CDH Consulting, LLC
Thornton, Colorado
720.431.7468
www.CDHConsult.com

May 16, 2025

New Mexico Environment Department
Air Quality Bureau
Minor Source Permitting Section
525 Camino de los Marquez, Suite 1
Santa Fe, New Mexico 87505-1816

RE: High Life Upslope Fed Com 1 CTB
NSR Permit #10432 Modification
Tap Rock Operating, LLC
2.3 mi S of Whites City, Eddy County, New Mexico

Dear NSR Permitting Team:

On behalf of Tap Rock Operating, LLC (Tap Rock), CDH Consulting, LLC (CDH) is submitting the attached application for a New Source Review (NSR) Construction Permit for proposed modifications to the referenced facility in Eddy County, New Mexico.

All required forms, notices, and supplemental information are included in this submittal. Digital files will be submitted upon request.

If you have any questions or comments, please feel free to contact me at (303) 594-7951 or cmartinez@CDHConsult.com.

Sincerely,

Chris Martinez
Air Quality Engineer

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.: **1248** in the amount of **$500**

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

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

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

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

Section 1 – Facility Information

Section 1-A: Company Information

		AI # if known: **41218**	Updating Permit/NOI #: **10432**
1	Facility Name: **High Life Upslope Fed Com CTB (fka High Life CTB)**	Plant primary SIC Code (4 digits): **1311**	
		Plant NAIC code (6 digits): **211120**	
a	Facility Street Address (If no facility street address, provide directions from a prominent landmark):): **From Whites City: Drive 1.6 miles south on Hwy 180. Turn left onto Whites City Road. Follow Whites City Road east and then southeast for approximately 1.2 miles. Turn right (south) on new access road and follow 0.2 miles to facility.**		

2	Plant Operator Company Name: **Tap Rock Operating, LLC**	Phone/Fax: **(720) 772-5090**
a	Plant Operator Address: **523 Park Point Dr, Suite 200, Golden, CO 80401**	
b	Plant Operator's New Mexico Corporate ID or Tax ID:	
3	Plant Owner(s) name(s): **Tap Rock Operating, LLC**	Phone/Fax: **(720) 772-5090**
a	Plant Owner(s) Mailing Address(s): **523 Park Point Dr, Suite 200, Golden, CO 80401**	
4	Bill To (Company): **Tap Rock Operating, LLC**	Phone/Fax: **(720) 772-5090**
a	Mailing Address: **523 Park Point Dr, Suite 200, Golden, CO 80401**	E-mail: **--**
5	☒ Preparer: **Chris Martinez** ☒ Consultant: **CDH Consulting, LLC**	Phone/Fax: **(303) 594-7951**
a	Mailing Address: **9446 Clermont St., Thornton, CO 80229**	E-mail: **cmartinez@cdhconsult.com**
6	Plant Operator Contact: **Bill Ramsey**	Phone/Fax: **(720) 772-5090**
a	Address: **523 Park Point Dr, Suite 200, Golden, CO 80401**	E-mail: **bramsey@taprk.com**
7	Air Permit Contact: **Bill Ramsey**	Title: **Sr. Environmental and Regulatory Specialist**
a	E-mail: **bramsey@taprk.com**	Phone/Fax: **(720) 772-5090**
b	Mailing Address: **523 Park Point Dr, Suite 200, Golden, CO 80401**	
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):
4	Was this facility constructed before 8/31/1972 and continuously operated since 1972? ☐ Yes ☒ No	
5	If Yes to question 3, has this facility been modified (see 20.2.72.7.P NMAC) or the capacity increased since 8/31/1972? ☐ Yes ☐ No ☒ N/A	
6	Does this facility have a Title V operating permit (20.2.70 NMAC)? ☐ Yes ☒ No	If yes, the permit No. is: P-
7	Has this facility been issued a No Permit Required (NPR)? ☐ Yes ☒ No	If yes, the NPR No. is:
8	Has this facility been issued a Notice of Intent (NOI)? ☐ Yes ☒ No	If yes, the NOI No. is:
9	Does this facility have a construction permit (20.2.72/20.2.74 NMAC)? ☒ Yes ☐ No	If yes, the permit No. is: **10432**
10	Is this facility registered under a General permit (GCP-1, GCP-2, etc.)? ☐ Yes ☒ No	If yes, the register No. is:

Section 1-C: Facility Input Capacity & Production Rate

1	What is the facility's maximum input capacity, specify units (reference here and list capacities in Section 20, if more room is required)			
a	Current	Hourly:	Daily:	Annually:
b	Proposed	Hourly:	Daily:	Annually:
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: **Oil: 160 bbl**	Daily: **Oil: 3,850 bbl**	Annually: **Oil: 1,405,250 bbl**

		Produced Water: 890 bbl **Natural Gas: 583 Mscf**	**Produced Water: 21,350 bbl** **Natural Gas: 14.0 MMscf**	**Produced Water: 7,792,750 bbl** **Natural Gas: 5,110 MMscf**
b	Proposed	Hourly: **Oil: 175 bbl** **Produced Water: 1,167 bbl** **Natural Gas: 1,396 Mscf**	Daily: **Oil: 4,200 bbl** **Produced Water: 28,000 bbl** **Natural Gas: 33.5 MMscf**	Annually: **Oil: 1,533,000 bbl** **Produced Water: 10,220,000 bbl** **Natural Gas: 12,228 MMscf**

Section 1-D: Facility Location Information

1	Latitude (decimal degrees): **32.142922**	Longitude (decimal degrees): **-104.376364**	County: **Eddy**	Elevation (ft): **3,510**
2	UTM Zone: ☐ 12 or ☒ 13	Datum: ☒ NAD 83 ☐ WGS 84		
a	UTM E (in meters, to nearest 10 meters): **558,814**	UTM N (in meters, to nearest 10 meters): **3,556,559**		
3	Name and zip code of nearest New Mexico town: **Whites City**			
4	Detailed Driving Instructions from nearest NM town (attach a road map if necessary): **From Whites City: Drive 1.6 miles south on Hwy 180. Turn left onto Whites City Road. Follow Whites City Road east and then southeast for approximately 1.2 miles. Turn right (south) on new access road and follow 0.2 miles to facility.**			
5	The facility is **2.3** (distance) miles **South** (direction) of **Whites City** (nearest town).			
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: **Located within Eddy County**			
8	**20.2.72** NMAC applications **only**: Will the property on which the facility is proposed to be constructed or operated be closer than 50 km (31 miles) to other states, Bernalillo County, or a Class I area (see www.env.nm.gov/air-quality/modeling-publications/)? ☒ Yes ☐ No (20.2.72.206.A.7 NMAC) If yes, list all with corresponding distances in kilometers: • **2.4 km from Carlsbad Caverns NP** • **15.9 km from Texas border**			
9	Name nearest Class I area: **Carlsbad Caverns NP**			
10	Shortest distance (in km) from facility boundary to the boundary of the nearest Class I area (to the nearest 10 meters): **2.4 km**			
11	Distance (meters) from the perimeter of the Area of Operations (AO is defined as the plant site inclusive of all disturbed lands, including mining overburden removal areas) to nearest residence, school or occupied structure: **~2,011 meters**			
12	Method(s) used to delineate the Restricted Area: **Facility is constructed on a raised, leveled pad with steep grade and perimeter ditch and berm.** "**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:		☐AM ☐PM	End:	☐AM ☐PM	

3	Month and year of anticipated start of construction: **Upon permit approval ~September 2025**
4	Month and year of anticipated construction completion: **2 weeks after start**
5	Month and year of anticipated startup of new or modified facility: **Upon construction completion**
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:		
a	If yes, NOV date or description of issue: **NA**		NOV Tracking No: **NA**
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:	Date:	Requirement # (or page # and paragraph #):
d	Provide the required text to be inserted in this permit:		
2	Is air quality dispersion modeling or modeling waiver being submitted with this application? ☐ 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):		Phone:
a	R.O. Title:	R.O. e-mail:	
b	R. O. Address:		
2	Alternate Responsible Official (20.2.70.300.D.2 NMAC):		Phone:
a	A. R.O. Title:	A. R.O. e-mail:	
b	A. R. O. Address:		
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):		
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.):		
a	Address of Parent Company:		

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.):
6	Telephone numbers & names of the owners' agents and site contacts familiar with plant operations:
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:

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 **Chris Martinez**, Email **cmartinez@cdhconsult.com**

Phone number **(303) 594-7951** .

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.

Table of Contents

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)		RICE Ignition Type (CI, SI, 4SLB, 4SRB, 2SLB)[4]	Replacing Unit No.
ENG-1	Compressor Engine	Caterpillar	3516J	TBD	1380 HP	1380 HP	TBD TBD	CATALYST ENG-1	2-02-002-54	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	4SLB	
ENG-2	Compressor Engine	Caterpillar	3516J	TBD	1380 HP	1380 HP	TBD TBD	CATALYST ENG-2	2-02-002-54	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☑ To be Replaced	4SLB	
GEN-1	Generator Engine	PSI	21.9L	TBD	581 HP	581 HP	TBD TBD	CATALYST GEN-1	2-02-002-53	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☑ To be Replaced	4SRB	
GEN-2	Generator Engine	PSI	21.9L	TBD	581 HP	581 HP	TBD TBD	CATALYST GEN-2	2-02-002-53	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☑ To be Replaced	4SRB	
GEN-3	Generator Engine	PSI	21.9L	TBD	581 HP	581 HP	TBD TBD	CATALYST GEN-3	2-02-002-53	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☑ To be Replaced	4SRB	
GEN-4	Generator Engine	PSI	21.9L	TBD	581 HP	581 HP	TBD TBD	CATALYST GEN-4	2-02-002-53	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☑ To be Replaced	4SRB	
FUG-1	Equipment Fugitives	N/A	N/A	N/A	N/A	N/A	TBD TBD	 FUG-1	3-10-888-11	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced		
HT-1	Heater Treater	TBD	TBD	TBD	1.5 MMBtu/hr	1.5 MMBtu/hr	TBD TBD	 HT-1	3-10-004-04	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
HT-2	Heater Treater	TBD	TBD	TBD	1.5 MMBtu/hr	1.5 MMBtu/hr	TBD TBD	 HT-2	3-10-004-04	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
HT-3	Heater Treater	TBD	TBD	TBD	1.5 MMBtu/hr	1.5 MMBtu/hr	TBD TBD	 HT-3	3-10-004-04	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
HT-4	Heater Treater	TBD	TBD	TBD	1.5 MMBtu/hr	1.5 MMBtu/hr	TBD TBD	 HT-4	3-10-004-04	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
HT-5	Heater Treater	TBD	TBD	TBD	1.5 MMBtu/hr	1.5 MMBtu/hr	TBD TBD	 HT-5	3-10-004-04	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
HT-6	Heater Treater	TBD	TBD	TBD	1.5 MMBtu/hr	1.5 MMBtu/hr	TBD TBD	 HT-6	3-10-004-04	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
HT-7	Heater Treater	TBD	TBD	TBD	1.5 MMBtu/hr	1.5 MMBtu/hr	TBD TBD	 HT-7	3-10-004-04	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
HT-8	Heater Treater	TBD	TBD	TBD	1.5 MMBtu/hr	1.5 MMBtu/hr	TBD TBD	 HT-8	3-10-004-04	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		

Unit Number[1]	Source Description	Make	Model #	Serial #	Manufact-urer's Rated Capacity[3] (Specify Units)	Requested Permitted Capacity[3] (Specify Units)	Date of Manufacture[2] / Date of Construction/ Reconstruction[2]	Controlled by Unit # / Emissions vented to Stack #	Source Classi-fication Code (SCC)		RICE Ignition Type (CI, SI, 4SLB, 4SRB, 2SLB)[4]	Replacing Unit No.
TK-1	Crude Oil Tank	TBD	TBD	TBD	1000 bbl	9836.75 Mgal/yr	TBD TBD	VRU/FL-LP FL-LP	4-04-003-12	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced		
TK-2	Crude Oil Tank	TBD	TBD	TBD	1000 bbl	9836.75 Mgal/yr	TBD TBD	VRU/FL-LP FL-LP	4-04-003-12	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced		
TK-3	Crude Oil Tank	TBD	TBD	TBD	1000 bbl	9836.75 Mgal/yr	TBD TBD	VRU/FL-LP FL-LP	4-04-003-12	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced		
TK-4	Crude Oil Tank	TBD	TBD	TBD	1000 bbl	9836.75 Mgal/yr	TBD TBD	VRU/FL-LP FL-LP	4-04-003-12	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced		
TK-5	Crude Oil Tank	TBD	TBD	TBD	1000 bbl	9836.75 Mgal/yr	TBD TBD	VRU/FL-LP FL-LP	4-04-003-12	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced		
TK-6	Crude Oil Tank	TBD	TBD	TBD	1000 bbl	9836.75 Mgal/yr	TBD TBD	VRU/FL-LP FL-LP	4-04-003-12	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced		
PWTK-1	Produced Water Tank	TBD	TBD	TBD	1000 bbl	81,823.88 Mgal/yr	TBD TBD	VRU/FL-LP FL-LP	4-04-003-15	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced		
PWTK-2	Produced Water Tank	TBD	TBD	TBD	1000 bbl	81,823.88 Mgal/yr	TBD TBD	VRU/FL-LP FL-LP	4-04-003-15	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced		
PWTK-3	Produced Water Tank	TBD	TBD	TBD	1000 bbl	81,823.88 Mgal/yr	TBD TBD	VRU/FL-LP FL-LP	4-04-003-15	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced		
PWTK-4	Produced Water Tank	TBD	TBD	TBD	1000 bbl	81,823.88 Mgal/yr	TBD TBD	VRU/FL-LP FL-LP	4-04-003-15	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced		
FL-LP	Low Pressure Flare	HERO	T60VT8 Dual Tip	TBD	2.70 MMScf/d	2.70 MMScf/d	TBD TBD	 FL-LP	3-10-001-60	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☑ To be Replaced		
FL-LP SSM	Low Pressure Flare - SSM	HERO	T60VT8 Dual Tip	TBD	2.70 MMScf/d	2.70 MMScf/d	TBD TBD	 FL-LP	3-10-001-60	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☑ To be Replaced		
FL-HP	High Pressure Flare	HERO	T60VT8 Dual Tip	TBD	23.00 MMscf/d	23.00 MMscf/d	TBD TBD	 FL-HP	3-10-001-60	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☑ To be Replaced		
FL-HP SSM	High Pressure Flare - SSM	HERO	T60VT8 Dual Tip	TBD	23.00 MMscf/d	23.00 MMscf/d	TBD TBD	 FL-HP	3-10-001-60	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☑ To be Replaced		
VRT	Vapor Recovery Towers	TBD	TBD	TBD	-	-	TBD TBD	VRU/FL-LP FL-LP	3-10-888-11	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced		
FL-LP	Low Pressure Flare	DBI	AF-668	TBD	2.0 MMScf/d	2.0 MMScf/d	TBD TBD	 FL-LP	3-10-001-60	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☑ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
FL-LP SSM	Low Pressure Flare - SSM	DBI	AF-668	TBD	2.0 MMScf/d	2.0 MMScf/d	TBD TBD	 FL-LP	3-10-001-60	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☑ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
FL-HP	High Pressure Flare	DBI	AF-668	TBD	37.0 MMscf/d	37.0 MMscf/d	TBD TBD	 FL-HP	3-10-001-60	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☑ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
FL-HP SSM	High Pressure Flare - SSM	DBI	AF-668	TBD	37.0 MMscf/d	37.0 MMscf/d	TBD TBD	 FL-HP	3-10-001-60	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☑ Replacement Unit ☐ To Be Modified ☐ To be Replaced		

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)		RICE Ignition Type (CI, SI, 4SLB, 4SRB, 2SLB)[4]	Replacing Unit No.
ENG-2	Compressor Engine	Caterpillar	3606	TBD	1875 HP	1875 HP	TBD TBD	CATALYST ENG-2	2-02-002-54	Existing (unchanged) ☐ To be Removed New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced ☐	4SLB	
GEN-1	Generator Engine	PSI	21.9L	TBD	581 HP	581 HP	TBD TBD	CATALYST GEN-1	2-02-002-53	Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced ☐	4SRB	
GEN-2	Generator Engine	PSI	21.9L	TBD	581 HP	581 HP	TBD TBD	CATALYST GEN-2	2-02-002-53	Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced ☐	4SRB	
GEN-3	Generator Engine	PSI	21.9L	TBD	581 HP	581 HP	TBD TBD	CATALYST GEN-3	2-02-002-53	Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced ☐	4SRB	
GEN-4	Generator Engine	PSI	21.9L	TBD	581 HP	581 HP	TBD TBD	CATALYST GEN-4	2-02-002-53	Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced ☐	4SRB	
GEN-5	Generator Engine	PSI	21.9L	TBD	581 HP	581 HP	TBD TBD	CATALYST GEN-5	2-02-002-53	Existing (unchanged) ☐ To be Removed ☐ New/Additional ☑ Replacement Unit ☐ To Be Modified ☐ To be Replaced ☐	4SRB	
GEN-6	Generator Engine	PSI	21.9L	TBD	581 HP	581 HP	TBD TBD	CATALYST GEN-6	2-02-002-53	Existing (unchanged) ☐ To be Removed ☐ New/Additional ☑ Replacement Unit ☐ To Be Modified ☐ To be Replaced ☐	4SRB	
HT-9	Heater Treater	TBD	TBD	TBD	1.5 MMBtu/hr	1.5 MMBtu/hr	TBD TBD	 HT-9	3-10-004-04	Existing (unchanged) ☐ To be Removed ☐ New/Additional ☑ Replacement Unit ☐ To Be Modified ☐ To be Replaced ☐		
HT-10	Heater Treater	TBD	TBD	TBD	1.5 MMBtu/hr	1.5 MMBtu/hr	TBD TBD	 HT-10	3-10-004-04	Existing (unchanged) ☐ To be Removed ☐ New/Additional ☑ Replacement Unit ☐ To Be Modified ☐ To be Replaced ☐		
HT-11	Heater Treater	TBD	TBD	TBD	1.5 MMBtu/hr	1.5 MMBtu/hr	TBD TBD	 HT-11	3-10-004-04	Existing (unchanged) ☐ To be Removed ☐ New/Additional ☑ Replacement Unit ☐ To Be Modified ☐ To be Replaced ☐		

[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
OILLOAD-1	Oil truck loading	N/A	N/A	264,600	20.2.72.202.B.5 (< 0.5 tpy VOC)		☑ Existing (unchanged) ☐ New/Additional ☐ To Be Modified ☐ To be Removed ☐ Replacement Unit ☐ To be Replaced
			N/A	gal/yr			
PWLOAD-1	Produced water truck loading	N/A	N/A	191,100	20.2.72.202.B.5 (< 0.5 tpy VOC)		☑ Existing (unchanged) ☐ New/Additional ☐ To Be Modified ☐ To be Removed ☐ Replacement Unit ☐ To be Replaced
			N/A	gal/yr			
							☐ Existing (unchanged) ☐ New/Additional ☐ To Be Modified ☐ To be Removed ☐ Replacement Unit ☐ To be Replaced
							☐ Existing (unchanged) ☐ New/Additional ☐ To Be Modified ☐ To be Removed ☐ Replacement Unit ☐ To be Replaced
							☐ Existing (unchanged) ☐ New/Additional ☐ To Be Modified ☐ To be Removed ☐ Replacement Unit ☐ To be Replaced
							☐ Existing (unchanged) ☐ New/Additional ☐ To Be Modified ☐ To be Removed ☐ Replacement Unit ☐ To be Replaced
							☐ Existing (unchanged) ☐ New/Additional ☐ To Be Modified ☐ To be Removed ☐ Replacement Unit ☐ To be Replaced
							☐ Existing (unchanged) ☐ New/Additional ☐ To Be Modified ☐ To be Removed ☐ Replacement Unit ☐ To be Replaced
							☐ Existing (unchanged) ☐ New/Additional ☐ To Be Modified ☐ To be Removed ☐ Replacement Unit ☐ To be Replaced
							☐ Existing (unchanged) ☐ New/Additional ☐ To Be Modified ☐ To be Removed ☐ Replacement Unit ☐ To be Replaced
							☐ Existing (unchanged) ☐ New/Additional ☐ To Be Modified ☐ To be Removed ☐ Replacement Unit ☐ To be Replaced
							☐ Existing (unchanged) ☐ New/Additional ☐ To Be Modified ☐ To be Removed ☐ Replacement Unit ☐ To be Replaced
							☐ Existing (unchanged) ☐ New/Additional ☐ To Be Modified ☐ To be Removed ☐ Replacement Unit ☐ To be Replaced

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

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
CATALYST	Catalytic Reduction	TBD	CO	ENG-1	77	Manufacturer Specification
CATALYST	Catalytic Reduction	TBD	CO	ENG-2	76	Manufacturer Specification
CATALYST	Catalytic Reduction	TBD	VOCs	ENG-1	35	Manufacturer Specification
CATALYST	Catalytic Reduction	TBD	NOx	GEN-1	91	Manufacturer Specification
CATALYST	Catalytic Reduction	TBD	CO	GEN-1	88	Manufacturer Specification
CATALYST	Catalytic Reduction	TBD	NOx	GEN-2	91	Manufacturer Specification
CATALYST	Catalytic Reduction	TBD	CO	GEN-2	88	Manufacturer Specification
CATALYST	Catalytic Reduction	TBD	NOx	GEN-3	91	Manufacturer Specification
CATALYST	Catalytic Reduction	TBD	CO	GEN-3	88	Manufacturer Specification
CATALYST	Catalytic Reduction	TBD	NOx	GEN-4	91	Manufacturer Specification
CATALYST	Catalytic Reduction	TBD	CO	GEN-4	88	Manufacturer Specification
CATALYST	Catalytic Reduction	TBD	NOx	GEN-5	91	Manufacturer Specification
CATALYST	Catalytic Reduction	TBD	CO	GEN-5	88	Manufacturer Specification
CATALYST	Catalytic Reduction	TBD	NOx	GEN-6	91	Manufacturer Specification
CATALYST	Catalytic Reduction	TBD	CO	GEN-6	88	Manufacturer Specification
VRU	Vapor Recovery Unit	TBD	VOCs	TK-1	90	Design Calculation
FL-LP	Flare	TBD	VOCs	TK-1	98	Manufacturer Specification
VRU	Vapor Recovery Unit	TBD	VOCs	TK-2	90	Design Calculation
FL-LP	Flare	TBD	VOCs	TK-2	98	Manufacturer Specification

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
VRU	Vapor Recovery Unit	TBD	VOCs	TK-3	90	Design Calculation
FL-LP	Flare	TBD	VOCs	TK-3	98	Manufacturer Specification
VRU	Vapor Recovery Unit	TBD	VOCs	TK-4	90	Design Calculation
FL-LP	Flare	TBD	VOCs	TK-4	98	Manufacturer Specification
VRU	Vapor Recovery Unit	TBD	VOCs	TK-5	90	Design Calculation
FL-LP	Flare	TBD	VOCs	TK-5	98	Manufacturer Specification
VRU	Vapor Recovery Unit	TBD	VOCs	TK-6	90	Design Calculation
FL-LP	Flare	TBD	VOCs	TK-6	98	Manufacturer Specification
VRU	Vapor Recovery Unit	TBD	VOCs	PWTK-1	90	Design Calculation
FL-LP	Flare	TBD	VOCs	PWTK-1	98	Manufacturer Specification
VRU	Vapor Recovery Unit	TBD	VOCs	PWTK-2	90	Design Calculation
FL-LP	Flare	TBD	VOCs	PWTK-2	98	Manufacturer Specification
VRU	Vapor Recovery Unit	TBD	VOCs	PWTK-3	90	Design Calculation
FL-LP	Flare	TBD	VOCs	PWTK-3	98	Manufacturer Specification
VRU	Vapor Recovery Unit	TBD	VOCs	PWTK-4	90	Design Calculation
FL-LP	Flare	TBD	VOCs	PWTK-4	98	Manufacturer Specification
VRU	Vapor Recovery Unit	TBD	VOCs	VRT	90	Design Calculation
FL-LP	Flare	TBD	VOCs	VRT	98	Manufacturer Specification

[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
ENG-1	3.04	13.33	7.91	34.65	3.26	14.26	0.005	0.022	-	-	0.100	0.440	0.100	0.440	-	-	-	-
ENG-2	4.13	18.11	8.27	36.21	2.89	12.67	0.006	0.027	-	-	0.124	0.543	0.100	0.440	-	-	-	-
GEN-1	4.56	19.96	4.33	18.98	0.60	2.64	0.002	0.007	-	-	0.066	0.287	0.066	0.287	-	-	-	-
GEN-2	4.56	19.96	4.33	18.98	0.60	2.64	0.002	0.007	-	-	0.066	0.287	0.066	0.287	-	-	-	-
GEN-3	4.56	19.96	4.33	18.98	0.60	2.64	0.002	0.007	-	-	0.066	0.287	0.066	0.287	-	-	-	-
GEN-4	4.56	19.96	4.33	18.98	0.60	2.64	0.002	0.007	-	-	0.066	0.287	0.066	0.287	-	-	-	-
GEN-5	4.56	19.96	4.33	18.98	0.60	2.64	0.002	0.007	-	-	0.066	0.287	0.066	0.287	-	-	-	-
GEN-6	4.56	19.96	4.33	18.98	0.60	2.64	0.002	0.007	-	-	0.066	0.287	0.066	0.287	-	-	-	-
FUG-1	-	-	-	-	0.11	0.48	-	-	-	-	-	-	-	-	-	-	-	-
HT-1	0.15	0.64	0.12	0.54	0.01	0.04	-	-	-	-	0.01	0.05	0.01	0.05				
HT-2	0.15	0.64	0.12	0.54	0.01	0.04	-	-	-	-	0.01	0.05	0.01	0.05				
HT-3	0.15	0.64	0.12	0.54	0.01	0.04	-	-	-	-	0.01	0.05	0.01	0.05				
HT-4	0.15	0.64	0.12	0.54	0.01	0.04	-	-	-	-	0.01	0.05	0.01	0.05				
HT-5	0.15	0.64	0.12	0.54	0.01	0.04	-	-	-	-	0.01	0.05	0.01	0.05				
HT-6	0.15	0.64	0.12	0.54	0.01	0.04	-	-	-	-	0.01	0.05	0.01	0.05				
HT-7	0.15	0.64	0.12	0.54	0.01	0.04	-	-	-	-	0.01	0.05	0.01	0.05				
HT-8	0.15	0.64	0.12	0.54	0.01	0.04	-	-	-	-	0.01	0.05	0.01	0.05				
HT-9	0.15	0.64	0.12	0.54	0.01	0.04	-	-	-	-	0.01	0.05	0.01	0.05				
HT-10	0.15	0.64	0.12	0.54	0.01	0.04	-	-	-	-	0.01	0.05	0.01	0.05				
HT-11	0.15	0.64	0.12	0.54	0.01	0.04	-	-	-	-	0.01	0.05	0.01	0.05				
TK-1	-	-	-	-	39.78	174.26	-	-	-	-	-	-	-	-	-	-	-	-
TK-2	-	-	-	-	39.78	174.26	-	-	-	-	-	-	-	-	-	-	-	-
TK-3	-	-	-	-	39.78	174.26	-	-	-	-	-	-	-	-	-	-	-	-
TK-4	-	-	-	-	39.78	174.26	-	-	-	-	-	-	-	-	-	-	-	-
TK-5	-	-	-	-	39.78	174.26	-	-	-	-	-	-	-	-	-	-	-	-
TK-6	-	-	-	-	39.78	174.26	-	-	-	-	-	-	-	-	-	-	-	-
PWTK-1					4.60	20.16												
PWTK-2					4.60	20.16												
PWTK-3					4.60	20.16												
PWTK-4					4.60	20.16												
FL-LP	0.00	0.02	0.02	0.09	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FL-LP SSM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FL-HP	0.00	0.02	0.02	0.09	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FL-HP SSM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VRT	-	-	-	-	-	1666.00	-	-	-	-	-	-	-	-	-	-	-	-
MALF	-	-	-	-	-	10.00	-	-	-	-	-	-	-	-	-	-	-	-
Totals	36.19	158.28	43.52	190.85	267.09	2845.88	0.02	0.09	0.00	0.00	0.73	3.26	0.71	3.15	0.00	0.00	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 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
ENG-1	1.52	6.66	1.83	8.00	2.83	12.39	0.005	0.022	-	-	0.100	0.440	0.100	0.440	-	-	-	-
ENG-2	1.24	5.43	2.48	10.86	3.42	15.00	0.006	0.027	-	-	0.124	0.543	0.124	0.543	-	-	-	-
GEN-1	0.43	1.88	0.52	2.26	0.69	3.03	0.002	0.007	-	-	0.066	0.287	0.066	0.287	-	-	-	-
GEN-2	0.43	1.88	0.52	2.26	0.69	3.03	0.002	0.007	-	-	0.066	0.287	0.066	0.287	-	-	-	-
GEN-3	0.43	1.88	0.52	2.26	0.69	3.03	0.002	0.007	-	-	0.066	0.287	0.066	0.287	-	-	-	-
GEN-4	0.43	1.88	0.52	2.26	0.69	3.03	0.002	0.007	-	-	0.066	0.287	0.066	0.287	-	-	-	-
GEN-5	0.43	1.88	0.52	2.26	0.69	3.03	0.002	0.007	-	-	0.066	0.287	0.066	0.287	-	-	-	-
GEN-6	0.43	1.88	0.52	2.26	0.69	3.03	0.002	0.007	-	-	0.066	0.287	0.066	0.287	-	-	-	-
FUG-1	-	-	-	-	0.11	0.48	-	-	-	-	-	-	-	-	-	-	-	-
HT-1	0.15	0.64	0.12	0.54	0.01	0.04	-	-	-	-	0.01	0.05	0.01	0.05	-	-	-	-
HT-2	0.15	0.64	0.12	0.54	0.01	0.04	-	-	-	-	0.01	0.05	0.01	0.05	-	-	-	-
HT-3	0.15	0.64	0.12	0.54	0.01	0.04	-	-	-	-	0.01	0.05	0.01	0.05	-	-	-	-
HT-4	0.15	0.64	0.12	0.54	0.01	0.04	-	-	-	-	0.01	0.05	0.01	0.05	-	-	-	-
HT-5	0.15	0.64	0.12	0.54	0.01	0.04	-	-	-	-	0.01	0.05	0.01	0.05	-	-	-	-
HT-6	0.15	0.64	0.12	0.54	0.01	0.04	-	-	-	-	0.01	0.05	0.01	0.05	-	-	-	-
HT-7	0.15	0.64	0.12	0.54	0.01	0.04	-	-	-	-	0.01	0.05	0.01	0.05	-	-	-	-
HT-8	0.15	0.64	0.12	0.54	0.01	0.04	-	-	-	-	0.01	0.05	0.01	0.05	-	-	-	-
HT-9	0.15	0.64	0.12	0.54	0.01	0.04	-	-	-	-	0.01	0.05	0.01	0.05	-	-	-	-
HT-10	0.15	0.64	0.12	0.54	0.01	0.04	-	-	-	-	0.01	0.05	0.01	0.05	-	-	-	-
HT-11	0.15	0.64	0.12	0.54	0.01	0.04	-	-	-	-	0.01	0.05	0.01	0.05	-	-	-	-
TK-1	-	-	-	-	0.00	0.00	-	-	-	-	-	-	-	-	-	-	-	-
TK-2	-	-	-	-	0.00	0.00	-	-	-	-	-	-	-	-	-	-	-	-
TK-3	-	-	-	-	0.00	0.00	-	-	-	-	-	-	-	-	-	-	-	-
TK-4	-	-	-	-	0.00	0.00	-	-	-	-	-	-	-	-	-	-	-	-
TK-5	-	-	-	-	0.00	0.00	-	-	-	-	-	-	-	-	-	-	-	-
TK-6	-	-	-	-	0.00	0.00	-	-	-	-	-	-	-	-	-	-	-	-
PWTK-1					0.00	0.00												
PWTK-2					0.00	0.00												
PWTK-3					0.00	0.00												
PWTK-4					0.00	0.00												
FL-LP	0.00	0.02	0.02	0.09	0.00	0.00	-	-	-	-	-	-	-	-	-	-	-	-
FL-LP SSM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FL-HP	0.00	0.02	0.02	0.09	0.00	0.00	-	-	-	-	-	-	-	-	-	-	-	-
FL-HP SSM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VRT	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-	-	-
MALF	-	-	-	-	-	10.00	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Totals	7.00	30.45	8.79	38.53	10.61	56.49	0.02	0.09	0.00	0.00	0.73	3.26	0.73	3.26	0.00	0.00	0.00	0.00
Totals (including SSM)	118.20	35.85	515.76	63.20	408.07	89.61	0.02	0.09	0.00	0.00	0.73	3.26	0.73	3.26	0.00	0.00	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
ENG-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ENG-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GEN-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GEN-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GEN-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GEN-4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GEN-5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GEN-6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FUG-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HT-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HT-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HT-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HT-4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HT-5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HT-6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HT-7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HT-8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HT-9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HT-10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HT-11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TK-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TK-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TK-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TK-4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TK-5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TK-6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PWTK-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PWTK-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PWTK-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PWTK-4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FL-LP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FL-LP SSM	1.2746	0.5756	5.8109	2.6238	14.45	6.34												
FL-HP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FL-HP SSM	109.93	4.83	501.16	22.04	383.01	16.78												
VRT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SSM	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-	-	-	-
Totals	111.205	5.4056	506.971	24.6638	397.46	33.12	0	0	0	0	0	0	0	0	0	0	0	0

[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
FL-LP	FL-LP, FL-LP SSM	1.28	0.59	5.83	2.71	14.45	6.34	-	-	-	-	-	-	-	-	-	-
FL-HP	FL-HP, FL-HP SSM	109.93	4.85	501.18	22.13	383.01	16.78										
Totals:																	

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										
	mass GHG															
	CO_2e															
	mass GHG															
	CO_2e															
	mass GHG															
	CO_2e															
	mass GHG															
	CO_2e															
	mass GHG															
	CO_2e															
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	mass GHG															
	CO_2e															
	mass GHG															
	CO_2e															
	mass GHG															
	CO_2e															
	mass GHG															
	CO2e															
Total	mass GHG															
	CO_2e															

[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.

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 (acfs)	Flow Rate (dscfs)	Moisture by Volume (%)	Velocity (ft/sec)	Inside Diameter (ft)
ENG-1	ENG-1	V	No	25	902	43.90	-	-	125.90	0.67
ENG-2	ENG-2	V	No	25	822	199.60	-	-	186.80	1.17
GEN-1	GEN-1	V	No	15	1382	31.60	-	-	361.90	0.33
GEN-2	GEN-2	V	No	15	1382	31.60	-	-	361.90	0.33
GEN-3	GEN-3	V	No	15	1382	31.60	-	-	361.90	0.33
GEN-4	GEN-4	V	No	15	1382	31.60	-	-	361.90	0.33
GEN-5	GEN-5	V	No	15	1382	31.60	-	-	361.90	0.33
GEN-6	GEN-6	V	No	15	1382	31.60	-	-	361.90	0.33
HT-1	HT-1	V	No	20	460	7.80	-	-	22.40	0.67
HT-2	HT-2	V	No	20	460	7.80	-	-	22.40	0.67
HT-3	HT-3	V	No	20	460	7.80	-	-	22.40	0.67
HT-4	HT-4	V	No	20	460	7.80	-	-	22.40	0.67
HT-5	HT-5	V	No	20	460	7.80	-	-	22.40	0.67
HT-6	HT-6	V	No	20	460	7.80	-	-	22.40	0.67
HT-7	HT-7	V	No	20	460	7.80	-	-	22.40	0.67
HT-8	HT-8	V	No	20	460	7.80	-	-	22.40	0.67
HT-9	HT-9	V	No	20	460	7.80	-	-	22.40	0.67
HT-10	HT-10	V	No	20	460	7.80	-	-	22.40	0.67
HT-11	HT-11	V	No	20	460	7.80	-	-	22.40	0.67
FL-LP	FL-LP	V	No	75	1500	31.25	-	-	159.00	0.50
FL-LP SSM	FL-LP SSM	V	No	75	1500	31.25	-	-	159.00	0.50
FL-HP	FL-HP	V	No	75	1500	266.00	-	-	755.00	0.67
FL-HP SSM	FL-HP SSM	V	No	75	1500	266.00	-	-	755.00	0.67

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		Benzene ☑ HAP or ☐ TAP		Ethylbenzene ☑ HAP or ☐ TAP		n-Hexane ☑ HAP or ☐ TAP		Toluene ☑ HAP or ☐ TAP		Xylene ☑ 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
ENG-1	ENG-1	0.78	3.43	0.60	2.64	0.10	0.42	0.06	0.26	0.01	0.02	0.00	0.00	0.01	0.06	0.00	0.02	0.00	0.01
ENG-2	ENG-2	0.63	2.78	0.41	1.81	0.12	0.52	0.07	0.32	0.01	0.03	0.00	0.00	0.02	0.07	0.01	0.03	0.00	0.01
GEN-1	GEN-1	0.11	0.48	0.08	0.34	0.01	0.05	0.01	0.04	0.01	0.03	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
GEN-2	GEN-2	0.11	0.48	0.08	0.34	0.01	0.05	0.01	0.04	0.01	0.03	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
GEN-3	GEN-3	0.11	0.48	0.08	0.34	0.01	0.05	0.01	0.04	0.01	0.03	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
GEN-4	GEN-4	0.11	0.48	0.08	0.34	0.01	0.05	0.01	0.04	0.01	0.03	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
GEN-5	GEN-5	0.11	0.48	0.08	0.34	0.01	0.05	0.01	0.04	0.01	0.03	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
GEN-6	GEN-6	0.11	0.48	0.08	0.34	0.01	0.05	0.01	0.04	0.01	0.03	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
Totals:		2.07534	9.09	1.48845	6.5194	0.27746	1.21526	0.19164	0.8394	0.04759	0.20843	0.00161	0.00706	0.02806	0.12291	0.02324	0.10177	0.0092	0.04028

Table 2-J: Fuel

Specify fuel characteristics and usage. Unit and stack numbering must correspond throughout the application package.

