hicks, a native New Mexican, graduated from New Mexico State University with a Bachelor of Science in Civil Engineering and a minor in economics. She grew up on a ranch near present day McDonald north of Lovington before moving to Clovis, and eventually returning to Lea County.

"I came back home," she said. "That was a choice."

Some have mentioned if Hicks wins the seat it will be a "family affair" for the districts in Lea County, as her younger brother, Randy Pettigrew, R-Lovington, is running for a third term as the Dist. 61 representative.

"He's my little brother, but in this case he would be senior to me, so I would absolutely seek advice on the workings and how best to accomplish things," Hicks said. "Even though we came from the same household, and there's only two years difference between us, our lives were very different. … Randy and I will often land at the same place, but we do not go the same direction."

She is a member of the National Society of Professional Engineers, the American Society of Civil Engineers, the New Mexico Professional Surveyors, the New Mexico Society for Professional Engineers and the American Council of Independent Laboratories.

Hicks' involvement in various local, state and national committees and commissions is well documented, including:

■ Appointed to the New Mexico State Transportation Committee by N.M. Gov. Susana Martinez in 2011

■ Appointed to the State of New Mexico Judicial Performance Evaluation Commission by N.M. Gov. Bill Richardson in 2005

■ Appointed to both New Mexico State University and New Mexico Tech Board of Regents by N.M. Gov. Susanna Martinez

■ Serving as vice chair of the Hobbs Utility Board

■ Serving on the Career and Technical Education Center Hobbs advisory committee

■ Serving as a founder and director for MyPower 2008-2011.

■ Serving as a committee member for the City of Hobbs Oil and Gas Ordinance Committee, Police Chief Selection Panel and Comprehensive Plan Advisory Board.

■ Serving with the Economic Development Corporation of Lea County, the Lea County Improvement Corporation, the Carlsbad Department of Development, Rotary Club, Hobbs Stock Club, Eagle Trust Foundation, Junior Service League, Hobbs Boys and Girls Club and many other local organizations.

Hicks has also accumulated numerous awards including: Junior Woman of Achievement; NMSPE- Outstanding Service award, three times, and Young Engineer of the Year; The Preston Miller award for outstanding contributions to the work and operations of ACIL, three times; New Mexico Business Weekly Top 25 Engineering firm and Top 50 Women-Owned Business; the ZweigWhit Hot Firm list, twice; Albuquerque Business First Top CEOs; and the Rotary Paul Harris Fellow Award, twice.

People should vote for Hicks because she is true to her word, she has compassion, and she is an advocate for people and their needs, she said.

"I've been an advocate for what is best for our community and our state — whether that's STEM education, education and economic development, that's where my efforts have been. And, I won't stop doing that," Hicks said.

Blake Ovard's *email is editor@hobbsnews.com.*

NOTICE OF AIR QUALITY PERMIT APPLICATION

Pinon Midstream, LLC announces its application to the New Mexico Environment Department for an air quality permit for the modification of its existing Dark Horse Treating Facility. The Dark Horse Treating Facility currently operates under GCP-O&G Permit number 9058 but as the proposed modifications will no longer allow the site to qualify under the GCP-O&G, a New Source Review Permit application is being submitted. The expected date of application submittal to the Air Quality Bureau is October 27, 2023.

The exact location for the proposed facility known as, Dark Horse Treating Facility, is at latitude 32.120112 dec deg North and longitude -103.289663 dec deg West. The approximate location of this facility is 5.9 miles west of Jal in Lea County.

The proposed modification consists of expanding the existing gas treating and CO_2 sequestration facility by adding three (3) additional natural gas processing trains and two (2) flares to the site.

The estimated maximum quantities of any regulated air contaminant will be as follows in pound per hour (pph) and tons per year (tpy) and could change slightly during the course of the Department's review:

Pollutant:	Pounds per hour	Tons per year
Particulate Matter (PM)	10.0 pph	37.0 tpy
PM_{10}	10.0 pph	37.0 tpy
$PM_{2.5}$	9.0 pph	36.0 tpy
Sulfur Dioxide (SO_2)	5393.0 pph	189.0 tpy
Nitrogen Oxides (NO_x)	306.0 pph	167.0 tpy
Carbon Monoxide (CO)	575.0 pph	179.0 tpy
Volatile Organic Compounds (VOC)	372.0 pph	249.0 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	17.0 pph	69.0 tpy
Toxic Air Pollutant (TAP)	n/a pph	n/a tpy
Green House Gas Emissions as Total CO_2e	n/a	350,100.0 tpy

The standard and maximum operating schedule of the facility will be 24 hours a day, 7 days a week, and a maximum of 52 weeks per year.

The owner and operator of the Facility is: Pinon Midstream, LLC, 20445 SH 249, Suite 300, Houston, TX 77070.

If you have any comments about the construction or operation of this facility, and you want your comments to be made as part of the permit review process, you must submit your comments in writing to this address: Permit Programs Manager; New Mexico Environment Department; Air Quality Bureau; 525 Camino de los Marquez, Suite 1; Santa Fe, New Mexico; 87505-1816. Other comments and questions may be submitted verbally. (505) 476-4300; 1 800 224-7009.

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Attención

Este es un aviso de la oficina de Calidad del Aire del Departamento del Medio Ambiente de Nuevo México, acerca de las emisiones producidas por un establecimiento en esta área. Si usted desea información en español, por favor comuníquese con esa oficina al teléfono 505-629-3395.

Notice of Non-Discrimination

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Saturday Horoscope

Holiday Mathis

Horoscopes by Holiday

ARIES (March 21-April 19). You'll put your mind to it and stay on your path without detour, distraction or pause. This consistency will lead you to a solid place. You'll also be lauded for your social skills. People really like you.

TAURUS (April 20-May 20). People need your take. They'll ask what you think. They'll want you to witness their stories, problems and insights. You'll know what to say that will not only answer the situation at hand but will be actionable.

GEMINI (May 21-June 21). Your innate sense of social balance makes it difficult for you to receive gracious hospitality without quickly returning it. However, it's better not to keep a mental tally now. Simply accept the gifts offered to you.

CANCER (June 22-July 22). The project that was on your back burner is now moved to the front and you suddenly realize there are not enough burners. Do what you can and soon others will offer help and resources.

LEO (July 23-Aug. 22). Research and experiment. Ask what's working for others because some of it will work for you too. Persistence coupled with problem-solving skills will win out. Success will be the result of tinkering.

VIRGO (Aug. 23-Sept. 22). Even as you stand in your truth you are well aware there are many other truths in the same situation. Respecting other people's point of view, you'll see options invisible to those stuck in one narrow line of sight.

LIBRA (Sept. 23-Oct. 23). Friendship is, for the most part, a completely voluntary relationship. That is both the beautiful and the tenuous thing about it. You'll actively cherish your friendships, fully realizing the rarity of them.

SCORPIO (Oct. 24-Nov. 21). Your reputation will precede you. What do you think it should be? What will set the others up for a fulfilling experience with you? Today, you will be able to shape the story to a great extent.

SAGITTARIUS (Nov. 22-Dec. 21). You play to win. Be aware that the moment of victory is when many make mistakes by becoming overconfident and therefore open to mistakes of greed and arrogance. Be mindful not to let success go to your head.

CAPRICORN (Dec. 22-Jan. 19). If you think a person can figure it out on their own, you'll let them. Your leadership is needed in the hard parts, not the easy ones. You're brave and can lead others through territory you don't even know yourself.

AQUARIUS (Jan. 20-Feb. 18). Everyone is different, with a unique set of experiences and a way of processing them that is totally original. Knowing this, you don't assume things about people; you ask. You'll earn respect and trust with this move.

PISCES (Feb. 19-March 20). Escape fantasies pop to mind, especially having to do with exotic places. Are you avoiding something in the immediate future? Once you face it, your getaway will be truly paradise.