Unit No.	Fuel Type (low sulfur Diesel, ultra low sulfur diesel, Natural Gas, Coal, …)	Fuel Source: purchased commercial, pipeline quality natural gas, residue gas, raw/field natural gas, process gas (e.g. SRU tail gas) or other	Specify Units				
			Lower Heating Value	Hourly Usage (MSCF/hr)	Annual Usage (MMSCF/y)	% Sulfur	% Ash
ENG-1	Natural Gas	Field Natural Gas	1157	8.710	76.30	0	0
ENG-2	Natural Gas	Field Natural Gas	1157	10.700	93.98	0	0
GEN-1	Natural Gas	Field Natural Gas	1157	2.920	25.61	0	0
GEN-2	Natural Gas	Field Natural Gas	1157	2.920	25.610	0	0
GEN-3	Natural Gas	Field Natural Gas	1157	2.920	25.610	0	0
GEN-4	Natural Gas	Field Natural Gas	1157	2.920	25.610	0	0
GEN-5	Natural Gas	Field Natural Gas	1157	2.920	25.610	0	0
GEN-6	Natural Gas	Field Natural Gas	1157	2.920	25.610	0	0
HT-1	Natural Gas	Field Natural Gas	1157	1.300	11.388	0	0
HT-2	Natural Gas	Field Natural Gas	1157	1.300	11.388	0	0
HT-3	Natural Gas	Field Natural Gas	1157	1.300	11.388	0	0
HT-4	Natural Gas	Field Natural Gas	1157	1.300	11.388	0	0
HT-5	Natural Gas	Field Natural Gas	1157	1.300	11.388	0	0
HT-6	Natural Gas	Field Natural Gas	1157	1.300	11.388	0	0
HT-7	Natural Gas	Field Natural Gas	1157	1.300	11.388	0	0
HT-8	Natural Gas	Field Natural Gas	1157	1.300	11.388	0	0
HT-9	Natural Gas	Field Natural Gas	1157	1.300	11.388	0	0
HT-10	Natural Gas	Field Natural Gas	1157	1.300	11.388	0	0
HT-11	Natural Gas	Field Natural Gas	1157	1.300	11.388	0	0
FL-LP	Natural Gas	Field Natural Gas	1157	0.055	0.482	0	0
FL-HP	Natural Gas	Field Natural Gas	1157	0.055	0.482	0	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		Composition	Liquid Density (lb/gal)	Vapor Molecular Weight (lb/lb*mol)	Average Storage Conditions		Max Storage Conditions	
						Temperature (°F)	True Vapor Pressure (psia)	Temperature (°F)	True Vapor Pressure (psia)
TK-1	4-04-003-12	Crude Oil	Mixed Hydrocarbons	6.5	45.03	77	10.65	77	10.65
TK-2	4-04-003-12	Crude Oil	Mixed Hydrocarbons	6.5	45.03	77	10.65	77	10.65
TK-3	4-04-003-12	Crude Oil	Mixed Hydrocarbons	6.5	45.03	77	10.65	77	10.65
TK-4	4-04-003-12	Crude Oil	Mixed Hydrocarbons	6.5	45.03	77	10.65	77	10.65
TK-5	4-04-003-12	Crude Oil	Mixed Hydrocarbons	6.5	45.03	77	10.65	77	10.65
TK-6	4-04-003-12	Crude Oil	Mixed Hydrocarbons	6.5	45.03	77	10.65	77	10.65
PWTK-1	4-04-003-15	Produced Water	99% Produced Water, 1% Oil	8.3	27.95	77	0.99	77	0.99
PWTK-2	4-04-003-15	Produced Water	99% Produced Water, 1% Oil	8.3	27.95	77	0.99	77	0.99
PWTK-3	4-04-003-15	Produced Water	99% Produced Water, 1% Oil	8.3	27.95	77	0.99	77	0.99
PWTK-4	4-04-003-15	Produced Water	99% Produced Water, 1% Oil	8.3	27.95	77	0.99	77	0.99

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 = 0.159 M3 = 42.0 gal

Tank No.	Date Installed	Materials Stored	Seal Type (refer to Table 2-LR below)	Roof Type (refer to Table 2-LR below)	Capacity		Diameter (M)	Vapor Space (M)	Color (from Table VI-C)		Paint Condition (from Table VI-C)	Annual Throughput (gal/yr)	Turn-overs (per year)
					(bbl)	(M^3)			Roof	Shell			
TK-1	TBD	Crude Oil	N/A	FX	1,000	159	6.6	4.65	Dark Green	Dark Green	Good	10,731,000	255.50
TK-2	TBD	Crude Oil	N/A	FX	1,000	159	6.6	4.65	Dark Green	Dark Green	Good	10,731,000	255.50
TK-3	TBD	Crude Oil	N/A	FX	1,000	159	6.6	4.65	Dark Green	Dark Green	Good	10,731,000	255.50
TK-4	TBD	Crude Oil	N/A	FX	1,000	159	6.6	4.65	Dark Green	Dark Green	Good	10,731,000	255.50
TK-5	TBD	Crude Oil	N/A	FX	1,000	159	6.6	4.65	Dark Green	Dark Green	Good	10,731,000	255.50
TK-6	TBD	Crude Oil	N/A	FX	1,000	159	6.6	4.65	Dark Green	Dark Green	Good	10,731,000	255.50
PWTK-1	TBD	Produced Water	N/A	FX	1,000	159	6.6	4.65	Dark Green	Dark Green	Good	107,310,000	2555.00
PWTK-2	TBD	Produced Water	N/A	FX	1,000	159	6.6	4.65	Dark Green	Dark Green	Good	107,310,000	2555.00
PWTK-3	TBD	Produced Water	N/A	FX	1,000	159	6.6	4.65	Dark Green	Dark Green	Good	107,310,000	2555.00
PWTK-4	TBD	Produced Water	N/A	FX	1,000	159	6.6	4.65	Dark Green	Dark Green	Good	107,310,000	2555.00

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	
Note: 1.00 bbl = 0.159 M^3 = 42.0 gal					**BL**: Black	
					OT: Other (specify)	

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)**
				Crude Oil	Mixed Hydrocarbons	Liquid	4,200 bbl/d
				Produced Water	Produced Water	Liquid	28,000 bbl/d
				Natural Gas	Natural Gas	Gas	33.5 MMscf/d

Table 2-N: CEM Equipment

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

Stack No.	Pollutant(s)	Manufacturer	Model No.	Serial No.	Sample Frequency	Averaging Time	Range	Sensitivity	Accuracy
	N/A								

Table 2-O: Parametric Emissions Measurement Equipment

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

Unit No.	Parameter/Pollutant Measured	Location of Measurement	Unit of Measure	Acceptable Range	Frequency of Maintenance	Nature of Maintenance	Method of Recording	Averaging Time
	N/A							

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.

Application Summary: This permit application is being submitted to authorize the addition of wells and separators to the facility under 20.2.72.200.A.1 NMAC. Compressor engine (ENG-2) will be replaced, the four generators (GEN 1-4) will be replaced with six smaller units (GEN 1-6), three heater treaters will be added (HT 9-11), and the flare (FL-1 & FL-2) is being replaced with a taller unit. Throughput for the facility will be increased slightly due to additional wells.

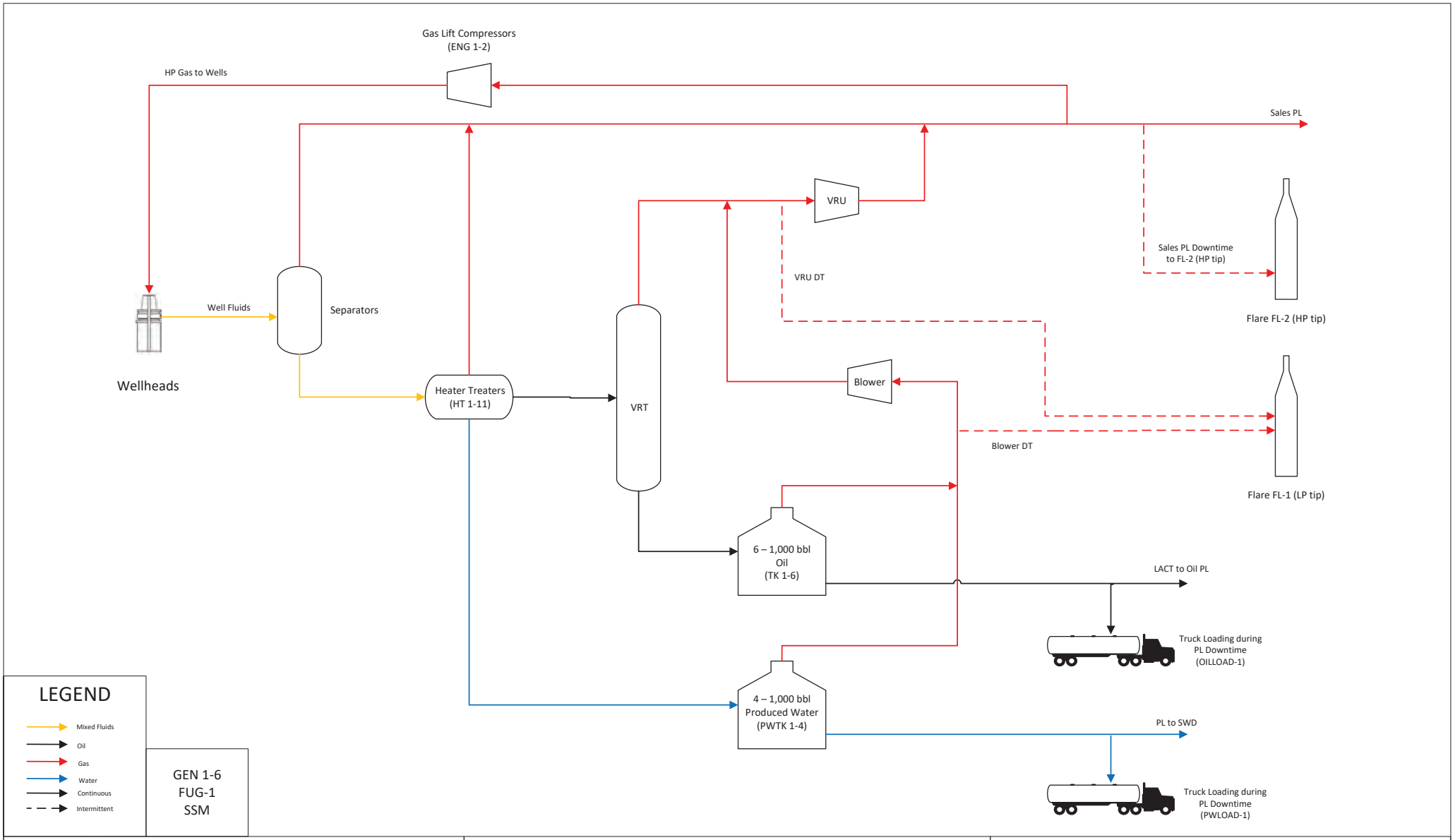
Process Summary: Well fluids are routed to individual initial separators where gas and liquids are separated. Liquids from the initial separators flow to heater treaters (HT 1-11). Oil from the heater treaters enters the vapor recovery towers (VRTs). Gas from the heater treaters joins the gas from the initial separators and is sent to the sales pipeline. Gas is sent to flare during short pipeline downtime periods (FL-2 (HP)). Prior to the sales point, a side stream of gas is removed and sent to gas lift compressors (ENG 1-2). The compressors direct the gas down hole to assist in bringing fluids to the surface. The compressor engines are gas fired and controlled with catalytic converters. Water from the heater treaters flows to atmospheric storage tanks (PWTK 1-4). Vapors from the water storage tanks are captured by the tank blower and routed to the VRU and then to the sales pipeline. When the blower is down for maintenance, the vapors are controlled by the low-pressure flare (FL-1 (BDT)). When enough water has accumulated in the tanks it is piped off-site for disposal. A small amount of truck loading is included for operational flexibility (PWLOAD-1, HR-1). Gas from the VRTs is routed to a Vapor Recovery Unit (VRU) and to the sales line. The oil from the VRTs is routed to the atmospheric oil storage tanks (TK 1-6). Vapors from the oil storage tanks are captured by the tank blower and routed to the VRU and then to the sales pipeline. When the blower is down for maintenance, the vapors are controlled by the flare (FL-1 (BDT)). When enough oil has accumulated in the tanks it is piped off-site for sale via LACT. A small amount of truck loading is included for operational flexibility (OILLOAD-1, HR-1). During periods of VRU downtime, the vapor stream is controlled by the flare (FL-1(VDT)). The facility utilizes six electrical generators (GEN 1-6) to provide power to the site.

Startup, Shutdown, and Maintenance (SSM) routine or predictable emissions: VOCs during blower and VRU downtime are controlled by FL-LP. Sales gas pipeline downtime is routed to FL-HP.

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.

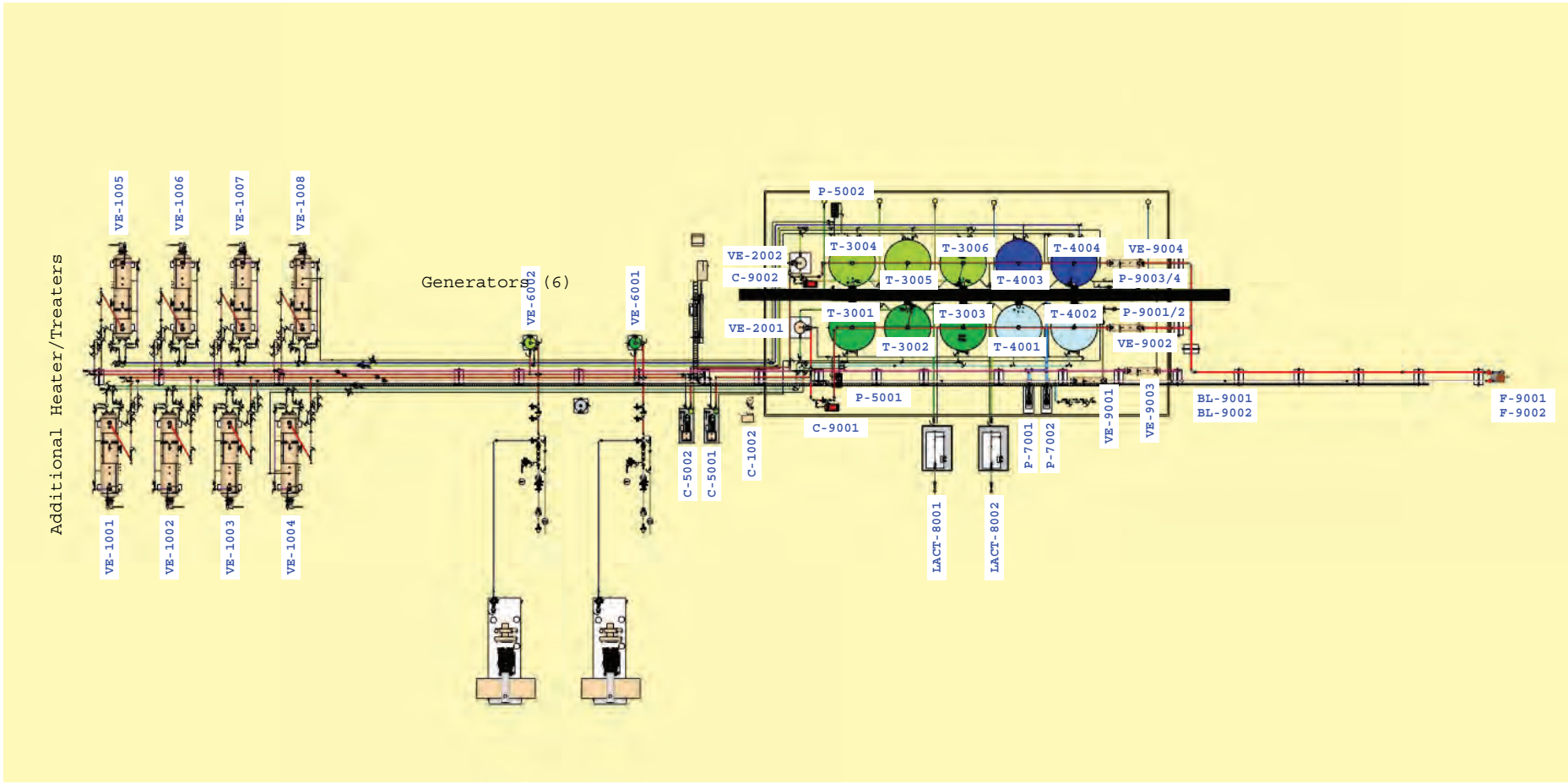


CDH Consulting, LLC Thornton, CO	Process Flow Diagram May 2025	Tap Rock Operating, LLC High Life Upslope Fed Com CTB

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.



BEAR

+P&, P"%*-.%/01/,0'"
.+*,%$R*0-

P, $%P,*-
"2+0P3"-$%,*4 +$

TAP ROCK

$*P%R #)
R"& +R#"&

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.

Control Devices:

- **Catalytic Converters** - Engine emissions are controlled using catalytic converters to reduce NOx, CO, and VOCs.
- **Low-Pressure Blower** - Tank flash, working, and breathing vapors are controlled by a low-pressure blower which routes to the VRU inlet and then to the sales line.
- **Vapor Recovery Unit (VRU)** - VRT vapors are collected by the VRU and routed to the sales line.
- **Flare (FL**-1) – During periods of Blower downtime, stream is routed to the flare for destruction (FL-1(BDT))
- **Flare (FL**-1) – During periods of VRU downtime, stream is routed to the flare for destruction (FL-1(VDT))
- **Flare (FL**-2) – During periods of sales line downtime, stream is routed to the flare for destruction (FL-2(HP))

AIR EMISSIONS CALCULATION TOOL

Instructions for Completing the Equipment Calculation Forms

1. Click the **Start Button** below to reset the form to begin data entry.

2. The ***Air Emissions Calculation Tool*** initially loads with the **Core Data Information Form.** Once all information is entered on this form, the necessary equipment calculation pages will be created based on the information entered on the Core Data Information Form. The customized ***Air Emissions Calculation Tool*** should now be saved to your computer before entering any other information on the equipment calculation pages. **Warning,** every time you click on the **Start Button b**elow, the ***Air Emissions Calculation Tool*** will reset and all data entered will be lost.

3. Green/Blue colored information boxes require users to enter the required information for the subject facility. Default values may be changed if not appropriate for the facility.

4. Yellow colored boxes represent calculated values based on user information entered and may not be changed.

5. Yellow boxes with green/blue cross-hatching represent calculated values based on user information entered, however users may input data in these boxes, if necessary.

Start

Core Data Information

Mandatory - All appropriate Data Must Be Entered For All Boxes Below. This Data Will Automatically Create All Required Equipment Forms And Populate This Data In All Emissions Calculation Forms.

Date Field	May 9, 2025		Permit/NOI/NPR Number	10432	
Company Name:	Tap Rock Operating, LLC		Select Application Type	NSR	
Facility Name:	High Life CTB		AI# if Known	41218	
Max. Facility Gas Production	33,500	(Mscf/d) 1,396 (Mscf/h)	Elevation (ft.)	3,510	
Max. Facility Oil Production	4,200	(BOPD) 175 (BOPH)	Sour Gas Streams at This Site?	NO	
Max. Facility Produced Water	28,000	(BWPD) 1,167 (BWPH)			

Enter The Quantity Of All Air Emissions Sources Located At The Facility
(Leave Blank For Each Equipment Type That Is Not Present)

Equipment	Quantity	Equipment	Quantity
Amine Unit(s)		Compressor Engine (s)	2
Dehydrator(s)		Enclosed Combustion Device(s) (ECD)	
Equipment Fugitives		Flare(s)	1
Flash Tower/Ultra-Low Pressure Separator(s)^	2	Generator Engine (s)	6
Gunbarrel Separator(s)/Tank(s)		Heater(s), Heater Treaters	11
Number of Paved Haul Roads Segments		Number of Unpaved Haul Road Segments	
Low Pressure Compressor(s)* & Compressor(s)*		Oil/Condensate Storage Tank(s)	6
Oil/Condensate Truck Loading		Produced Water Storage Tank(s)	4
Produced Water Truck Loading		Pumpjack Engine(s)	
Reboilers(s) (Amine Units)		Placeholder for Future Use	
Reboilers(s) (Glycol, others)		Startup, Shutdown & Maintenance and Malfunction	✓
Skim Oil or Slop Oil Tank(s)		Thermal Oxidizer(s) (TO)	
Vapor Combustion Device(s) (VCU)		Vapor Recovery Unit(s) (VRU)^	2

Click Here to Generate Required Forms & Save to Your Computer

Complete all required forms that follow, for the equipment at the subject facility, based on the selections made above. Items with an * indicate an air emissions calculation form currently not required at this time and those with ^ indicate forms under construction at this time.

New Mexico Environment Department Air Quality Bureau Equipment Emissions Calculation Form

Date:	May 9, 2025	**Permit Number:**	NSR-10432
Company Name:	Tap Rock Operating, LLC	**AI# if Known:**	41218
Facility Name:	High Life CTB	**Elevation (ft.):**	3,510

Non-Emergency SI Rich Burn, Lean Burn & Clean Burn Natural Gas Fired Compressor Engines (100% Load) & Stationary & Non-Road Diesel (≤600hp & >600hp) & Gasoline Compressor Engines (≤600hp)

Enter data in green-shaded areas only! One engine per form unless like-kind engines

Emission Unit ID:	ENG 1
Engine Manufacturer:	Caterpillar
Engine Model:	G3516J
Engine Serial #:	TBD
Engine Manuf. Date:	>7/1/2010
Engine Type:	4SLB
Factory HP Rating	1,380
Allowable HP Rating	1,380
Engine BSFC (Btu/(Hp*Hr))	7,301
Fuel LHV, (BTU/SCF)	1,157
Fuel Sulfur (grains/dscf)	0.002

Engine Deration

- (•) No Deration
- ( ) Stationary - Naturally Aspirated
- ( ) Stationary - Turbo Aspirated
- ( ) Portable - Naturally Aspirated
- ( ) Portable - Turbo Aspirated

Quantity of Like-kind Engines:	1
Engine Description	Compressor Engine
Hours/year	8,760
Fuel Type:	Field Gas

No Deration.

Notes:

Hourly Fuel Flow Rate (MMSCF/hr)	0.008708
Annual Fuel Flow Rate (MMSCF/yr)	76.28208
Maximum Engine RPM	1,400
Exhaust Temperature (°F)	902
Exhaust Velocity (ft/sec)	125.9
Exhaust Flow (ACFM)	2,636
Stack Diameter (ft)	0.67
Stack Height (ft)	25

Select Source of Emission Factors

- ( ) AP-42 Emission Factors
- ( ) Manufacturer Specs (Enter Appropriate Emission Factors Below) or Diesel Tier 1, 2, 3 or 4
- ( ) NSPS JJJJ; Engine Manuf. Between July 1, 2007-June 30, 2010 & Engine HP≥500HP
- (•) NSPS JJJJ; Engine Manuf. On or after July 1, 2010 & Engine HP≥500HP
- ( ) NSPS JJJJ; Engine Manuf. Between July 1, 2008-Dec. 31, 2010 & Engine HP 100≤HP<500
- ( ) NSPS JJJJ; Engine Manuf. on or after Jan.1, 2011 & Engine HP 100≤HP<500
- ( ) NSPS JJJJ; Eng. Manuf. Betw. Jan. 1, 2008-June 30, 2010 & LB Engine HP 500≤HP<1350
- ( ) NSPS JJJJ; Engine Manuf. on or after July 1, 2010 & LB Engine HP 500≤HP<1350
- ( ) NSPS JJJJ; Engines < 100HP (Enter Appropriate Emission Factors Below)
- ( ) NSPS IIII; Stationary Diesel Engines

Emission Factors, Catalyst Control Efficiency & Safety Factor						Uncontrolled Emissions		JJJJ Emissions		Controlled Emissions (includes SF)[1]	
Pollutant	Uncontrld. EF g/hp-hr	% Control Efficiency	% Safety Factor	Contrld EF g/(hp-hr)	JJJJ EF g/hp-hr	lb/hr	Tons/yr	lb/hr	Tons/yr	lb/hr	Tons/yr
NOx^	0.5	0	0	0.5	1	1.5212	6.6629	3.0423	13.3253	1.5212	6.6629
CO	2.6	76.92	0	0.6	2	7.9101	34.6462	6.0847	26.651	1.8254	7.9953
VOC*	1.07	34.58	0	0.7	0.7	3.2553	14.2582	2.1296	9.3276	2.8286	12.3893
Formaldehyde			0			0	0			0.6034	2.6429
TSP/PM10/PM2.5	0.0331	0	0	0.0331		0.1007	0.4411		0	0.1007	0.4411
[2]SO_2	0.002	0	0	0.002		0.004976	0.021795			0.004976	0.021795
AP-42 HAPs	lb/MMBtu										
Formaldehyde	0.0528	NA	NA	NA	NA	0.60343	2.64302	NA	NA	NA	NA
Acetaldehyde	0.00836	NA	NA	NA	NA	0.09554	0.41847	NA	NA	NA	NA
Acrolein	0.00514	NA	NA	NA	NA	0.05874	0.25728	NA	NA	NA	NA
Benzene	0.00044	NA	NA	NA	NA	0.00503	0.02203	NA	NA	NA	NA
Ethylbenzene	0.0000397	NA	NA	NA	NA	0.00045	0.00197	NA	NA	NA	NA
n-Hexane	0.0011	NA	NA	NA	NA	0.01257	0.05506	NA	NA	NA	NA
Toluene	0.000408	NA	NA	NA	NA	0.00466	0.02041	NA	NA	NA	NA
Xylene	0.000184	NA	NA	NA	NA	0.0021	0.0092	NA	NA	NA	NA
Total HAPs	NA	NA	NA	NA	NA	0.78252	3.42744	NA	NA	0.78	3.43

* Uncontrolled & Controlled VOC emissions include aldehyde emissions. VOC Emissions for JJJJ do not include aldehyde emissions. [1] For NOI's & NPR, controlled emissions cannot be less than JJJJ emissions. [2] SO2 EF (grains/scf or ppm) except for AP-42 EF in g/hp-hr for SO2 & EF Values for NOx, CO, VOC, TSP/PM10/PM2.5 in lb/hp-hr for large gasoline & diesel engines. ^NOx+NMHC Emission Factors for diesel engines assume 75% NOx and 25% VOC

Calculation Tool for Non-Emergency SI Rich Burn, Lean Burn & Clean Burn Natural Gas Fired Compressor Engines (100% Load) & Large Stationary Diesel (≤600hp & >600hp) & Gasoline Compressor Engines (≤600hp) Emissions

AP-42 Gas-Fired Engine Emission factors based on AP-42, Tables 3.2-1, 3.2-2 & 3.2-3 (July 2000)
https://www3.epa.gov/ttn/chief/ap42/ch03/final/c03s02.pdf
40 CFR Part 60 Subpart JJJJ Emission Factors based on §60.4233 & Table 1
http://www.ecfr.gov/cgi-bin/text-idx?node=sp40.7.60.jjjj
AP-42 Diesel & Gasoline Fired Engine Emission factors based on AP-42, Tables 3.3-1, 3.2-2, 3.4-1, 3.4-2, 3.4-3 & 3.4-4
https://www3.epa.gov/ttn/chief/ap42/ch03/final/c03s03.pdf
40 CFR Part 60 Subpart IIII Emission Factors based on §60.4233 & Table 1
http://www.ecfr.gov/cgi-bin/text-idx?node=sp40.7.60.iiii
EPA Tier 1-4 Nonroad Compression Ignition Emission Standards (EPA-42--B-16-022)
https://nepis.epa.gov/Exe/ZyNET.exe/P100OA05.txt?ZyActionD=ZyDocument&Client=EPA&Index=2011%20Thru%202015&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&UseQField=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A%5CZYFILES%5CINDEX%20DATA%5C11THRU15%5CTXT%5C00000019%5CP100OA05.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h%7C-&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=hpfr&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=1

Emission factors for natural gas and field gas internal combustion engines may be based on AP-42, Tables 3.2-1, 3.2-2 or 3.2-3 or NSPS JJJJ emission standards or manufacturer specifications based on engine applicability.

NOx Sample Calculation Using AP-42 Emission Factors for a 500-HP 4-Stroke Rich Burn Engine

pph = NOx Emission Factor (EF) lb/MMBtu * Heat Value Btu/scf/1020 Btu/scf * Maximum Heat Input (MMBtu/hr) * Allowable HP * 1/1000000 MMBtu/Btu
= 2.21 lb/MMBtu * 1020 Btu/scf/1020Btu/scf * 7500 MMBtu/hr *500 hp * 1/1000000 MMBtu/Btu
=8.29 lb/hr

tpy =NOx Emission Factor (EF) lb/MMBtu * Heat Value Btu/scf/1020 Btu/scf * Maximum Heat Input (MMBtu/hr) * Allowable HP * 1/1000000 MMBtu/Btu * 8760 hrs/yr * 1/2000 tons/lbs
= 2.21 lb/MMBtu * 1020 Btu/scf/1020 Btu/scf * 0.5 MMBtu/hr * 1/1020 Btu/scf * 1000000/1 Btu/MMBtu * 8760 hrs/yr * 1ton/2000lbs
= 36.31 tpy

AP-42 SO_2 emissions based on 100% conversion of fuel sulfur to SO_2 and assumes sulfur content in natural gas of 2,000 grains/10^6 scf. The SO2 emission factor is 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. For all other engines not using AP-42, The SO_2 emissions are based on grains S/scf. Fuel Heat values for Diesel = 0.137 MMBtu/gal; LPG = 0.0905 MMBtu/gal and Gasoline = 0.13 MMBtu/gal per AP-42 Appendix A, pg 5 & 6. SO2 emissions for all diesel engines not using AP-42, equals Gal Diesel/hr * diesel wt (lb)/gal * 15 ppm S * 64 lb SO2/32 lb S, where diesel weighs 7.1089 lb/gal.

NOx Sample Calculation Using NSPS JJJJ Emission Factors for a July 1, 2010 500-HP 4-Stroke Rich Burn Engine

pph = NOx Emission Factor (EF) g/hp-hr * 1/453.6 lbs/grams * Allowable HP
= 1 g/hp-hr * 1/453.6 lbs/grams * 500 hp
= 1.1 lb/hr

tpy =NOx Emission Factor (EF) g/hp-hr * 1/453.6 lbs/grams * Allowable HP * 8760 hrs/yr * 1/2000 tons/lbs
= 1 g/hp-hr * 1/453.6 lbs/grams * 500 hp * 8760 hrs/yr * 1ton/2000lbs
= 4.82 tpy

Technical Disclaimer
This document is intended to help you accurately determine stationary compressor engine emissions. It does not supersede or replace any state or federal law, rule, or regulation. This guidance reflects the current understanding of how these units work and how they generate emissions, how they are monitored or tested, and what data are available for emissions determination, may change over time as the AQB continue scientific studies and as new information becomes available. The AQB welcome any data, information, or feedback that may improve our understanding of stationary compressor engine emissions and thereby further improve determinations within the emissions inventory. The calculation methods represented are intended as an emissions calculation aid; alternate calculation methods may be equally acceptable if they are based upon, and adequately demonstrate, sound engineering assumptions or data. If you have a question regarding the acceptability of a given emissions determination method, contact the Permitting Section at 505-476-4300.

New Mexico Environment Department Air Quality Bureau Equipment Emissions Calculation Form

Date:	May 9, 2025	**Permit Number:**	NSR-10432
Company Name:	Tap Rock Operating, LLC	**AI# if Known:**	41218
Facility Name:	High Life CTB	**Elevation (ft.):**	3,510

Non-Emergency SI Rich Burn, Lean Burn & Clean Burn Natural Gas Fired Compressor Engines (100% Load) & Stationary & Non-Road Diesel (≤600hp & >600hp) & Gasoline Compressor Engines (≤600hp)

Enter data in green-shaded areas only! One engine per form unless like-kind engines

Emission Unit ID:	ENG 2
Engine Manufacturer:	Caterpillar
Engine Model:	G3606
Engine Serial #:	TBD
Engine Manuf. Date:	> 7/1/2010
Engine Type:	4SLB
Factory HP Rating	1,875
Allowable HP Rating	1,875
Engine BSFC (Btu/(Hp*Hr))	6,620
Fuel LHV, (BTU/SCF)	1,157
Fuel Sulfur (grains/dscf)	0.002

Engine Deration

- (•) No Deration
- ( ) Stationary - Naturally Aspirated
- ( ) Stationary - Turbo Aspirated
- ( ) Portable - Naturally Aspirated
- ( ) Portable - Turbo Aspirated

Quantity of Like-kind Engines:	1
Engine Description	Compressor Engine
Hours/year	8,760
Fuel Type:	Field Gas

No Deration.

Notes:

Hourly Fuel Flow Rate (MMSCF/hr)	0.010728
Annual Fuel Flow Rate (MMSCF/yr)	93.97728
Maximum Engine RPM	1,000
Exhaust Temperature (°F)	822
Exhaust Velocity (ft/sec)	186.8
Exhaust Flow (ACFM)	11,978
Stack Diameter (ft)	1.17
Stack Height (ft)	25

Select Source of Emission Factors

- ( ) AP-42 Emission Factors
- ( ) Manufacturer Specs (Enter Appropriate Emission Factors Below) or Diesel Tier 1, 2, 3 or 4
- ( ) NSPS JJJJ; Engine Manuf. Between July 1, 2007-June 30, 2010 & Engine HP≥500HP
- (•) NSPS JJJJ; Engine Manuf. On or after July 1, 2010 & Engine HP≥500HP
- ( ) NSPS JJJJ; Engine Manuf. Between July 1, 2008-Dec. 31, 2010 & Engine HP 100≤HP<500
- ( ) NSPS JJJJ; Engine Manuf. on or after Jan.1, 2011 & Engine HP 100≤HP<500
- ( ) NSPS JJJJ; Eng. Manuf. Betw. Jan. 1, 2008-June 30, 2010 & LB Engine HP 500≤HP<1350
- ( ) NSPS JJJJ; Engine Manuf. on or after July 1, 2010 & LB Engine HP 500≤HP<1350
- ( ) NSPS JJJJ; Engines < 100HP (Enter Appropriate Emission Factors Below)
- ( ) NSPS IIII; Stationary Diesel Engines

Emission Factors, Catalyst Control Efficiency & Safety Factor						Uncontrolled Emissions		JJJJ Emissions		Controlled Emissions (includes SF)[1]	
Pollutant	Uncontrld. EF g/hp-hr	% Control Efficiency	% Safety Factor	Contrld EF g/(hp-hr)	JJJJ EF g/hp-hr	lb/hr	Tons/yr	lb/hr	Tons/yr	lb/hr	Tons/yr
NOx^	0.3	0	0	0.3	1	1.2401	5.4316	4.1336	18.1052	1.2401	5.4316
CO	2.5	76	0	0.6	2	10.334	45.2629	8.2672	36.2103	2.4802	10.8633
VOC*	0.32	-118.75	0	0.7	0.7	1.3228	5.7939	2.8935	12.6735	3.4246	14.9997
Formaldehyde	0.19	47.37	0	0.1		0.7854	3.4401			0.4134	1.8107
TSP/PM10/PM2.5	0.03	0	0	0.03		0.124	0.5431		0	0.124	0.5431
[2]SO_2	0.002	0	0	0.002		0.00613	0.026849			0.00613	0.026849
AP-42 HAPs	lb/MMBtu										
Formaldehyde	0.0528	NA	NA	NA	NA	0.74341	3.25614	NA	NA	NA	NA
Acetaldehyde	0.00836	NA	NA	NA	NA	0.11771	0.51557	NA	NA	NA	NA
Acrolein	0.00514	NA	NA	NA	NA	0.07237	0.31698	NA	NA	NA	NA
Benzene	0.00044	NA	NA	NA	NA	0.0062	0.02716	NA	NA	NA	NA
Ethylbenzene	0.0000397	NA	NA	NA	NA	0.00056	0.00245	NA	NA	NA	NA
n-Hexane	0.0011	NA	NA	NA	NA	0.01549	0.06785	NA	NA	NA	NA
Toluene	0.000408	NA	NA	NA	NA	0.00574	0.02514	NA	NA	NA	NA
Xylene	0.000184	NA	NA	NA	NA	0.00259	0.01134	NA	NA	NA	NA
Total HAPs	NA	NA	NA	NA	NA	1.00606	4.40659	NA	NA	0.63	2.78

* Uncontrolled & Controlled VOC emissions include aldehyde emissions. VOC Emissions for JJJJ do not include aldehyde emissions. [1] For NOI's & NPR, controlled emissions cannot be less than JJJJ emissions. [2] SO2 EF (grains/scf or ppm) except for AP-42 EF in g/hp-hr for SO2 & EF Values for NOx, CO, VOC, TSP/PM10/PM2.5 in lb/hp-hr for large gasoline & diesel engines. ^NOx+NMHC Emission Factors for diesel engines assume 75% NOx and 25% VOC

New Mexico Environment Department Air Quality Bureau Equipment Emissions Calculation Form

Date:	May 9, 2025	**Permit Number:**	NSR-10432
Company Name:	Tap Rock Operating, LLC	**AI# if Known:**	41218
Facility Name:	High Life CTB	**Elevation (ft.):**	3,510

Non-Emergency SI Rich Burn, Lean Burn & Clean Burn Natural Gas Fired Generator Engines (100% Load) & Stationary & Non-Road Diesel (≤600hp & >600hp) & Gasoline Generator Engines (≤600hp)

Enter data in green-shaded areas only! One engine per form unless like-kind engines

Emission Unit ID:	GEN 1
Engine Manufacturer:	Power Solutions International
Engine Model:	14.6L
Engine Serial #:	TBD
Engine Manuf. Date:	>7/1/2010
Engine Type:	4SRB
Factory HP Rating	390
Allowable HP Rating	390
Engine BSFC (Btu/(Hp*Hr))	8,671
Fuel LHV, (BTU/SCF)	1,157
Fuel Sulfur (grains/dscf)	0.002

Quantity of Like-kind Engines:	1
Engine Description	Generator Engine
Hours/year	8,760
Fuel Type:	Field Gas

Engine Deration

- (•) No Deration
- ( ) Stationary - Naturally Aspirated
- ( ) Stationary - Turbo Aspirated
- ( ) Portable - Naturally Aspirated
- ( ) Portable - Turbo Aspirated

No Deration.