37,530
Registered Voters in Lea County

20,979
Registered voters voted in November 2020

16,551
Where were the rest of you?

If you don't vote, Lea County loses its voice
in state and national government.
Lea County was last in the state
for voter turnout in 2022.

We don't want to be last in 2023 and 2024.

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LEGALS

LEGAL NOTICE
October 27 and
November 3, 2023

Pursuant to the New Mexico self-storage lien act, Chapter 48-11-1 through 48-11-9, Advantage storage, which is located at 1015 S 17th St Lovington NM 88260, will hold a public online auction of property sold to satisfy the owner(s) lien online at www.storagetreasures.com. The auction will end on or around 11:00 am on November 14, 2023. Property will be sold to the highest bidder. Deposit for removal and cleanup may be required. Seller reserves the right to withdraw property from sale. Property being sold includes contents in space of the following tenant(s), with brief descriptions of contents in each space. **April Melton 1303 S 6th Lovington, NM 88260,** Printer, tables, lamps, aquarium with stand, medical equipment, home décor, home furnishing, toys, misc. boxes and bags. Contact the office at Advantage Storage Property Manager at (575)396-2000.
#00284223

LEGAL LEGAL LEGAL LEGAL

LEGAL NOTICE
October 27, 2023

NOTICE OF AIR QUALITY PERMIT APPLICATION

Pinon Midstream, LLC announces its application to the New Mexico Environment Department for an air quality permit for the modification of its existing Dark Horse Treating Facility. The Dark Horse Treating Facility currently operates under GCP-O&G Permit number 9058 but as the proposed modifications will no longer allow the site to qualify under the GCP-O&G, a New Source Review Permit application is being submitted. The expected date of application submittal to the Air Quality Bureau is October 27, 2023.

The exact location for the proposed facility known as, Dark Horse Treating Facility, is at latitude 32.120112 dec deg North and longitude -103.289663 dec deg West. The approximate location of this facility is 5.9 miles west of Jal in Lea County.

The proposed modification consists of expanding the existing gas treating and CO2 sequestration facility by adding three (3) additional natural gas processing trains and two (2) flares to the site.

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Nitrogen Oxides (NO_x)	306.0 pph	167.0 tpy
Carbon Monoxide (CO)	575.0 pph	179.0 tpy
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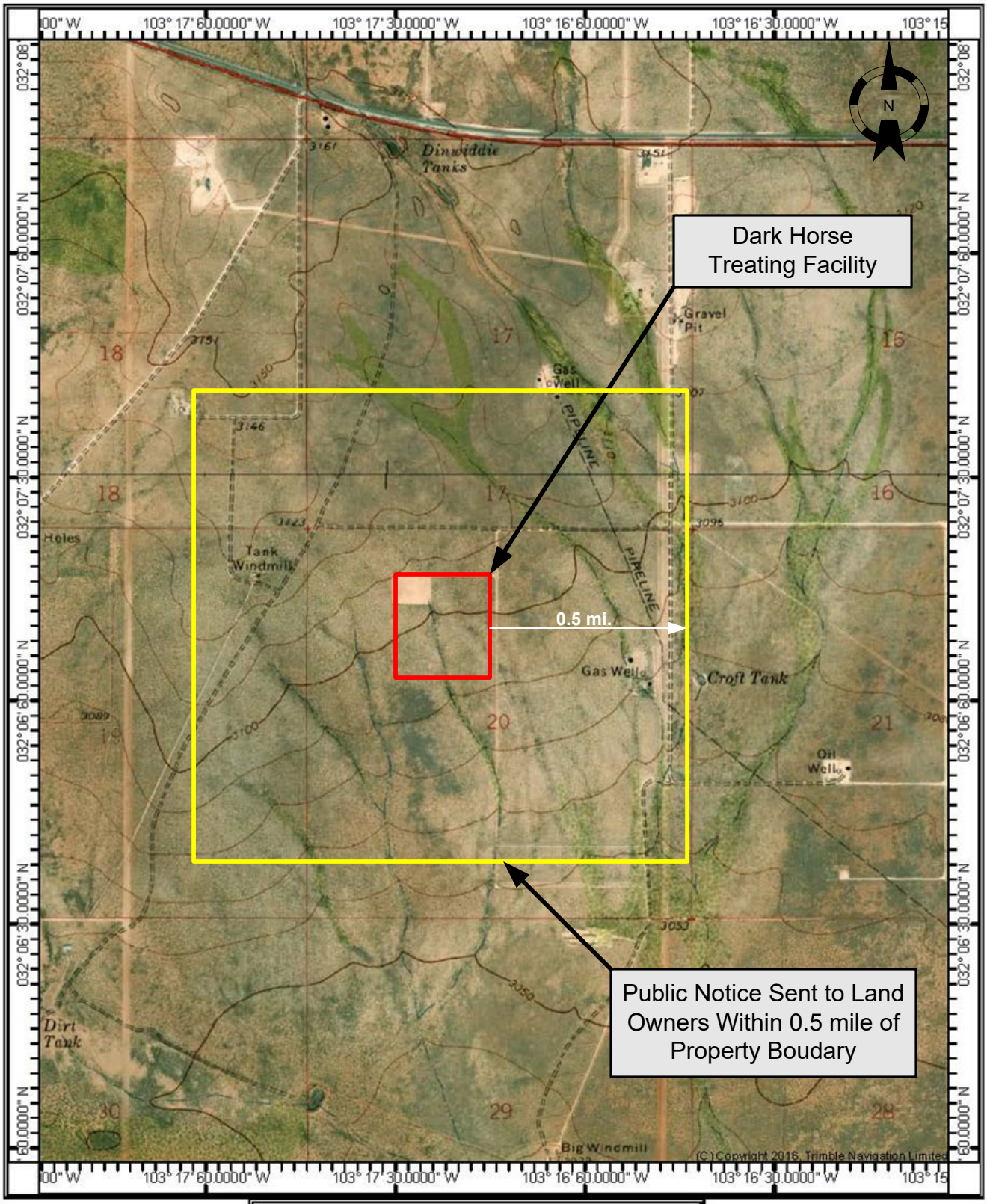
#00284302



ALLIANT ENVIRONMENTAL, LLC			**Public Notice Map**	**Piñon Midstream, LLC**	
Scale: **1:20,000**	Drawn by: MDF	Date: 10/18/2023	**Dark Horse Treating Facility** N 32° 7' 12.40" Latitude W 103° 17' 22.79" Longitude	Project No.:	File Name: **Dark Horse TF Diagrams**	Figure:
	Chk'd by:	Date:				

Parcels

#	Owner #	Parcel Code	Name	In Care of Name	Mailing Address 1
1	51686	4000516860008	FULFER RANCH LLC	*N/A*	PO BOX 1224
2	51818	4000518180001	RODRIGUEZ, OSCAR	*N/A*	PO BOX 549
3	51823	4000518230001	RAILEY, JUANITA	*N/A*	*N/A*
4	51721	4000517210001	RODRIGUEZ, OSCAR	*N/A*	PO BOX 549
5	51828	4000518280001	WEBSTER, WAYNE W	WEBSTER, MARSHA J	*N/A*
6	51655	4000516550001	EMERSON, BILLY RALPH	EMERSON, MIKE %	PO BOX 75
7	207973	4000901460001	PLAINS PIPELINE LP	PROPERTY TAX DEPT ATTN	*N/A*
8	90132	4900105150523	EL PASO NATURAL GAS CO	PROPERTY TAX %	PO BOX 4372
9	51686	4950125130904	FULFER RANCH LLC	*N/A*	PO BOX 1224
10	90132	4900105130427	EL PASO NATURAL GAS CO	PROPERTY TAX %	PO BOX 4372
11	90132	4900105150434	EL PASO NATURAL GAS CO	PROPERTY TAX %	PO BOX 4372
12	State	*N/A*	*N/A*	*N/A*	*N/A*
13	51684	4000516840001	FULFER RANCH LLC	*N/A*	PO BOX 1224
14	BLM/USA	*N/A*	*N/A*	*N/A*	*N/A*
15	51645	4000516450024	INTREPID POTASH-NEW MEXICO LLC	*N/A*	707 17TH ST
16	51685	4000516850005	FULFER RANCH LLC	*N/A*	PO BOX 1224
17	90132	4900105145623	EL PASO NATURAL GAS CO	PROPERTY TAX %	PO BOX 4372
18	51685	4000516850004	FULFER RANCH LLC	*N/A*	PO BOX 1224
19	51645	4000516450011	INTREPID POTASH-NEW MEXICO LLC	*N/A*	707 17TH ST
20	State	*N/A*	*N/A*	*N/A*	*N/A*
21	State	*N/A*	*N/A*	*N/A*	*N/A*
22	State	*N/A*	*N/A*	*N/A*	*N/A*
23	51645	4000516450011	INTREPID POTASH-NEW MEXICO LLC	*N/A*	707 17TH ST
24	214195	4000516450001	PINON MIDSTREAM LLC	CAMPBELL, CONNIE %	20445 SH 249