Notes:

Hourly Fuel Flow Rate (MMSCF/hr)	0.002923
Annual Fuel Flow Rate (MMSCF/yr)	25.60548
Maximum Engine RPM	1,800
Exhaust Temperature (°F)	1,382
Exhaust Velocity (ft/sec)	361.9
Exhaust Flow (ACFM)	1,895
Stack Diameter (ft)	0.33
Stack Height (ft)	15

Select Source of Emission Factors

- ( ) AP-42 Emission Factors
- ( ) Manufacturer Specs (Enter Appropriate Emission Factors Below) or Diesel Tier 1, 2, 3 or 4
- ( ) NSPS JJJJ; Engine Manuf. Between July 1, 2007-June 30, 2010 & Engine HP≥500HP
- ( ) NSPS JJJJ; Engine Manuf. On or after July 1, 2010 & Engine HP≥500HP
- ( ) NSPS JJJJ; Engine Manuf. Between July 1, 2008-Dec. 31, 2010 & Engine HP 100≤HP<500
- (•) NSPS JJJJ; Engine Manuf. on or after Jan.1, 2011 & Engine HP 100≤HP<500
- ( ) NSPS JJJJ; Eng. Manuf. Betw. Jan. 1, 2008-June 30, 2010 & LB Engine HP 500≤HP<1350
- ( ) NSPS JJJJ; Engine Manuf. on or after July 1, 2010 & LB Engine HP 500≤HP<1350
- ( ) NSPS JJJJ; Engines < 100HP (Enter Appropriate Emission Factors Below)
- ( ) NSPS IIII; Stationary Diesel Engines

Emission Factors, Catalyst Control Efficiency & Safety Factor						Uncontrolled Emissions		JJJJ Emissions		Controlled Emissions (includes SF)[1]	
Pollutant	Uncontrld. EF g/hp-hr	% Control Efficiency	% Safety Factor	Contrld EF g/(hp-hr)	JJJJ EF g/hp-hr	lb/hr	Tons/yr	lb/hr	Tons/yr	lb/hr	Tons/yr
NOx^	5.3	90.57	0	0.5	1	4.5569	19.9592	0.8598	3.7659	0.4299	1.883
CO	5.04	88.1	0	0.6	2	4.3333	18.9799	1.7196	7.5318	0.5159	2.2596
VOC*	0.7	0	0	0.7	0.7	0.6019	2.6363	0.6019	2.6363	0.6912	3.0275
Formaldehyde			0			0	0			0.0786	0.3443
TSP/PM10/PM2.5	0.0763	0	0	0.0763		0.0656	0.2873		0	0.0656	0.2873
[2]SO_2	0.002	0	0	0.002		0.00167	0.007315			0.00167	0.007315
AP-42 HAPs	lb/MMBtu										
Formaldehyde	0.0205	NA	NA	NA	NA	0.07864	0.34444	NA	NA	NA	NA
Acetaldehyde	0.00279	NA	NA	NA	NA	0.0107	0.04687	NA	NA	NA	NA
Acrolein	0.00263	NA	NA	NA	NA	0.01009	0.04419	NA	NA	NA	NA
Benzene	0.00158	NA	NA	NA	NA	0.00606	0.02654	NA	NA	NA	NA
Ethylbenzene	0.0000248	NA	NA	NA	NA	0.0001	0.00044	NA	NA	NA	NA
n-Hexane		NA	NA	NA	NA	0	0	NA	NA	NA	NA
Toluene	0.000558	NA	NA	NA	NA	0.00214	0.00937	NA	NA	NA	NA
Xylene	0.000195	NA	NA	NA	NA	0.00075	0.00329	NA	NA	NA	NA
Total HAPs	NA	NA	NA	NA	NA	0.10848	0.47514	NA	NA	0.11	0.48

* Uncontrolled & Controlled VOC emissions include aldehyde emissions. VOC Emissions for JJJJ do not include aldehyde emissions. [1] For NOI's & NPR, controlled emissions cannot be less than JJJJ emissions. [2] SO2 EF (grains/scf or ppm) except for AP-42 EF in g/hp-hr for SO2 & EF Values for NOx, CO, VOC, TSP/PM10/PM2.5 in lb/hp-hr for large gasoline & diesel engines. ^NOx+NMHC Emission Factors for diesel engines assume 75% NOx and 25% VOC

Calculation Tool for Non-Emergency SI Rich Burn, Lean Burn & Clean Burn Natural Gas Fired Generator Engines (100% Load) & Large Stationary Diesel (≤600hp & >600hp) & Gasoline Generator Engines (≤600hp) Emissions

AP-42 Gas-Fired Engine Emission factors based on AP-42, Tables 3.2-1, 3.2-2 & 3.2-3 (July 2000)
https://www3.epa.gov/ttn/chief/ap42/ch03/final/c03s02.pdf
40 CFR Part 60 Subpart JJJJ Emission Factors based on §60.4233 & Table 1
http://www.ecfr.gov/cgi-bin/text-idx?node=sp40.7.60.jjjj
AP-42 Diesel & Gasoline Fired Engine Emission factors based on AP-42, Tables 3.3-1, 3.2-2, 3.4-1, 3.4-2, 3.4-3 & 3.4-4
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40 CFR Part 60 Subpart IIII Emission Factors based on §60.4233 & Table 1
http://www.ecfr.gov/cgi-bin/text-idx?node=sp40.7.60.iiii
EPA Tier 1-4 Nonroad Compression Ignition Emission Standards (EPA-42--B-16-022)
https://nepis.epa.gov/Exe/ZyNET.exe/P100OA05.txt?ZyActionD=ZyDocument&Client=EPA&Index=2011%20Thru%202015&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&UseQField=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A%5CZYFILES%5CINDEX%20DATA%5C11THRU15%5CTXT%5C00000019%5CP100OA05.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h%7C-&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=hpfr&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=1

Emission factors for natural gas and field gas internal combustion engines may be based on AP-42, Tables 3.2-1, 3.2-2 or 3.2-3 or NSPS JJJJ emission standards or manufacturer specifications based on engine applicability.

NOx Sample Calculation Using AP-42 Emission Factors for a 500-HP 4-Stroke Rich Burn Engine

pph = NOx Emission Factor (EF) lb/MMBtu * Heat Value Btu/scf/1020 Btu/scf * Maximum Heat Input (MMBtu/hr) * Allowable HP * 1/1000000 MMBtu/Btu
= 2.21 lb/MMBtu * 1020 Btu/scf/1020Btu/scf * 7500 MMBtu/hr *500 hp * 1/1000000 MMBtu/Btu
=8.29 lb/hr

tpy =NOx Emission Factor (EF) lb/MMBtu * Heat Value Btu/scf/1020 Btu/scf * Maximum Heat Input (MMBtu/hr) * Allowable HP * 1/1000000 MMBtu/Btu * 8760 hrs/yr * 1/2000 tons/lbs
= 2.21 lb/MMBtu * 1020 Btu/scf/1020 Btu/scf * 0.5 MMBtu/hr * 1/1020 Btu/scf * 1000000/1 Btu/MMBtu * 8760 hrs/yr * 1ton/2000lbs
= 36.31 tpy

AP-42 SO_2 emissions based on 100% conversion of fuel sulfur to SO_2 and assumes sulfur content in natural gas of 2,000 grains/10^6 scf. The SO2 emission factor is 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. For all other engines not using AP-42, The SO_2 emissions are based on grains S/scf. Fuel Heat values for Diesel = 0.137 MMBtu/gal; LPG = 0.0905 MMBtu/gal and Gasoline = 0.13 MMBtu/gal per AP-42 Appendix A, pg 5 & 6. SO2 emissions for all diesel engines not using AP-42, equals Gal Diesel/hr * diesel wt (lb)/gal * 15 ppm S * 64 lb SO2/32 lb S, where diesel weighs 7.1089 lb/gal.

NOx Sample Calculation Using NSPS JJJJ Emission Factors for a July 1, 2010 500-HP 4-Stroke Rich Burn Engine

pph = NOx Emission Factor (EF) g/hp-hr * 1/453.6 lbs/grams * Allowable HP
= 1 g/hp-hr * 1/453.6 lbs/grams * 500 hp
= 1.1 lb/hr

tpy =NOx Emission Factor (EF) g/hp-hr * 1/453.6 lbs/grams * Allowable HP * 8760 hrs/yr * 1/2000 tons/lbs
= 1 g/hp-hr * 1/453.6 lbs/grams * 500 hp * 8760 hrs/yr * 1ton/2000lbs
= 4.82 tpy

Technical Disclaimer
This document is intended to help you accurately determine stationary generator engine emissions. It does not supersede or replace any state or federal law, rule, or regulation. This guidance reflects the current understanding of how these units work and how they generate emissions, how they are monitored or tested, and what data are available for emissions determination, may change over time as the AQB continue scientific studies and as new information becomes available. The AQB welcome any data, information, or feedback that may improve our understanding of stationary generator engine emissions and thereby further improve determinations within the emissions inventory. The calculation methods represented are intended as an emissions calculation aid; alternate calculation methods may be equally acceptable if they are based upon, and adequately demonstrate, sound engineering assumptions or data. If you have a question regarding the acceptability of a given emissions determination method, contact the Permitting Section at 505-476-4300.

New Mexico Environment Department Air Quality Bureau Equipment Emissions Calculation Form

Date:	May 9, 2025	**Permit Number:**	NSR-10432
Company Name:	Tap Rock Operating, LLC	**AI# if Known:**	41218
Facility Name:	High Life CTB	**Elevation (ft.):**	3,510

Non-Emergency SI Rich Burn, Lean Burn & Clean Burn Natural Gas Fired Generator Engines (100% Load) & Stationary & Non-Road Diesel (≤600hp & >600hp) & Gasoline Generator Engines (≤600hp)

Enter data in green-shaded areas only! One engine per form unless like-kind engines

Emission Unit ID:	GEN 2
Engine Manufacturer:	Power Solutions International
Engine Model:	14.6L
Engine Serial #:	TBD
Engine Manuf. Date:	>7/1/2010
Engine Type:	4SRB
Factory HP Rating	390
Allowable HP Rating	390
Engine BSFC (Btu/(Hp*Hr))	8,671
Fuel LHV, (BTU/SCF)	1,157
Fuel Sulfur (grains/dscf)	0.002

Quantity of Like-kind Engines:	1
Engine Description	Generator Engine
Hours/year	8,760
Fuel Type:	Field Gas

Engine Deration

- (•) No Deration
- ( ) Stationary - Naturally Aspirated
- ( ) Stationary - Turbo Aspirated
- ( ) Portable - Naturally Aspirated
- ( ) Portable - Turbo Aspirated

No Deration.

Notes:

Hourly Fuel Flow Rate (MMSCF/hr)	0.002923
Annual Fuel Flow Rate (MMSCF/yr)	25.60548
Maximum Engine RPM	1,800
Exhaust Temperature (°F)	1,382
Exhaust Velocity (ft/sec)	361.9
Exhaust Flow (ACFM)	1,895
Stack Diameter (ft)	0.33
Stack Height (ft)	15

Select Source of Emission Factors

- ( ) AP-42 Emission Factors
- ( ) Manufacturer Specs (Enter Appropriate Emission Factors Below) or Diesel Tier 1, 2, 3 or 4
- ( ) NSPS JJJJ; Engine Manuf. Between July 1, 2007-June 30, 2010 & Engine HP≥500HP
- ( ) NSPS JJJJ; Engine Manuf. On or after July 1, 2010 & Engine HP≥500HP
- ( ) NSPS JJJJ; Engine Manuf. Between July 1, 2008-Dec. 31, 2010 & Engine HP 100≤HP<500
- (•) NSPS JJJJ; Engine Manuf. on or after Jan.1, 2011 & Engine HP 100≤HP<500
- ( ) NSPS JJJJ; Eng. Manuf. Betw. Jan. 1, 2008-June 30, 2010 & LB Engine HP 500≤HP<1350
- ( ) NSPS JJJJ; Engine Manuf. on or after July 1, 2010 & LB Engine HP 500≤HP<1350
- ( ) NSPS JJJJ; Engines < 100HP (Enter Appropriate Emission Factors Below)
- ( ) NSPS IIII; Stationary Diesel Engines

Emission Factors, Catalyst Control Efficiency & Safety Factor						Uncontrolled Emissions		JJJJ Emissions		Controlled Emissions (includes SF)[1]	
Pollutant	Uncontrld. EF g/hp-hr	% Control Efficiency	% Safety Factor	Contrld EF g/(hp-hr)	JJJJ EF g/hp-hr	lb/hr	Tons/yr	lb/hr	Tons/yr	lb/hr	Tons/yr
NOx^	5.3	90.57	0	0.5	1	4.5569	19.9592	0.8598	3.7659	0.4299	1.883
CO	5.04	88.1	0	0.6	2	4.3333	18.9799	1.7196	7.5318	0.5159	2.2596
VOC*	0.7	0	0	0.7	0.7	0.6019	2.6363	0.6019	2.6363	0.6912	3.0275
Formaldehyde			0			0	0			0.0786	0.3443
TSP/PM10/PM2.5	0.0763	0	0	0.0763		0.0656	0.2873		0	0.0656	0.2873
[2]SO_2	0.002	0	0	0.002		0.00167	0.007315			0.00167	0.007315
AP-42 HAPs	lb/MMBtu										
Formaldehyde	0.0205	NA	NA	NA	NA	0.07864	0.34444	NA	NA	NA	NA
Acetaldehyde	0.00279	NA	NA	NA	NA	0.0107	0.04687	NA	NA	NA	NA
Acrolein	0.00263	NA	NA	NA	NA	0.01009	0.04419	NA	NA	NA	NA
Benzene	0.00158	NA	NA	NA	NA	0.00606	0.02654	NA	NA	NA	NA
Ethylbenzene	0.0000248	NA	NA	NA	NA	0.0001	0.00044	NA	NA	NA	NA
n-Hexane		NA	NA	NA	NA	0	0	NA	NA	NA	NA
Toluene	0.000558	NA	NA	NA	NA	0.00214	0.00937	NA	NA	NA	NA
Xylene	0.000195	NA	NA	NA	NA	0.00075	0.00329	NA	NA	NA	NA
Total HAPs	NA	NA	NA	NA	NA	0.10848	0.47514	NA	NA	0.11	0.48

* Uncontrolled & Controlled VOC emissions include aldehyde emissions. VOC Emissions for JJJJ do not include aldehyde emissions. [1] For NOI's & NPR, controlled emissions cannot be less than JJJJ emissions. [2] SO2 EF (grains/scf or ppm) except for AP-42 EF in g/hp-hr for SO2 & EF Values for NOx, CO, VOC, TSP/PM10/PM2.5 in lb/hp-hr for large gasoline & diesel engines. ^NOx+NMHC Emission Factors for diesel engines assume 75% NOx and 25% VOC

New Mexico Environment Department Air Quality Bureau Equipment Emissions Calculation Form

Date:	May 9, 2025	**Permit Number:**	NSR-10432
Company Name:	Tap Rock Operating, LLC	**AI# if Known:**	41218
Facility Name:	High Life CTB	**Elevation (ft.):**	3,510

Non-Emergency SI Rich Burn, Lean Burn & Clean Burn Natural Gas Fired Generator Engines (100% Load) & Stationary & Non-Road Diesel (≤600hp & >600hp) & Gasoline Generator Engines (≤600hp)

Enter data in green-shaded areas only! One engine per form unless like-kind engines

Emission Unit ID:	GEN 3
Engine Manufacturer:	Power Solutions International
Engine Model:	14.6L
Engine Serial #:	TBD
Engine Manuf. Date:	>7/1/2010
Engine Type:	4SRB
Factory HP Rating	390
Allowable HP Rating	390
Engine BSFC (Btu/(Hp*Hr))	8,671
Fuel LHV, (BTU/SCF)	1,157
Fuel Sulfur (grains/dscf)	0.002

Quantity of Like-kind Engines:	1
Engine Description	Generator Engine
Hours/year	8,760
Fuel Type:	Field Gas

Engine Deration

- (•) No Deration
- ( ) Stationary - Naturally Aspirated
- ( ) Stationary - Turbo Aspirated
- ( ) Portable - Naturally Aspirated
- ( ) Portable - Turbo Aspirated

No Deration.

Notes:

Hourly Fuel Flow Rate (MMSCF/hr)	0.002923
Annual Fuel Flow Rate (MMSCF/yr)	25.60548
Maximum Engine RPM	1,800
Exhaust Temperature (°F)	1,382
Exhaust Velocity (ft/sec)	361.9
Exhaust Flow (ACFM)	1,895
Stack Diameter (ft)	0.33
Stack Height (ft)	15

Select Source of Emission Factors

- ( ) AP-42 Emission Factors
- ( ) Manufacturer Specs (Enter Appropriate Emission Factors Below) or Diesel Tier 1, 2, 3 or 4
- ( ) NSPS JJJJ; Engine Manuf. Between July 1, 2007-June 30, 2010 & Engine HP≥500HP
- ( ) NSPS JJJJ; Engine Manuf. On or after July 1, 2010 & Engine HP≥500HP
- ( ) NSPS JJJJ; Engine Manuf. Between July 1, 2008-Dec. 31, 2010 & Engine HP 100≤HP<500
- (•) NSPS JJJJ; Engine Manuf. on or after Jan.1, 2011 & Engine HP 100≤HP<500
- ( ) NSPS JJJJ; Eng. Manuf. Betw. Jan. 1, 2008-June 30, 2010 & LB Engine HP 500≤HP<1350
- ( ) NSPS JJJJ; Engine Manuf. on or after July 1, 2010 & LB Engine HP 500≤HP<1350
- ( ) NSPS JJJJ; Engines < 100HP (Enter Appropriate Emission Factors Below)
- ( ) NSPS IIII; Stationary Diesel Engines

Emission Factors, Catalyst Control Efficiency & Safety Factor						Uncontrolled Emissions		JJJJ Emissions		Controlled Emissions (includes SF)[1]	
Pollutant	Uncontrld. EF g/hp-hr	% Control Efficiency	% Safety Factor	Contrld EF g/(hp-hr)	JJJJ EF g/hp-hr	lb/hr	Tons/yr	lb/hr	Tons/yr	lb/hr	Tons/yr
NOx^	5.3	90.57	0	0.5	1	4.5569	19.9592	0.8598	3.7659	0.4299	1.883
CO	5.04	88.1	0	0.6	2	4.3333	18.9799	1.7196	7.5318	0.5159	2.2596
VOC*	0.7	0	0	0.7	0.7	0.6019	2.6363	0.6019	2.6363	0.6912	3.0275
Formaldehyde			0			0	0			0.0786	0.3443
TSP/PM10/PM2.5	0.0763	0	0	0.0763		0.0656	0.2873		0	0.0656	0.2873
[2]SO_2	0.002	0	0	0.002		0.00167	0.007315			0.00167	0.007315
AP-42 HAPs	lb/MMBtu										
Formaldehyde	0.0205	NA	NA	NA	NA	0.07864	0.34444	NA	NA	NA	NA
Acetaldehyde	0.00279	NA	NA	NA	NA	0.0107	0.04687	NA	NA	NA	NA
Acrolein	0.00263	NA	NA	NA	NA	0.01009	0.04419	NA	NA	NA	NA
Benzene	0.00158	NA	NA	NA	NA	0.00606	0.02654	NA	NA	NA	NA
Ethylbenzene	0.0000248	NA	NA	NA	NA	0.0001	0.00044	NA	NA	NA	NA
n-Hexane		NA	NA	NA	NA	0	0	NA	NA	NA	NA
Toluene	0.000558	NA	NA	NA	NA	0.00214	0.00937	NA	NA	NA	NA
Xylene	0.000195	NA	NA	NA	NA	0.00075	0.00329	NA	NA	NA	NA
Total HAPs	NA	NA	NA	NA	NA	0.10848	0.47514	NA	NA	0.11	0.48

* Uncontrolled & Controlled VOC emissions include aldehyde emissions. VOC Emissions for JJJJ do not include aldehyde emissions. [1] For NOI's & NPR, controlled emissions cannot be less than JJJJ emissions. [2] SO2 EF (grains/scf or ppm) except for AP-42 EF in g/hp-hr for SO2 & EF Values for NOx, CO, VOC, TSP/PM10/PM2.5 in lb/hp-hr for large gasoline & diesel engines. ^NOx+NMHC Emission Factors for diesel engines assume 75% NOx and 25% VOC

New Mexico Environment Department Air Quality Bureau Equipment Emissions Calculation Form

Date:	May 9, 2025	**Permit Number:**	NSR-10432
Company Name:	Tap Rock Operating, LLC	**AI# if Known:**	41218
Facility Name:	High Life CTB	**Elevation (ft.):**	3,510

Non-Emergency SI Rich Burn, Lean Burn & Clean Burn Natural Gas Fired Generator Engines (100% Load) & Stationary & Non-Road Diesel (≤600hp & >600hp) & Gasoline Generator Engines (≤600hp)

Enter data in green-shaded areas only! One engine per form unless like-kind engines

Emission Unit ID:	GEN 4
Engine Manufacturer:	Power Solutions International
Engine Model:	14.6L
Engine Serial #:	TBD
Engine Manuf. Date:	>7/1/2010
Engine Type:	4SRB
Factory HP Rating	390
Allowable HP Rating	390
Engine BSFC (Btu/(Hp*Hr))	8,671
Fuel LHV, (BTU/SCF)	1,157
Fuel Sulfur (grains/dscf)	0.002

Quantity of Like-kind Engines:	1
Engine Description	Generator Engine
Hours/year	8,760
Fuel Type:	Field Gas

Engine Deration

- (•) No Deration
- ( ) Stationary - Naturally Aspirated
- ( ) Stationary - Turbo Aspirated
- ( ) Portable - Naturally Aspirated
- ( ) Portable - Turbo Aspirated

No Deration.

Notes:

Hourly Fuel Flow Rate (MMSCF/hr)	0.002923
Annual Fuel Flow Rate (MMSCF/yr)	25.60548
Maximum Engine RPM	1,800
Exhaust Temperature (°F)	1,382
Exhaust Velocity (ft/sec)	361.9
Exhaust Flow (ACFM)	1,895
Stack Diameter (ft)	0.33
Stack Height (ft)	15

Select Source of Emission Factors

- ( ) AP-42 Emission Factors
- ( ) Manufacturer Specs (Enter Appropriate Emission Factors Below) or Diesel Tier 1, 2, 3 or 4
- ( ) NSPS JJJJ; Engine Manuf. Between July 1, 2007-June 30, 2010 & Engine HP≥500HP
- ( ) NSPS JJJJ; Engine Manuf. On or after July 1, 2010 & Engine HP≥500HP
- ( ) NSPS JJJJ; Engine Manuf. Between July 1, 2008-Dec. 31, 2010 & Engine HP 100≤HP<500
- (•) NSPS JJJJ; Engine Manuf. on or after Jan.1, 2011 & Engine HP 100≤HP<500
- ( ) NSPS JJJJ; Eng. Manuf. Betw. Jan. 1, 2008-June 30, 2010 & LB Engine HP 500≤HP<1350
- ( ) NSPS JJJJ; Engine Manuf. on or after July 1, 2010 & LB Engine HP 500≤HP<1350
- ( ) NSPS JJJJ; Engines < 100HP (Enter Appropriate Emission Factors Below)
- ( ) NSPS IIII; Stationary Diesel Engines

Emission Factors, Catalyst Control Efficiency & Safety Factor						Uncontrolled Emissions		JJJJ Emissions		Controlled Emissions (includes SF)[1]	
Pollutant	Uncontrld. EF g/hp-hr	% Control Efficiency	% Safety Factor	Contrld EF g/(hp-hr)	JJJJ EF g/hp-hr	lb/hr	Tons/yr	lb/hr	Tons/yr	lb/hr	Tons/yr
NOx^	5.3	90.57	0	0.5	1	4.5569	19.9592	0.8598	3.7659	0.4299	1.883
CO	5.04	88.1	0	0.6	2	4.3333	18.9799	1.7196	7.5318	0.5159	2.2596
VOC*	0.7	0	0	0.7	0.7	0.6019	2.6363	0.6019	2.6363	0.6912	3.0275
Formaldehyde			0			0	0			0.0786	0.3443
TSP/PM10/PM2.5	0.0763	0	0	0.0763		0.0656	0.2873		0	0.0656	0.2873
[2]SO_2	0.002	0	0	0.002		0.00167	0.007315			0.00167	0.007315
AP-42 HAPs	lb/MMBtu										
Formaldehyde	0.0205	NA	NA	NA	NA	0.07864	0.34444	NA	NA	NA	NA
Acetaldehyde	0.00279	NA	NA	NA	NA	0.0107	0.04687	NA	NA	NA	NA
Acrolein	0.00263	NA	NA	NA	NA	0.01009	0.04419	NA	NA	NA	NA
Benzene	0.00158	NA	NA	NA	NA	0.00606	0.02654	NA	NA	NA	NA
Ethylbenzene	0.0000248	NA	NA	NA	NA	0.0001	0.00044	NA	NA	NA	NA
n-Hexane		NA	NA	NA	NA	0	0	NA	NA	NA	NA
Toluene	0.000558	NA	NA	NA	NA	0.00214	0.00937	NA	NA	NA	NA
Xylene	0.000195	NA	NA	NA	NA	0.00075	0.00329	NA	NA	NA	NA
Total HAPs	NA	NA	NA	NA	NA	0.10848	0.47514	NA	NA	0.11	0.48

* Uncontrolled & Controlled VOC emissions include aldehyde emissions. VOC Emissions for JJJJ do not include aldehyde emissions. [1] For NOI's & NPR, controlled emissions cannot be less than JJJJ emissions. [2] SO2 EF (grains/scf or ppm) except for AP-42 EF in g/hp-hr for SO2 & EF Values for NOx, CO, VOC, TSP/PM10/PM2.5 in lb/hp-hr for large gasoline & diesel engines. ^NOx+NMHC Emission Factors for diesel engines assume 75% NOx and 25% VOC

New Mexico Environment Department Air Quality Bureau Equipment Emissions Calculation Form

Date:	May 9, 2025	**Permit Number:**	NSR-10432
Company Name:	Tap Rock Operating, LLC	**AI# if Known:**	41218
Facility Name:	High Life CTB	**Elevation (ft.):**	3,510

Non-Emergency SI Rich Burn, Lean Burn & Clean Burn Natural Gas Fired Generator Engines (100% Load) & Stationary & Non-Road Diesel (≤600hp & >600hp) & Gasoline Generator Engines (≤600hp)

Enter data in green-shaded areas only! One engine per form unless like-kind engines

Emission Unit ID:	GEN 5
Engine Manufacturer:	Power Solutions International
Engine Model:	14.6L
Engine Serial #:	TBD
Engine Manuf. Date:	> 1/1/2011
Engine Type:	4SRB
Factory HP Rating	390
Allowable HP Rating	390
Engine BSFC (Btu/(Hp*Hr))	8,671
Fuel LHV, (BTU/SCF)	1,157
Fuel Sulfur (grains/dscf)	0.002

Quantity of Like-kind Engines:	1
Engine Description	Generator Engine
Hours/year	8,760
Fuel Type:	Field Gas

Engine Deration

- (•) No Deration
- ( ) Stationary - Naturally Aspirated
- ( ) Stationary - Turbo Aspirated
- ( ) Portable - Naturally Aspirated
- ( ) Portable - Turbo Aspirated

No Deration.

Notes:

Hourly Fuel Flow Rate (MMSCF/hr)	0.002923
Annual Fuel Flow Rate (MMSCF/yr)	25.60548
Maximum Engine RPM	1,800
Exhaust Temperature (°F)	1,382
Exhaust Velocity (ft/sec)	361.9
Exhaust Flow (ACFM)	1,895
Stack Diameter (ft)	0.33
Stack Height (ft)	15

Select Source of Emission Factors

- ( ) AP-42 Emission Factors
- ( ) Manufacturer Specs (Enter Appropriate Emission Factors Below) or Diesel Tier 1, 2, 3 or 4
- ( ) NSPS JJJJ; Engine Manuf. Between July 1, 2007-June 30, 2010 & Engine HP≥500HP
- ( ) NSPS JJJJ; Engine Manuf. On or after July 1, 2010 & Engine HP≥500HP
- ( ) NSPS JJJJ; Engine Manuf. Between July 1, 2008-Dec. 31, 2010 & Engine HP 100≤HP<500
- (•) NSPS JJJJ; Engine Manuf. on or after Jan.1, 2011 & Engine HP 100≤HP<500
- ( ) NSPS JJJJ; Eng. Manuf. Betw. Jan. 1, 2008-June 30, 2010 & LB Engine HP 500≤HP<1350
- ( ) NSPS JJJJ; Engine Manuf. on or after July 1, 2010 & LB Engine HP 500≤HP<1350
- ( ) NSPS JJJJ; Engines < 100HP (Enter Appropriate Emission Factors Below)
- ( ) NSPS IIII; Stationary Diesel Engines

Emission Factors, Catalyst Control Efficiency & Safety Factor						Uncontrolled Emissions		JJJJ Emissions		Controlled Emissions (includes SF)[1]	
Pollutant	Uncontrld. EF g/hp-hr	% Control Efficiency	% Safety Factor	Contrld EF g/(hp-hr)	JJJJ EF g/hp-hr	lb/hr	Tons/yr	lb/hr	Tons/yr	lb/hr	Tons/yr
NOx^	5.3	90.57	0	0.5	1	4.5569	19.9592	0.8598	3.7659	0.4299	1.883
CO	5.04	88.1	0	0.6	2	4.3333	18.9799	1.7196	7.5318	0.5159	2.2596
VOC*	0.7	0	0	0.7	0.7	0.6019	2.6363	0.6019	2.6363	0.6912	3.0275
Formaldehyde			0			0	0			0.0786	0.3443
TSP/PM10/PM2.5	0.0763	0	0	0.0763		0.0656	0.2873		0	0.0656	0.2873
[2]SO_2	0.002	0	0	0.002		0.00167	0.007315			0.00167	0.007315
AP-42 HAPs	lb/MMBtu										
Formaldehyde	0.0205	NA	NA	NA	NA	0.07864	0.34444	NA	NA	NA	NA
Acetaldehyde	0.00279	NA	NA	NA	NA	0.0107	0.04687	NA	NA	NA	NA
Acrolein	0.00263	NA	NA	NA	NA	0.01009	0.04419	NA	NA	NA	NA
Benzene	0.00158	NA	NA	NA	NA	0.00606	0.02654	NA	NA	NA	NA
Ethylbenzene	0.0000248	NA	NA	NA	NA	0.0001	0.00044	NA	NA	NA	NA
n-Hexane		NA	NA	NA	NA	0	0	NA	NA	NA	NA
Toluene	0.000558	NA	NA	NA	NA	0.00214	0.00937	NA	NA	NA	NA
Xylene	0.000195	NA	NA	NA	NA	0.00075	0.00329	NA	NA	NA	NA
Total HAPs	NA	NA	NA	NA	NA	0.10848	0.47514	NA	NA	0.11	0.48

* Uncontrolled & Controlled VOC emissions include aldehyde emissions. VOC Emissions for JJJJ do not include aldehyde emissions. [1] For NOI's & NPR, controlled emissions cannot be less than JJJJ emissions. [2] SO2 EF (grains/scf or ppm) except for AP-42 EF in g/hp-hr for SO2 & EF Values for NOx, CO, VOC, TSP/PM10/PM2.5 in lb/hp-hr for large gasoline & diesel engines. ^NOx+NMHC Emission Factors for diesel engines assume 75% NOx and 25% VOC

New Mexico Environment Department Air Quality Bureau Equipment Emissions Calculation Form

Date:	May 9, 2025	**Permit Number:**	NSR-10432
Company Name:	Tap Rock Operating, LLC	**AI# if Known:**	41218
Facility Name:	High Life CTB	**Elevation (ft.):**	3,510

Non-Emergency SI Rich Burn, Lean Burn & Clean Burn Natural Gas Fired Generator Engines (100% Load) & Stationary & Non-Road Diesel (≤600hp & >600hp) & Gasoline Generator Engines (≤600hp)

Enter data in green-shaded areas only! One engine per form unless like-kind engines

Emission Unit ID:	GEN 6
Engine Manufacturer:	Power Solutions International
Engine Model:	14.6L
Engine Serial #:	TBD
Engine Manuf. Date:	>1/1/2011
Engine Type:	4SRB
Factory HP Rating	390
Allowable HP Rating	390
Engine BSFC (Btu/(Hp*Hr))	8,671
Fuel LHV, (BTU/SCF)	1,157
Fuel Sulfur (grains/dscf)	0.002

Quantity of Like-kind Engines:	1
Engine Description	Generator Engine
Hours/year	8,760
Fuel Type:	Field Gas

Engine Deration

- (•) No Deration
- ( ) Stationary - Naturally Aspirated
- ( ) Stationary - Turbo Aspirated
- ( ) Portable - Naturally Aspirated
- ( ) Portable - Turbo Aspirated

No Deration.

Notes:

Hourly Fuel Flow Rate (MMSCF/hr)	0.002923
Annual Fuel Flow Rate (MMSCF/yr)	25.60548
Maximum Engine RPM	1,800
Exhaust Temperature (°F)	1,382
Exhaust Velocity (ft/sec)	361.9
Exhaust Flow (ACFM)	1,895
Stack Diameter (ft)	0.33
Stack Height (ft)	15

Select Source of Emission Factors

- ( ) AP-42 Emission Factors
- ( ) Manufacturer Specs (Enter Appropriate Emission Factors Below) or Diesel Tier 1, 2, 3 or 4
- ( ) NSPS JJJJ; Engine Manuf. Between July 1, 2007-June 30, 2010 & Engine HP≥500HP
- ( ) NSPS JJJJ; Engine Manuf. On or after July 1, 2010 & Engine HP≥500HP
- ( ) NSPS JJJJ; Engine Manuf. Between July 1, 2008-Dec. 31, 2010 & Engine HP 100≤HP<500
- (•) NSPS JJJJ; Engine Manuf. on or after Jan.1, 2011 & Engine HP 100≤HP<500
- ( ) NSPS JJJJ; Eng. Manuf. Betw. Jan. 1, 2008-June 30, 2010 & LB Engine HP 500≤HP<1350
- ( ) NSPS JJJJ; Engine Manuf. on or after July 1, 2010 & LB Engine HP 500≤HP<1350
- ( ) NSPS JJJJ; Engines < 100HP (Enter Appropriate Emission Factors Below)
- ( ) NSPS IIII; Stationary Diesel Engines

Emission Factors, Catalyst Control Efficiency & Safety Factor						Uncontrolled Emissions		JJJJ Emissions		Controlled Emissions (includes SF)[1]	
Pollutant	Uncontrld. EF g/hp-hr	% Control Efficiency	% Safety Factor	Contrld EF g/(hp-hr)	JJJJ EF g/hp-hr	lb/hr	Tons/yr	lb/hr	Tons/yr	lb/hr	Tons/yr
NOx^	5.3	90.57	0	0.5	1	4.5569	19.9592	0.8598	3.7659	0.4299	1.883
CO	5.04	88.1	0	0.6	2	4.3333	18.9799	1.7196	7.5318	0.5159	2.2596
VOC*	0.7	0	0	0.7	0.7	0.6019	2.6363	0.6019	2.6363	0.6912	3.0275
Formaldehyde			0			0	0			0.0786	0.3443
TSP/PM10/PM2.5	0.0763	0	0	0.0763		0.0656	0.2873		0	0.0656	0.2873
[2]SO_2	0.002	0	0	0.002		0.00167	0.007315			0.00167	0.007315
AP-42 HAPs	lb/MMBtu										
Formaldehyde	0.0205	NA	NA	NA	NA	0.07864	0.34444	NA	NA	NA	NA
Acetaldehyde	0.00279	NA	NA	NA	NA	0.0107	0.04687	NA	NA	NA	NA
Acrolein	0.00263	NA	NA	NA	NA	0.01009	0.04419	NA	NA	NA	NA
Benzene	0.00158	NA	NA	NA	NA	0.00606	0.02654	NA	NA	NA	NA
Ethylbenzene	0.0000248	NA	NA	NA	NA	0.0001	0.00044	NA	NA	NA	NA
n-Hexane		NA	NA	NA	NA	0	0	NA	NA	NA	NA
Toluene	0.000558	NA	NA	NA	NA	0.00214	0.00937	NA	NA	NA	NA
Xylene	0.000195	NA	NA	NA	NA	0.00075	0.00329	NA	NA	NA	NA
Total HAPs	NA	NA	NA	NA	NA	0.10848	0.47514	NA	NA	0.11	0.48

* Uncontrolled & Controlled VOC emissions include aldehyde emissions. VOC Emissions for JJJJ do not include aldehyde emissions. [1] For NOI's & NPR, controlled emissions cannot be less than JJJJ emissions. [2] SO2 EF (grains/scf or ppm) except for AP-42 EF in g/hp-hr for SO2 & EF Values for NOx, CO, VOC, TSP/PM10/PM2.5 in lb/hp-hr for large gasoline & diesel engines. ^NOx+NMHC Emission Factors for diesel engines assume 75% NOx and 25% VOC

New Mexico Environment Department Air Quality Bureau Emissions Calculation Forms

Date: May 9, 2025
Company Name: Tap Rock Operating, LLC
Facility Name: High Life CTB

Permit Number: 10432
AI# if Known: 41218
Elevation (ft.): 3,510

Total Requested Emissions For All Regulated Engines (NSR Request)

UnitID	NO_x		CO		VOC		SO_x		TSP		PM_{10}		$PM_{2.5}$		H_2S		Total HAP	
	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	lb/hr	tons/yr	lb/hr	tons/yr
ENG 1	1.52	6.66	1.83	8	2.83	12.39	0	0.02	0.1	0.44	0.1	0.44	0.1	0.44			0.78	3.43
ENG 2	1.24	5.43	2.48	10.86	3.42	15	0.01	0.03	0.12	0.54	0.12	0.54	0.12	0.54			0.63	2.78
ENG 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0	0
ENG 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0	0
ENG 5	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0	0
ENG 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0	0
ENG 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0	0
ENG 8	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0	0
GEN 1	0.43	1.88	0.52	2.26	0.69	3.03	0	0.01	0.07	0.29	0.07	0.29	0.07	0.29			0.11	0.48
GEN 2	0.43	1.88	0.52	2.26	0.69	3.03	0	0.01	0.07	0.29	0.07	0.29	0.07	0.29			0.11	0.48
GEN 3	0.43	1.88	0.52	2.26	0.69	3.03	0	0.01	0.07	0.29	0.07	0.29	0.07	0.29			0.11	0.48
GEN 4	0.43	1.88	0.52	2.26	0.69	3.03	0	0.01	0.07	0.29	0.07	0.29	0.07	0.29			0.11	0.48
GEN 5	0.43	1.88	0.52	2.26	0.69	3.03	0	0.01	0.07	0.29	0.07	0.29	0.07	0.29			0.11	0.48
GEN 6	0.43	1.88	0.52	2.26	0.69	3.03	0	0.01	0.07	0.29	0.07	0.29	0.07	0.29			0.11	0.48
GEN 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0	0
GEN 8	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0	0
PJENG 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0	0
PJENG 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0	0
PJENG 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0	0
PJENG 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0	0
PJENG 5	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0	0
PJENG 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0	0
PJENG 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0	0
PJENG 8	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0	0
Page Totals	**5.34**	**23.37**	**7.43**	**32.42**	**10.39**	**45.57**	**0.01**	**0.11**	**0.64**	**2.72**	**0.64**	**2.72**	**0.64**	**2.72**			**2.07**	**9.09**

New Mexico Environment Department Air Quality Bureau Emissions Calculation Forms

Date: May 9, 2025
Company Name: Tap Rock Operating, LLC
Facility Name: High Life CTB

Permit Number: 10432
AI# if Known: 41218
Elevation (ft.): 3,510

Heaters, Heated Separators & Heater Treaters (Only for units rated <100 MMBTU/Hr)

Enter appropriate information in green boxes below changing default values as appropriate and adding additional rows for each heater unit.

Enter the Sulfur Content of Gas or use default value (grains/10^6 scf). **2,000**

SO_2 emissions based on AP-42 EF and assumes 100% conversion of fuel sulfur to SO2 and assumes sulfur content in natural gas of 2,000 grains/1000000 scf. Change default value of 2000 as needed based on gas analysis submitted with application.

Enter the Site Fuel Heat Value of Gas or use default value (Btu/scf). **1,020**

Emissions From All Heaters, Heated Separators & Heater Treaters

Add/Remove Rows	Unit ID	Heat Input	NO_x		CO		VOC		SO_2		$PM/PM_{10}/PM_{2.5}$	
		MMBtu/hr	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy
+ -	HT-1	1.5	0.147	0.644	0.124	0.543	0.008	0.035	0	0	0.011	0.048
+ -	HT-2	1.5	0.147	0.644	0.124	0.543	0.008	0.035	0	0	0.011	0.048
+ -	HT-3	1.5	0.147	0.644	0.124	0.543	0.008	0.035	0	0	0.011	0.048
+ -	HT-4	1.5	0.147	0.644	0.124	0.543	0.008	0.035	0	0	0.011	0.048
+ -	HT-5	1.5	0.147	0.644	0.124	0.543	0.008	0.035	0	0	0.011	0.048
+ -	HT-6	1.5	0.147	0.644	0.124	0.543	0.008	0.035	0	0	0.011	0.048
+ -	HT-7	1.5	0.147	0.644	0.124	0.543	0.008	0.035	0	0	0.011	0.048
+ -	HT-8	1.5	0.147	0.644	0.124	0.543	0.008	0.035	0	0	0.011	0.048
+ -	HT-9	1.5	0.147	0.644	0.124	0.543	0.008	0.035	0	0	0.011	0.048
+ -	HT-10	1.5	0.147	0.644	0.124	0.543	0.008	0.035	0	0	0.011	0.048
	Totals		1.47	6.44	1.24	5.43	0.08	0.35	0	0	0.11	0.48

Calculation Tool for Heaters, Heated Separators & Heater Treater Emissions (Uncontrolled) for Oil & Gas Production Sites (Only for units rated <100 MMBTU/Hr)

All emission factors based on AP-42, Table 1.4-1, Table 1.4-2 and Table 1.4-3 (July 1998)
https://www3.epa.gov/ttn/chief/ap42/ch01/final/c01s04.pdf

Emission factors for natural gas combustion in boilers and furnaces are presented in AP42, Tables 1.4-1, 1.4-2, 1.4-3, and 1.4-4. The Tables present emission factors on a volume basis (lb/10^6 scf). To convert to an energy basis (lb/MMBtu), divide by a heating value of 1,020 MMBtu/10^6 scf. The emission factors 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.

NOx Sample Calculation

pph = AP 42 NOx Emission Factor (EF) * site fuel heat value Btu/scf/1020 Btu/scf * Maximum Heat Input (MMBtu/hr) * 1/site fuel heat Value Btu/scf * 1000000/1Btu/MMBtu
= 100 lb/1000000 scf * 2000 Btu/scf/1020 Btu/scf * 0.5 MMBtu/hr * 1/2000 Btu/scf * 1000000/1Btu/MMBtu
=0.096 lb/hr

tpy = AP 42 NOx Emission Factor (EF) * site fuel heat value Btu/scf/1020 Btu/scf * Maximum Heat Input (MMBtu/hr) * 1/site fuel heat value Btu/scf * 1000000/1 Btu/MMBtu * 8760 hrs/yr * 1ton/2000 lbs
= 100 lb/1000000 scf * 2000 Btu/scf/1020 Btu/scf * 0.5 MMBtu/hr * 1/2000 Btu/scf * 1000000/1 Btu/MMBtu * 8760 hrs/yr * 1ton/2000lbs
= 0.42 tpy

SO_2 emissions based on 100% conversion of fuel sulfur to SO_2 and assumes sulfur content in natural gas of 2,000 grains/10^6 scf. The SO_2 emission factor is 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.

Date: May 9, 2025
Company Name: Tap Rock Operating, LLC
Facility Name: High Life CTB

Permit Number: 10432
AI# if Known: 41218
Elevation (ft.): 3,510

Heaters, Heated Separators & Heater Treaters (Only for units rated <100 MMBTU/Hr)

Enter appropriate information in green boxes below changing default values as appropriate and adding additional rows for each heater unit.

Enter the Sulfur Content of Gas or use default value (grains/10^6 scf). **2,000**

SO_2 emissions based on AP-42 EFand assumes 100% conversion of fuel sulfur to SO2 and assumes sulfur content in natural gas of 2,000 grains/1000000 scf. Change default value of 2000 as needed based on gas analysis submitted with application.

Enter the Site Fuel Heat Value of Gas or use default value (Btu/scf). **1,020**

Emissions From All Heaters, Heated Separators & Heater Treaters

Add/Remove Rows	Unit ID	Heat Input	NO_x		CO		VOC		SO_2		PM/PM_{10}	
		MMBtu/hr	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy
+ -	HT-11	1.5	0.147	0.644	0.124	0.543	0.008	0.035	0	0	0.011	0.048
Totals			0.147	0.644	0.124	0.543	0.008	0.035	0	0	0.011	0.048

Date:	May 9, 2025	**Permit Number:**	NSR-10432
Company Name:	Tap Rock Operating, LLC	**AI# if Known:**	41218
Facility Name:	High Life CTB	**Elevation (ft.):**	3,510

Flash Tower/Ultra-low Pressure Separators Air Emissions Calculations Form

Under Development

Please submit all required calculations and supporting documentation for all Flash Tower/Ultra-low Pressure Separators emissions in the application.

Date:	May 9, 2025	**Permit Number:**	NSR-10432
Company Name:	Tap Rock Operating, LLC	**AI# if Known:**	41218
Facility Name:	High Life CTB	**Elevation (ft.):**	3,510

VRT/ULPS (Including the Low Pressure Compressor (LPC) or VRU) Process vs Control Determination

Please complete the Process vs. Control determination below for the VRT/ULPS, which addresses the three criteria referenced in the EPA Nov. 27, 1995 Process Guidance memo and enter appropriate Information in all green boxes.

1. ***Is the primary purpose of the equipment to control air pollution? (Check appropriate box)***

☒ No, the primary purpose of the VRT/ULPS equipment (including the low pressure compressor (LPC) or VRU) is to recover flash gas vapors and route them into an available gas sales line.

☐ Yes, the primary purpose of the VRT/ULPS equipment (including the low pressure compressor (LPC) or VRU) is to control air pollution.

2. ***Where the equipment is recovering product, how do the cost savings from the product recovery compare to the cost of the equipment? (Check appropriate box)***

☒ Yes, the benefit-cost analysis below demonstrates a positive return on investment. The benefit-cost analysis of the VRT/ULPS equipment (including the low pressure compressor (LPC) or VRU) compared to the product recovered is shown below:

☐ No, the benefit- cost analysis below demonstrates a negative return on investment.

VRT/ULPS/LPC/VRU-1	VRT/ULPS/LPC/VRU-1 Benefit-Cost Analysis*		
Capital Cost of VRT/ULPS ($)	$5,000.00	Oil Production (BOPD)	4,200
VRT/ULPS/LPC/VRU Rental Costs ($/mo)	$0.00	VRT/ULPS Vapor Production (Mcf/d)	70
Capital Cost of LPC/VRU ($)	$5,000.00	Heating Value of Vapors (Btu/scf)	2,076
Annual Maintenance & Service Costs ($/yr)	$5,000.00	Natural Gas Price ($/MMBtu)	$3.33
Annual Electricity or Fuel Costs ($/yr)		VRT/ULPS/LPC/VRU Life Expectancy (Yrs)	5
VRT/ULPS/LPC/VRU Lifetime Costs ($)	$35,000.00	Lifetime VRT/ULPS/LPC/VRU Profit (Revenues-Costs) ($/yr)	$848,145.95
Annual VRT/ULPS/LPC/VRU Revenue ($/yr)	$176,629.19	Payback Period (Yrs)	0.198
VRT/ULPS/LPC/VRU Lifetime Revenue ($)	$883,145.95	Lifetime Benefit-Cost Ratio	25.23

3. ***Would the equipment be installed if no air quality regulations are in place? (Check appropriate box)***

☒ Yes, the VRT/ULPS equipment (including the low pressure compressor (LPC) or VRU) would still be installed regardless of air quality regulations, due to the significant cost benefits of product recovery.

☐ No, the VRT/ULPS equipment (including the low pressure compressor (LPC) or VRU) would not be installed if there were no air quality regulations in place.

Notes:

Footnote: All estimates based on current dollars unless specified otherwise; Tank vapor estimates based on flash calculation method noted in Tanks form based on oil throughput noted in p2 of AECT (this can be changed by user); Gas price based on EIA Natural Gas Weekly Update. * The time value of money is not taken into account.

Date:	May 9, 2025	**Permit Number:**	NSR-10432
Company Name:	Tap Rock Operating, LLC	**AI# if Known:**	41218
Facility Name:	High Life CTB	**Elevation (ft.):**	3,510

VRT/ULPS (Including the Low Pressure Compressor (LPC) or VRU) Process vs Control Determination

Please complete the Process vs. Control determination below for the VRT/ULPS, which addresses the three criteria referenced in the EPA Nov. 27, 1995 Process Guidance memo and enter appropriate Information in all green boxes.

1. *Is the primary purpose of the equipment to control air pollution? (Check appropriate box)*

☒ No, the primary purpose of the VRT/ULPS equipment (including the low pressure compressor (LPC) or VRU) is to recover flash gas vapors and route them into an available gas sales line.

☐ Yes, the primary purpose of the VRT/ULPS equipment (including the low pressure compressor (LPC) or VRU) is to control air pollution.

2. *Where the equipment is recovering product, how do the cost savings from the product recovery compare to the cost of the equipment? (Check appropriate box)*

☒ Yes, the benefit-cost analysis below demonstrates a positive return on investment. The benefit-cost analysis of the VRT/ULPS equipment (including the low pressure compressor (LPC) or VRU) compared to the product recovered is shown below:

☐ No, the benefit- cost analysis below demonstrates a negative return on investment.

VRT/ULPS/LPC/VRU-2	VRT/ULPS/LPC/VRU-2 Benefit-Cost Analysis*		
Capital Cost of VRT/ULPS ($)	$5,000.00	Oil Production (BOPD)	4,200
VRT/ULPS/LPC/VRU Rental Costs ($/mo)	$0.00	VRT/ULPS Vapor Production (Mcf/d)	70
Capital Cost of LPC/VRU ($)	$5,000.00	Heating Value of Vapors (Btu/scf)	2,025
Annual Maintenance & Service Costs ($/yr)	$5,000.00	Natural Gas Price ($/MMBtu)	$3.33
Annual Electricity or Fuel Costs ($/yr)		VRT/ULPS/LPC/VRU Life Expectancy (Yrs)	5
VRT/ULPS/LPC/VRU Lifetime Costs ($)	$35,000.00	Lifetime VRT/ULPS/LPC/VRU Profit (Revenues-Costs) ($/yr)	$826,450.20
Annual VRT/ULPS/LPC/VRU Revenue ($/yr)	$172,290.04	Payback Period (Yrs)	0.203
VRT/ULPS/LPC/VRU Lifetime Revenue ($)	$861,450.20	Lifetime Benefit-Cost Ratio	24.61

3. *Would the equipment be installed if no air quality regulations are in place? (Check appropriate box)*

☒ Yes, the VRT/ULPS equipment (including the low pressure compressor (LPC) or VRU) would still be installed regardless of air quality regulations, due to the significant cost benefits of product recovery.

☐ No, the VRT/ULPS equipment (including the low pressure compressor (LPC) or VRU) would not be installed if there were no air quality regulations in place.

Notes:

Footnote: All estimates based on current dollars unless specified otherwise; Tank vapor estimates based on flash calculation method noted in Tanks form based on oil throughput noted in p2 of AECT (this can be changed by user); Gas price based on EIA Natural Gas Weekly Update. * The time value of money is not taken into account.

Date:	May 9, 2025	**Permit Number:**	NSR-10432
Company Name:	Tap Rock Operating, LLC	**AI# if Known:**	41218
Facility Name:	High Life CTB	**Elevation (ft.):**	3,510

Vertical Fixed Roof (VFR) Oil/Condensate VOC Flash Emissions Calculations Form

Select Tanks Flash Emission Calculation Method

GOR	E & P Tanks	ProMax
Vasquez-Beggs	HYSYS	VMGSim

ProMax Oil Tanks Emission Calculations

Please attach the ProMAX printout with all input data provided along with the calculated emissions. Enter the uncontrolled VOC emissions below. If the tank vapors are routed to a flare, enclosed combustion device, vapor combustion unit, vapor recovery unit or thermal oxidizer select the appropriate VOC destruction method below along with selected VOC destruction efficiency supported by manufacturer specifications submitted with the application.

Tanks VOC Control Method

Capture Efficiency	100	Represent Uncaptured/Uncollected VOC's at Tanks	YES
VOC Control Method[1]	VRU & Flare	Represent VRU/ULPC Downtime Emissions at Tanks	NO
VOC Destruction Efficiency[2]	98	Represent VOC Controlled Emissions at Tanks*	NO
Notes			

Total VOC Flash Emissions From Oil/Condensate Storage Tanks Calculated with ProMax

Add/Remove Rows	Tank ID	VOC Uncontrolled Emissions		VOC Emissions after Control		VOC Emissions at the Tanks	
Up To 10 Units		pph	tpy	pph*	tpy*	pph	tpy
+ -	TK-1	28.72	125.79	0.03	0.13	0	0
+ -	TK-2	28.72	125.79	0.03	0.13	0	0
+ -	TK-3	28.72	125.79	0.03	0.13	0	0
+ -	TK-4	28.72	125.79	0.03	0.13	0	0
+ -	TK-5	28.72	125.79	0.03	0.13	0	0
+ -	TK-6	28.72	125.79	0.03	0.13	0	0
	Totals	172.32	754.74	0.18	0.78	0	0

Notes 1 & 2 See next page; * Emissions only represented at tanks if "Yes" is selected to represent emissions at tanks.

Calculation Tool for Tanks Flashing & Working & Standing Emissions for Oil & Gas Production Sites

All flash emissions based on flash calculation methodology selected;

1) The appropriate ECD, flare, TO, VCU or VRU form must also be completed.
2) Manufacturer documentation required to support % control selected. If using a VRU/LPC, calculations assume VRU/ULPC with a 100% control efficiency, but with 5% downtime;
3) Information included in calculation tool must be based on representative oil and gas analysis which must be submitted with application;
4) GOR and Vasquez-Beggs sample calculations outlined below; E & P Tanks, ProMax, HYSYS & VMG Sim flash emissions require submittal of computer simulation model emissions calculations print-outs;
5) Working & Standing emissions based on AP-42 Chpt. 7, tanks 4.09d computer simulation or ProMax, or VMG computer simulation models.

Sample Calculations

GOR Methodology

VOC pph = GOR (scf/bbl) * Facility Oil Throughput (BOPD) * 1/24 (Hours/Day * 1/Universal Gas Constant 385 scf/lb-mole @ 70^{O}F, 1 atm) * Molecular Weight of Tank Vapors (lb/lb-mol)
= 40 (scf/bbl) * 1000 (BOPD)*1/24 (hrs/day) *1/385 scf/lb-mol * 50 lb/lb-mol
= 216.45 lbs/hr

VOC tpy = GOR (scf/bbl) * Facility Oil Throughput (BOPD) * 1/24 (Hours/Day * 1/Universal Gas Constant 385 scf/lb-mole @ 70^{O}F, 1 atm) * Molecular Weight of Tank Vapors (lb/lb-mol) * 8760 hr/yr * 1/2000 lbs/ton
= 40 (scf/bbl) * 1000 (BOPD)*1/24 (hrs/day) *1/385 scf/lb-mol * 50 lb/lb-mol * 8760 hr/yr * 1/2000 lbs/ton
= 948.05 tpy

Vasquez-Beggs Methodology

INPUTS			Constraints			
API Gravity		API	16	<API>	58	^{0}API
Separator Pressure (psig)		P	50	<P+Patm>	5250	psia
Separator Temp. (^{0}F)		Ti	70	<Ti>	295	^{0}F
Separator Gas Gravity at Initial Condition		SGi	0.56	<SGi>	1.18	MW/28.97
Barrels of Oil/Day (BOPD)	700	Q	None	<Q>	None	BOPD
Tank Gas MW		MW	18	<MW>	125	lb/lb-mole
VOC Fraction of Tank Gas		VOC	0.5	<VOC>	1.00	Fraction
Atmospheric Pressure (psia)		Patm	20	<Rs>	2070	scf/bbl

Constants			
	^{0}API Gravity		
^{0}APTI	<30	≥30	Given^{0}API
C1	0.0362	0.0178	
C2	1.0937	1.187	
C3	25.724	23.931	

SGx = Dissolved gas gravity at Separator pressure = SGi [1.0+0.00005912*API*Ti*Log(Pi/114.7)]

Rs = (C1 * SGx * Pi^C2) exp ((C3 * API) / (Ti + 460)) for P + Patm

THC = Rs * Q * MW * 1/385 scf/lb-mole * 365 D/Yr * 1 ton/2000 lbs

VOC = THC * Frac. of C3+ in the Stock Tank Vapor

Technical Disclaimer
This document is intended to help you accurately determine oil/condensate storage tank flash, working and standing emissions. It does not supersede or replace any state or federal law, rule, or regulation. This guidance reflects the current understanding of how these units work and how they generate emissions, how they are monitored or tested, and what data are available for emissions determination, may change over time as the AQB continue scientific studies and as new information becomes available. The AQB welcome any data, information, or feedback that may improve our understanding of oil/condensate storage tank flash, working and standing emissions and thereby further improve determinations within the emissions inventory. The calculation methods represented are intended as an emissions calculation aid; alternate calculation methods may be equally acceptable if they are based upon, and adequately demonstrate, sound engineering assumptions or data. If you have a question regarding the acceptability of a given emissions determination method, contact the Permitting Section at 505-476-4300.

Date:	May 9, 2025	**Permit Number:**	NSR-10432
Company Name:	Tap Rock Operating, LLC	**AI# if Known:**	41218
Facility Name:	High Life CTB	**Elevation (ft.):**	3,510

Vertical Fixed Roof (VFR) Oil/Condensate VOC Working & Standing Emissions Calculations Form

Select Tanks W & S Emission Calculation Method

AP-42 Chpt. 7 | EPA Tanks 4.09d | ProMax | E & P Tanks

ProMax Oil Tanks W & S Emission Calculations

Please attach the ProMAX printout with all input data provided along with the calculated emissions. Enter the uncontrolled VOC emissions below. If the tank vapors are routed to a flare, enclosed combustion device, vapor combustion unit, vapor recovery unit or thermal oxidizer select the appropriate VOC destruction method below along with selected VOC destruction efficiency supported by manufacturer specifications submitted with the application.

Tanks VOC Control Method

Capture Efficiency	100	Represent Uncaptured and/or Controlled VOC's at Tanks	YES
VOC Control Method	VRU & Flare	Represent VRU/ULPC Downtime Emissions at Tanks	NO
VOC Destruction Efficiency	98	Represent VOC Controlled Emissions at Tanks*	NO
Notes			

Total VOC W & S Emissions From Oil/Condensate Storage Tanks Calculated with ProMax

Add/Remove Rows Up To 10 Units	Tank ID	VOC Uncontrolled Emissions		VOC Emissions after Control		VOC Emissions at the Tanks	
		pph	tpy	pph*	tpy*	pph	tpy
+ -	TK-1	11.07	48.47	0.23	1.02	0	0
+ -	TK-2	11.07	48.47	0.23	1.02	0	0
+ -	TK-3	11.07	48.47	0.23	1.02	0	0
+ -	TK-4	11.07	48.47	0.23	1.02	0	0
+ -	TK-5	11.07	48.47	0.23	1.02	0	0
+ -	TK-6	11.07	48.47	0.23	1.02	0	0
	Totals	66.42	290.82	1.38	6.12	0	0

Notes 1 & 2 See next page; * Emissions only represented at tanks if "Yes" is selected to represent emissions at tanks.

New Mexico Environment Department Air Quality Bureau Equipment Emissions Calculation Form

Date:	May 9, 2025	**Permit Number:**	NSR-10432
Company Name:	Tap Rock Operating, LLC	**AI# if Known:**	41218
Facility Name:	High Life CTB	**Elevation (ft.):**	3,510

Startup, Shutdown & Maintenance and Malfunction

- ○ No SSM emissions are expected from routine operations.
- ◉ Request up to 10 tpy of VOC SSM emissions.
- ○ Request site specific VOC & H2S SSM and enter information below.
- ○ Request site specific VOC & H2S SSM plus 10 tpy VOC and enter information below.
- ○ Request site specific combustion SSM and those emissions are included in Section 4 (attach calculations.)

- ◉ Request 10 tpy VOC Malfunction emissions for GCP-O&G, GCP-6 or NSR permitting actions only.

	Blowdowns			Engine Startups		
Unit Numbers						
Quantity of Like-kind Blowdown Units or Engines	1					
Total Volume of Each Blowdown or Engine Startup Vent (acf)						
Duration of Event (Minutes)						
Maximum Blowdowns or Startups/hr	1					
Frequency of Blowdowns or Engine Startups (Events/yr)						
Total Actual Volume of Gas Vented (acf/yr)	0					
Pressure of Gas Inside Unit Before Venting (psig)						
Final Pressure (psia)	14.7					
Gas Temperature Prior to Venting (°F)						
Vented Gas Molecular Weight (lb/lb-mol						
Vented Gas VOC wt %						
Vented Total HAP wt %						
Vented Gas Benzene wt %						
Vented Gas H_2S wt %						

Startup, Shutdown and Maintenance Emissions (SSM) and Malfunction Emissions

SSM	VOC		Total HAP		Benzene		H_2S	
	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY
SSM Blowdowns								
SSM Startups								
SSM Other (Attach Calculations)								
SSM Totals		**10**						
Malfunction Total		**10**						

Notes

Planned SSM Emissions

The venting emissions calculations herein should only be used when only gas (no liquids) is present in the unit. The calculation of the vented gas is based on the volume of the unit and assumes the unit is saturated with vapor at the pressure and temperature of the unit before venting occurs. If liquids are also present in the gas, please enter the calculated amounts in the SSM Other row only and submit separate calculations, since the calculations on this form do not account for the evaporation of liquids that may be present in the unit.

Calculations are based on the Ideal gas law: P(V) = n(R)(T)

VOC result = (((Pressure of Gas Inside the Unit Before Venting) * (Actual Volume of the Vented Unit)) / (Frequency of events) * (Molecular Weight) * VOC wt%)/(Ideal Gas Constant) * (Temperature of Gas Inside the Unit Before Venting)

Where the Ideal Gas Constant = 10.73159 (ft^3*psia)/R*lb-mol

For SSM combustion emissions, attach separate calculations.

Date:	May 9, 2025	**Permit Number:**	NSR-10432
Company Name:	Tap Rock Operating, LLC	**AI# if Known:**	41218
Facility Name:	High Life CTB	**Elevation (ft.):**	3,510

Vertical Fixed Roof (VFR) Produced Water VOC Flash Emissions Calculations Form

Select Tanks Flash Emission Calculation Method

GWR	E & P Tanks	ProMax
Vasquez-Beggs	HYSIS	VMGSim

ProMax Produced Water Tanks Emission Calculations

Please attach the ProMAX printout with all input data provided along with the calculated emissions. Enter the uncontrolled VOC emissions below. If the tank vapors are routed to a flare, enclosed combustion device, vapor combustion unit, vapor recovery unit or thermal oxidizer select the appropriate VOC destruction method below along with selected VOC destruction efficiency supported by manufacturer specifications submitted with the application.

Tanks VOC Control Method			
Select % Oil in Water	1	VOC Uncontrolled emissions entered includes this percentage.	
Capture Efficiency	100	Represent Uncaptured and/or Controlled VOC's at Tanks	YES
VOC Control Method	VRU & Flare	Represent VRU/ULPC Downtime Emissions at Tanks	NO
VOC Destruction Efficiency	98	Represent VOC Controlled Emissions at Tanks*	NO
Notes			

Total VOC Emissions From Produced Water Storage Tanks Calculated with ProMax

Add/Remove Rows Up To 10 Units	Tank ID	VOC Uncontrolled Emissions		VOC Emissions after Control		VOC Emissions at the Tanks	
		pph	tpy	pph*	tpy*	pph	tpy
+ -	PWTK- 1	2.06	9.03	0	0.01	0	0
+ -	PWTK- 2	2.06	9.03	0	0.01	0	0
+ -	PWTK- 3	2.06	9.03	0	0.01	0	0
+ -	PWTK- 4	2.06	9.03	0	0.01	0	0
	Totals	8.24	36.12	0	0.04	0	0

Notes 1 & 2 See next page; * Emissions only represented at tanks if "Yes" is selected to represent emissions at tanks.

Calculation Tool for Tanks Flashing & Working & Standing Emissions for Oil & Gas Production Sites

All flash emissions based on flash calculation methodology selected ;

1) The appropriate ECD, flare, TO, VCU or VRU form must also be completed.
2) Manufacturer documentation required to support % control selected. Assumes VRU/ULPC with a 100% control efficieny, but with 5% downtime;
3) Information included in calculation tool must be based on representative oil and gas analysis which must be submitted with application;
4) GOR and Vasquez-Beggs sample calculations outlined below; E & P Tanks, ProMax, HYSYS & VMG Sim flash emissions require submittal of computer simulation model emissions calculations print-outs;
5) Working & Standing emissions based on AP-42 Chpt. 7, tanks 4.09d computer simulation or ProMax, or VMG computer simulation models.

Sample Calculations

GWR Methodology

VOC pph = GWR (scf/bbl) * Facility Water Throughput (BOPD) * 1/24 (Hours/Day * 1/Universal Gas Constant 385 scf/lb-mole @ 70^{O}F, 1 atm) * Molecular Weight of Tank Vapors (lb/lb-mol) * Percent Oil in Water
= 40 (scf/bbl) * 1000 (BOPD)*1/24 (hrs/day) *1/385 scf/lb-mol * 50 lb/lb-mol * 1/100
= 2.16 lbs/hr

VOC tpy = GWR (scf/bbl) * Facility Water Throughput (BOPD) * 1/24 (Hours/Day * 1/Universal Gas Constant 385 scf/lb-mole @ 70^{O}F, 1 atm) * Molecular Weight of Tank Vapors (lb/lb-mol) * 8760 hr/yr * 1/2000 lbs/ton * Percent Oil in Water
= 40 (scf/bbl) * 1000 (BOPD)*1/24 (hrs/day) *1/385 scf/lb-mol * 50 lb/lb-mol * 8760 hr/yr * 1/2000 lbs/ton * 1/100
= 9.48 tpy

Vasquez-Beggs Methodology

INPUTS			Constraints			
API Gravity		API	16	<API>	58	^{0}API
Separator Pressure (psig)		P	50	<P+Patm>	5250	psia
Separator Temp. (^{0}F)		Ti	70	<Ti>	295	^{0}F
Separator Gas Gravity at Initial Condition		SGi	0.56	<SGi>	1.18	MW/28.97
Barrels of Water/Day (BOPD)	7,000	Q	None	<Q>	None	BOPD
Tank Gas MW		MW	18	<MW>	125	lb/lb-mole
VOC Fraction of Tank Gas		VOC	0.5	<VOC>	1.00	Fraction
Atmospheric Pressure (psia)		Patm	20	<Rs>	2070	scf/bbl

Constants			
	^{0}API Gravity		
^{0}APTI	<30	≥30	Given^{0}API
C1	0.0362	0.0178	
C2	1.0937	1.187	
C3	25.724	23.931	

SGx = Dissolved gas gravity at Separator pressure = SGi [1.0+0.00005912*API*Ti*Log(Pi/114.7)]

Rs = (C1 * SGx * Pi^C2) exp ((C3 * API) / (Ti + 460)) for P + Patm

THC = Rs * Q * MW * 1/385 scf/lb-mole * 365 D/Yr * 1 ton/2000 lbs

VOC = THC * Frac. of C3+ in the Stock Tank Vapor

Technical Disclaimer
This document is intended to help you accurately determine produced water storage tank flash, working and standing emissions. It does not supersede or replace any state or federal law, rule, or regulation. This guidance reflects the current understanding of how these units work and how they generate emissions, how they are monitored or tested, and what data are available for emissions determination, may change over time as the AQB continue scientific studies and as new information becomes available. The AQB welcome any data, information, or feedback that may improve our understanding of produced water storage tank flash, working and standing emissions and thereby further improve determinations within the emissions inventory. The calculation methods represented are intended as an emissions calculation aid; alternate calculation methods may be equally acceptable if they are based upon, and adequately demonstrate, sound engineering assumptions or data. If you have a question regarding the acceptability of a given emissions determination method, contact the Permitting Section at 505-476-4300.

Date:	May 9, 2025	**Permit Number:**	NSR-10432
Company Name:	Tap Rock Operating, LLC	**AI# if Known:**	41218
Facility Name:	High Life CTB	**Elevation (ft.):**	3,510

Vertical Fixed Roof (VFR) Water Tanks VOC Working & Standing Emissions Calculations Form

Select Tanks W & S Emission Calculation Method

AP-42 Chpt. 7 | EPA Tanks 4.09d | ProMax | E & P Tanks

ProMax Produced Water Tanks W & S Emission Calculations

(Assumes W & S emissions are 1% of the emissions calculated based on oil properties and entered as uncontrolled emissions)

Please attach the ProMAX printout with all input data provided along with the calculated emissions. Enter the uncontrolled VOC emissions below. If the tank vapors are routed to a flare, enclosed combustion device, vapor combustion unit, vapor recovery unit or thermal oxidizer select the appropriate VOC destruction method below along with selected VOC destruction efficiency supported by manufacturer specifications submitted with the application.

Tanks VOC Control Method

Capture Efficiency	100	Represent Uncaptured and/or Controlled VOC's at Tanks	YES
VOC Control Method	VRU & Flare	Represent VRU/ULPC Downtime Emissions at Tanks	NO
VOC Destruction Efficiency	98	Represent VOC Controlled Emissions at Tanks*	NO

Notes

Total VOC W & S Emissions From Produced Water Storage Tanks Calculated with ProMax

Add/Remove Rows Up To 10 Units	Tank ID	VOC Uncontrolled Emissions		VOC Emissions after Control		VOC Emissions at the Tanks	
		pph	tpy	pph*	tpy*	pph	tpy
+ -	PWTK-1	2.54	11.13	0.05	0.23	0	0
+ -	PWTK-2	2.54	11.13	0.05	0.23	0	0
+ -	PWTK-3	2.54	11.13	0.05	0.23	0	0
+ -	PWTK-4	2.54	11.13	0.05	0.23	0	0
	Totals	10.16	44.52	0.2	0.92	0	0

Notes 1 & 2 See next page; * Emissions only represented at tanks if "Yes" is selected to represent emissions at tanks.

New Mexico Environment Department Air Quality Bureau Equipment Emissions Calculation Form

Date:	May 9, 2025	**Permit Number:**	NSR-10432
Company Name:	Tap Rock Operating, LLC	**AI# if Known:**	41218
Facility Name:	High Life CTB	**Elevation (ft.):**	3,510

Flare

Enter information in green boxes below changing default values as appropriate.

	Gas Stream 1	Gas Stream 2	Gas Stream 3		Gas Stream 1	Gas Stream 2	Gas Stream 3
Emission Unit ID	FL-1 (BDT)	FL-1 (VDT)	FL-2 (HP)	Hourly Gas Routed to Flare (MMBtu/hr)	6.55735	12.12384	1,616.568
Hourly Gas Stream to Flare (Mscf/hr)	3.13	5.84	1,396	Annual Gas Routed to Flare (MMBtu/yr)	5,761.25	10,608.36	141,623.4
Annual Gas Stream to Flare (MMscf/yr)	2.75	5.11	122.3	Pilot Gas Routed to Flare (MMBtu/hr)	0.06369	0	0.06369
Max. Heat Value of Gas (Btu/scf)	2,095	2,076	1,158	Gas MW (lb/lbmol)	42.21	41.42	21.38
Field Gas Mol Fraction (lbmol H2S/lb-mol)				Gas Pressure (psia)	14.7	14.7	14.7
Field Gas Sulfur Content (S grains/100 scf)				Gas Temperature (°F)	70	70	70
Pilot Gas to Flare (Mscf/hr)	0.055		0.055	Field Gas H2S Wt.% to Flare (%)			
Max. Heat Value Pilot Gas (Btu/scf)	1,158		1,158	Flare Control Efficiency	98	98	98
Pilot Gas Sulfur Content (S grains/100 scf)				Total VOC wt.% to Flare (%)[1]	73.74	72.94	24.32
Source of Flare Emission Factors	AP-42 Table	AP-42 Table	AP-42 Table	Safety Factor Applied to Total Emissions (%)			
Use Highest NOx & CO Emission Factors From AP-42 or TCEQ	NO	NO	NO				

Total Emissions to Flare

Pollutant	NOx			CO			VOC			SO2			H2S		
Gas Streams to Flare	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Uncontrolled (pph)	0	0	0	0	0	0	257.47	465.2	19,151	0	0	0	0	0	0
Uncontrolled (tpy)	0	0	0	0	0	0	112.77	203.76	838.8	0	0	0	0	0	0
Field Gas (pph)	0.4459	0.8244	109.9266	2.0328	3.7584	501.1361	5.15	9.3	383.01	0	0	0	0	0	0
Field Gas (tpy)	0.1959	0.3607	4.8152	0.893	1.6443	21.9516	2.26	4.08	16.78	0	0	0	0	0	0
Pilot Gas (pph)	0.0043		0.0043	0.0197		0.0197	0	0	0	0	0	0	0	0	0
Pilot Gas (tpy)	0.019		0.019	0.0865		0.0865	0	0	0	0	0	0	0	0	0
Subtotal Flare (pph)	0.4502	0.8244	109.9309	2.0525	3.7584	501.1558	5.15	9.3	383.01	0	0	0	0	0	0
Subtotal Flare (tpy)	0.2149	0.3607	4.8342	0.9795	1.6443	22.0381	2.26	4.08	16.78	0	0	0	0	0	0
Total Flare (pph)	111.21			506.97			397.46			0			0		
Total Flare (tpy)	5.41			24.66			23.12			0			0		

See reverse side for calculation notes.