#	Mailing Address 2	Mailing City	Mailing State	Country Name	Mailing Zipcode	Mailing Zipcode Extension	Area(acres)
1	*N/A*	JAL	NM	*N/A*	88252	1224	< 0.01
2	*N/A*	JAL	NM	*N/A*	88252	0549	0.10
3	3613 JONETTE DR	FT WORTH	TX	*N/A*	76118	*N/A*	0.14
4	*N/A*	JAL	NM	*N/A*	88252	*N/A*	0.23
5	14 GASOLINE ALLEY RD	JAL	NM	*N/A*	88252	*N/A*	0.23
6	*N/A*	JAL	NM	*N/A*	88252	*N/A*	0.31
7	333 CLAY STREET SUITE 1600	HOUSTON	TX	*N/A*	77002	*N/A*	7.31
8	*N/A*	HOUSTON	TX	*N/A*	77210	4372	10.82
9	*N/A*	JAL	NM	*N/A*	88252	1224	20.03
10	*N/A*	HOUSTON	TX	*N/A*	77210	4372	38.05
11	*N/A*	HOUSTON	TX	*N/A*	77210	4372	38.22
12	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	40.04
13	*N/A*	JAL	NM	*N/A*	88252	1224	41.64
14	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	48.85
15	STE. 4200	DENVER	CO	*N/A*	80202	*N/A*	60.17
16	*N/A*	JAL	NM	*N/A*	88252	1224	119.99
17	*N/A*	HOUSTON	TX	*N/A*	77210	4372	120.15
18	*N/A*	JAL	NM	*N/A*	88252	1224	125.41
19	STE. 4200	DENVER	CO	*N/A*	80202	*N/A*	125.50
20	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	125.54
21	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	160.05
22	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	320.15
23	STE. 4200	DENVER	CO	*N/A*	80202	*N/A*	320.39
24	STE 300	HOUSTON	TX	*N/A*	77040	*N/A*	520.74

October 23, 2023

CERTIFIED MAIL 7019 0700 0001 4973 3302

Dear **Oscar Rodriguez,**
Pinon Midstream, LLC announces its application to the New Mexico Environment Department for an air quality permit for the modification of its existing Dark Horse Treating Facility. The Dark Horse Treating Facility currently operates under GCP-O&G Permit number 9058 but as the proposed modifications will no longer allow the site to qualify under the GCP-O&G, a New Source Review Permit application is being submitted. The expected date of application submittal to the Air Quality Bureau is October 27, 2023.

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Sincerely,
Pinon Midstream, LLC
20445 SH 249, Suite 300, Houston, TX 77070

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☐ Adult Signature Required	$0.00
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Total Postage and Fees	$5.01

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City, State, ZIP+4®: Jal, NM 88252

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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Total Postage and Fees	$5.01

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10/24/2023

Sent To: NM State Land Office
Street and Apt. No., or PO Box No.: P.O. Box 1148
City, State, ZIP+4®: Santa Fe, NM 87504

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

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Santa Fe, NM 87508

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☐ Return Receipt (electronic)	$0.00
☐ Certified Mail Restricted Delivery	$0.00
☐ Adult Signature Required	$0.00
☐ Adult Signature Restricted Delivery	$
Postage	$0.66
Total Postage and Fees	$5.01

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ALBUQUERQUE, NM 87109 USPS OCT 24 2023

10/24/2023

Sent To: USA Bureau of Land Management
Street and Apt. No., or PO Box No.: 301 Dinosaur Trail
City, State, ZIP+4®: Santa Fe, NM 87508

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

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Houston, TX 77002

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☐ Return Receipt (hardcopy)	$0.00
☐ Return Receipt (electronic)	$0.00
☐ Certified Mail Restricted Delivery	$0.00
☐ Adult Signature Required	$0.00
☐ Adult Signature Restricted Delivery	$
Postage	$0.66
Total Postage and Fees	$5.01

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ALBUQUERQUE, NM 87109 USPS OCT 23 2023

10/23/2023

Sent To: Plains Pipeline LP, Attn - Property Tax Department
Street and Apt. No., or PO Box No.: 333 Clay Street, Suite 1600
City, State, ZIP+4®: Houston, TX 77002

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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☐ Return Receipt (electronic)	$0.00
☐ Certified Mail Restricted Delivery	$0.00
☐ Adult Signature Required	$0.00
☐ Adult Signature Restricted Delivery	$
Postage	$0.66
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ALBUQUERQUE, NM 87109 USPS OCT 24 2023

10/24/2023

Sent To: Intrepid Potash - New Mexico, LLC
Street and Apt. No., or PO Box No.: 707 17th St., Ste. 4200
City, State, ZIP+4®: Denver, CO 80202

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

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Houston, TX 77210

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☐ Return Receipt (electronic)	$0.00
☐ Certified Mail Restricted Delivery	$0.00
☐ Adult Signature Required	$0.00
☐ Adult Signature Restricted Delivery	$
Postage	$0.66
Total Postage and Fees	$5.01

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ALBUQUERQUE, NM 87109 USPS OCT 24 2023

10/24/2023

Sent To: El Paso Natural Gas Co
Street and Apt. No., or PO Box No.: P.O. Box 4372
City, State, ZIP+4®: Houston, TX 77210

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

Public Notice: Certified Letter Receipts for Surrounding Land Owners, County, and Municipality

7019 0700 0001 4973 3272

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Lovington, NM 88260

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Certified Mail Fee	$4.35
Extra Services & Fees (check box, add fee as appropriate)	$0.00
☐ Return Receipt (hardcopy)	$0.00
☐ Return Receipt (electronic)	$0.00
☐ Certified Mail Restricted Delivery	$0.00
☐ Adult Signature Required	$0.00
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Postage	$0.66
Total Postage and Fees	$5.01

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Sent To: Lea County Manager
Street and Apt. No., or PO Box No.: 100 N. Main Ave., Suite 4
City, State, ZIP+4®: Lovington, NM 88260

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7019 0700 0001 4973 3289

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Certified Mail Fee	$4.35
Extra Services & Fees (check box, add fee as appropriate)	$0.00
☐ Return Receipt (hardcopy)	$0.00
☐ Return Receipt (electronic)	$0.00
☐ Certified Mail Restricted Delivery	$0.00
☐ Adult Signature Required	$0.00
☐ Adult Signature Restricted Delivery	$
Postage	$0.66
Total Postage and Fees	$5.01

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Sent To: Mayor of Jal
Street and Apt. No., or PO Box No.: PO Drawer 340, 710 W. Wyoming
City, State, ZIP+4®: Jal, NM 88252

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7019 0700 0001 4973 3296

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Jal, NM 88252

OFFICIAL USE

Certified Mail Fee	$4.35
Extra Services & Fees (check box, add fee as appropriate)	$0.00
☐ Return Receipt (hardcopy)	$0.00
☐ Return Receipt (electronic)	$0.00
☐ Certified Mail Restricted Delivery	$0.00
☐ Adult Signature Required	$0.00
☐ Adult Signature Restricted Delivery	$
Postage	$0.66
Total Postage and Fees	$5.01

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USPS
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Sent To: Fulfer Ranch, LLC
Street and Apt. No., or PO Box No.: P.O. Box 1224
City, State, ZIP+4®: Jal, NM 88252

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7019 0700 0001 4973 3302

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Jal, NM 88252

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Certified Mail Fee	$4.35
Extra Services & Fees (check box, add fee as appropriate)	$0.00
☐ Return Receipt (hardcopy)	$0.00
☐ Return Receipt (electronic)	$0.00
☐ Certified Mail Restricted Delivery	$0.00
☐ Adult Signature Required	$0.00
☐ Adult Signature Restricted Delivery	$
Postage	$0.66
Total Postage and Fees	$5.01

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OCT 23 2023
USPS
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Sent To: Oscar Rodriguez
Street and Apt. No., or PO Box No.: P.O. Box 549
City, State, ZIP+4®: Jal, NM 88252

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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Fort Worth, TX 76118

OFFICIAL USE

Certified Mail Fee	$4.35
Extra Services & Fees (check box, add fee as appropriate)	$0.00
☐ Return Receipt (hardcopy)	$0.00
☐ Return Receipt (electronic)	$0.00
☐ Certified Mail Restricted Delivery	$0.00
☐ Adult Signature Required	$0.00
☐ Adult Signature Restricted Delivery	$
Postage	$0.66
Total Postage and Fees	$5.01

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OCT 23 2023
USPS
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Sent To: Juanita Bailey
Street and Apt. No., or PO Box No.: 3613 Jonette Dr.
City, State, ZIP+4®: Ft. Worth, TX 76118

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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OFFICIAL USE

Certified Mail Fee	$4.35
Extra Services & Fees (check box, add fee as appropriate)	$0.00
☐ Return Receipt (hardcopy)	$0.00
☐ Return Receipt (electronic)	$0.00
☐ Certified Mail Restricted Delivery	$0.00
☐ Adult Signature Required	$0.00
☐ Adult Signature Restricted Delivery	$
Postage	$0.66
Total Postage and Fees	$5.01

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10/23/2023

Sent To: Wayne W. Webster
Street and Apt. No., or PO Box No.: 14 Gasoline Alley Rd.
City, State, ZIP+4®: Jal, NM 88252

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

Submittal of Public Service Announcement – Certification

I, Martin R. Schluep, the undersigned, certify that on **10/23/2023**, submitted a public service announcement to **KIXN 102.9 FM** that serves the City of Jal, Lea County, New Mexico, in which the source is located near and that **KIXN 102.9 FM DID NOT RESPOND THAT IT WOULD AIR THE ANNOUNCEMENT.**

Signed this 23rd day of October, 2023.

M. Schluep.
Signature

10/23/2023
Date

Martin R. Schluep
Printed Name

Principal Consultant
Title {Consultant}

PSA Request

Martin Schluep <mschluep@alliantenv.com>

Mon 10/23/2023 3:18 PM

To:info@1radiosquare.com <info@1radiosquare.com>
Bcc:'Melissa Fetman' <mfetman@alliantenv.com>;Martin Schluep <mschluep@alliantenv.com>

To Whom it May Concern:

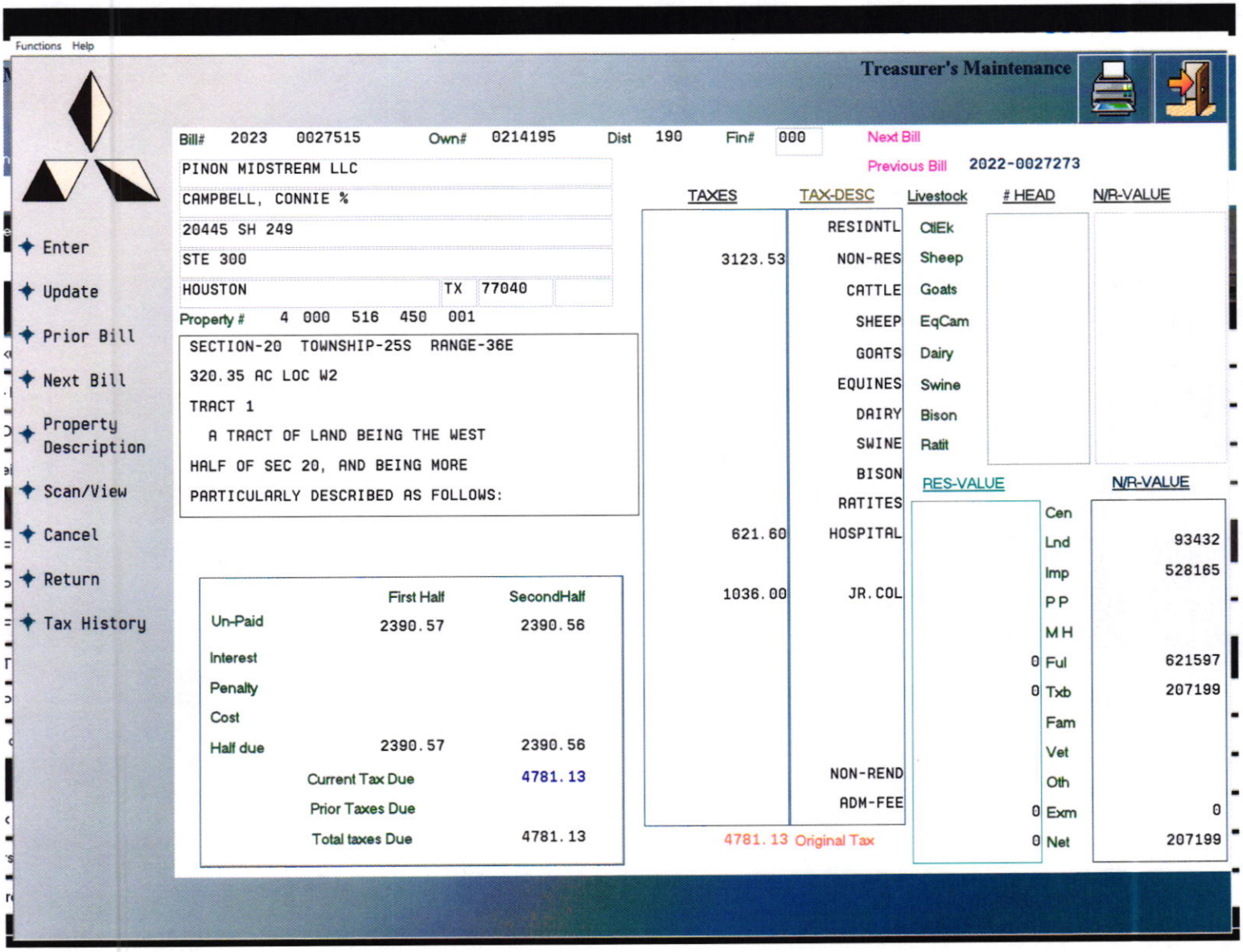
Piñon Midstream, LLC kindly requests, according to New Mexico air quality regulations, that KIXN 102.9 FM make the following public service announcement:

"Piñon Midstream, LLC will be submitting an air quality permit application to the New Mexico Environment Department for modifications to its existing Dark Horse Treating Facility located 5.9 miles west of Jal, in Lea County, NM. More details about the proposed project have been included in posted notices at the following locations in Jal: the Woolworth Community Library, Jal City Hall, and the USPS on 4th Street. If you have any comments that you would like to be made as part of the permit review process for this application, please mail them to the New Mexico Environment Department Air Quality Bureau at 525 Camino de los Marquez, Suite 1; Santa Fe, New Mexico; 87505-1816. Or your comments and questions may be submitted verbally by calling (505) 476-4300 or 1 800 224-7009."