1) Based on representative gas analysis which must be submitted with application; 2) Assumes pilot gas has a negligible amount of VOC & 0.25 grains H2S/100scf; *) Emission factors for NOx, CO & VOC based on AP-42, Table 13.5-1, (Dec. 2015) or TCEQ RG-360A/11 (February 2012); #) Assumes H_2S is converted to SO_2 at selected control efficiency; SO2 emissions based on mass balance; +) Assumes H_2S Destruction Efficiency equals flare destruction efficiency;

Calculation Tool for Flare Emissions for Oil & Gas Production Sites

All emission factors based on AP-42, Emission factors for NOx, CO & VOC, Table 13.5-1, (December 2016); https://www3.epa.gov/ttn/chief/ap42/ch13/final/C13S05_12-13-16.pdf or https://www.tceq.texas.gov/assets/public/comm_exec/pubs/rg/rg360/rg36011/rg-360a.pdf

1) Information included in calculation tool must be based on representative gas analysis which must be submitted with application;
2) Assumes pilot gas used has a negligible amount of VOC's and 0.25 grains H2S/100 scf;
3) SO_2 calculations assumes H_2S is converted to SO_2 at selected control efficiency; SO_2 emissions based on mass balance;
4) H_2S calculations assume H_2S Destruction Efficiency equals flare destruction efficiency;

Sample Calculations

NOx pph = hourly gas routed to flare (MMBtu/hr) * NOx Emission factor (lbs/MMBtu)
= 1(MMBtu/hr) * 0.068 (lbs/MMBtu)
= 0.068 lbs/hr

NOx tpy = annual gas routed to flare (MMBtu/yr) * NOx Emission factor (lbs/MMBtu) * 1/lbs/ton)
= 1000 (MMBtu/yr) * 0.068 (lb/MMBtu) * 1/2000 (lbs/ton)
= 0.034 tpy

SO_2 pph= Hourly Gas Stream to flare (MMScf/hr) * 1000000/1 (scf/MMScf) * Field Gas mol Fraction of H_2S (mol H_2S/lb-mol)/100 * 1/Universal Gas Constant 385 scf/lb-mole @ 60^{O}F, 1 atm * Conversion Rate of H_2S to SO_2 lb-mol SO_2/lb-mol H_2S * Molecular Weight of Sulfur Dioxide (64 lb SO_2/lb-mol SO_2)
= 1 MMScf/hr * 1000000/1 (Scf/MMScf) * 0.1 mol H_2S* 1/385 scf/lb-mole * 0.95 lb-mol SO_2/lb-mol H_2S * 64 lb/lb-mol

Residual

H_2S pph= Hourly Gas Stream to flare (MMScf/hr) * 1000000/1 (scf/MMScf) * Field Gas mol Fraction of H_2S (mol H_2S/lb-mol)/100 * 1/Universal Gas Constant 385 scf/lb-mole @ 60^{O}F, 1 atm * (100-(Flare Control Efficiency))/100) * Molecular Weight of Hydrogen Sulfide (34 lb H_2S/lb-mol H_2S)
= 1 MMScf/hr * 1000000/1 (Scf/MMScf) * 0.1 mol H_2S* 1/385 scf/lb-mole * (100-95%/100) * 34 lb/lb-mol

Flare, Vapor Combustion Devices & Enclosed Combustion Devices Emission Factors				
Contaminant	Assist Type	Waste Gas Stream Heat Value (Btu/scf)	AP-42 Emission Factor (lb/MMBtu)	TCEQ Emission Factor (lb/MMBtu)
NOx	Steam	≥1000	0.068	0.0485
	Steam	<1000	0.068	0.068
	Air or Unassisted	≥1000	0.068	0.138
	Air or Unassisted	<1000	0.068	0.0641
CO	Steam	≥1000	0.31	0.3503
	Steam	<1000	0.31	0.3465
	Air or Unassisted	≥1000	0.31	0.2755
	Air or Unassisted	<1000	0.31	0.5496
VOC	Air & Steam Assist	≥300	0.66	

Technical Disclaimer

This document is intended to help you accurately determine flares, enclosed combustion devices and vapor combustion units emissions. It does not supersede or replace any state or federal law, rule, or regulation. This guidance reflects the current understanding of how these combustion units work and how they generate emissions, how they are monitored or tested, and what data are available for emissions determination, may change over time as the AQB continue scientific studies and as new information becomes available. The AQB welcome any data, information, or feedback that may improve our understanding of flares, enclosed combustion devices and vapor combustion units emissions and thereby further improve determinations within the emissions inventory. The calculation methods represented are intended as an emissions calculation aid; alternate calculation methods may be equally acceptable if they are based upon, and adequately demonstrate, sound engineering assumptions or data. If you have a question regarding the acceptability of a given emissions determination method, contact the Permitting Section at 505-476-4300.

New Mexico Environment Department Air Quality Bureau Emissions Calculation Forms

Date: May 9, 2025
Company Name: Tap Rock Operating, LLC
Facility Name: High Life CTB

Permit Number: 10432
AI# if Known: 41218
Elevation (ft.): 3,510

Total Requested Emissions For All Regulated Facility Equipment (NSR Request)

Emission Unit	NO_x		CO		VOC		SO_x		TSP		PM_{10}		$PM_{2.5}$		H_2S		Total HAP	
	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	lb/hr	tons/yr	lb/hr	tons/yr
Engines	5.34	23.37	7.43	32.42	10.39	45.57	0.01	0.11	0.64	2.72	0.64	2.72	0.64	2.72	-	-	2.07	9.09
Heaters	1.62	7.08	1.36	5.97	0.09	0.39	0	0	0.12	0.53	0.12	0.53	0.12	0.53	-	-		
Oil Tanks Flash	-	-	-	-	0	0	-	-	-	-	-	-	-	-				
Oil Tanks W & S	-	-	-	-	0	0	-	-	-	-	-	-	-	-				
Water Tks Flash	-	-	-	-	0	0	-	-	-	-	-	-	-	-				
Water Tks W & S	-	-	-	-	0	0	-	-	-	-	-	-	-	-				
Skim or Slop Tank	-	-	-	-			-	-	-	-	-	-	-	-				
GBS	-	-	-	-			-	-	-	-	-	-	-	-				
ECD	0	0	0	0	0	0	0	0										
VCU	0	0	0	0	0	0	0	0										
TO	0	0	0	0	0	0	0	0										
Flares	111.21	5.41	506.97	24.66	397.46	23.12	0	0										
Fugitives	-	-	-	-	0	0									0	0	0	0
SSM						10												
Malf.	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-	-	-	-
Unpaved Haul Rds.	-	-	-	-	-	-	-	-	0	0	0	0	0	0	-	-	-	-
Paved Haul Rds.	-	-	-	-	-	-	-	-	0	0	0	0	0	0	-	-	0	0
Oil Load	-	-	-	-			-	-	-	-	-	-	-	-				
Water Loading	-	-	-	-			-	-	-	-	-	-	-	-				
Amine Unt	-	-	-	-	0	0	-	-	-	-	-	-	-	-	0	0	0	0
Amine Reb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-		
Dehy Unit	-	-	-	-			-	-	-	-	-	-	-	-				
Dehy Reb.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-		
Totals	**118.17**	**35.86**	**515.76**	**63.05**	**407.94**	**89.08**	**0.01**	**0.11**	**0.76**	**3.25**	**0.76**	**3.25**	**0.76**	**3.25**	**0**	**0**	**2.07**	**9.09**

A red-outlined cell indicates that the facility exceeds the allowable emission limits for that pollutant for the requested permitting action and the application cannot be approved as proposed.

Supplemental Calculations
High Life CTB
May 2025

Production

	bbl/yr	bbl/d	bbl/hr
Oil	1,533,000	4,200	175.0
Produced Water	10,220,000	28,000	1166.7

gal/yr/tank	turn/tank/yr
10,731,000	256
107,310,000	2,555

	MMscf/yr	MMscf/d	Mscf/hr
Gas	12,228	33.5	1395.8

LP Flare Calculations

DRE = 98%

Blower DT -->	10%	Uncontrolled Flash Downtime		Uncontrolled W&S Downtime		Total Uncontrolled Downtime		Capture Efficiency	Total Uncontrolled to Flare		Total Uncontrolled to Flare by fluid		Total Controlled after Flare	
Unit No.		pph	tpy	pph	tpy	pph	tpy	%	pph	tpy				
TK-1		28.72	125.79	11.07	48.47	39.78	174.26	100%	39.78	174.26				
TK-2		28.72	125.79	11.07	48.47	39.78	174.26	100%	39.78	174.26				
TK-3		28.72	125.79	11.07	48.47	39.78	174.26	100%	39.78	174.26				
TK-4		28.72	125.79	11.07	48.47	39.78	174.26	100%	39.78	174.26				
TK-5		28.72	125.79	11.07	48.47	39.78	174.26	100%	39.78	174.26				
TK-6		28.72	125.79	11.07	48.47	39.78	174.26	100%	39.78	174.26	238.71	1,045.55	4.77	2.09
PWTK-1		2.06	9.03	2.54	11.13	4.60	20.16	100%	4.60	20.16				
PWTK-2		2.06	9.03	2.54	11.13	4.60	20.16	100%	4.60	20.16				
PWTK-3		2.06	9.03	2.54	11.13	4.60	20.16	100%	4.60	20.16				
PWTK-4		2.06	9.03	2.54	11.13	4.60	20.16	100%	4.60	20.16	18.41	80.64	0.37	0.16
											257.12	**1126.19**	**5.14**	**2.25**

	MMSCFD (from ProMax)	(scf/hr)	Mscf/hr	MMscf/yr	Btu/scf	MW (lb/lbmol)	VOC wt%	VOC lb/hr	VOC tpy	wt% Benzene	wt% Toluene	wt% Ethylbenzene	wt% Xylene	wt% n-Hexane
Tank Blower DT (10%) (FL-LPa)	0.075237	3134.90	3.13	2.75	2095	42.21	73.74	257.47	112.77	0.0000	0.0000	0.0000	0.0000	0.0000
VRU DT (10%) (FL-LPb)	0.140070	5836.27	5.84	5.11	2076	41.42	72.94	465.20	203.76	0.0000	0.0000	0.0000	0.0000	0.0000
Total Uncontrolled FL-LP			8.97	7.86				722.67	316.53					
Total Controlled FL-LP								**14.45**	**6.33**					
								5.15	**2.26**					

HP Flare Calculations

								9.30	**4.08**					
Sales Gas DT [1%] (FL-HP)	33.5	1395833.33	1395.83	122.28	1158	21.38	24.32	19150.61	838.80	0.0000	0.0000	0.0000	0.0000	0.0000
Total Uncontrolled FL-HP								19150.61	838.80					
Total Controlled FL-HP								**383.01**	**16.78**					
Total Controlled from Flares (FL-LP + FL-HP)								**397.47**	**23.11**					

Flare HAP Calculations (uncontrolled tpy)

Stream	Benzene	Toluene	Ethylbenzene	Xylene	n-Hexane	Formaldehyde	Acetaldehyde	Acrolein	Total HAP
Tank Blower DT to FL-LPa	0.000	0.000	0.000	0.000	0.000	-	-	-	0.000
Total VRU DT to FL-LPb	0.000	0.000	0.000	0.000	0.000	-	-	-	0.000
Total to FL-LP	0.000	0.000	0.000	0.000	0.000	-	-	-	0.000
Total to FL-HP	0.000	0.000	0.000	0.000	0.000	-	-	-	0.000

Flare HAP Calculations (controlled tpy)

Stream	Benzene	Toluene	Ethylbenzene	Xylene	n-Hexane	Formaldehyde	Acetaldehyde	Acrolein	Total HAP
Tanks (FL-LPa)	0.000	0.000	0.000	0.000	0.000	-	-	-	0.000
Total VRU DT to FL-LPb	0.000	0.000	0.000	0.000	0.000	-	-	-	0.000
Total from FL-LP	0.000	0.000	0.000	0.000	0.000	-	-	-	0.000
Total from FL-HP	0.000	0.000	0.000	0.000	0.000	-	-	-	0.0000

Other HAP Calculations (controlled tpy)

Source	Benzene	Toluene	Ethylbenzene	Xylene	n-Hexane	Formaldehyde	Acetaldehyde	Acrolein	Total HAP
ENG-1 (G3516J)	0.02203	0.02041	0.00197	0.0092	0.05506	2.6429	0.41847	0.25728	3.43
ENG-2 (G3606)	0.02716	0.02514	0.00245	0.01134	0.06785	1.8107	0.51557	0.31698	2.78
GEN-1 (14.6L)	0.02654	0.00937	0.00044	0.00329	0	0.3443	0.04687	0.04419	0.48
GEN-2 (14.6L)	0.02654	0.00937	0.00044	0.00329	0	0.3443	0.04687	0.04419	0.48
GEN-3 (14.6L)	0.02654	0.00937	0.00044	0.00329	0	0.3443	0.04687	0.04419	0.48
GEN-4 (14.6L)	0.02654	0.00937	0.00044	0.00329	0	0.3443	0.04687	0.04419	0.48
GEN-5 (14.6L)	0.02654	0.00937	0.00044	0.00329	0	0.3443	0.04687	0.04419	0.48
GEN-6 (14.6L)	0.02654	0.00937	0.00044	0.00329	0	0.3443	0.04687	0.04419	0.48
FUG-1									
Controlled HAPs Grand Total	0.208	0.102	0.007	0.040	0.123	6.519	1.215	0.839	9.090

Truck Loading

LACT to pipeline is Normal Operations

	Capacity	#/yr		Volume (gal)
Oil Trucks	180	35	5 trucks/day for 7 days	264,600
Water Trucks	130	35	5 trucks/day for 7 days	191,100
Total		70		

Stack Parameters (General)

	MMBtu/hr	F-Factor (wscf/MMBtu)*	Temp (F)	Diam (ft)	Flow (acfh)	Flow (acfm)	Flow (acfs)	Velocity (fps)
HT-1	1.50	10610	460	0.67	28157	469	7.8	22.4
HT-2	1.50	10610	460	0.67	28157	469	7.8	22.4
HT-3	1.50	10610	460	0.67	28157	469	7.8	22.4
HT-4	1.50	10610	460	0.67	28157	469	7.8	22.4
HT-5	1.50	10610	460	0.67	28157	469	7.8	22.4
HT-6	1.50	10610	460	0.67	28157	469	7.8	22.4
HT-7	1.50	10610	460	0.67	28157	469	7.8	22.4
HT-8	1.50	10610	460	0.67	28157	469	7.8	22.4
HT-9	1.50	10610	460	0.67	28157	469	7.8	22.4
HT-10	1.50	10610	460	0.67	28157	469	7.8	22.4
HT-11	1.50	10610	460	0.67	28157	469	7.8	22.4
ENG-1 (G3516J)			902	0.67		2636	43.9	125.9
ENG-2 (G3606)			822	1.17		11978	199.6	186.8
GEN-1 (14.6L)			1382	0.33		1895	31.6	361.9
GEN-2 (14.6L)			1382	0.33		1895	31.6	361.9
GEN-3 (14.6L)			1382	0.33		1895	31.6	361.9
GEN-4 (14.6L)			1382	0.33		1895	31.6	361.9
GEN-5 (14.6L)			1382	0.33		1895	31.6	361.9
GEN-6 (14.6L)			1382	0.33		1895	31.6	361.9
FL-LP			1500	0.50		1875	31.3	159.2
FL-HP			1500	0.67		15960	266.0	754.5

* 40 CFR 60, App A-7, Table 19-2

TABLE 19-2—F FACTORS FOR VARIOUS FUELS[1]

Fuel Type	F_d		F_w		F_c	
	dscm/J	dscf/10^6 Btu	wscm/J	wscf/10^6 Btu	scm/J	scf/10^6 Btu
Coal:						
Anthracite[2]	2.71×10^{-7}	10,100	2.83×10^{-7}	10,540	0.530×10^{-7}	1,970
Bituminus[2]	2.63×10^{-7}	9,780	2.86×10^{-7}	10,640	0.484×10^{-7}	1,800
Lignite	2.65×10^{-7}	9,860	3.21×10^{-7}	11,950	0.513×10^{-7}	1,910
Oil[3]	2.47×10^{-7}	9,190	2.77×10^{-7}	10,320	0.383×10^{-7}	1,420
Gas:						
Natural	2.34×10^{-7}	8,710	2.85×10^{-7}	10,610	0.287×10^{-7}	1,040
Propane	2.34×10^{-7}	8,710	2.74×10^{-7}	10,200	0.321×10^{-7}	1,190
Butane	2.34×10^{-7}	8,710	2.79×10^{-7}	10,390	0.337×10^{-7}	1,250
Wood	2.48×10^{-7}	9,240			0.492×10^{-7}	1,830
Wood Bark	2.58×10^{-7}	9,600			0.516×10^{-7}	1,920
Municipal	2.57×10^{-7}	9,570			0.488×10^{-7}	1,820
Solid Waste						

[1]Determined at standard conditions: 20 °C (68 °F) and 760 mm Hg (29.92 in Hg)

Fugitive Emissions

EQUIPMENT & COMPONENT COUNTS[1]

Equipment Type	*Count*	*Valves*	*Connectors*	*OELs*	*PRVs[3]*	*Flanges[2]*	*Pump Seals*
Wellhead(s)	11	121	396	11	0	22	0
Separator(s)	11	374	1166	66	22	44	0
Meter(s)/Piping	2	28	102	2	2	4	0
Compressor(s)	3	219	537	9	12	18	0
In-Line Heater(s)	11	154	715	22	11	22	0
Dehydrator(s)	0	0	0	0	0	0	0
Combustor(s)[4]	2	28	102	2	2	4	0
Oil Tank(s)[5]	6	204	636	6	12	24	0
Produced Water Tank(s)[5]	4	136	424	4	8	16	0
TOTAL COMPONENTS:		**1264**	**4078**	**122**	**69**	**154**	**0**

COMPONENT COUNT BY PROCESS STREAM[6]

Process Stream Gas %:	**30%**
Process Stream Oil %:	**60%**
Process Stream Water %:	**10%**

Component	*Gas*	*Heavy Oil*	*Light Oil*	*Water/Oil*
Connectors	1223	0	2447	408
Flanges	46	0	92	15
OELs	37	0	73	12
Pump Seals	0	0	0	0
Valves	379	0	758	126
Other[3]	21	0	41	7

EMISSION CALCULATIONS

	Stream Weight %:			**Emissions[7]:**			
Process Stream	*VOC*	*Benzene*	*Total HAP*	*TOC (TPY)*	*VOC (TPY)*	*Benzene (lbs/yr)*	*Total HAP*
Gas	24.32%	0.00%	0.00%	0.24	0.06	0.00	0.00
Heavy Oil	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00
Light Oil	100.00%	0.00%		0.42	0.42	0.00	0.00
Water/Oil	1.00%	0.00%	0.00%	0.06	0.00	0.00	0.00
			TOTAL EMISSIONS:	**0.72**	**0.48**	**0.00**	**0.00**

EQUATIONS

*TOC Emissions (TPY) = Component Qty. * Emission Factor (lbs/hr/comp) * Annual Operating Hrs * 1ton/2000 lbs*

*Emissions x (TPY) = TOC Emissions (TPY) * Weight Fraction of x from Gas Analysis (wt%)*

NOTES

1. Component counts estimated using Table W-1B of 40 CFR 98 Subpart W and conservative assumptions/estimates.
2. Flanges estimated as 3% of connector values.
3. PRVs are estimated under the "Other" category.
4. Combustor component counts are estimated using Table W-1B values under "Meters/Piping"
5. Storage tank component counts are estimated using Table W-1B values under "Separators"
6. Component count values allocated into process stream service using estimated average.
7. Emission factors derived from Table 2-8, EPA-453/R-95-017, "Protocol for Equipment Leak Emission Estimates," Nov. 1995.

Component Type	**Equipment Service Category[5]**			
	Gas (lbs/hr/component)	**Heavy Oil** (<20 API Gravity) (lbs/hr/component)	**Light Oil** (>20 API Gravity) (lbs/hr/component)	**Water/Light Oil[2]** (lbs/hr/component)
Connectors	2.20E-05	1.65E-05	2.14E-05	2.20E-05
Flanges	1.26E-05	8.60E-07	5.29E-06	6.39E-06
Open-ended Lines	3.31E-05	1.59E-05	3.09E-05	7.72E-06
Pumps[1]	7.72E-04	0.00E+00	1.12E-03	5.29E-05
Valves[3]	5.51E-05	1.85E-05	4.19E-05	2.14E-05
Other[4]	2.65E-04	7.05E-05	2.43E-04	1.30E-04

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)

Section 7

Information Used to Determine Emissions

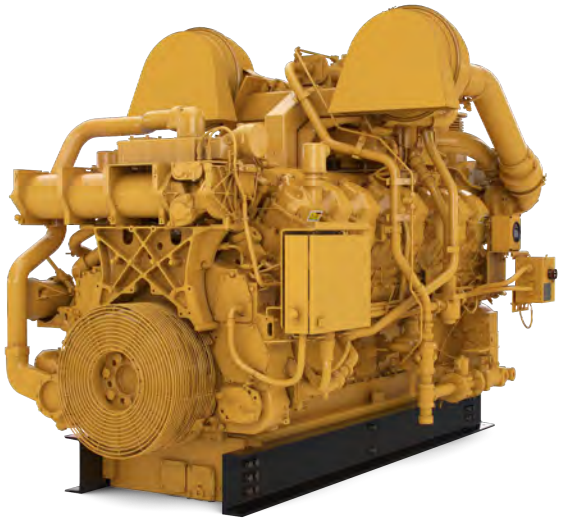
Information Used to Determine Emissions shall include the following:

- ☒ 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.

G3516J Gas Engine

1029 bkW (1380 bhp) 1400 rpm

0.5 g/bhp-hr NOx (NTE)



Shown with optional equipment

Cat® Engine Specifications

V-16, 4-Stroke-Cycle

Bore
170 mm (6.7 in)

Stroke
190 mm (7.5 in)

Displacement
69 L (4211 cu. in)

Aspiration
Turbocharged-2 Stage aftercooled

Digital Engine Management Govenor and Protection
Electronic (ADEM™ A3)

Combustion
Lean Burn

Cooling System Capacity
Total ..... 197.8 L (52.8 gal)
JW ..... 178 L (47.6 gal)
SCAC ..... 19.8 L (5.2 gal)

Lube Oil System (refill)
423 L (112 gal)

Oil Change Interval
1000 hrs

Rotation (from flywheel end)
Counterclockwise

Flywheel
SAE No.21

Flywheel Housing
SAE No.00

Flywheel Teeth
183

FEATURES AND BENEFITS

Engine Design

- Engine Design Built on G3500 LE proven reliability and durability
- Ability to burn a wide spectrum of gaseous fuels
- Robust diesel strength design prolongs life and lowers owning and operating costs
- Broad operating speed range at lower site air densitie (high altitude/ hot ambient temperatures)
- Higher power density improves fleet management
- Quality engine diagnostics
- Detonation-sensitive timing control for individual cylinders

Ultra Lean Burn Technology (ULB)

- ULB technology uses an advanced control system, a better turbo match, improved air and fuel mixing, and a more sophisticated combustion recipe to provide:
  - Lowest engine-out emissions
  - Highest fuel efficiency
  - Improved altitude and speed turndown
  - Stable load acceptance and load rejection

Emissions

- Meets U.S. EPA Spark Ignited Stationary NSPS emissions for 2010 and some non-attainment areas
- Lean air/fuel mixture provides best available emissions and fuel efficiency for engines of this bore size

Advanced Digital Engine Management

- ADEM A3 engine management system integrates speed control, air/fuel ratio control, and ignition/detonation controls into a complete engine management system. ADEM A3 has improved: user interface, display system, shutdown controls, and system diagnostics.

Full Range of Attachments

- Large variety of factory-installed engine attachments reduces packaging time

Testing

- Every engine is full-load tested to ensure proper engine performance.

Gas Engine Rating Pro

- GERP is a PC-based program designed to provide site performance capabilities for Cat® natural gas engines for the gas compression industry. GERP provides engine data for your site's altitude, ambient temperature, fuel, engine coolant heat rejection, performance data, installation drawings, spec sheets, and pump curves.

Product Support Offered Through Global Cat Dealer Network

- More than 2,200 dealer outlets
- Cat factory-trained dealer technicians service every aspect of your petroleum engine
- Cat parts and labor warranty
- Preventive maintenance agreements available for repair before-failure options
- S•O•S℠ program matches your oil and coolant samples against Caterpillar set standards to determine:
  - Internal engine component condition
  - Presence of unwanted fluids
  - Presence of combustion by-products
  - Site-specific oil change interval

Web Site

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STANDARD EQUIPMENT

G3516J Gas Engine

Air Inlet System
Axial flow air cleaners
Single element canister type with service indicator

Cooling System
Two-stage charge air cooling:
First stage — JW + OC + 1st stage AC
Second stage — 2nd stage AC
Engine cooling and charge air cooling thermostats

Exhaust System
Water-cooled exhaust manifolds
Dry turbocharger housings
Water-cooled exhaust elbow

Flywheels and Housings
SAE No. 21 flywheel
SAE No. 00 flywheel housing
SAE standard rotation

Fuel System
7-40 psig gas supply
Electronic fuel metering valve
Gas pressure regulator
Gas shutoff valve
Fuel System

Mounting
Rails

Instrumentation
Remote-mounted Advisor control panel
Interconnect harness

Lubrication System
Crankcase breather - top mounted
Oil cooler
Oil filter - RH
Shallow oil pan
Oil sampling valve
Turbo oil accumulator

Power Take-Offs
Front housing, two sided
Front lower LH accessory drive

General
Paint — Cat yellow
Crankshaft vibration damper and guard

OPTIONAL EQUIPMENT

Air Inlet System
Rain shield
Round air inlet adapters

Charging system
CSA alternator
(24V,65A)

Connections
Mechanical joint assembly connections

Exhaust System
Flexible fittings
Elbows
Flanges
Mufflers

Fuel System
Fuel filter

Lubrication System
Lubricating oil
Oil bypass filter
Oil pan drain
Deep sump oil pan
Air prelube pump

Power Take-Offs
Front stub shaft

Starting System
90 psi starter
150 psi starter

General
Special paint

EU Certification
EEC DOI certification

Torsional Vibration Analysis

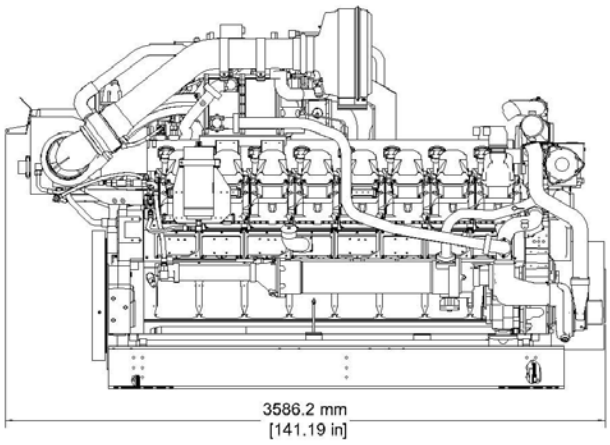
G3516J Gas Engine

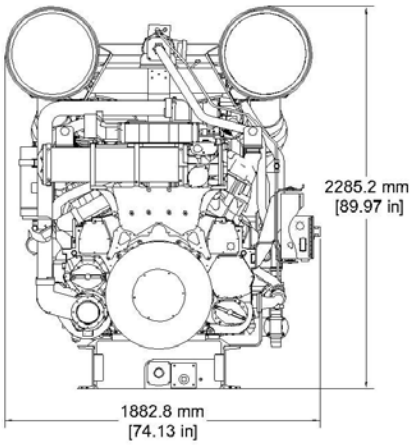
Performance Number		EM1495-01
Rating		0.5 g NOx NTE
Engine Power	bkW (bhp)	1029 (1380)
Engine Speed	rpm	1400
(100°F)	m (ft)	1405 (4610)
Speed Turndown @ Max Altitude, Rated Torque, and 38°C (100°F)	%	25
Aftercooler Temperature		
Stage 1 (JW)	°C (°F)	99 (210)
Stage 2 (SCAC)	°C (°F)	54 (130)
Emissions (NTE)*		
NOx	g/bkW-hr (g/bhp-hr)	0.67 (0.50)
CO	g/bkW-hr (g/bhp-hr)	3.26 (2.43)
CO_2	g/bkW-hr (g/bhp-hr)	631 (471)
VOC**	g/bkW-hr (g/bhp-hr)	0.64 (0.48)
Fuel Consumption @ 100 % Load* **	MJ/bkW-hr (Btu/bhp-hr)	10.33 (7301)
Heat Balance @ 100 % Load		
Heat Rejection to Jacket Water	bkW (Btu/min)	660 (37,553)
Heat Rejection to Oil Cooler	bkW (Btu/min)	79 (4472)
Heat Rejection to Aftercooler		
Stage 1 (JW)	bkW (Btu/min)	141 (8046)
Stage 2 (SCAC)	bkW (Btu/min)	89 (5067
Heat Rejection to Exhaust LHV To 25°C (77°F)	bkW (Btu/min)	903 (51,380)
Heat Rejection to Atmosphere	bkW (Btu/min)	93 (5313)
Exhaust System		
Exhaust Gas Flow Rate	m^3/min (scfm)	228.52 (8070)
Exhaust Stack Temperature	°C (°F)	444 (830)
Intake System		
Air Inlet Flow Rate	m^3/min (scfm)	88.07 (3110)
Gas Pressure	kPag (psig)	48-276 (7-40)

All technical data is based on 100% load and speed

** Volatile organic compounds as defined in U.S. EPA 40 CFR 60, subpart JJJJ *** ISO 3046/1

G3516J Gas Engine





Note: General configuration not to be used for installation

Dimensions		
Length	3586.2 mm	141.19 in
Width	1882.8 mm	74.13 in
Height	2285.2 mm	89.97 in
Weight	9008.9 Kg	19,861lbs

Rating Definitions and Conditions

Engine performance is obtained in accordance with SAE J1995, ISO3046/1, BS5514/1, and DIN6271/1 standards.

Transient response data is acquired from an engine/generator combination at normal operating temperature and in accordance with ISO3046/1 standard ambient conditions. Also in accordance with SAE J1995, BS5514/1, and DIN6271/1 standard reference conditions.

Conditions: Power for gas engines is based on fuel having an LHV of 33.74 kJ/L (905 Btu/cu ft) at 101 kPa (29.91 in Hg) and 15°C (59°F). Fuel rate is based on a cubic meter at 100 kPa (29.61 in Hg) and 15.6°C (60.1°F). Air flow is based on a cubic foot at 100 kPa (29.61 in Hg) and 25°C (77°F). Exhaust flow is based on a cubic foot at 100 kPa (29.61 in Hg) and stack temperature.

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ICE CATALYST SIZING PROGRAM

rev 2.1.3

Report Date: 9/14/2023

Customer	Nova Compression	Housing	ELH
Sales Person	MG	Element	ERZ-1524-3-400
Project	Unit 19707	Contact	Kevin Carter

Engine Name Caterpillar G3516J Caterpillar G3516J 1280bhp 1400rpm

Engine Power	1280.0	BHP	ACFM	7564.0	CU. FT/MIN	Exhaust O2	8.8	%
Exhaust Mass Flow	13290.0	LBS/HR	ACFH	453840	CU. FT/HR	Exhaust CO2	6.4	%
Process Temperature	852.0	F	SCFM	3002.7	CU. FT/MIN	Exhaust H2O	11.6	%
Exhaust Pressure	14.5	PSI	SCFH	180159	CU. FT/HR	Exhaust N2	73.2	%
Exhaust Density	0.0293	LBS/FT^3	Std Temp	68.0	F	Max Pressure Drop	12.0	in wc
Molecular Weight	28.43	AMU	Std Pressure	14.6959	PSI	Propane in Fuel	5.17	%

ACS Part Name	R14.875X23.875X3.500-400				
OEM Part Name	ERZ-1524-3-400				
Type	Propane Oxidation	Layers	1		
Geometry	Rectangular	Modules/Layer	2	Cell Count	400cpsi
X	14.875in	Guard Bed	No	Depth	3.500in
Y	23.875in				

Open Area	4.408	ft^2	Part Volume	0.643	ft^3	Part Weight	47	lbs
Linear Velocity	1716	ft/min	Total Volume	1.286	ft^3	Total Weight	95	lbs
Pressure Drop	3.1	in wc	Space Velocity	140123	GHSV			

Inlet Emissions

	g/bhp-hr	lb/hr	tons/year	ppmv	ppmvd	ppmvd%O2
NOx	0.50	1.41	6.18	65.60	74.20	40.00
CO	2.60	7.34	32.16	560.25	633.76	341.63
VOC	1.07	3.02	13.23	146.44	165.66	89.30

Target Emissions

	min %DRE	g/bhp-hr	lb/hr	tons/year	ppmv	ppmvd	ppmvd%O2
NOx	0.00	0.50	1.41	6.18	65.60	74.20	40.00
CO	76.92	0.60	1.69	7.42	129.29	146.25	78.84
VOC	34.58	0.70	1.98	8.66	95.80	108.37	58.42

Emissions with Catalyst

	%DRE	g/bhp-hr	lb/hr	tons/year	ppmv	ppmvd	ppmvd%O2
NOx	0.00	<0.50	<1.41	<6.18	<65.60	<74.20	<40.00
CO	76.92	<0.60	<1.69	<7.42	<129.29	<146.25	<78.84
VOC	34.58	<0.70	<1.98	<8.66	<95.80	<108.37	<58.42

Safety Value: 2 VOC Molecular Weight: 44.1 O2 Reference Value: 15 Uptime (TPY): 100% (8760 hours)

G3606
NON-CURRENT

GAS ENGINE SITE SPECIFIC TECHNICAL DATA
Tap Rock Operating - Tap Rock 3606 Cold Snack FC 211H

CATERPILLAR®

GAS COMPRESSION APPLICATION			
ENGINE SPEED (rpm):	1000	RATING STRATEGY:	GEN 1 ENGINE - NO CCV
COMPRESSION RATIO:	7.6	RATING LEVEL:	CONTINUOUS
AFTERCOOLER TYPE:	SCAC	FUEL SYSTEM:	GAV
AFTERCOOLER - STAGE 1/STAGE 2 INLET (°F):	174 / 130		WITH AIR FUEL RATIO CONTROL
JACKET WATER OUTLET (°F):	190	**SITE CONDITIONS:**	
ASPIRATION:	TA	FUEL:	11-9-23 Cold Snack FC 211H
COOLING SYSTEM:	JW+1AC, OC+2AC	FUEL PRESSURE RANGE(psig): (See note 1)	58.0-70.3
CONTROL SYSTEM:	ADEM4	FUEL METHANE NUMBER:	83.9
EXHAUST MANIFOLD:	DRY	FUEL LHV (Btu/scf):	941
COMBUSTION:	LOW EMISSION	ALTITUDE(ft):	3300
NOx EMISSION LEVEL (g/bhp-hr NOx):	0.3	STANDARD RATED POWER:	1875 bhp@1000rpm
SET POINT TIMING:	18		

				MAX RATING	SITE RATING AT MAX INLET AIR TEMP		
RATING		**NOTES**	**LOAD**	**100%**	**100%**	**75%**	**50%**
ENGINE POWER	(WITHOUT FAN)	(2)	bhp	1875	1875	1406	938
INLET AIR TEMPERATURE			°F	110	110	110	110
ENGINE DATA							
FUEL CONSUMPTION (LHV)		(3)	Btu/bhp-hr	6913	6913	7193	7770
FUEL CONSUMPTION (HHV)		(3)	Btu/bhp-hr	7665	7665	7974	8614
AIR FLOW (@inlet air temp, 14.7 psia)	(WET)	(4)(5)	ft3/min	4992	4992	3792	2604
AIR FLOW	(WET)	(4)(5)	lb/hr	20851	20851	15841	10876
FUEL FLOW (60°F, 14.7 psia)			scfm	230	230	179	129
INLET MANIFOLD PRESSURE		(6)	psi(abs)	50.2	50.2	38.7	27.5
EXHAUST TEMPERATURE - ENGINE OUTLET		(7)	°F	822	822	893	970
EXHAUST GAS FLOW (@engine outlet temp, 14.5 psia)	(WET)	(5)(8)	ft3/min	11978	11978	9614	6998
EXHAUST GAS MASS FLOW	(WET)	(5)(8)	lb/hr	21468	21468	16323	11223
EMISSIONS DATA - EXHAUST 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
NMHC (mol. wt. of 15.84)		(9)(10)	g/bhp-hr	0.55	0.55	0.57	0.60
NMNEHC (VOCs) (mol. wt. of 15.84)		(9)(10)(11)	g/bhp-hr	0.32	0.32	0.33	0.35
HCHO (Formaldehyde)		(9)(10)	g/bhp-hr	0.19	0.19	0.20	0.22
CH4 (mol. wt. of 16.04)	(NOMINAL)	(9)(12)	g/bhp-hr	3.93	3.93	4.05	4.30
CO2	(NOMINAL)	(9)(12)	g/bhp-hr	398	398	412	447
EXHAUST OXYGEN	(NOMINAL)	(9)(13)	% DRY	11.1	11.1	10.9	10.5
HEAT REJECTION							
HEAT REJ. TO JACKET WATER (JW)		(14)	Btu/min	22850	22850	18373	15224
HEAT REJ. TO ATMOSPHERE		(14)	Btu/min	5932	5932	5700	5473
HEAT REJ. TO LUBE OIL (OC)		(14)	Btu/min	11668	11668	10790	9350
HEAT REJ. TO A/C - STAGE 1 (1AC)		(14)(15)	Btu/min	19334	19334	10013	3144
HEAT REJ. TO A/C - STAGE 2 (2AC)		(14)(15)	Btu/min	8271	8271	5064	2464
COOLING SYSTEM SIZING CRITERIA							
TOTAL JACKET WATER CIRCUIT (JW+1AC)		(15)(16)	Btu/min	45435			
TOTAL STAGE 2 AFTERCOOLER CIRCUIT (OC+2AC)		(15)(16)	Btu/min	22686			
A cooling system safety factor of 0% has been added to the cooling system sizing criteria.							