Please contact me if you need anything else or if you have any questions.

Thank you,

Martin R. Schluep
Alliant Environmental, LLC
7804 Pan American Fwy. NE, Suite 5
Albuquerque, NM 87109
(C) 505.205.4819
www.alliantenv.com



THE UNDERSIGNED CERTIFIES BEING THE LEGAL COUNTY OFFICIAL HAVING CUSTODY OF THE TAX RECORDS, AND ATTEST THAT THE AMOUNT DUE OF $4781.13 FOR PROPERTY TAXES EXISTS AND IS GOOD TO 12/10/2023.

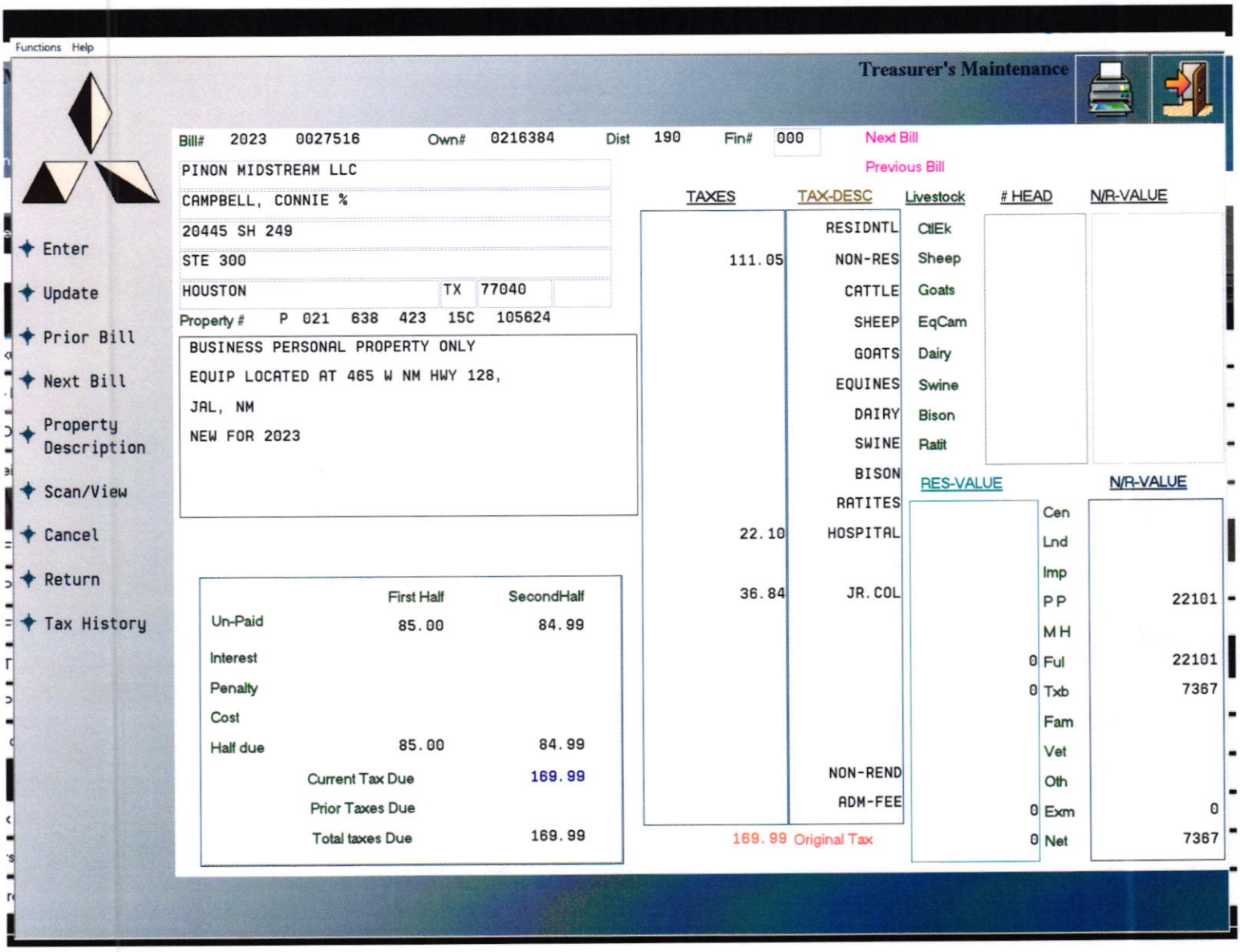
LEA COUNTY TREASURER
100 N MAIN ST., STE 3C
LOVINGTON, NM 88260
575-396-8643

SUSAN MARINOVICH
smarinovich@leacounty.net

seal

10/25/2023
DATE

Susan Marinovich
LEA COUNTY TREASURER



THE UNDERSIGNED CERTIFIES BEING THE LEGAL COUNTY OFFICIAL HAVING CUSTODY OF THE TAX RECORDS, AND ATTEST THAT THE AMOUNT DUE OF $169.99 FOR PROPERTY TAXES EXISTS AND IS GOOD TO 12/10/2023.

LEA COUNTY TREASURER
100 N MAIN ST., STE 3C
LOVINGTON, NM 88260
575-396-8643

SUSAN MARINOVICH
smarinovich@leacounty.net

seal

10/25/2023
DATE

Susan Marinovich
LEA COUNTY TREASURER

Section 10

Written Description of the Routine Operations of the Facility

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A written description of the routine operations of the facility. Include a description of how each piece of equipment will be operated, how controls will be used, and the fate of both the products and waste generated. For modifications and/or revisions, explain how the changes will affect the existing process. In a separate paragraph describe the major process bottlenecks that limit production. The purpose of this description is to provide sufficient information about plant operations for the permit writer to determine appropriate emission sources.

The facility receives raw sour gas from a gathering system at high pressure and low-pressure slug catchers. Liquid dropouts are sent to bullet tanks and a condensate stabilizer and then sent to storage to be trucked or piped off site. Low pressure rich gas is compressed and sent to the coalescing filter and is mixed with the high-pressure rich gas. The filtered gas is routed to amine units where sour gas is stripped and sent to electric compression for disposal to an AGI well. Rich gas is sent to TEG dehydration then routed to the sales line. Flares are installed onsite to control any blowdown emissions during SSM activities.

Liquid dropouts are sent to bullet tanks and a condensate stabilizer and are then sent off-site via pipeline. As aback-up, the liquids may also be stored in on-site storage tanks and then trucked off-site. Low pressure rich gas is compressed and sent to the coalescing filter and is mixed with the high-pressure rich gas.

There are multiple heaters/reboilers for the amine and dehydration units to regenerate the amine or glycol used in those units. Each dehydration unit will have it's own combustor to control the regenerator emissions. The condensate storage tanks and loading will be controlled by two vapor recovery units (VRUs, automatic redundancy system ensures no VRU downtime), set up in parallel to be sure all vapors are captured and sent back to the facility inlet. As a back-up, vapors can also be sent to the flare or vapor combustor.

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)**:**
Dark Horse Treating Facility:

- Compressor engines to compress gas
- Hot oil heaters and reboilers for amine and dehydration units
- Flares
- Vapor combustors
- Vapor Recovery Units
- Storage Tanks

B. Apply the 3 criteria for determining a single source:

SIC Code: Surrounding or associated sources belong to the same 2-digit industrial grouping (2-digit SIC code) as this facility, OR surrounding or associated sources that belong to different 2-digit SIC codes are support facilities for this source.

☑ **Yes** ☐ **No**

Common Ownership or Control: Surrounding or associated sources are under common ownership or control as this source.

☑ **Yes** ☐ **No**

Contiguous or Adjacent: Surrounding or associated sources are contiguous or adjacent with this source.

☑ **Yes** ☐ **No**

C. Make a determination:

☑ The source, as described in this application, constitutes the entire source for 20.2.70, 20.2.72, 20.2.73, or 20.2.74 NMAC applicability purposes. If in "A" above you evaluated only the source that is the subject of this application, all "**YES**" boxes should be checked. If in "A" above you evaluated other sources as well, you must check **AT LEAST ONE** of the boxes "**NO**" to conclude that the source,

as described in the application, is the entire source for 20.2.70, 20.2.72, 20.2.73, and 20.2.74 NMAC applicability purposes.

☐ The source, as described in this application, **does not** constitute the entire source for 20.2.70, 20.2.72, 20.2.73, or 20.2.74 NMAC applicability purposes (A permit may be issued for a portion of a source). The entire source consists of the following facilities or emissions sources (list and describe):

Section 12

Section 12.A

PSD Applicability Determination for All Sources

(Submitting under 20.2.72, 20.2.74 NMAC)

A PSD applicability determination for all sources. For sources applying for a significant permit revision, apply the applicable requirements of 20.2.74.AG and 20.2.74.200 NMAC and to determine whether this facility is a major or minor PSD source, and whether this modification is a major or a minor PSD modification. It may be helpful to refer to the procedures for Determining the Net Emissions Change at a Source as specified by Table A-5 (Page A.45) of the EPA New Source Review Workshop Manual to determine if the revision is subject to PSD review.

A. This facility is:

- ☑ **a minor PSD source before and after this modification (if so, delete C and D below).**
- ☐ **a major PSD source before this modification. This modification will make this a PSD minor source.**
- ☐ **an existing PSD Major Source that has never had a major modification requiring a BACT analysis.**
- ☐ **an existing PSD Major Source that has had a major modification requiring a BACT analysis**
- ☐ **a new PSD Major Source after this modification.**

B. **This facility is not one of the listed 20.2.74.501 Table I – PSD Source Categories. The "project" emissions for this modification are not significant as the project will have emissions less than the PSD emissions thresholds. The "project" emissions listed below are the site's total emissions that include the existing equipment and new, proposed equipment. This project does not result in "de-bottlenecking," or other associated emissions resulting in higher emissions. The maximum operating capacity of the equipment is used to calculate the emissions for this application. The project emissions (before netting) for this project are as follows [see Table 2 in 20.2.74.502 NMAC for a complete list of significance levels]:**

a. **NOx: 151.1 TPY**
b. **CO: 162.2 TPY**
c. **VOC: 190.8 TPY**
d. **SOx: 171.8 TPY**
e. **PM: 35.2 TPY**
f. **PM10: 35.2 TPY**
g. **PM2.5: 34.0 TPY**
h. **Fluorides: N/A**
i. **Lead: N/A TPY**
j. **Sulfur compounds (listed in Table 2): 2.6 TPY**
k. **GHG: 302,768.7 TPY**

C. **Netting is not required as this project is not considered significant.**

D. **BACT** is **not required for this application, as the site is not a PSD major source.**

E. If this is an existing PSD major source, or any facility with emissions greater than 250 TPY (or 100 TPY for 20.2.74.501 Table 1 – PSD Source Categories), determine whether any permit modifications are related, or could be considered a single project with this action, and provide an explanation for your determination whether a PSD modification is triggered.
This site is currently a minor PSD source and will remain a minor PSD source after the modification.

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 Regulation Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification: (You may delete instructions or statements that do not apply in the justification column to shorten the document.)
20.2.1 NMAC	General Provisions	Yes	Facility	General Provisions apply to Notice of Intent, Construction, and Title V permit applications.
20.2.3 NMAC	Ambient Air Quality Standards NMAAQS	Yes	Facility	20.2.3 NMAC is a State Implementation Plan (SIP) approved regulation that limits the maximum allowable concentration of, Sulfur Compounds, Carbon Monoxide and Nitrogen Dioxide. The facility meets the maximum allowable concentrations of the listed pollutants 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 may apply if, this is an application for a notice of intent (NOI) per 20.2.73 NMAC, if the activity or facility is a fugitive dust source listed at 20.2.23.108.A NMAC, **and** if the activity or facility is located in an area subject to a mitigation plan pursuant to 40 CFR 51.930. As of January 2019, the only areas of the State subject to a mitigation plan per 40 CFR 51.930 are in Doña Ana and Luna Counties. As this site is located in Lea County, 20.2.23 NMAC does not apply.
20.2.33 NMAC	Gas Burning Equipment - Nitrogen Dioxide	No	N/A	This facility does not have gas burning equipment (external combustion emission sources, such as gas fired boilers and heaters) having a heat input of greater than 1,000,000 million British Thermal Units per year per unit.
20.2.34 NMAC	Oil Burning Equipment: NO_2	No	N/A	This facility does not have oil burning equipment (external combustion emission sources, such as oil fired boilers and heaters) having a heat input of greater than 1,000,000 million British Thermal Units per year per unit.
20.2.35 NMAC	Natural Gas Processing Plant – Sulfur	No	N/A	This regulation establishes sulfur emission standards for natural gas processing plants. The proposed facility potentially meets the definition of a new natural gas processing plant under this regulation but as the plant will release less than an average of 5 tons per day of sulfur, this regulation is not applicable [20.2.35.110.A NMAC].
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	The facility is not subject to this regulation for the following reasons: (a) This facility does not store hydrocarbons containing hydrogen sulfide in a container associated with a petroleum production facility of petroleum processing facility having a capacity of 20,000 gallons or greater with a throughput of at least 30,000 gallons per week (20.2.38.109); (b) The tank battery or storage facility is not within a municipality (20.2.38.110) or within five miles of a municipality (20.2.38.111); (c) This facility is not a new tank battery with a capacity of 65,000 gallons or greater (20.2.38.112); and (d) The facility is not a new tank battery operated in conjunction with a petroleum production facility, or a new hydrocarbon storage facility operated in conjunction with a petroleum processing facility per 20.2.38.113.

State Regulation Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification: (You may delete instructions or statements that do not apply in the justification column to shorten the document.)
20.2.39 NMAC	Sulfur Recovery Plant - Sulfur	No	N/A	This regulation could apply to sulfur recovery plants that are **not** part of petroleum or natural gas processing facilities. As this site is a natural gas processing facility, this regulation does not apply.
20.2.50 NMAC	Oil and Gas Sector – Ozone Precursor Pollutants	Yes	C-1200, C-1210, C-1220, C-1230, H-1620, H-2620, H-3620, H-4620, H-5620, H-6620, H-1781, H-2781, FL-1967, FL-2967, FL-3967, FL-4967, FL-5967, FL-6967, FL-7967, DEHY-1, DEHY-2, DEHY-3, DEHY-4, DEHY-5, DEHY-6, TK-1900, TK-1910, TK-1920, TK-1930, FUG	This regulation establishes emission standards for volatile organic compounds (VOC) and oxides of nitrogen (NOx) for oil and gas production, processing, compression, and transmission sources. 20.2.50 NMAC subparts below: Include the construction status of applicable units as “New”, “Existing”, “Relocation of Existing”, or “Reconstructed” as defined by this Part in your justification: Check the box for the subparts that are applicable: ☒113 – Engines and Turbines ☒114 – Compressor Seals ☐115 – Control Devices and Closed Vent Systems ☒116 – Equipment Leaks and Fugitive Emissions ☐ 117 – Natural Gas Well Liquid Unloading ☒ 118 – Glycol Dehydrators ☒ 119 – Heaters ☒ 120 – Hydrocarbon Liquid Transfers ☒121 – Pig Launching and Receiving ☒122 – Pneumatic Controllers and Pumps ☒ 123 – Storage Vessels ☐124 – Well Workovers ☐ 125 – Small Business Facilities ☐126 – Produced Water Management Unit ☐127 – Flowback Vessels and Preproduction Operations