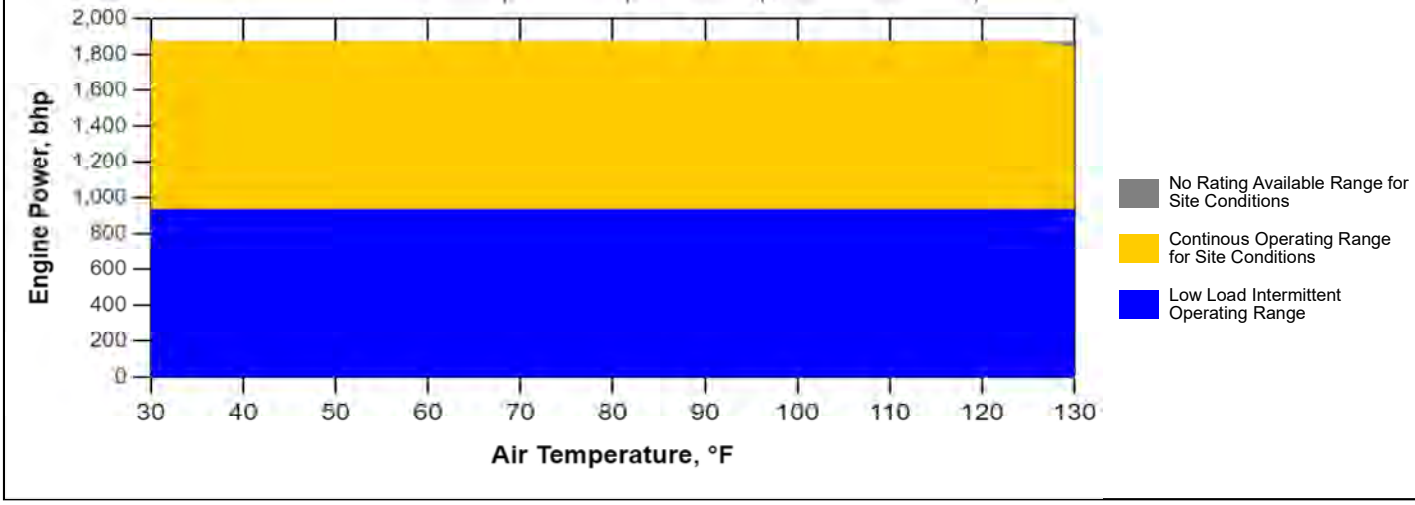
CONDITIONS AND DEFINITIONS

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. Refer to product O&M manual for details on additional lower load capability. No overload permitted at rating shown.

For notes information consult page three.

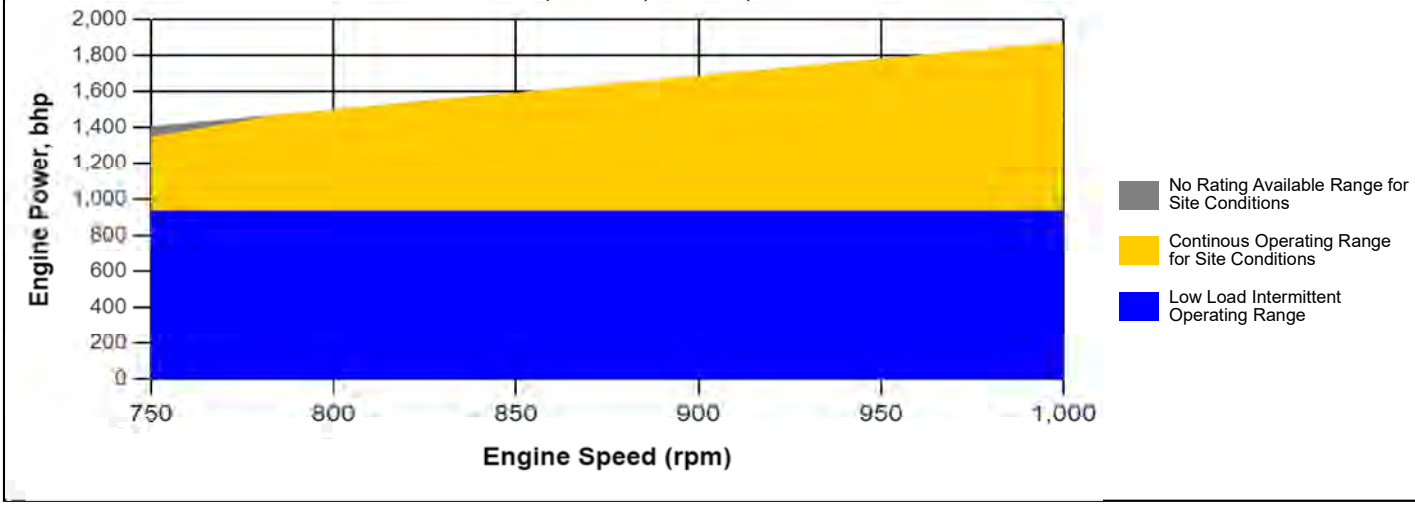
Engine Power vs. Inlet Air Temperature

Data represents temperature sweep at 3300 ft and 1000 rpm



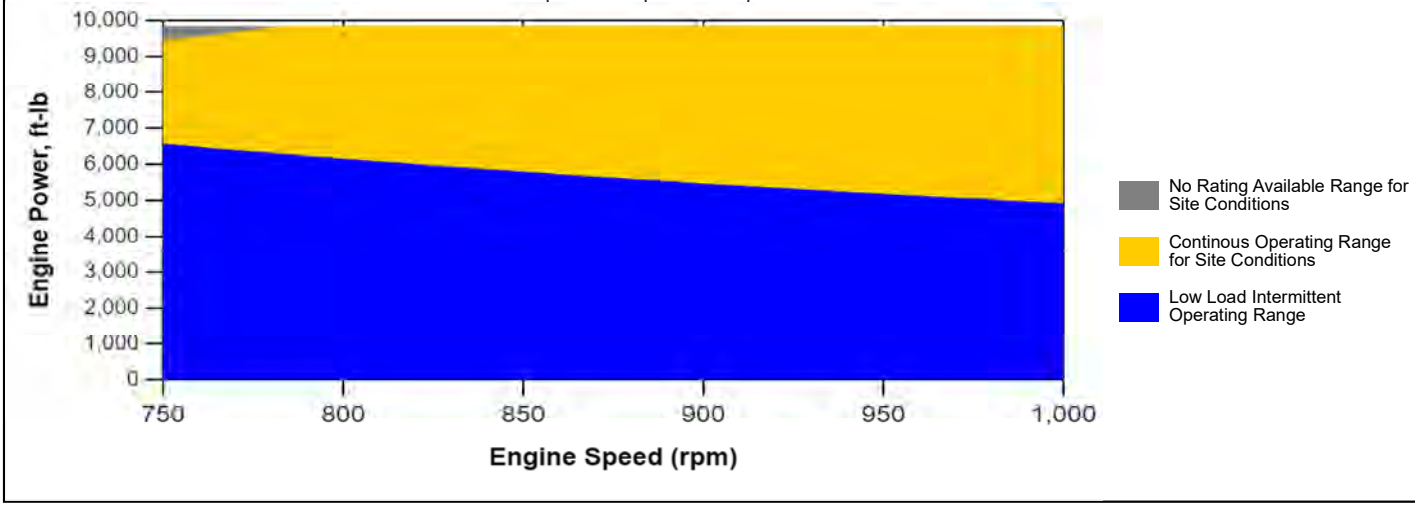
Engine Power vs. Engine Speed

Data represents speed sweep at 3300 ft and 110 °F



Engine Torque vs. Engine Speed

Data represents speed sweep at 3300 ft and 110 °F



Note:
At site conditions of 3300 ft and 110°F inlet air temp., constant torque can be maintained down to 785 rpm. The minimum speed for loading at these conditions is 750 rpm.

NOTES:

1. Fuel pressure range specified is to the engine gas shutoff valve (GSOV). Additional fuel train components should be considered in pressure and flow calculations.

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

3. Fuel consumption tolerance is ± 2.5% of full load data.

4. Air flow value is on a 'wet' basis. Flow is a nominal value with a tolerance of ± 5 %.

5. Inlet and Exhaust Restrictions must not exceed A&I limits based on full load flow rates from the standard technical data sheet.

6. Inlet manifold pressure is a nominal value with a tolerance of ± 5 %.

7. Exhaust temperature is a nominal value with a tolerance of (+)63°F, (-)54°F.

8. Exhaust flow value is on a "wet" basis. Flow is a nominal value with a tolerance of ± 6 %.

9. Emissions data is at engine exhaust flange prior to any after treatment.

10. CO, NMHC, NMNEHC, and HCHO emission values listed are higher than nominal levels to allow for instrumentation, measurement, and engine-to-engine variations. They indicate the maximum values expected under steady state conditions. Fuel methane number cannot vary more than ± 3. NMHC, and NMNEHC do not include aldehydes. An oxidation catalyst may be required to meet Federal, State or local CO or HC requirements.

11. VOCs - Volatile organic compounds as defined in US EPA 40 CFR 60, subpart JJJJ

12. CO2 tolerance is ± 2.5%. CH4 tolerance is ± 26.0%. Fuel methane number cannot vary more than ± 3.

13. Exhaust Oxygen level is the result of adjusting the engine to operate at the specified NOx level. Tolerance is ± 0.5.

14. Heat rejection values are nominal. Tolerances, based on treated water, are ± 10% for jacket water circuit, ± 50% for radiation, ± 20% for lube oil circuit, and ± 5% for aftercooler circuit.

15. Aftercooler heat rejection includes an aftercooler heat rejection factor for the site elevation and inlet air temperature specified. Aftercooler heat rejection values at part load are for reference only. Do not use part load data for heat exchanger sizing.

16. Cooling system sizing criteria are maximum circuit heat rejection for the site, with applied tolerances.

GAS ENGINE SITE SPECIFIC TECHNICAL DATA
Tap Rock Operating - Tap Rock 3606 Cold Snack FC 211H

Constituent	Abbrev	Mole %	Norm
Water Vapor	H2O	0.0000	0.0000
Methane	CH4	93.5126	93.5126
Ethane	C2H6	4.2718	4.2718
Propane	C3H8	0.5740	0.5740
Isobutane	iso-C4H10	0.0249	0.0249
Norbutane	nor-C4H10	0.0719	0.0719
Isopentane	iso-C5H12	0.0092	0.0092
Norpentane	nor-C5H12	0.0109	0.0109
Hexane	C6H14	0.0541	0.0541
Heptane	C7H16	0.0000	0.0000
Nitrogen	N2	1.3939	1.3939
Carbon Dioxide	CO2	0.0767	0.0767
Hydrogen Sulfide	H2S	0.0000	0.0000
Carbon Monoxide	CO	0.0000	0.0000
Hydrogen	H2	0.0000	0.0000
Oxygen	O2	0.0000	0.0000
Helium	HE	0.0000	0.0000
Neopentane	neo-C5H12	0.0000	0.0000
Octane	C8H18	0.0000	0.0000
Nonane	C9H20	0.0000	0.0000
Ethylene	C2H4	0.0000	0.0000
Propylene	C3H6	0.0000	0.0000
TOTAL (Volume %)		100.0000	100.0000

Fuel Makeup:	11-9-23 Cold Snack FC 211H
Unit of Measure:	English

Calculated Fuel Properties:

Caterpillar Methane Number:	83.9
Lower Heating Value (Btu/scf):	941
Higher Heating Value (Btu/scf):	1043
WOBBE Index (BTU/scfm):	1225
THC: Free Inert Ratio:	67.00
Total % Inerts (% N2,CO2,He):	1.47%
RPC (%) (To 905 Btu/scf Fuel):	100%
Compressibility Factor:	0.998
Stoich A/F Ratio (Vol/Vol):	9.82
Stoich A/F Ratio (Mass/Mass):	16.65
Specific Gravity (Relative to Air):	0.590
Fuel Specific Heat Ratio (K):	1.309

CONDITIONS AND DEFINITIONS

Caterpillar Methane Number represents the knock resistance of a gaseous fuel. It should be used with the Caterpillar Fuel Usage Guide for the engine and rating to determine the rating for the fuel specified. A Fuel Usage Guide for each rating is included on page 2 of its standard technical data sheet.

RPC always applies to naturally aspirated (NA) engines, and turbocharged (TA or LE) engines only when they are derated for altitude and ambient site conditions.

Project specific technical data sheets generated by the Caterpillar Gas Engine Rating Pro program take the Caterpillar Methane Number and RPC into account when generating a site rating.

Fuel properties for Btu/scf calculations are at 60F and 14.696 psia.

Caterpillar shall have no liability in law or equity, for damages, consequently or otherwise, arising from use of program and related material or any part thereof.

FUEL LIQUIDS

Field gases, well head gases, and associated gases typically contain liquid water and heavy hydrocarbons entrained in the gas. To prevent detonation and severe damage to the engine, hydrocarbon liquids must not be allowed to enter the engine fuel system. To remove liquids, a liquid separator and coalescing filter are recommended, with an automatic drain and collection tank to prevent contamination of the ground in accordance with local codes and standards.

To avoid water condensation in the engine or fuel lines, limit the relative humidity of water in the fuel to 80% at the minimum fuel operating temperature.

Catalytic Combustion Corporation
311 Riggs Street, Bloomer, WI 54724
Tel: (715) 568-2882 • Fax: (715) 568-2884 • Cell: (817) 899-8177
Email jmartin@catalyticcombustion.com

CATALYTIC COMBUSTION
EMISSION TECHNOLOGIES

To Enerflex
Attn Kevin Parsons
Via E-mail

Our Ref. 001-000-302301.00
Date: 15 April, 2025
Page: 1 of 1

Catalyst Performance

For : Cat G3606

Project/Location : Cold Snack FC 211H

Engine Parameters

Engine Manufacturer	Caterpillar	
Engine Model	G3606	
Horsepower	1875	bhp
Speed	1000	rpm
Exhaust Flowrate	11978	acfm
Exhaust Temperature	822	° F
Fuel	Natural Gas	

	Raw Exhaust	
NOx	0.30	g/bhp-hr
CO	2.50	g/bhp-hr
NMHC	0.55	g/bhp-hr
NMNEHC (VOC)	0.32	g/bhp-hr
HCHO	0.19	g/bhp-hr
Oxygen	11.10	%

Catalyst Description and Performance Expectations

Catalyst Model	REMB-3615F-D-15HF-HFX4	Overall Dimensions	35.88 x 14.88 x 3.7
Cell Pattern, Substrate	15HF	Catalyst Qty Required	4 per Unit
Formulation	HFX4	Pressure Drop	2.6 inches of H2O
Warranty Period [hrs]	24000		

	Performance	
NOx	0.30	g/bhp-hr
CO	0.60	g/bhp-hr
NMNEHC (VOC)	0.70	g/bhp-hr

Application Notes and Exceptions:

- Engine operating conditions and raw emissions to be confirmed/verified by end user.

Please contact us if you have any questions or to let us know how we can be of further help.

Best regards,

Josh Martin

Josh Martin
Sales and Business Development Manager, Catalytic Combustion Corporation
Prepared By: DW

PSI ENERGY

14.6L

	Rev:	F				
	Units		14.6L			
	Std	Metric	1500		1800	
General Engine Data						
Type	N/A		V-type 4 cycle			
Number of cylinders	N/A		8			
Aspiration	N/A		Turbo Charge Air Cooled			
Bore	in	mm	5.04	128	5.04	128
Stroke	in	mm	5.59	142	5.59	142
Displacement	in^3	L	892	14.6	892	14.6
Compression Ratio	N/A		10.5			
Mean Piston Speed	ft/min	m/s	1398	7.1	1677	8.52
Gross Standby Power Rating[1,2,3] Per ISO 3046 at the Flywheel						
NG	Hp	kW	369	275	459	342
LP	Hp	kW	229	171	319	238
MEP (@ rated Load on NG)	psi	bar	218	15.0	226	15.6
MEP (@ rated Load on LP)	psi	bar	136	9.4	157	10.9
Gross Prime Power Rating[1,2,3] Per ISO 3046 at the Flywheel						
NG	Hp	kW	332	248	390	291
LP	Hp	kW	206	154	271	202
MEP (@ rated Load on NG)	psi	bar	196	13.5	192	13.3
MEP (@ rated Load on LP)	psi	bar	122	8.4	134	9.2
RPM Range (Min-Max)	RPM		1500-1800			
Rotation Viewed from Flywheel	N/A		Counter Clockwise			
Firing Order	N/A		1-5-7-2-6-3-4-8-1			
Dry Weight						
Fan to Flywheel	lb	kg	3150	1429	3150	1429
Rad to Flywheel	lb	kg	4450	2018	4450	2018
Wet Weight						
Fan to Flywheel	lb	kg	3291	1475	3291	1475
Rad to Flywheel	lb	kg	4757	2155	4757	2155
CG						
Distance from FW housing	in	mm	18	449	18	449
Distance above center of crankshaft	in	mm	6	159	6	159
Engine Mounting						
Maximum Allowable Bending Moment at Rear of Block	lb ft	N m	4425	6000	4425	6000
Moment of Inertia About Roll Axis	lb ft^2	kg m^2				
Flywheel housing	N/A		SAE No.1			
Flywheel	N/A		No. 14			
Number of Flywheel Teeth	N/A		160			
Exhaust System						
Type			Water Cooled Manifold			
Maximum allowable Back pressure	in HG	kPa	3	10.2	3	10.2
Standard Catalyst Back pressure	in HG	kPa	1.5	5.1	1.5	5.1
Exhaust Outlet Pipe Size						
Maximum Turbine Inlet Temperature	F	C	1382	750	1382	750
Exhaust Flow at Rated Power	lb/hr	kg/hr	2302	1044	2782	1301
Exhaust Flow at Rated Power @1350F	cfm	m^3/min	1727.3	48.9	1895	53.6
Air Induction System						
Maximum allowable Intake Air Restriction with Air Cleaner						
Clean	inH2O	kPa	5	1.24	5	1.24
Dirty	inH2O	kPa	15	3.74	15	3.74
Combustion Air required (entire engine)	lb/hr	kg/hr	2172	985	2625	1227
Combustion Air required (entire engine)	cfm	m^3/min	490	14	687	19

PSI ENERGY

14.6L

	Rev:	F				
	Units		14.6L			
	Std	Metric	1500		1800	
Electrical System						
Minimum Recommended Battery Capacity	AH		200			
Cold Cranking Current						
Engine only	CCA		1000			
Engine with Drive train	CCA		1000			
Maximum Allowable Resistance of Starting Circuit	Ohms		0.002			
Starting Motor Power	HP	kW	9.4	7	9.4	7
Battery Charging Alternator						
Voltage	Volts		24			
Current	Amps		45			
Coil primary Resistance	Ohms		0.59Ω ± 10%			
Spark Plug p/n			IFR7F-4D			
Spark plug gap	inches	mm	.015" (-0/+.008") .38mm (-0/+.2mm)			
Cooling System						
Coolant Capacity						
Engine only	gal	L	9.5	43.2	9.5	43.2
Engine with Radiator	gal	L	28	127	28	127
Engine Coolant Flow	gal/min	L/min	151	570	180	680
Water Pump Speed	RPM		2547		3056	
Heat rejected to Cooling water at rated Load	btu/min	kcal/sec	14233	59.8	16189	68
Maximum Intake Air Temperature (IAT)	F	C	155	68	155	68
ECU IAT Warning	F	C	140	60	140	60
ECU IAT Shutdown	F	C	155	69	155	69
Maximum Coolant Friction Head External to the engine	psi	bar	5.8	0.4	5.8	0.4
Maximum Air Restriction Across a Radiator	inH2O	mmH2O	0.5	12.8	0.5	12.8
Standard Thermostat Range						
Cracking Temperature	F	C	160	71	160	71
Full Open Temperature	F	C	185	85	185	85
Maximum Output Pressure of Engine Water Pump						
Maximum Allowable Pressure Cap	psi	bar	14.7	1	14.7	1
Ambient Clearance Open Genset (water) (Air-to-Boil)						
Specified	F	C	142	61	142	61
Acutal	F	C			147	64
Ambient Clearance (Oil)						
Specified	F	C	142	61	142	61
Acutal	F	C			150	66
CAC Rise over Ambient (Charge)						
Specified	F	C	15	9	15	9
Acutal	F	C			13	8
Maximum Allowable Top Tank Temperature	F	C	230	110	230	110
ECU Warning	F	C	220	104	220	104
ECU Shutdown	F	C	230	110	230	110
Fan Power	HP	kW	13	9.7	22	16.4
Fan Diameter, including blades	in	mm	45	1143	45	1143
Fan Speed	RPM		1200		1440	
Cooling Fan Air Flow @ 1" Static H2O Pressure and 125F @ radiator	CFM	m^3/min	25,714	728	30,000	849
Charge Air Cooler						
Compressor Outlet Temperature	F	C	272	133	285	163
Compressor Flow Rate per CAC	lb/hr	kg/hr	1151	522	1391	650
Heat Rejection per CAC	btu/min	kW	TBD		2669	46.9

PSI ENERGY

14.6L

	Rev:	F				
	Units		14.6L			
	Std	Metric	1500		1800	
Lubrication System						
Oil Specification			SAE 15W-40 Low Ash Gas engine oil (.25-.5% by wt), API CD/CF or higher			
Oil Pressure						
Idle						
Min	Psi	Bar	13	0.9	13	0.9
Max	Psi	Bar	43.5	3	43.5	3
Rated Speed						
Min	Psi	Bar	43.5	3	43.5	3
Max	Psi	Bar	94.5	6.5	94.5	6.5
Maximum Allowable Oil Temperature	F	C	250	121	250	121
Engine Oil Capacity						
Min	Qts	L	26.5	25	26.5	25
Max	Qts	L	32.75	31	32.75	31
Oil Filter Capacity	Qts	L	7.5	7.1	7.5	7.1
ECU Oil Pressure Warning[5]	psi		30			
ECU Oil Pressure Shut Down[5]	psi		25			
Fuel System						
Fuel Consumption[6]						
NG	Ft^3/hr	kg/hr	2918	59	3648	74
LP	Ft^3/hr	kg/hr	782	42	1087	58
Maximum EPR Rated Pressure	psi	kPa	1.0	6.9	1.0	6.9
Maximum Running pressure to Electronic Pressure Regulator (EPR)	inH2O	kPa	11.0	2.7	11.0	2.7
Minimum Running pressure to EPR	inH2O	kPa	7.0	1.7	7.0	1.7
Minimum Gas Supply Pipe Size			2 x 1-1/4" NPT			
Maximum EPR Rated Pressure	psi	kPa	1.0	6.9	1.0	6.9
Maximum Running Pressure to EPR	inH2O	kPa	11.0	2.7	11.0	2.7
Minimum Running Pressure to EPR	inH2O	kPa	7.0	1.7	7.0	1.7
Minimum LPG Supply Pipe Size[4]			2 x 1-1/4" NPT			

[1] Standby and overload ratings based on ISO3046.

[2] All ratings are gross flywheel horsepower corrected to 77°F at an altitude of 328feet with no cooling fan or alternator losses using heating value for NG of 1015 BTU/SCF.

[3] Production tolerances in engines and installed components can account for power variations of +/- 5%. Altitude, temperature and excessive exhaust and intake restrictions should be applied to power calculations.

[4] The preceeding pipe sizes are only suggestions and piping sizes may vary with temperature, pressure, distance from supply and application of local codes. Gas must be available at adequate volume and pressure for engine at the EPR.

[5] >1400RPM

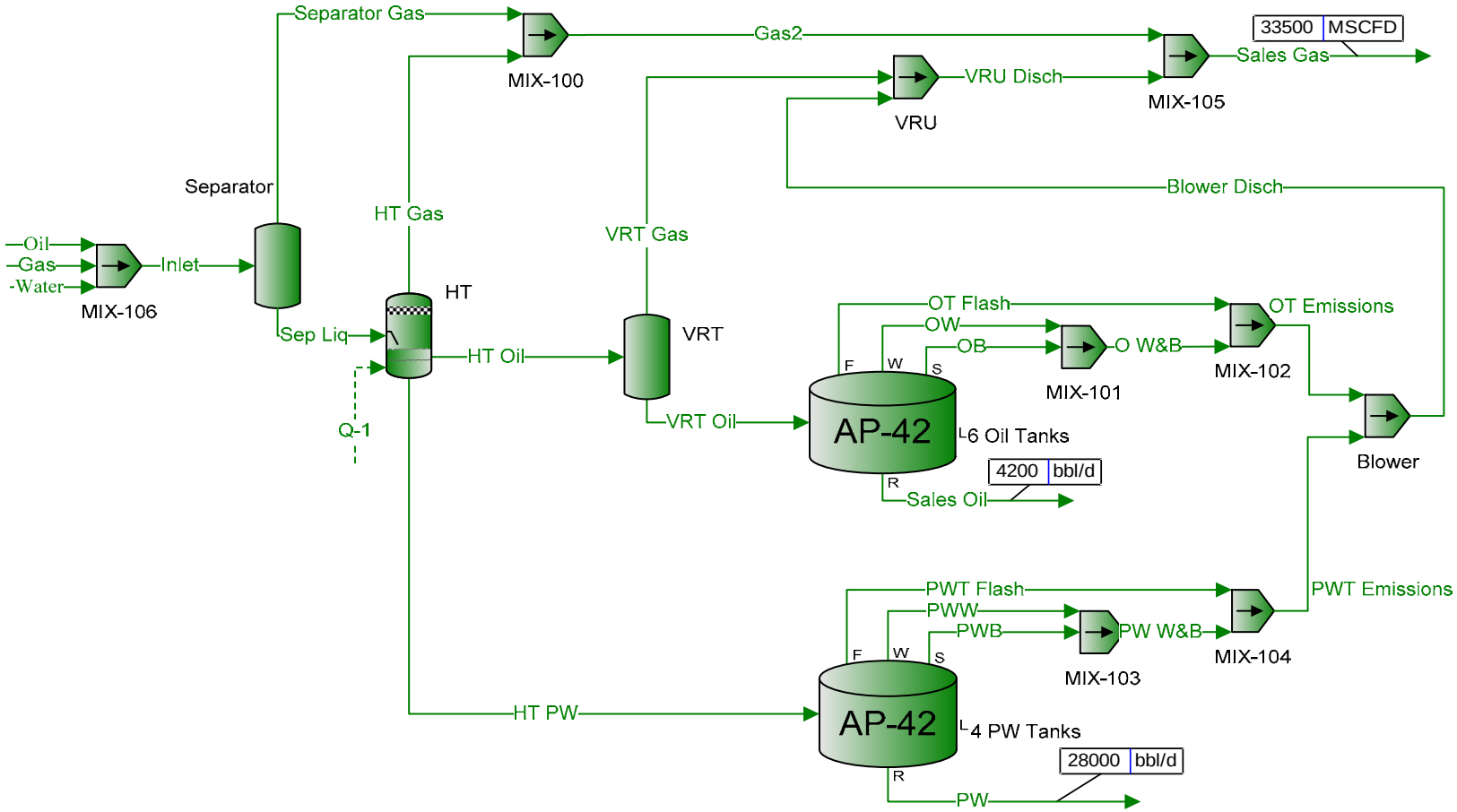
[6] See PSI Energy Technical Spec. 56300002 - Fuel Specification. Gas properties for fuel consumption data: NG: Density =0.717 kg/m3, LHV = 927 BTU/scf; Propane: Density = 1.882 kg/m3, LHV = 2316 BTU/scf

Flare Design Report

Date - 5/9/25
Customer - TapRock
Job Location - Upslope
Flare Equipment - AF-668 NC 7.5 HP with TBone
Notes - 0

Total Flare Gas Flow Rate (MMscfd) -	39.00
HP Flare Gas Flow Rate (MMscfd) -	37.00
Heating Value of the HP Flare Gas (Btu/Ft3) -	1350
Model of Tbone Tip -	Tbone 25
LP Flare Gas Flow Rate (MMscfd) -	2.00
Heating Value of the LP Flare Gas (Btu/Ft3) -	1500
Calculated LP Gas Exit Velocity (Ft/Sec) -	54
Allowed LP Gas Air Exit Velocity (Ft/Sec) -	159
Minimum Flare Height (Feet) -	68
Actual Flare Height (Feet) -	75
ΔP LP Gas Across the Flare Tip (Oz/in2) -	2.56
HP Gas Pressure at the Tbone Tip (Lbs/in2) -	34
Wind Speed (mph) -	20
HP Flare Gas Temperature F°-	80
LP Flare Gas Temperature F°-	80
Maximum Ground Radiation (Btu/Hr/Ft^2) -	1500
Maximum Radiation from base of Flare (Feet) -	30

This flare system will comply 40 CFR 63.11, 60.18 & 0000b
and therefore carries a destruction efficiency of 98% or greater.


Separator Gas
MIX-100
Gas2
33500
MSCFD
Sales Gas
VRU Disch
VRU
MIX-105
Separator
Blower Disch
HT Gas
VRT Gas
Oil
Gas
-Water
Inlet
MIX-106
HT
Sep Liq
HT Oil
VRT
Q-1
OT Flash
OW
OB
O W&B
MIX-101
OT Emissions
MIX-102
F
W
S
AP-42
6 Oil Tanks
VRT Oil
4200
bbl/d
R
Sales Oil
Blower
PWT Flash
PWW
PWB
PW W&B
MIX-103
PWT Emissions
MIX-104
HT PW
AP-42
4 PW Tanks
28000
bbl/d
PW

Process Streams		Blower Disch	Gas	Gas2	HT Gas	HT Oil
Composition	**Status:**	Solved	Solved	Solved	Solved	Solved
Phase: **Total**	**From Block:**	Blower	--	MIX-100	HT	HT
	To Block:	VRU	MIX-106	MIX-105	MIX-100	VRT
Mole Fraction		%	%	%	%	%
Carbon Dioxide		0.599079	0.111202*	0.110084	0.205948	0.00537377
Nitrogen		0.00956005	0.499414*	0.498277	0.102058	0.000332475
Methane		12.9301	78.5947*	78.4938	45.2449	0.519887
Ethane		22.7695	10.8302*	10.8773	18.4120	1.04547
Propane		22.9051	4.70621*	4.77259	13.2245	2.23722
Isobutane		4.78686	0.819119*	0.811680	2.74889	0.941804
n-Butane		11.4785	1.69285*	1.71788	6.27674	3.05723
Isopentane		3.49728	0.540122*	0.490169	2.00490	2.14419
n-Pentane		3.86262	0.591751*	0.536990	2.28509	3.11038
i-Hexane		5.51633	1.61441*	0.766953	3.48608	9.81105
C7+		1.12768	0*	0.0884888	0.536436	76.6479
Water		10.5173	0*	0.835819	5.47245	0.479150
Molar Flow		lbmol/h	lbmol/h	lbmol/h	lbmol/h	lbmol/h
Carbon Dioxide		0.0494895	4.06087*	4.03223	0.0587889	0.0220019
Nitrogen		0.000789750	18.2377*	18.2512	0.0291330	0.00136126
Methane		1.06815	2870.13*	2875.12	12.9154	2.12858
Ethane		1.88098	395.500*	398.420	5.25580	4.28049
Propane		1.89218	171.862*	174.813	3.77500	9.15989
Isobutane		0.395440	29.9127*	29.7307	0.784683	3.85604
n-Butane		0.948232	61.8195*	62.9234	1.79173	12.5173
Isopentane		0.288908	19.7242*	17.9542	0.572309	8.77899
n-Pentane		0.319089	21.6096*	19.6692	0.652289	12.7349
i-Hexane		0.455701	58.9552*	28.0924	0.995119	40.1695
C7+		0.0931566	0*	3.24122	0.153128	313.820
Water		0.868829	0*	30.6149	1.56214	1.96179
Mass Fraction		%	%	%	%	%
Carbon Dioxide		0.624667	0.224523*	0.227489	0.285081	0.00199613
Nitrogen		0.00634518	0.641844*	0.655429	0.0899244	7.86119E-05
Methane		4.91465	57.8452*	59.1283	22.8299	0.0703952
Ethane		16.2215	14.9403*	15.3578	17.4134	0.265336
Propane		23.9302	9.52072*	9.88186	18.3417	0.832660
Isobutane		6.59191	2.18420*	2.21521	5.02530	0.462025
n-Butane		15.8069	4.51401*	4.68838	11.4747	1.49980
Isopentane		5.97830	1.78782*	1.66059	4.54973	1.30574
n-Pentane		6.60281	1.95872*	1.81922	5.18556	1.89411
i-Hexane		11.2629	6.38263*	3.10342	9.44897	7.13611
C7+		3.57066	0*	0.555295	2.25490	86.4589
Water		4.48915	0*	0.707037	3.10089	0.0728577
Mass Flow		lb/h	lb/h	lb/h	lb/h	lb/h
Carbon Dioxide		2.17801	178.717*	177.456	2.58727	0.968292
Nitrogen		0.0221236	510.899*	511.278	0.816115	0.0381334
Methane		17.1358	46044.0*	46124.0	207.194	34.1477
Ethane		56.5591	11892.3*	11980.1	158.037	128.710
Propane		83.4368	7578.36*	7708.50	166.461	403.911
Isobutane		22.9838	1738.59*	1728.01	45.6075	224.121
n-Butane		55.1133	3593.09*	3657.25	104.139	727.531
Isopentane		20.8444	1423.08*	1295.37	41.2914	633.393
n-Pentane		23.0219	1559.11*	1419.11	47.0619	918.804
i-Hexane		39.2702	5080.48*	2420.87	85.7548	3461.62
C7+		12.4497	0*	433.166	20.4645	41939.9
Water		15.6522	0*	551.535	28.1423	35.3422

Process Streams		Blower Disch	Gas	Gas2	HT Gas	HT Oil
Composition	**Status:**	Solved	Solved	Solved	Solved	Solved
Phase: **Total**	**From Block:**	Blower	--	MIX-100	HT	HT
	To Block:	VRU	MIX-106	MIX-105	MIX-100	VRT
Property	**Units**					
Temperature	°F	96.6900	85.8*	96.7912	135*	135
Pressure	psig	-1.43595	121.9*	32	32*	32
Mole Fraction Vapor	%	94.8558	100	100	100	0
Mole Fraction Light Liquid	%	0.772457	0	0	0	100
Mole Fraction Heavy Liquid	%	4.37178	0	0	0	0
Phase Mole Fraction	%	100	100	100	100	100
Molecular Weight	lb/lbmol	42.2067	21.7970	21.2966	31.7934	118.478
Mass Density	lb/ft^3	0.100039	0.526947	0.168328	0.237340	46.6692
Molar Flow	lbmol/h	8.26094	3651.81	3662.86	28.5455	409.431
Mass Flow	lb/h	348.667	79598.6	78006.6	907.557	48508.5
Vapor Volumetric Flow	ft^3/h	3485.32	151056	463420	3823.88	1039.41
Liquid Volumetric Flow	gpm	434.533	18833.0	57777.0	476.743	129.589
Std Vapor Volumetric Flow	MMSCFD	0.0752375	33.2593*	33.3599	0.259981	3.72894
Std Liquid Volumetric Flow	sgpm	1.35702	448.660	443.616	4.09936	124.823
Compressibility		0.936995	0.965237	0.989317	0.980181	0.0185757
Specific Gravity			0.752594	0.735318	1.09774	0.748279
API Gravity						49.0263
Enthalpy	Btu/h	-445547	-1.27044E+08	-1.27619E+08	-1.23152E+06	-3.40185E+07
Mass Enthalpy	Btu/lb	-1277.86	-1596.05	-1636.01	-1356.96	-701.289
Mass Cp	Btu/(lb*°F)	0.432291	0.497214	0.491894	0.467585	0.487239
Ideal Gas CpCv Ratio		1.12690	1.23418	1.23700	1.15647	1.04573
Dynamic Viscosity	cP		0.0108031	0.0109376	0.0105168	0.451404
Kinematic Viscosity	cSt		1.27985	4.05645	2.76626	0.603829
Thermal Conductivity	Btu/(h*ft*°F)		0.0179753	0.0182025	0.0162755	0.0627104
Surface Tension	lbf/ft					0.00145864?
Net Ideal Gas Heating Value	Btu/ft^3	2095.17	1187.44	1154.08	1634.66	5881.59
Net Liquid Heating Value	Btu/lb	18647.8	20608.8	20495.4	19362.3	18676.5
Gross Ideal Gas Heating Value	Btu/ft^3	2281.38	1307.72	1272.01	1787.57	6287.36
Gross Liquid Heating Value	Btu/lb	20322.4	22703.0	22597.1	21187.8	19976.2

Process Streams		HT PW	Inlet	O W&B	OB	Oil
Composition	**Status:**	Solved	Solved	Solved	Solved	Solved
Phase: **Total**	**From Block:**	HT	MIX-106	MIX-101	6 Oil Tanks	--
	To Block:	4 PW Tanks	Separator	MIX-102	MIX-101	MIX-106
Mole Fraction		%	%	%	%	%
Carbon Dioxide		0.000183721	0.0153116	0.116125	0.116125	0.009*
Nitrogen		2.96231E-06	0.0682358	0.000111521	0.000111521	0.004*
Methane		0.00261560	10.7582	2.21520	2.21520	1.981*
Ethane		0.00124574	1.50647	31.5686	31.5686	1.923*
Propane		0.000610863	0.688263	31.0383	31.0383	3.148*
Isobutane		6.57002E-05	0.125613	5.78378	5.78378	0.948*
n-Butane		0.000267864	0.282246	13.6193	13.6193	3.516*
Isopentane		4.84957E-05	0.0999774	4.11303	4.11303	1.804*
n-Pentane		3.47464E-05	0.121165	4.57492	4.57492	2.776*
i-Hexane		2.28732E-05	0.255202	6.35128	6.35128	2.393*
C7+		0.000321325	1.18554	0.596288	0.596288	81.498*
Water		99.9946	84.8938	0.0230793	0.0230793	0*
Molar Flow		lbmol/h	lbmol/h	lbmol/h	lbmol/h	lbmol/h
Carbon Dioxide		0.0416640	4.09589	0.00205579	0.000124299	0.0350219*
Nitrogen		0.000671791	18.2532	1.97428E-06	1.19370E-07	0.0155653*
Methane		0.593164	2877.84	0.0392162	0.00237112	7.70870*
Ethane		0.282507	402.983	0.558866	0.0337906	7.48300*
Propane		0.138531	184.112	0.549478	0.0332230	12.2499*
Isobutane		0.0148994	33.6016	0.102392	0.00619088	3.68897*
n-Butane		0.0607460	75.5014	0.241106	0.0145779	13.6819*
Isopentane		0.0109978	26.7442	0.0728139	0.00440253	7.01994*
n-Pentane		0.00787977	32.4119	0.0809910	0.00489694	10.8023*
i-Hexane		0.00518716	68.2671	0.112438	0.00679832	9.31192*
C7+		0.0728698	317.135	0.0105562	0.000638259	317.135*
Water		22676.7	22709.3	0.000408579	2.47038E-05	0*
Mass Fraction		%	%	%	%	%
Carbon Dioxide		0.000448789	0.0336878	0.107806	0.107806	0.00332379*
Nitrogen		4.60611E-06	0.0955616	6.59012E-05	6.59012E-05	0.000940309*
Methane		0.00232906	8.62811	0.749645	0.749645	0.266686*
Ethane		0.00207914	2.26456	20.0238	20.0238	0.485226*
Propane		0.00149512	1.51724	28.8712	28.8712	1.16486*
Isobutane		0.000211957	0.364990	7.09130	7.09130	0.462376*
n-Butane		0.000864161	0.820116	16.6982	16.6982	1.71489*
Isopentane		0.000194209	0.360609	6.25982	6.25982	1.09222*
n-Pentane		0.000139148	0.437031	6.96281	6.96281	1.68071*
i-Hexane		0.000109408	1.09944	11.5456	11.5456	1.73050*
C7+		0.00238357	7.92078	1.68102	1.68102	91.3983*
Water		99.9897	76.4579	0.00877074	0.00877074	0*
Mass Flow		lb/h	lb/h	lb/h	lb/h	lb/h
Carbon Dioxide		1.83361	180.258	0.0904742	0.00547032	1.54129*
Nitrogen		0.0188191	511.335	5.53062E-05	3.34397E-06	0.436036*
Methane		9.51580	46167.6	0.629124	0.0380386	123.666*
Ethane		8.49472	12117.3	16.8046	1.01605	225.007*
Propane		6.10861	8118.52	24.2296	1.46499	540.165*
Isobutane		0.865989	1953.00	5.95123	0.359828	214.411*
n-Butane		3.53069	4388.31	14.0136	0.847300	795.220*
Isopentane		0.793479	1929.56	5.25343	0.317637	506.480*
n-Pentane		0.568516	2338.48	5.84340	0.353308	779.373*
i-Hexane		0.447005	5882.94	9.68940	0.585848	802.458*
C7+		9.73854	42382.8	1.41077	0.0852988	42382.8*
Water		408527	409114	0.00736066	0.000445046	0*

Process Streams		HT PW	Inlet	O W&B	OB	Oil
Composition	**Status:**	Solved	Solved	Solved	Solved	Solved
Phase: **Total**	**From Block:**	HT	MIX-106	MIX-101	6 Oil Tanks	--
	To Block:	4 PW Tanks	Separator	MIX-102	MIX-101	MIX-106
Property	**Units**					
Temperature	°F	135	103.402	106.969	106.969	105.4*
Pressure	psig	32	121.3	-1.43595	-1.43595	121.3*
Mole Fraction Vapor	%	0	13.5851	100	100	0
Mole Fraction Light Liquid	%	100	1.61750	0	0	100
Mole Fraction Heavy Liquid	%	0	84.7974	0	0	0
Phase Mole Fraction	%	100	100	100	100	100
Molecular Weight	lb/lbmol	18.0162	20.0030	47.4055	47.4055	119.167
Mass Density	lb/ft^3	61.4362	3.25574	0.104893	0.104893	47.9029
Molar Flow	lbmol/h	22677.9	26750.2	1.77032	0.107039	389.132
Mass Flow	lb/h	408569	535084	83.9230	5.07421	46371.6
Vapor Volumetric Flow	ft^3/h	6650.30	164351	800.080	48.3751	968.033
Liquid Volumetric Flow	gpm	829.128	20490.5	99.7503	6.03118	120.690
Std Vapor Volumetric Flow	MMSCFD	206.542	243.631	0.0161234	0.000974867	3.54406
Std Liquid Volumetric Flow	sgpm	816.860	1385.30	0.331555	0.0200467	118.790*
Compressibility		0.00214574	0.138275	0.985496	0.985496	0.0557896
Specific Gravity		0.985048		1.63679	1.63679	0.768059
API Gravity		10.0022				47.7429
Enthalpy	Btu/h	-2.76352E+09	-2.93858E+09	-83678.4	-5059.43	-3.23680E+07
Mass Enthalpy	Btu/lb	-6763.91	-5491.82	-997.086	-997.086	-698.014
Mass Cp	Btu/(lb*°F)	0.978347	0.862265	0.422449	0.422449	0.464770
Ideal Gas CpCv Ratio		1.32671	1.28709	1.11081	1.11081	1.04820
Dynamic Viscosity	cP	0.495912		0.00861393	0.00861393	0.549836
Kinematic Viscosity	cSt	0.503917		5.12665	5.12665	0.716557
Thermal Conductivity	Btu/(h*ft*°F)	0.372530		0.0113434	0.0113434	0.0642567
Surface Tension	lbf/ft	0.00455303				0.00154427?
Net Ideal Gas Heating Value	Btu/ft^3	0.0934409	248.127	2473.62	2473.62	5913.48
Net Liquid Heating Value	Btu/lb	-1057.69	3873.42	19645.0	19645.0	18669.5
Gross Ideal Gas Heating Value	Btu/ft^3	50.4090	313.141	2685.88	2685.88	6318.04
Gross Liquid Heating Value	Btu/lb	2.13142	5106.87	21344.6	21344.6	19957.9

Process Streams		OT Emissions	OT Flash	OW	PW	PW W&B
Composition	**Status:**	Solved	Solved	Solved	Solved	Solved
Phase: **Total**	**From Block:**	MIX-102	6 Oil Tanks	6 Oil Tanks	4 PW Tanks	MIX-103
	To Block:	Blower	MIX-102	MIX-101	--	MIX-104
Mole Fraction		%	%	%	%	%
Carbon Dioxide		0.118996	0.120054	0.116125	2.15561E-20	3.83686
Nitrogen		0.00179371	0.00241336	0.000111521	1.32285E-22	0.0168660
Methane		7.22275	9.06734	2.21520	2.36540E-19	24.1307
Ethane		24.3066	21.6315	31.5686	1.26199E-19	14.0102
Propane		26.6663	25.0558	31.0383	4.30279E-20	5.66740
Isobutane		5.78656	5.78759	5.78378	4.08051E-21	0.470617
n-Butane		13.4953	13.4496	13.6193	1.63220E-20	2.36244
Isopentane		4.22595	4.26755	4.11303	3.28721E-21	0.333976
n-Pentane		4.73230	4.79026	4.57492	8.21802E-22	0.124101
i-Hexane		6.85059	7.03452	6.35128	0	0.0361050
C7+		0.722879	0.769510	0.596288	0.000120177	4.14612
Water		5.87008	8.02389	0.0230793	99.9999	44.8646
Molar Flow		lbmol/h	lbmol/h	lbmol/h	lbmol/h	lbmol/h
Carbon Dioxide		0.00782551	0.00576972	0.00193149	4.88811E-18	0.0388059
Nitrogen		0.000117959	0.000115985	1.85491E-06	2.99972E-20	0.000170583
Methane		0.474988	0.435772	0.0368451	5.36384E-17	0.244057
Ethane		1.59847	1.03960	0.525075	2.86172E-17	0.141699
Propane		1.75365	1.20417	0.516255	9.75712E-18	0.0573199
Isobutane		0.380541	0.278149	0.0962008	9.25305E-19	0.00475980
n-Butane		0.887486	0.646380	0.226528	3.70122E-18	0.0238936
Isopentane		0.277910	0.205096	0.0684113	7.45415E-19	0.00337782
n-Pentane		0.311209	0.230218	0.0760940	1.86354E-19	0.00125515
i-Hexane		0.450514	0.338076	0.105640	0	0.000365165
C7+		0.0475385	0.0369823	0.00991797	0.0272517	0.0419337
Water		0.386033	0.385624	0.000383875	22676.2	0.453759
Mass Fraction		%	%	%	%	%
Carbon Dioxide		0.114154	0.116600	0.107806	5.26589E-20	6.05053
Nitrogen		0.00109529	0.00149198	6.59012E-05	2.05699E-22	0.0169297
Methane		2.52572	3.21016	0.749645	2.10636E-19	13.8711
Ethane		15.9314	14.3543	20.0238	2.10636E-19	15.0951
Propane		25.6312	24.3825	28.8712	1.05318E-19	8.95469
Isobutane		7.33118	7.42362	7.09130	1.31647E-20	0.980123
n-Butane		17.0976	17.2515	16.6982	5.26589E-20	4.92010
Isopentane		6.64606	6.79490	6.25982	1.31647E-20	0.863407
n-Pentane		7.44238	7.62719	6.96281	3.29118E-21	0.320829
i-Hexane		12.8683	13.3781	11.5456	0	0.111486
C7+		2.10583	2.26953	1.68102	0.000891505	19.8545
Water		2.30513	3.19008	0.00877074	99.9991	28.9612
Mass Flow		lb/h	lb/h	lb/h	lb/h	lb/h
Carbon Dioxide		0.344397	0.253922	0.0850039	2.15123E-16	1.70783
Nitrogen		0.00330444	0.00324914	5.19623E-05	8.40325E-19	0.00477860
Methane		7.61998	6.99086	0.591085	8.60492E-16	3.91528
Ethane		48.0644	31.2598	15.7885	8.60492E-16	4.26075
Propane		77.3282	53.0986	22.7646	4.30246E-16	2.52756
Isobutane		22.1179	16.1666	5.59140	5.37808E-17	0.276650
n-Butane		51.5826	37.5690	13.1663	2.15123E-16	1.38875
Isopentane		20.0509	14.7975	4.93579	5.37808E-17	0.243706
n-Pentane		22.4533	16.6099	5.49009	1.34452E-17	0.0905575
i-Hexane		38.8232	29.1338	9.10355	0	0.0314682
C7+		6.35319	4.94243	1.32547	3.64199	5.60415
Water		6.95449	6.94713	0.00691562	408518	8.17460

Process Streams		OT Emissions	OT Flash	OW	PW	PW W&B
Composition	**Status:**	Solved	Solved	Solved	Solved	Solved
Phase: **Total**	**From Block:**	MIX-102	6 Oil Tanks	6 Oil Tanks	4 PW Tanks	MIX-103
	To Block:	Blower	MIX-102	MIX-101	--	MIX-104
Property	**Units**					
Temperature	°F	106.965	106.969	106.969	83.5989	83.5989
Pressure	psig	-1.43595	-1.43595	-1.43595	-1.43595	-1.43595
Mole Fraction Vapor	%	100	100	100	0	53.3573
Mole Fraction Light Liquid	%	0	0	0	100	4.08755
Mole Fraction Heavy Liquid	%	0	0	0	0	42.5551
Phase Mole Fraction	%	100	100	100	100	100
Molecular Weight	lb/lbmol	45.8764	45.3131	47.4055	18.0154	27.9080
Mass Density	lb/ft^3	0.101405	0.100124	0.104893	62.1441	0.119470
Molar Flow	lbmol/h	6.57628	4.80595	1.66328	22676.2	1.01140
Mass Flow	lb/h	301.696	217.773	78.8488	408522	28.2261
Vapor Volumetric Flow	ft^3/h	2975.16	2175.03	751.705	6573.79	236.260
Liquid Volumetric Flow	gpm	370.929	271.172	93.7191	819.589	29.4558
Std Vapor Volumetric Flow	MMSCFD	0.0598942	0.0437708	0.0151486	206.527	0.00921142
Std Liquid Volumetric Flow	sgpm	1.16403	0.832472	0.311508	816.667	0.101224
Compressibility		0.986521	0.986868	0.985496	0.000659341	0.531293
Specific Gravity		1.58399	1.56454	1.63679	0.996398	
API Gravity					9.99837	
Enthalpy	Btu/h	-335067	-251388	-78619.0	-2.78397E+09	-82942.8
Mass Enthalpy	Btu/lb	-1110.61	-1154.36	-997.086	-6814.74	-2938.52
Mass Cp	Btu/(lb*°F)	0.424243	0.424943	0.422449	0.977649	0.578000
Ideal Gas CpCv Ratio		1.11436	1.11572	1.11081	1.32877	1.20867
Dynamic Viscosity	cP	0.00879283	0.00885921	0.00861393	0.843161	
Kinematic Viscosity	cSt	5.41313	5.52377	5.12665	0.847012	
Thermal Conductivity	Btu/(h*ft*°F)	0.0115404	0.0116178	0.0113434	0.353234	
Surface Tension	lbf/ft				0.00493086	
Net Ideal Gas Heating Value	Btu/ft^3	2337.04	2286.73	2473.62	0.00793681	955.083
Net Liquid Heating Value	Btu/lb	19157.3	18969.3	19645.0	-1059.58	12594.2
Gross Ideal Gas Heating Value	Btu/ft^3	2540.37	2486.77	2685.88	50.3184	1061.38
Gross Liquid Heating Value	Btu/lb	20839.6	20644.9	21344.6	0.176912	14040.0

Process Streams		PWB	PWT Emissions	PWT Flash	PWW	Sales Gas
Composition	**Status:**	Solved	Solved	Solved	Solved	Solved
Phase: **Total**	**From Block:**	4 PW Tanks	MIX-104	4 PW Tanks	4 PW Tanks	MIX-105
	To Block:	MIX-103	Blower	MIX-104	MIX-103	--
Mole Fraction		%	%	%	%	%
Carbon Dioxide		3.83686	2.47314	0.424523	3.83686	0.111297
Nitrogen		0.0168660	0.0398769	0.0744444	0.0168660	0.496249
Methane		24.1307	35.2096	51.8527	24.1307	78.2372
Ethane		14.0102	16.7694	20.9142	14.0102	10.9244
Propane		5.66740	8.22307	12.0623	5.66740	4.84276
Isobutane		0.470617	0.884417	1.50604	0.470617	0.827706
n-Butane		2.36244	3.60583	5.47368	2.36244	1.75670
Isopentane		0.333976	0.652820	1.13180	0.333976	0.502591
n-Pentane		0.124101	0.467736	0.983954	0.124101	0.550992
i-Hexane		0.0361050	0.307905	0.716209	0.0361050	0.787736
C7+		4.14612	2.70785	0.547244	4.14612	0.0923857
Water		44.8646	28.6583	4.31292	44.8646	0.869963
Molar Flow		lbmol/h	lbmol/h	lbmol/h	lbmol/h	lbmol/h
Carbon Dioxide		0.000267478	0.0416640	0.00285816	0.0385384	4.09378
Nitrogen		1.17578E-06	0.000671791	0.000501208	0.000169407	18.2532
Methane		0.00168222	0.593164	0.349106	0.242375	2877.75
Ethane		0.000976691	0.282507	0.140808	0.140722	401.827
Propane		0.000395090	0.138531	0.0812111	0.0569248	178.128
Isobutane		3.28080E-05	0.0148994	0.0101396	0.00472699	30.4450
n-Butane		0.000164692	0.0607460	0.0368524	0.0237289	64.6156
Isopentane		2.32824E-05	0.0109978	0.00761999	0.00335454	18.4865
n-Pentane		8.65139E-06	0.00787977	0.00662462	0.00124650	20.2668
i-Hexane		2.51698E-06	0.00518716	0.00482199	0.000362648	28.9748
C7+		0.000289037	0.0456181	0.00368440	0.0416447	3.39817
Water		0.00312763	0.482796	0.0290374	0.450631	31.9993
Mass Fraction		%	%	%	%	%
Carbon Dioxide		6.05053	3.90367	0.671024	6.05053	0.229091
Nitrogen		0.0169297	0.0400650	0.0749011	0.0169297	0.650193
Methane		13.8711	20.2587	29.8767	13.8711	58.7031
Ethane		15.0951	18.0848	22.5867	15.0951	15.3637
Propane		8.95469	13.0049	19.1036	8.95469	9.98769
Isobutane		0.980123	1.84365	3.14390	0.980123	2.25006
n-Butane		4.92010	7.51667	11.4265	4.92010	4.77547
Isopentane		0.863407	1.68928	2.93284	0.863407	1.69598
n-Pentane		0.320829	1.21034	2.54973	0.320829	1.85931
i-Hexane		0.111486	0.951652	2.21674	0.111486	3.17498
C7+		19.8545	12.9792	2.62674	19.8545	0.577467
Water		28.9612	18.5170	2.79064	28.9612	0.733024
Mass Flow		lb/h	lb/h	lb/h	lb/h	lb/h
Carbon Dioxide		0.0117716	1.83361	0.125786	1.69606	180.165
Nitrogen		3.29375E-05	0.0188191	0.0140405	0.00474566	511.335
Methane		0.0269869	9.51580	5.60052	3.88829	46166.2
Ethane		0.0293682	8.49472	4.23397	4.23138	12082.6
Propane		0.0174217	6.10861	3.58105	2.51013	7854.68
Isobutane		0.00190687	0.865989	0.589338	0.274743	1769.53
n-Butane		0.00957226	3.53069	2.14194	1.37918	3755.60
Isopentane		0.00167979	0.793479	0.549773	0.242026	1333.78
n-Pentane		0.000624188	0.568516	0.477958	0.0899334	1462.23
i-Hexane		0.000216902	0.447005	0.415537	0.0312513	2496.92
C7+		0.0386278	6.09654	0.492395	5.56552	454.141
Water		0.0563452	8.69771	0.523117	8.11825	576.477

Process Streams		PWB	PWT Emissions	PWT Flash	PWW	Sales Gas
Composition	**Status:**	Solved	Solved	Solved	Solved	Solved
Phase: **Total**	**From Block:**	4 PW Tanks	MIX-104	4 PW Tanks	4 PW Tanks	MIX-105
	To Block:	MIX-103	Blower	MIX-104	MIX-103	--
Property	**Units**					
Temperature	°F	83.5989	83.7307	83.5989	83.5989	94.0133
Pressure	psig	-1.43595	-1.43595	-1.43595	-1.43595	-1.43595
Mole Fraction Vapor	%	53.3573	71.9098	99.8444	53.3573	100
Mole Fraction Light Liquid	%	4.08755	2.55190	0.149184	4.08755	0
Mole Fraction Heavy Liquid	%	42.5551	25.5383	0.00640113	42.5551	0
Phase Mole Fraction	%	100	100	100	100	100
Molecular Weight	lb/lbmol	27.9080	27.8818	27.8426	27.9080	21.3808
Mass Density	lb/ft^3	0.119470	0.0886085	0.0637832	0.119470	0.0478626
Molar Flow	lbmol/h	0.00697127	1.68466	0.673265	1.00443	3678.24
Mass Flow	lb/h	0.194554	46.9715	18.7454	28.0315	78643.6
Vapor Volumetric Flow	ft^3/h	1.62847	530.102	293.893	234.632	1.64311E+06
Liquid Volumetric Flow	gpm	0.203031	66.0906	36.6412	29.2528	204856
Std Vapor Volumetric Flow	MMSCFD	6.34917E-05	0.0153433	0.00613184	0.00914793	33.5000
Std Liquid Volumetric Flow	sgpm	0.000697711	0.192994	0.0917694	0.100527	446.132
Compressibility		0.531293	0.715494	0.992814	0.531293	0.996887
Specific Gravity						0.738223
API Gravity						
Enthalpy	Btu/h	-571.702	-110480	-27537.3	-82371.1	-1.28412E+08
Mass Enthalpy	Btu/lb	-2938.52	-2352.07	-1469.01	-2938.52	-1632.84
Mass Cp	Btu/(lb*°F)	0.578000	0.525775	0.446777	0.578000	0.486434
Ideal Gas CpCv Ratio		1.20867	1.20131	1.19125	1.20867	1.23689
Dynamic Viscosity	cP					0.0108407
Kinematic Viscosity	cSt					14.1397
Thermal Conductivity	Btu/(h*ft*°F)					0.0179469
Surface Tension	lbf/ft					
Net Ideal Gas Heating Value	Btu/ft^3	955.083	1151.01	1445.34	955.083	1157.93
Net Liquid Heating Value	Btu/lb	12594.2	15375.9	19564.5	12594.2	20481.9
Gross Ideal Gas Heating Value	Btu/ft^3	1061.38	1270.37	1584.33	1061.38	1276.14
Gross Liquid Heating Value	Btu/lb	14040.0	17000.9	21459.4	14040.0	22580.3

Process Streams		Sales Oil	Sep Liq	Separator Gas	VRT Gas	VRT Oil
Composition	**Status:**	Solved	Solved	Solved	Solved	Solved
Phase: **Total**	**From Block:**	6 Oil Tanks	Separator	Separator	VRT	VRT
	To Block:	--	HT	MIX-100	VRU	6 Oil Tanks
Mole Fraction		%	%	%	%	%
Carbon Dioxide		0.000533177	0.000529743	0.109331	0.169507	0.00246959
Nitrogen		1.69461E-06	0.000134825	0.501389	0.0173714	3.09872E-05
Methane		0.0223017	0.0676465	78.7549	21.9896	0.140002
Ethane		0.292098	0.0424764	10.8181	21.4382	0.684643
Propane		1.51196	0.0565560	4.70621	19.9883	1.92313
Isobutane		0.797658	0.0201403	0.796464	4.47947	0.879208
n-Butane		2.75076	0.0621639	1.68207	10.4518	2.92639
Isopentane		2.08666	0.0405015	0.478271	3.41936	2.12163
n-Pentane		3.06900	0.0579472	0.523260	3.91247	3.09618
i-Hexane		9.92890	0.178102	0.745595	5.99453	9.87858
C7+		79.2722	1.35857	0.0849704	0.896098	77.9883
Water		0.267891	98.1152	0.799400	7.24327	0.359465
Molar Flow		lbmol/h	lbmol/h	lbmol/h	lbmol/h	lbmol/h
Carbon Dioxide		0.00210998	0.122455	3.97344	0.0120664	0.00993548
Nitrogen		6.70619E-06	0.0311661	18.2221	0.00123659	0.000124666
Methane		0.0882560	15.6371	2862.20	1.56534	0.563244
Ethane		1.15594	9.81880	393.164	1.52609	2.75440
Propane		5.98336	13.0734	171.038	1.42288	7.73701
Isobutane		3.15662	4.65562	28.9460	0.318873	3.53716
n-Butane		10.8858	14.3697	61.1317	0.744014	11.7733
Isopentane		8.25767	9.36229	17.3819	0.243408	8.53558
n-Pentane		12.1451	13.3950	19.0169	0.278511	12.4563
i-Hexane		39.2923	41.1698	27.0973	0.426723	39.7428
C7+		313.709	314.046	3.08809	0.0637891	313.757
Water		1.06014	22680.2	29.0527	0.515615	1.44617
Mass Fraction		%	%	%	%	%
Carbon Dioxide		0.000193785	0.00117671	0.226811	0.184177	0.000906790
Nitrogen		3.92047E-07	0.000190632	0.662086	0.0120145	7.24242E-06
Methane		0.00295469	0.0547742	59.5555	8.70945	0.0187387
Ethane		0.0725355	0.0644654	15.3336	15.9152	0.171759
Propane		0.550602	0.125873	9.78228	21.7609	0.707522
Isobutane		0.382879	0.0590838	2.18214	6.42795	0.426352
n-Butane		1.32038	0.182364	4.60850	14.9981	1.41909
Isopentane		1.24332	0.147489	1.62658	6.09084	1.27712
n-Pentane		1.82864	0.211019	1.77959	6.96921	1.86376
i-Hexane		7.06622	0.774659	3.02872	12.7539	7.10252
C7+		87.4924	9.16408	0.535288	2.95669	86.9582
Water		0.0398567	89.2148	0.678858	3.22166	0.0540297
Mass Flow		lb/h	lb/h	lb/h	lb/h	lb/h
Carbon Dioxide		0.0928590	5.38917	174.869	0.531036	0.437256
Nitrogen		0.000187863	0.873068	510.462	0.0346411	0.00349231
Methane		1.41584	250.858	45916.8	25.1118	9.03582
Ethane		34.7579	295.242	11822.1	45.8881	82.8223
Propane		263.840	576.481	7542.04	62.7427	341.168
Isobutane		183.470	270.595	1682.41	18.5336	205.588
n-Butane		632.705	835.201	3553.11	43.2437	684.288
Isopentane		595.781	675.478	1254.08	17.5616	615.832
n-Pentane		876.257	966.434	1372.05	20.0942	898.710
i-Hexane		3386.03	3547.82	2335.12	36.7730	3424.85
C7+		41925.0	41970.1	412.702	8.52497	41931.4
Water		19.0987	408590	523.393	9.28895	26.0532

Process Streams		Sales Oil	Sep Liq	Separator Gas	VRT Gas	VRT Oil
Composition	**Status:**	Solved	Solved	Solved	Solved	Solved
Phase: **Total**	**From Block:**	6 Oil Tanks	Separator	Separator	VRT	VRT
	To Block:	--	HT	MIX-100	VRU	6 Oil Tanks
Property	**Units**					
Temperature	°F	106.969	103.395	103.395	133.290	133.290
Pressure	psig	-1.43595	121	121*	11*	11
Mole Fraction Vapor	%	0	0	100	100	0
Mole Fraction Light Liquid	%	100	1.87096	0	0	100
Mole Fraction Heavy Liquid	%	0	98.1290	0	0	0
Phase Mole Fraction	%	100	100	100	100	100
Molecular Weight	lb/lbmol	121.087	19.8126	21.2142	40.5039	119.857
Mass Density	lb/ft^3	47.6855	59.8955	0.490859	0.166544	46.8125
Molar Flow	lbmol/h	395.736	23115.9	3634.31	7.11854	402.313
Mass Flow	lb/h	47918.5	457985	77099.1	288.328	48220.2
Vapor Volumetric Flow	ft^3/h	1004.89	7646.40	157070	1731.25	1030.07
Liquid Volumetric Flow	gpm	125.285	953.318	19582.7	215.844	128.424
Std Vapor Volumetric Flow	MMSCFD	3.60422	210.531	33.0999	0.0648330	3.66411
Std Liquid Volumetric Flow	sgpm	122.500	945.782	439.517	1.15857	123.664
Compressibility		0.00553713	0.00742833	0.970543	0.982074	0.0103390
Specific Gravity		0.764573	0.960345	0.732471	1.39849	0.750576
API Gravity		48.4289	14.3612			48.7302
Enthalpy	Btu/h	-3.38958E+07	-2.81220E+09	-1.26388E+08	-347332	-3.36712E+07
Mass Enthalpy	Btu/lb	-707.363	-6140.37	-1639.29	-1204.64	-698.280
Mass Cp	Btu/(lb*°F)	0.467359	0.922333	0.505383	0.447695	0.485185
Ideal Gas CpCv Ratio		1.04703	1.29718	1.23609	1.12420	1.04535
Dynamic Viscosity	cP	0.552876	0.651983	0.0111749	0.00967444	0.464999
Kinematic Viscosity	cSt	0.723803	0.679550	1.42124	3.62641	0.620111
Thermal Conductivity	Btu/(h*ft*°F)	0.0643010	0.320515	0.0188093	0.0138032	0.0628866
Surface Tension	lbf/ft	0.00159987	0.00433562?			0.00148282?
Net Ideal Gas Heating Value	Btu/ft^3	6009.36	106.286	1150.30	2053.03	5949.33
Net Liquid Heating Value	Btu/lb	18671.2	1072.97	20508.7	19062.3	18674.2
Gross Ideal Gas Heating Value	Btu/ft^3	6422.50	163.024	1267.96	2236.06	6359.04
Gross Liquid Heating Value	Btu/lb	19965.9	2159.71	22613.7	20777.5	19971.4

Process Streams		VRU Disch	Water
Composition	**Status:**	Solved	Solved
Phase: **Total**	**From Block:**	VRU	--
	To Block:	MIX-105	MIX-106
Mole Fraction		%	%
Carbon Dioxide		0.400247	0*
Nitrogen		0.0131756	0*
Methane		17.1234	0*
Ethane		22.1533	0*
Propane		21.5551	0*
Isobutane		4.64458	0*
n-Butane		11.0033	0*
Isopentane		3.46121	0*
n-Pentane		3.88569	0*
i-Hexane		5.73767	0*
C7+		1.02049	0*
Water		9.00189	100*
Molar Flow		lbmol/h	lbmol/h
Carbon Dioxide		0.0615559	0*
Nitrogen		0.00202634	0*
Methane		2.63349	0*
Ethane		3.40707	0*
Propane		3.31506	0*
Isobutane		0.714313	0*
n-Butane		1.69225	0*
Isopentane		0.532316	0*
n-Pentane		0.597599	0*
i-Hexane		0.882424	0*
C7+		0.156946	0*
Water		1.38444	22709.3*
Mass Fraction		%	%
Carbon Dioxide		0.425285	0*
Nitrogen		0.00891132	0*
Methane		6.63232	0*
Ethane		16.0829	0*
Propane		22.9483	0*
Isobutane		6.51770	0*
n-Butane		15.4408	0*
Isopentane		6.02924	0*
n-Pentane		6.76866	0*
i-Hexane		11.9378	0*
C7+		3.29275	0*
Water		3.91544	100*
Mass Flow		lb/h	lb/h
Carbon Dioxide		2.70905	0*
Nitrogen		0.0567647	0*
Methane		42.2476	0*
Ethane		102.447	0*
Propane		146.180	0*
Isobutane		41.5174	0*
n-Butane		98.3570	0*
Isopentane		38.4060	0*
n-Pentane		43.1161	0*
i-Hexane		76.0432	0*
C7+		20.9747	0*
Water		24.9412	409114*

Process Streams		VRU Disch	Water
Composition	**Status:**	**Solved**	**Solved**
Phase: **Total**	**From Block:**	**VRU**	**--**
	To Block:	**MIX-105**	**MIX-106**
Property	**Units**		
Temperature	°F	102.684	105.4*
Pressure	psig	-1.43595	121.3*
Mole Fraction Vapor	%	98.1963	0
Mole Fraction Light Liquid	%	0.426184	100
Mole Fraction Heavy Liquid	%	1.37748	0
Phase Mole Fraction	%	100	100
Molecular Weight	lb/lbmol	41.4185	18.0153
Mass Density	lb/ft^3	0.0937240	61.8874
Molar Flow	lbmol/h	15.3795	22709.3
Mass Flow	lb/h	636.996	409114
Vapor Volumetric Flow	ft^3/h	6796.51	6610.62
Liquid Volumetric Flow	gpm	847.357	824.181
Std Vapor Volumetric Flow	MMSCFD	0.140070	206.827
Std Liquid Volumetric Flow	sgpm	2.51559	817.848*
Compressibility		0.970989	0.00652828
Specific Gravity			0.992282
API Gravity			9.98354
Enthalpy	Btu/h	-792878	-2.77917E+09
Mass Enthalpy	Btu/lb	-1244.72	-6793.15
Mass Cp	Btu/(lb*°F)	0.430323	0.976808
Ideal Gas CpCv Ratio		1.12762	1.32795
Dynamic Viscosity	cP		0.662536
Kinematic Viscosity	cSt		0.668323
Thermal Conductivity	Btu/(h*ft*°F)		0.362203
Surface Tension	lbf/ft		0.00476986
Net Ideal Gas Heating Value	Btu/ft^3	2075.67	0
Net Liquid Heating Value	Btu/lb	18835.5	-1059.76
Gross Ideal Gas Heating Value	Btu/ft^3	2260.40	50.3100
Gross Liquid Heating Value	Btu/lb	20528.4	0

14842 N Maple Drive
Kellyville, OK 74039
918 941 2166
www.heroflare.com

Harker
Megan Henke

Rev 0: 12/20/21
Flare Technology: Air Assist

Project Reference: Dual Tip Flare (FL-9110)
Tap Rock Resources

Flare Model: T60VT8

Hero Flare is pleased to have the opportunity to provide a firm proposal for the supply of our A+ Series smokeless flare technology to handle VRT+Tank Vapors+Heater Treater as well as high pressure sales gas.

The A+ series technology is fully Quad O compliant. Our systems come complete with our Hotspot Ignition ™ System which is a high stability pilot that can operate in the most extreme conditions. In addition, all flare systems are provided with a blower VFD to maximize efficency smokeless capacity across the full operating range.

The Hero Flare system offers the following:

- 40 CFR 60.18 EPA Compliant
- 98% Destruction Efficency
- Continously Monitored Pilot Ignition System with automatic re-light
- Blower VFD allows for optimium energy and combustion efficency

We look forward to working with you as this project progresses.

Best regards,

Craig Rosencutter
Office: (918) 941-2166 Ext. 101
Cell: (918) 344-4335
Email: craig.rosencutter@heroflare.com

Design Data Sheet

Design Flow Rate

Flow Rate Case	Flow Rate (MMSCFD)	MW	LHV (Btu/SCF)	Flare Inlet Pres. (psig)	Temp. (°F)
Inlet 1: H.P. Max Flow Rate	23	20	1200	30	Amb.
Inlet 1: H.P. Ringelmann 1 Smokeless	18	20	1200	20	
Inlet 2: L.P. Ringelmann 0 Smokeless	2.71	40	1,840	0.7	

Site Conditions

Wind	90 MPH	Temperature	0 to 120 °F	Elevation	14.5 Psi

Site Utilities Required

Pilot Gas (per pilot)	Natural Gas: 55 scfh @ 18 psig OR Propane: 25 scfh @ 9 psig (Clean, dry gas)	
Plant Air	No Plant Air Required	
Pilot Panel Electricity	Powered by Converter Located Inside Hero VFD Panel (480VAC to 120VAC)	
Blower / VFD Electricity	480VAC / 3PH	Blower Size: 15 HP

Emission / Flare Performance

Destruction	A 98% or greater hydrocarbon destruction efficiency will be achieved
Smokeless Rate	See Above Smokeless Rates
Max Radiation	Less than 500 Btu/hr/SF at normal & 1500 Btu/hr at max flow rates
Tip Velocity	Meets EPA regulations over full operating range

Pilot Construction

Electrical / Classification	120VAC / Non-Classified Area
Control Panel Type	Nema 4 (Painted)
Pilot(s)	Two (2) Stainless Steel Gas Pilot with Easy Glide Retraction System
Pilot Construction	Stainless Steel
Pilot Monitoring	Type K Thermcouple
Pilot Gas Connection	½" FNPT Located at Base of Flare

Flare Construction

Component	Dimension	Material
Stack Height	60'	A53B
Flare tip	2' Long	Stainless
HP Inlet	8" Flanged	Carbon
Tank Vapor Inlet	12" Flanged	Carbon

Certificate of Analysis

Number: 6030-23010267-004A

Artesia Laboratory
200 E Main St.
Artesia, NM 88210
Phone 575-746-3481

Jan. 26, 2023

Alex Batista
Taprock
602 Park Point Drive
Ste. 200
Golden, CO 80401

Station Name: Schlitz Fed Com 211H
Station Number: 7060643
Station Location: Taprock
Sample Point: Meter Run
Analyzed: 01/23/2023 11:35:03 by EBH

Sampled By: Jason Bealer
Sample Of: Liquid Spot
Sample Date: 01/20/2023 08:13
Sample Conditions: 121.3 psig, @ 105.4 °F
Method: GPA 2103M
Cylinder No: 1111-002300

Analytical Data

Components	Mol. %	MW	Wt. %	Sp. Gravity	L.V. %
Nitrogen	0.004	28.013	0.001	0.8069	0.001
Methane	1.981	16.043	0.267	0.3000	0.694
Carbon Dioxide	0.009	44.010	0.003	0.8172	0.003
Ethane	1.923	30.069	0.485	0.3563	1.063
Propane	3.148	44.096	1.165	0.5072	1.793
Iso-butane	0.948	58.122	0.462	0.5628	0.641
n-Butane	3.516	58.122	1.715	0.5842	2.291
Iso-pentane	1.804	72.149	1.092	0.6251	1.364
n-Pentane	2.776	72.149	1.681	0.6307	2.080
Hexanes	2.393	86.175	1.731	0.6658	2.028
Heptanes Plus	81.498	133.643	91.398	0.8103	88.042
	100.000		100.000		100.000

Calculated Physical Properties	Total	C7+
Specific Gravity at 60°F	0.7806	0.8103
API Gravity at 60°F	49.781	43.124
Molecular Weight	119.167	133.643
Pounds per Gallon (in Vacuum)	6.507	6.756
Pounds per Gallon (in Air)	6.500	6.748
Cu. Ft. Vapor per Gallon @ 14.696 psia	20.723	19.183

Hydrocarbon Laboratory Manager

Quality Assurance: The above analyses are performed in accordance with ASTM, UOP, GPA guidelines for quality assurance, unless otherwise stated.