State Regulation Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification: (You may delete instructions or statements that do not apply in the justification column to shorten the document.)
20.2.61.109 NMAC	Smoke & Visible Emissions	Yes	C-1200, C-1210, C-1220, C-1230, H-1620, H-2620, H-3620, H-4620, H-5620, H-6620, H-1781, H-2781, H-2600 E-1566, E-2566, E-3566, E-4566, FL-1967, FL-2967, FL-3967, FL-4967, FL-5967, FL-6967, FL-1850, FL-1850 BD, FL-1950, FL-1950 BD, FL-2050, FL-2050 BD, FL-7967	This regulation that limits opacity to 20% applies to Stationary Combustion Equipment, such as engines, boilers, heaters, and flares unless your equipment is subject to another state regulation that limits particulate matter such as 20.2.19 NMAC (see 20.2.61.109 NMAC).
20.2.70 NMAC	Operating Permits	Yes	Facility	This application is being submitted for a construction permit under 20.2.72 NMAC. With the revisions being made to this site, a Title V Permit will be required in the future.
20.2.71 NMAC	Operating Permit Fees	Yes	Facility	With the revisions being made to this site, a Title V Permit will be required in the future. Piñon understands that TV fees will be required at that time.
20.2.72 NMAC	Construction Permits	Yes	Facility	The Dark Horse treating Facility currently operates under GCP-O&G Permit Number 9058. With the revisions being requested, the site will convert to an NSR Permit under 20.2.72 NMAC.
20.2.73 NMAC	NOI & Emissions Inventory Requirements	Yes	Facility	The notice of intent requirements does not apply to this site. **Emissions Inventory Reporting per** 20.2.73.300 NMAC is currently, and will continue to be required for this site.
20.2.74 NMAC	Permits – Prevention of Significant Deterioration (PSD)	No	N/A	This site will not require a PSD Permit as the emissions are not over the PSD major source thresholds.
20.2.75 NMAC	Construction Permit Fees	Yes	Facility	A permit application fee will be required for this application as it is being submitted under 20.2.72 NMAC.

State Regulation Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification: (You may delete instructions or statements that do not apply in the justification column to shorten the document.)
20.2.77 NMAC	New Source Performance	Yes	FUG, C-1200, C-1210, C-1220, C-1230, H-1620, H-2620, H-3620, H-4620, H-5620, H-6620, H-1781, H-2781, H-2600	The listed equipment is subject to the requirements of 40 CFR Part 60. See the Federal Regulations section below for more information.
20.2.78 NMAC	Emission Standards for HAPS	No	N/A	This facility emits hazardous air pollutants but there is no equipment that is required to comply with Part 61 requirements.
20.2.79 NMAC	Permits – Nonattainment Areas	No	N/A	This site is located in Lea County which is considered an attainment area; therefore, 20.2.79 NMAC does not apply.
20.2.80 NMAC	Stack Heights	Yes	Facility	Air dispersion modeling will be submitted with this application; therefore, the stack height requirements will be met.
20.2.82 NMAC	MACT Standards for source categories of HAPS	Yes	C-1200, C-1210, C-1220, C-1230, DEHY-1, DEHY-2, DEHY-3, DEHY-4, DEHY-5, DEHY-6	The listed equipment is subject to the requirements of 40 CFR Part 63. See the Federal Regulations section below for more information.

Federal Regulations:

Federal Regulation Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
40 CFR 50	NAAQS	Yes	Facility	As this site is subject to 20.2.72 NMAC, it is subject to the National Ambient Air Quality Standards. Air dispersion modeling has been performed for this application and all NAAQS are shown to be met.
NSPS 40 CFR 60, Subpart A	General Provisions	Yes	FUG, C-1200, C-1210, C-1220, C-1230, H-1620, H-2620, H-3620, H-4620, H-5620, H-6620, H-1781, H-2781, H-2600	The listed equipment is subject to the requirements of 40 CFR Part 60. See the regulations below for more information.

Federal Regulation Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
NSPS 40 CFR60.40a, Subpart Da	Subpart Da, Performance Standards for **Electric Utility Steam Generating Units**	No	N/A	Establishes PM, SO_2 and NOx emission limits/standards of performance for steam generating units with a heat input capacity greater than 250 MMBtu/hr. As there are no steam generating units with a heat capacity greater than 250 MMBtu/hr at this site, this rule does not apply.
NSPS 40 CFR60.40b Subpart Db	**Electric Utility Steam Generating Units**	No	N/A	The affected facility to which this subpart applies is each steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity from fuels combusted in the steam generating unit of greater than 29 MW (100 million Btu/hour). As there are no steam generating units with a heat input capacity greater than 100 MMBtu/hr, this rule does not apply.
40 CFR 60.40c, Subpart Dc	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units	Yes	H-1620, H-2620, H-3620, H-4620, H-5620, H-6620, H-1781, H-2781, H-2600	Subpart Dc applies to the listed units as they were constructed after June 9, 1989 and have a maximum design heat input capacity of 29 MW (100 MMBtu/hr) or less, but greater than or equal to 2.9 MW (10 MMBtu/hr).
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	As there are no storage tanks that commenced construction between May 18, 1978 and July 23, 1984, 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	As there are no storage vessels at this site with a storage capacity greater than or equal to 75 cubic meters (m^3) that are used to store volatile organic liquids (VOL), this regulation does not apply**.**

Federal Regulation Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
NSPS 40 CFR 60.330 Subpart GG	**Stationary Gas Turbines**	No	N/A	There are no turbines at this site; therefore, this regulation does not apply.
NSPS 40 CFR 60, Subpart KKK	Leaks of VOC from **Onshore Gas Plants**	No	N/A	Thie regulation applies to an affected Facility with Leaks of VOC from Onshore Gas Plants that commences construction, reconstruction, or modification between January 20, 1984 and August 23, 2011. As this site was constructed after August 23, 2011, this regulation does not apply.
NSPS 40 CFR Part 60 Subpart LLL	Standards of Performance for **Onshore Natural Gas Processing**: SO_2 Emissions	No	N/A	This regulation applies to natural gas processing plants, including a sweetening unit followed by a sulfur recovery unit, constructed between January 20, 1984 and August 23, 2011. As this site was constructed after August 23, 2011, this regulation does not apply.
NSPS 40 CFR Part 60 Subpart OOOO	Standards of Performance for Crude Oil and Natural Gas Production, Transmission, and Distribution for which construction, modification or reconstruction commenced after August 23, 2011 and before September 18, 2015	No	N/A	The rule applies to “affected” facilities that are constructed, modified, or reconstructed after Aug 23, 2011 (40 CFR 60.5365): gas wells, including fractured and hydraulically refractured wells, centrifugal compressors, reciprocating compressors, pneumatic controllers, certain equipment at natural gas processing plants, sweetening units at natural gas processing plants, and storage vessels. As this site was constructed after August 23, 2011, this regulation does not apply.

Federal Regulation Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
NSPS 40 CFR Part 60 Subpart OOOOa	Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced **After** September 18, 2015	Yes	FUG, C-1200, C-1210, C-1220, C-1230	As this site was constructed after September 18, 2015, Subpart OOOOa applies to multiple pieces of equipment. The compressors associated with Units C-1200 through C-1230 were constructed or modified after September 18, 2015 and are subject to subpart OOOOa. [§60.5365(c)]. The fugitive components installed as part of the onshore natural gas processing plant will be subject to NSPS OOOOa. [§60.5365(f)]. The amine units are sweetening units located at onshore natural gas processing plants under this subpart; however, the acid gas produced onsite is completely re-injected into oil-or-gas-bearing geologic strata or otherwise not released to the atmosphere. The sweeting unit are therefore exempt from the rule requirements. [§60.5365a(g)(4)] The storage vessels at this facility each emit less than 6 tpy of VOC and are therefore not 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 at this site; therefore, this regulation does not apply.
NSPS 40 CFR Part 60 Subpart JJJJ	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines	Yes	C-1200, C-1210, C-1220, C-1230	The compressor engines at this site are 4SLB, 2500-hp engines, manufactured after July 1, 2007 and must comply with Subpart JJJJ.
NSPS 40 CFR 60 Subpart TTTT	Standards of Performance for Greenhouse Gas Emissions for Electric Generating Units	No	N/A	As there are no electric generating units onsite, 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	As there are no electric generating units onsite, 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 site is not a MSW; therefore, these regulations do not apply.
NESHAP 40 CFR 61 Subpart A	General Provisions	No	N/A	There are no Subparts of 40 CFR Part 61 that apply to equipment at this site; therefore, Subpart A does not apply.
NESHAP 40 CFR 61 Subpart E	National Emission Standards for **Mercury**	No	N/A	As this site does not process mercury ore to recover mercury, use mercury chlor-alkali cells to produce chlorine gas and alkali metal hydroxide, and incinerate or dry wastewater treatment plant sludge, this regulation does not apply.

Federal Regulation Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
NESHAP 40 CFR 61 Subpart V	National Emission Standards for **Equipment Leaks** (Fugitive Emission Sources)	No	N/A	The provisions of this subpart apply to each of the following sources that are intended to operate in volatile hazardous air pollutant (VHAP) service: pumps, compressors, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, surge control vessels, bottoms receivers, and control devices or systems required by this subpart. VHAP service means a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least 10 percent by weight of VHAP. VHAP means a substance regulated under this subpart for which a standard for equipment leaks of the substance has been promulgated. Benzene is a VHAP (See 40 CFR 61 Subpart J). There is no equipment at this site that operates in VHAP service; therefore, this regulation does not apply.
MACT 40 CFR 63, Subpart A	General Provisions	Yes	C-1200, C-1210, C-1220, C-1230, DEHY-1, DEHY-2., DEHY-3, DEHY-4, DEHY-5, DEHY-6	The listed equipment is subject to the requirements of 40 CFR Part 63. See the regulations below for more information.
MACT 40 CFR 63.760 Subpart HH	Oil and Natural Gas Production Facilities	Yes	DEHY-1, DEHY-2., DEHY-3, DEHY-4, DEHY-5, DEHY-6	As this site will be a major source of HAP emissions, Subpart HH applies to the glycol dehydration units. The dehydrators will have a natural gas flow rate greater than 85 thousand standard cubic meters per day (~3 MMscfd). The dehydrators are equipped with controls as required under MACT HH per 63.764(c)(1)-(3).
MACT 40 CFR 63 Subpart HHH	National Emission Standards for Hazardous Air Pollutants from Natural Gas Transmissions and Storage Facilities	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 (if there is no local distribution company), and that are major sources of hazardous air pollutants (HAP) emissions as defined in §63.1271. As this site is an onshore natural gas processing plant, Subpart HHH 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	Yes	H-1600, H-1620, H-2620, H-3620, H-4620, H-5620, H-6620, H-1781, H-2781, H-1741, H-2741, E-1566, E-2566, E-3566, E-4566, H-2600	The facility will be a major source of HAPs and the units listed will be subject to MACT 40 CFR 63 Subpart DDDDD as they will be constructed after the June 4, 2010 applicability date. The boilers and process heaters will be combusting natural gas.

Federal Regulation Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
MACT 40 CFR 63 Subpart UUUUU	National Emission Standards for Hazardous Air Pollutants Coal & Oil Fire Electric Utility Steam Generating Unit	No	N/A	This regulation does not apply as there are no electric utility steam generating units onsite.
MACT 40 CFR 63 Subpart ZZZZ	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (**RICE MACT**)	Yes	C-1200, C-1210, C-1220, C-1230	This subpart establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. The listed engines are 4SLB, 2500-hp engines located at a major source of HAP emissions and will comply with the applicable requirements of Subpart ZZZZ.
40 CFR 64	Compliance Assurance Monitoring	Yes	DEHY-1, DEHY-2., DEHY-3, DEHY-4, DEHY-5, DEHY-6	As this site will be a TV major source with the proposed changes included in this application and the listed units are major in and of themselves, Dark Horse must comply with CAM requirements.
40 CFR 68	Chemical Accident Prevention	Yes	Facility	The facility is an affected facility, as it will use chemicals at quantities greater than the thresholds listed in Part 68. The facility will develop and maintain an RMP for these chemicals.
Title IV – Acid Rain 40 CFR 72	**Acid Rain**	No	N/A	This regulation does not apply as this facility does not generate commercial electric power or electric power for sale.
Title IV – Acid Rain 40 CFR 73	**Sulfur Dioxide** Allowance Emissions	No	N/A	This regulation does not apply as this facility does not generate commercial electric power or electric power for sale.
Title IV-Acid Rain 40 CFR 75	**Continuous Emissions Monitoring**	No	N/A	This regulation does not apply as this facility does not generate commercial electric power or electric power for sale.
Title IV – Acid Rain 40 CFR 76	**Acid Rain** Nitrogen Oxides **Emission Reduction Program**	No	N/A	This regulation does not apply as this facility does not generate commercial electric power or electric power for sale.
Title VI – 40 CFR 82	Protection of **Stratospheric Ozone**	No	N/A	Not applicable as this site does not meet any of the following: **(40 CFR 82.1 and 82.100)** produce, transform, destroy, import or export a controlled substance or import or export a controlled product; **(40 CFR 82.30)** if you perform service on a motor vehicle for consideration when this service involves the refrigerant in the motor vehicle air conditioner; **(40 CFR 82.80)** if you are a department, agency, and instrumentality of the United States subject to Federal procurement requirements; **(82.150)** if you service, maintain, or repair appliances, dispose of appliances, refrigerant reclaimers, **if you are an owner or operator of an appliance**, if you are a manufacturer of appliances or of recycling and recovery equipment, if you are an approved recycling and recovery equipment testing organization, and/or if you sell or offer for sell or purchase class I or class I refrigerants.

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.

Piñon Midstream, LLC will develop the above-mentioned plans and make them available to NMED upon request.

Section 15

Alternative Operating Scenarios

(Submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

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

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

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

There are no alternative operating scenarios being proposed with this application.

Section 16

Air Dispersion Modeling

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

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

Check each box that applies:

☐ See attached, approved modeling **waiver for all** pollutants from the facility.

☐ See attached, approved modeling **waiver for some** pollutants from the facility.

☒ Attached in Universal Application Form 4 (UA4) is a **modeling report for all** pollutants from the facility.

☐ Attached in UA4 is a **modeling report for some** pollutants from the facility.

☐ No modeling is required.

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.

There is no compliance testing to report at this time.

Section 18

Addendum for Streamline Applications

Do not print this section unless this is a streamline application.

This Section is not applicable as this is not a Streamline application.

Section 19

Requirements for Title V Program

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

This Section is not applicable as this is not a Title V permit application.

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 included in this application.

Section 21

Addendum for Landfill Applications

Do not print this section unless this is a landfill application.

This Section is not applicable as this is not a landfill application.

Section 22: Certification

Company Name: Piñon Midstream, LLC

I, Chris Kassen, 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 28 day of October, 2023 upon my oath or affirmation, before a notary of the State of Texas.

*Signature

10/28/23
Date

Chris Kassen
Printed Name

VP Operations
Title

Scribed and sworn before me on this 28th day of October, 2023.

My authorization as a notary of the State of Texas expires on the 11th day of April, 2027.

KYLE A. ABERNATHY
Notary Public, State of Texas
Comm. Expires 04-11-2027
Notary ID 134299356

Notary's Signature

10-28-2023
Date

Kyle Abernathy
Notary's Printed Name

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