Certificate of Analysis

Number: 6030-23010274-002A

Artesia Laboratory
200 E Main St.
Artesia, NM 88210
Phone 575-746-3481

Jan. 25, 2023

Alex Batista
Taprock
602 Park Point Drive
Ste. 200
Golden, CO 80401

Station Name:	Schlitz Fed Com B Sales	Sampled By:	Jason Bealer
Station Number:	7060652	Sample Of:	Gas Spot
Sample Point:	Meter Run	Sample Date:	01/21/2023 10:38
Formation:	Spot	Sample Conditions:	121.9 psig, @ 85.8 °F Ambient: 50 °F
County:	Eddy, NM	Effective Date:	01/21/2023 10:38
Type of Sample:	Spot-Cylinder	Method:	GPA-2261M
Heat Trace Used:	N/A	Cylinder No:	5030-03796
Sampling Method:	Fill and Purge	Instrument:	6030_GC6 (Inficon GC-3000 Micro)
Sampling Company:	SPL	Last Inst. Cal.:	01/24/2023 0:00 AM
		Analyzed:	01/25/2023 08:14:43 by EBH

Analytical Data

Components	Un-normalized Mol %	Mol. %	Wt. %	GPM at 14.73 psia		
Nitrogen	0.503	0.499	0.638		GPM TOTAL C2+	6.133
Methane	79.159	78.596	57.549		GPM TOTAL C3+	3.226
Carbon Dioxide	0.112	0.111	0.223		GPM TOTAL iC5+	1.120
Ethane	10.908	10.830	14.863	2.907		
Propane	4.740	4.706	9.471	1.301		
Iso-butane	0.825	0.819	2.173	0.269		
n-Butane	1.705	1.693	4.491	0.536		
Iso-pentane	0.544	0.540	1.778	0.198		
n-Pentane	0.596	0.592	1.949	0.215		
Hexanes Plus	1.626	1.614	6.865	0.707		
	100.718	100.000	100.000	6.133		

Calculated Physical Properties	**Total**	**C6+**
Relative Density Real Gas	0.7593	3.2176
Calculated Molecular Weight	21.91	93.19
Compressibility Factor	0.9959	
GPA 2172 Calculation:		
Calculated Gross BTU per ft³ @ 14.73 psia & 60°F		
Real Gas Dry BTU	1322	5141
Water Sat. Gas Base BTU	1300	5052
Ideal, Gross HV - Dry at 14.73 psia	1316.9	5141.1
Ideal, Gross HV - Wet	1294.0	5051.6
Net BTU Wet Gas - real gas	1180	

Hydrocarbon Laboratory Manager

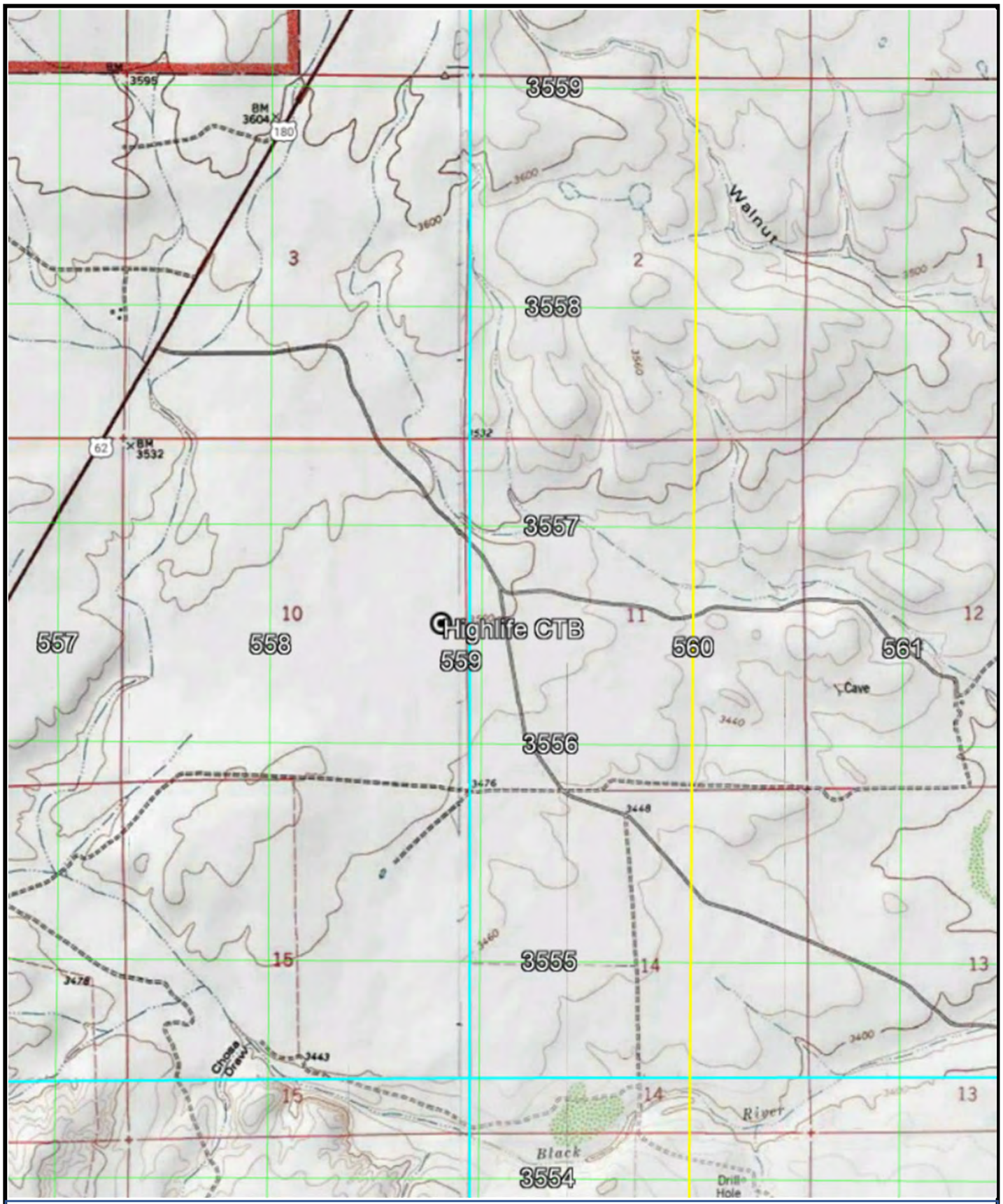
Quality Assurance: The above analyses are performed in accordance with ASTM, UOP, GPA guidelines for quality assurance, unless otherwise stated.

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	



CDH Consulting, LLC	Topographic Map May 2025	Tap Rock Operating, LLC High Life Upslope Fed Com CTB

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.

May 1, 2025

John Arthur Ballard
80 Ballard Ranch Road
Carlsbad, NM 88220

CERTIFIED MAIL – 7022 2410 0000 2510 9373

Subject: Air Permit Application Notice

Dear Mr. Ballard,

On behalf of Tap Rock Operating, LLC (Tap Rock), CDH Consulting, LLC (CDH) is providing this notice of air permit application. Comments can be submitted via methods provided in the attached Notice.

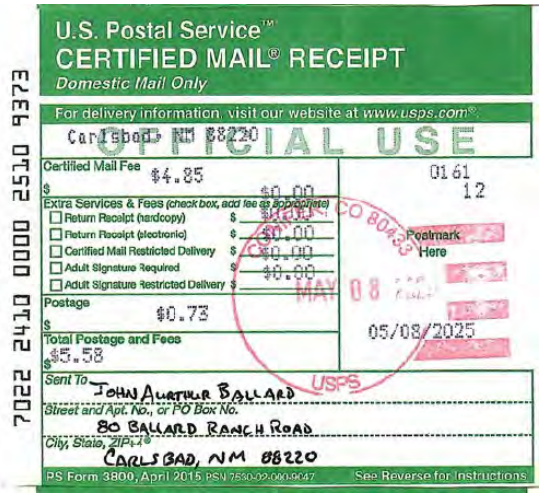
Please do not hesitate to contact me at (303) 594-7951 or cmartnez@cdhconsult.com if you have any questions or require additional information.

Sincerely,

CDH CONSULTING, LLC

Chris Martinez
Senior Air Quality Engineer

Attachment – Air Permit Notice


U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only
For delivery information, visit our website at www.usps.com®
Carlsbad, NM 88220
OFFICIAL USE
Certified Mail Fee $4.85
Extra Services & Fees (check box, add fee as appropriate)
Return Receipt (hardcopy) $0.00
Return Receipt (electronic) $0.00
Certified Mail Restricted Delivery $0.00
Adult Signature Required $0.00
Adult Signature Restricted Delivery $
Postage $0.73
Total Postage and Fees $5.58
01 61 12
Postmark Here
MAY 08
05/08/2025
Sent To JOHN ARTHUR BALLARD
Street and Apt. No., or PO Box No. 80 BALLARD RANCH ROAD
City, State, ZIP+4® CARLSBAD, NM 88220
PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions
7022 2410 0000 2510 9373

NOTICE OF AIR QUALITY PERMIT APPLICATION

Tap Rock Operating, LLC announces its application submittal to the New Mexico Environment Department for an air quality permit for the modification of its Oil and Gas facility. The expected date of application submittal to the Air Quality Bureau is May 9, 2025.

The exact location of the facility, known as the High Life Upslope Fed Com CTB, is 32.142922, -104.376364. The approximate location of this facility is 2.3 miles south of Whites City in Eddy County.

The proposed facility consists of an oil and gas central tank battery where oil, gas, and water will be separated for sale.

The estimated maximum quantities of any regulated air contaminant will be as follows in pounds 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
PM_{10}	0.76	3.25
$PM_{2.5}$	0.76	3.25
Sulfur Dioxide (SO_2)	0.01	0.11
Nitrogen Oxides (NO_X)	120.75	47.2
Carbon Monoxide (CO)	522.96	94.67
Volatile Organic Compounds (VOC)	407.94	89.08
Sum of all Hazardous Air Pollutant (HAPs)	2.07	9.09
Toxic Air Pollutant (TAP)	-	-
Green House Gas Emissions as Total CO_2e	-	< 75,000 mT

The operating schedule of the facility will be continuous (24 hr/day, 7 days/wk, 52 wks/yr)

The owner and/or operator of the Facility is:
Tap Rock Operating, LLC
523 Park Point Dr, Suite 200
Golden, CO 80401

If you have any questions or comments about construction or operation of this facility, and you want your comments to be made as a part of the permit review process, you must submit your comments in writing to this address:

Permit Programs Manager
New Mexico Environment Department
Air Quality Bureau
525 Camino de los Marquez, Suite 1,
Santa Fe, New Mexico, 87505-1816

Other comments and questions may be submitted verbally. (505) 476-4300; 1 800 224-7009

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

General information about air quality and the permitting process, and links to the regulations can be found at the Air Quality Bureau's website: www.env.nm.gov/air-quality/permitting-section -home-page/. The regulation dealing with public participation in the permit review process is 20.2.72.206 NMAC.

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.

May 1, 2025

Berry and Janice Lucas
P.O. Box 96,
Whites City, NM 88268

CERTIFIED MAIL – 7022 2410 0000 2510 9397

Subject: Air Permit Application Notice

Dear Berry & Janice,

On behalf of Tap Rock Operating, LLC (Tap Rock), CDH Consulting, LLC (CDH) is providing this notice of air permit application. Comments can be submitted via methods provided in the attached Notice.

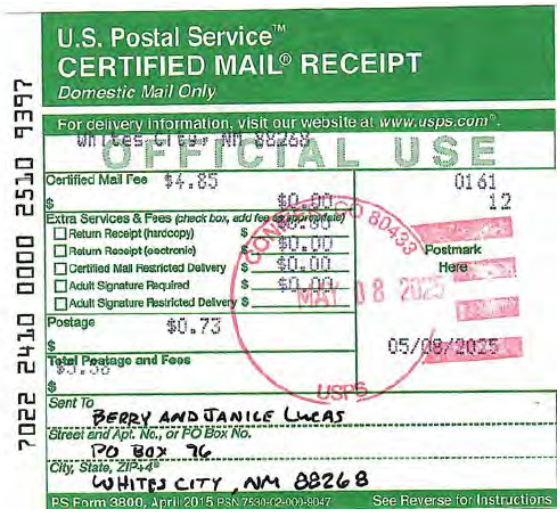
Please do not hesitate to contact me at (303) 594-7951 or cmartnez@cdhconsult.com if you have any questions or require additional information.

Sincerely,

CDH CONSULTING, LLC

Chris Martinez
Senior Air Quality Engineer

Attachment – Air Permit Notice


U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only
For delivery information, visit our website at www.usps.com®.
OFFICIAL USE
Certified Mail Fee $4.85
Extra Services & Fees (check box, add fee as appropriate)
Return Receipt (hardcopy) $0.00
Return Receipt (electronic) $0.00
Certified Mail Restricted Delivery $0.00
Adult Signature Required $0.00
Adult Signature Restricted Delivery $
Postage $0.73
Total Postage and Fees
Postmark Here
MAY 08 2025
05/08/2025
Sent To BERRY AND JANICE LUCAS
Street and Apt. No., or PO Box No. PO BOX 96
City, State, ZIP+4® WHITES CITY, NM 88268
PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions
7022 2410 0000 2510 9397

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Sum of all Hazardous Air Pollutant (HAPs)	2.07	9.09
Toxic Air Pollutant (TAP)	-	-
Green House Gas Emissions as Total CO_2e	-	< 75,000 mT

The operating schedule of the facility will be continuous (24 hr/day, 7 days/wk, 52 wks/yr)

The owner and/or operator of the Facility is:
Tap Rock Operating, LLC
523 Park Point Dr, Suite 200
Golden, CO 80401

If you have any questions or comments about construction or operation of this facility, and you want your comments to be made as a 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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May 1, 2025

Eddy County Clerk
c/o Cara Cooke
101 W Green Street
Carlsbad, NM 88220

CERTIFIED MAIL – 7022 2410 0000 2510 9380

Subject: Air Permit Application Notice

Dear Eddy County Clerk,

On behalf of Tap Rock Operating, LLC (Tap Rock), CDH Consulting, LLC (CDH) is providing this notice of air permit application. Comments can be submitted via methods provided in the attached Notice.

Please do not hesitate to contact me at (303) 594-7951 or cmartnez@cdhconsult.com if you have any questions or require additional information.

Sincerely,

CDH CONSULTING, LLC

Chris Martinez
Senior Air Quality Engineer

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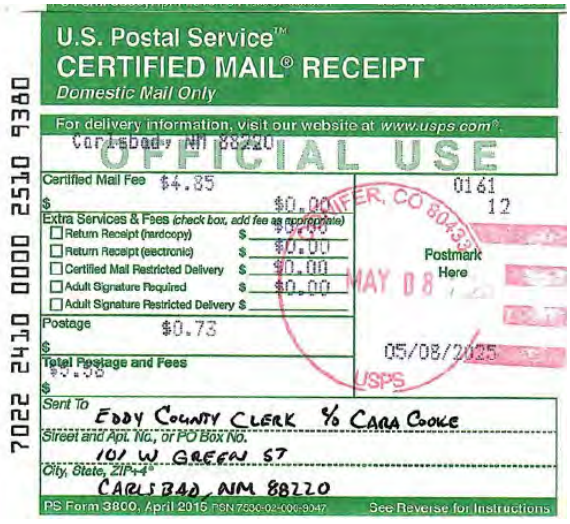

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Tracking Number:

70224100000025109397

Copy Add to Informed Delivery

Latest Update

Your item has been delivered and is available at a PO Box at 10:39 am on May 13, 2025 in WHITES CITY, NM 88268.

Get More Out of USPS Tracking:

USPS Tracking Plus®

Delivered

Delivered, PO Box

WHITES CITY, NM 88268
May 13, 2025, 10:39 am

See All Tracking History

What Do USPS Tracking Statuses Mean?

Text & Email Updates

USPS Tracking Plus®

Product Information

See Less

Tracking Number:

70224100000025109373

Copy Add to Informed Delivery

Latest Update

Your item has been delivered to an agent and left with an individual at the address at 11:47 am on May 14, 2025 in CARLSBAD, NM 88220.

Get More Out of USPS Tracking:

USPS Tracking Plus®

Delivered to Agent

Delivered to Agent, Left with Individual

CARLSBAD, NM 88220
May 14, 2025, 11:47 am

See All Tracking History

What Do USPS Tracking Statuses Mean?

See More

Tracking Number:

70224100000025109380

Copy Add to Informed Delivery

Latest Update

Your item was delivered to an individual at the address at 10:35 am on May 13, 2025 in CARLSBAD, NM 88220.

Get More Out of USPS Tracking:

USPS Tracking Plus®

Delivered

Delivered, Left with Individual

CARLSBAD, NM 88220
May 13, 2025, 10:35 am

See All Tracking History

What Do USPS Tracking Statuses Mean?

COUNTY NOTICE

May 8, 2025

Eddy County Clerk
c/o Cara Cooke
101 W Greene Street
Carlsbad, NM 88220

LANDOWNER NOTICE (within ½ mile)

May 8, 2025

Berry and Janice Lucas
P.O. Box 96,
Whites City, NM 88268

John Arthur Ballard
80 Ballard Ranch Road
Carlsbad, NM 88220

NEWSPAPER PUBLICATION

Carlsbad News-Argus (May 15, 2025)

- Legal Notice
- Display Ad

POSTINGS

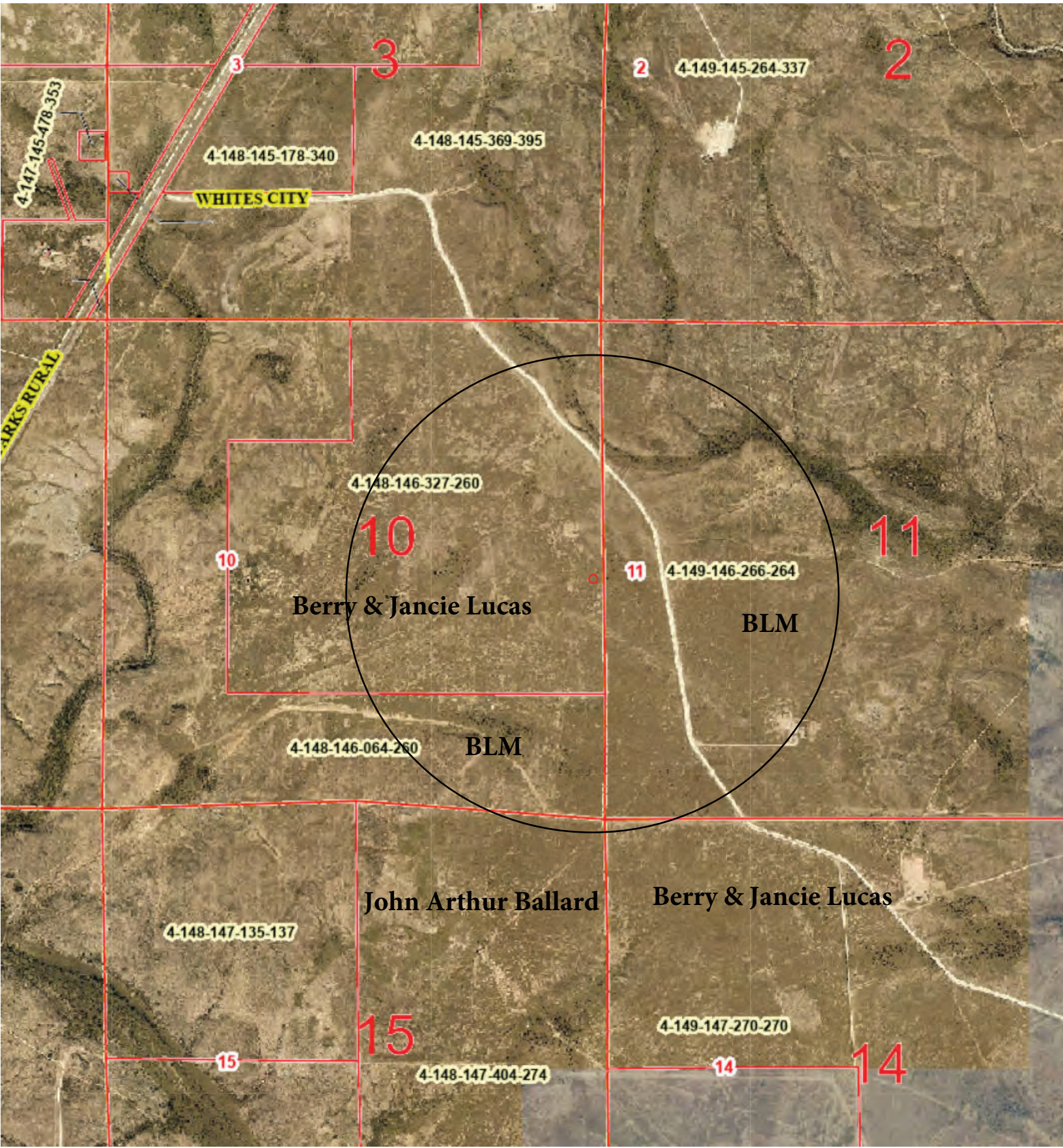
May 8, 2025

Site location – High Life Upslope CTB

US Post Office
23 Carlsbad Cavern Hwy
Whites City, NM 88268

Carlsbad Municipal Building
101 N Halagueno St
Carlsbad, NM 88220

Carlsbad Public Library
101 S Halagueno St
Carlsbad, NM 88220


3
3
2
4-149-145-264-337
2
4-147-145-478-353
4-148-145-178-340
4-148-145-369-395
WHITES CITY
ARKS RURAL
4-148-146-327-260
10
10
11
4-149-146-266-264
11
Berry & Jancie Lucas
BLM
4-148-146-064-260
BLM
John Arthur Ballard
Berry & Jancie Lucas
4-148-147-135-137
15
4-149-147-270-270
15
4-148-147-404-274
14
14

Property Record Card

Eddy Assessor

LUCAS, BERRY & JANICE (JT)

PO BOX 96
WHITE CITY, NM 88268-0096

Account: R037505

Tax Area: CO_NR - CARLSBAD-OUT (Nonresidential)

Acres: 320.000

Parcel: 4-148-146-327-260

Situs Address:
1212 NATIONAL PARKS HIGHWAY RURAL
CARLSBAD, 88220

Value Summary

Value By:	Market	Override
Land (1)	$720	N/A
Total	**$720**	**$720**

Legal Description

Quarter: NE S: 10 T: 25S R: 25E Quarter: NW S: 10 T: 25S R: 25E Quarter: SW S: 10 T: 25S R: 25E Quarter: SE S: 10 T: 25S R: 25E NESW, NE, N2SE, SENW

Public Remarks

Entry Date	Model	Remark
12/23/2008		BOOK D 762 PG 917
07/15/2024		AG APPLICATION ON FILE - LIVESTOCK ACCT # P075610

Land Occurrence 1

Property Code	0400 - AGRICULTURAL LAND	Land Code	121_2_25 - Grazing Land B - 2.25
Description	AGRICULTURAL LAND	Measure	A - Acres

Abstract Summary

Code	Classification	Actual Value Value	Taxable Value	Actual Value Override	Taxable Override
0400	AGRICULTURAL LAND	$720	$240	NA	NA
Total		**$720**	**$240**	**NA**	**NA**

Property Record Card

Eddy Assessor

LUCAS, BERRY & JANICE (JT)

PO BOX 96
WHITE CITY, NM 88268-0096

Account: R091854

Tax Area: CO_NR - CARLSBAD-OUT (Nonresidential)

Acres: 480.000

Parcel: 4-149-147-270-270

Situs Address:
E OF 1212 NATIONAL PARKS HIGHWAY RURAL
CARLSBAD, 88220

Value Summary

Value By:	Market	Override
Land (1)	$1,080	N/A
Total	**$1,080**	**$1,080**

Legal Description

Quarter: NE S: 14 T: 25S R: 25E Quarter: NW S: 14 T: 25S R: 25E Quarter: SE S: 14 T: 25S R: 25E NW, E2

Public Remarks

Entry Date	Model	Remark
12/23/2008		BOOK D 762 PG 917
07/15/2024		AG APPLICATION ON FILE - LIVESTOCK ACCT # P075610

Land Occurrence 1

Property Code	0400 - AGRICULTURAL LAND	Land Code	121_2_25 - Grazing Land B - 2.25
Description	AGRICULTURAL LAND	Measure	A - Acres

Abstract Summary

Code	Classification	Actual Value Value	Taxable Value	Actual Value Override	Taxable Override
0400	AGRICULTURAL LAND	$1,080	$360	NA	NA
Total		**$1,080**	**$360**	**NA**	**NA**

Property Record Card

Eddy Assessor

BUREAU OF LAND MANAGEMENT

UNITED STATES OF AMERICA

Account: R091826

Tax Area: CO_NR - CARLSBAD-OUT (Nonresidential)

Acres: 640.000

Parcel: 4-149-146-266-264

Situs Address:
WHITES CITY ROAD
CARLSBAD, 88220

Value Summary

Value By:	Market	Override
Land (1)	$1,440	N/A
Total	**$1,440**	**$1,440**

Legal Description

Quarter: NE S: 11 T: 25S R: 25E Quarter: NW S: 11 T: 25S R: 25E Quarter: SW S: 11 T: 25S R: 25E Quarter: SE S: 11 T: 25S R: 25E ALL EXEMPT

Public Remarks

Entry Date	Model	Remark

Land Occurrence 1

Property Code	9400 - EXEMPT AGRICULTURAL LAND	Land Code	138_2_25 - Grazing B Federal - 2.25
Description	AGRICULTURAL LAND	Measure	A - Acres

Abstract Summary

Code	Classification	Actual Value Value	Taxable Value	Actual Value Override	Taxable Override
9400	EXEMPT AGRICULTURAL LAND	$1,440	$480	NA	NA
Total		**$1,440**	**$480**	**NA**	**NA**

Property Record Card

Eddy Assessor

BUREAU OF LAND MANAGEMENT

UNITED STATES OF AMERICA

Account: R075070

Tax Area: CO_NR - CARLSBAD-OUT (Nonresidential)

Acres: 320.000

Parcel: 4-148-146-064-260

Situs Address:
E OF R1375 NATIONAL PARKS HIGHWAY RURAL
CARLSBAD, 88220

Value Summary

Value By:	Market	Override
Land (1)	$720	N/A
Total	**$720**	**$720**

Legal Description

Quarter: NW S: 10 T: 25S R: 25E Quarter: SW S: 10 T: 25S R: 25E Quarter: SE S: 10 T: 25S R: 25E W2W2, NENW, S2SE, SESW EXEMPT

Public Remarks

Entry Date	Model	Remark

Land Occurrence 1

Property Code	9400 - EXEMPT AGRICULTURAL LAND	Land Code	138_2_25 - Grazing B Federal - 2.25
Description	AGRICULTURAL LAND	Measure	A - Acres

Abstract Summary

Code	Classification	Actual Value Value	Taxable Value	Actual Value Override	Taxable Override
9400	EXEMPT AGRICULTURAL LAND	$720	$240	NA	NA
Total		**$720**	**$240**	**NA**	**NA**

Property Record Card

Eddy Assessor

BALLARD, JOHN ARTHUR
80 BALLARD RANCH RD
CARLSBAD, NM 88220

Account: R091858
Tax Area: CO_NR - CARLSBAD-OUT (Nonresidential)
Acres: 320.000

Parcel: 4-148-147-404-274
Situs Address:
E OF 1212 NATIONAL PARKS HIGHWAY
CARLSBAD, 88220

Value Summary

Value By:	Market	Override
Land (1)	$720	N/A
Total	**$720**	**$720**

Legal Description

Quarter: NE S: 15 T: 25S R: 25E Quarter: SE S: 15 T: 25S R: 25E E2

Public Remarks

Entry Date	Model	Remark
		BOOK 115 PG 1195

Land Occurrence 1

Property Code	0400 - AGRICULTURAL LAND	Land Code	121_2_25 - Grazing Land B - 2.25
Description	AGRICULTURAL LAND	Measure	A - Acres

Abstract Summary

Code	Classification	Actual Value Value	Taxable Value	Actual Value Override	Taxable Override
0400	AGRICULTURAL LAND	$720	$240	NA	NA
Total		**$720**	**$240**	**NA**	**NA**

General Posting of Notices – Certification

I, **Bill Ramsey**, the undersigned, certify that on May 8, 2025, posted a true and correct copy of the attached Public Notice in the following publicly accessible and conspicuous places in **Carlsbad & Whites City** of **Eddy** County, State of New Mexico on the following dates:

1. Facility entrance May 8, 2025
2. US Post Office May 8, 2025
   23 Carlsbad Cavern Hwy
   Whites City, NM 88268
3. Carlsbad Municipal Building May 8, 2025
   101 N Halagueno St.
   Carlsbad, NM 88220
4. Carlsbad Public Library May 8, 2025
   101 S Halagueno St.
   Carlsbad, NM 88220

Signed this 14th day of May, 2025.

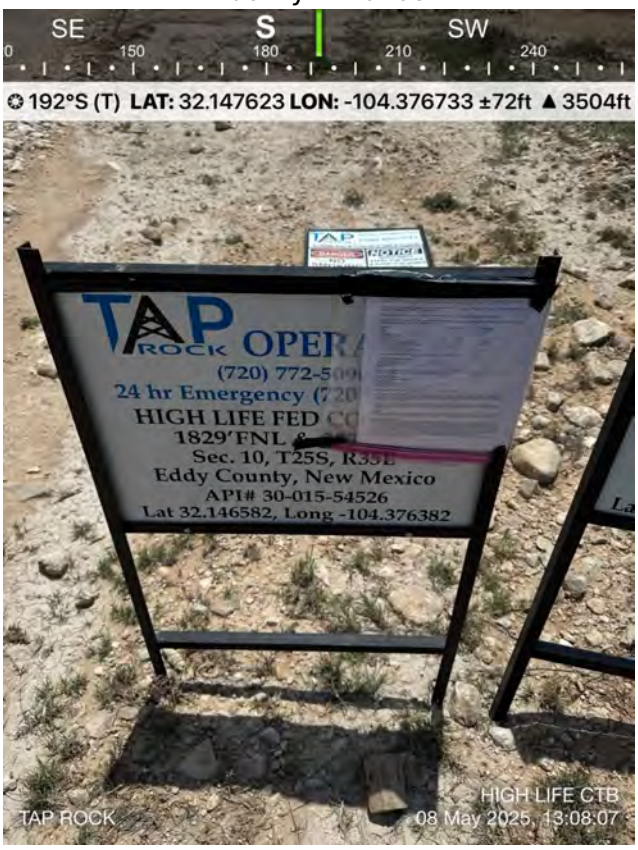
Signature

5/14/2025
Date

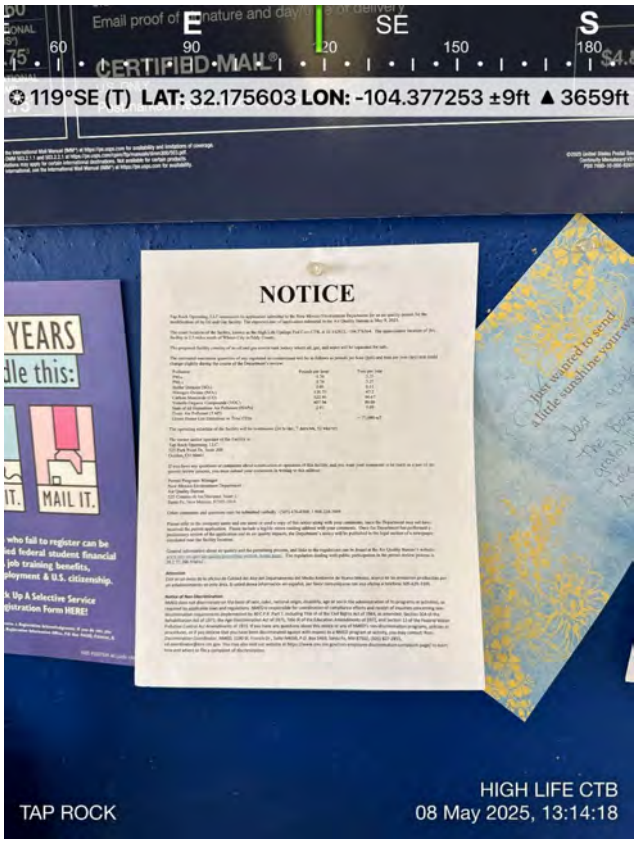
Bill Ramsey
Printed Name

Sr. Environmental and Regulatory Specialist
Title {APPLICANT OR RELATIONSHIP TO APPLICANT}

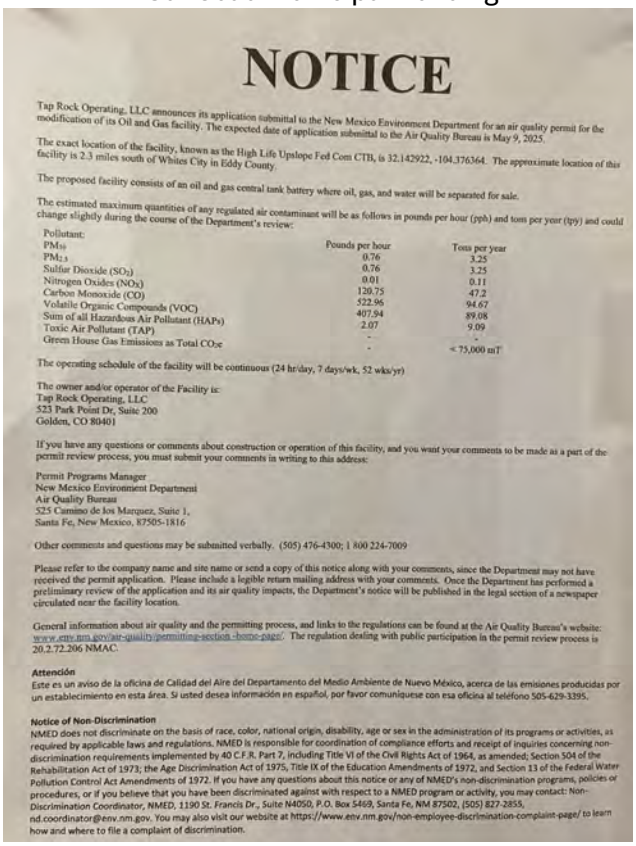
Facility Entrance



Whites City Post Office



Carlsbad Municipal Building



NOTICE

Tap Rock Operating, LLC announces its application submittal to the New Mexico Environment Department for an air quality permit for the modification of its Oil and Gas facility. The expected date of application submittal to the Air Quality Bureau is May 9, 2025.

The exact location of the facility, known as the High Life Upslope Fed Com CTB, is 32.142922, -104.376364. The approximate location of this facility is 2.3 miles south of Whites City in Eddy County.

The proposed facility consists of an oil and gas central tank battery where oil, gas, and water will be separated for sale.

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

Pollutant:	Pounds per hour	Tons per year
PM_{10}	0.76	3.25
$PM_{2.5}$	0.76	3.25
Sulfur Dioxide (SO_2)	0.01	0.11
Nitrogen Oxides (NOx)	120.75	47.2
Carbon Monoxide (CO)	522.96	94.67
Volatile Organic Compounds (VOC)	407.94	89.08
Sum of all Hazardous Air Pollutant (HAPs)	2.07	9.09
Toxic Air Pollutant (TAP)	-	-
Green House Gas Emissions as Total CO_2e	-	< 75,000 mT

The operating schedule of the facility will be continuous (24 hr/day, 7 days/wk, 52 wks/yr)

The owner and/or operator of the Facility is:
Tap Rock Operating, LLC
523 Park Point Dr, Suite 200
Golden, CO 80401

If you have any questions or comments about construction or operation of this facility, and you want your comments to be made as a part of the permit review process, you must submit your comments in writing to this address:

Permit Programs Manager
New Mexico Environment Department
Air Quality Bureau
525 Camino de los Marquez, Suite 1,
Santa Fe, New Mexico, 87505-1816

Other comments and questions may be submitted verbally. (505) 476-4300; 1 800 224-7009

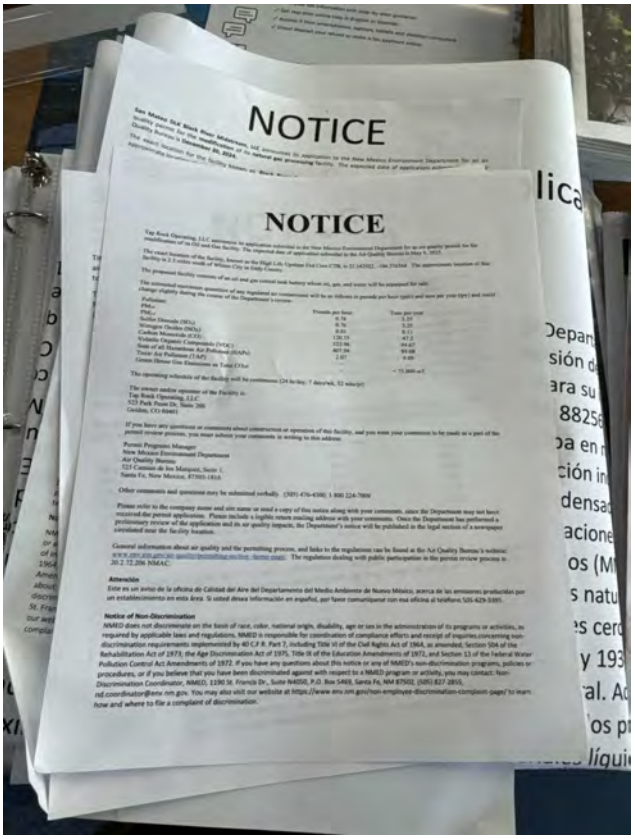
Please refer to the company name and site name or send a copy of this notice along with your comments, since the Department may not have received the permit application. Please include a legible return mailing address with your comments. Once the Department has performed a preliminary review of the application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

General information about air quality and the permitting process, and links to the regulations can be found at the Air Quality Bureau's website: www.env.nm.gov/air-quality/permitting-section -home-page/. The regulation dealing with public participation in the permit review process is 20.2.72.206 NMAC.

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.

Carlsbad Public Library



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Public Service Announcement (May 2025)

Tap Rock Operating, LLC is applying for an air permit with the New Mexico Environmental Department's Air Quality Bureau. The permit is for the modification of the High Life Upslope central tank battery located approximately 2.3 miles south of Whites City, in Eddy County. Notices required by the Bureau have been posted at the following locations.

The Carlsbad Municipal Building,

The Carlsbad Public Library, and

The U.S. Post Office in Whites City.

Comments may be directed to the New Mexico Environmental Department via telephone at (505) 476-4300 or (800) 224-7009.

Submittal of Public Service Announcement – Certification

I, **Bill Ramsey**, the undersigned, certify that on May 8, 2025, a public service announcement was submitted to KATK 92.1 FM that serves the Carlsbad and Whites City area of Eddy County, New Mexico, in which the source is or is proposed to be located and that KATK 92.1 FM responded that it would air the announcement.

Signed this 14th day of May, 2025.

Signature

5/14/2025
Date

Bill Ramsey
Printed Name

Sr. Environmental and Regulatory Specialist
Title {APPLICANT OR RELATIONSHIP TO APPLICANT}

CURRENT-ARGUS CLASSIFIEDS

To Advertise:
Classifieds: classifieds@currentargus.com
Public Notices/Legals: legals@currentargus.com
Phone: 575.628.5501

All classifieds are subject to applicable rate card, copies of which are available from our Advertising Dept. All ads are subject to approval before publication. Current-Argus reserves the right to edit, refuse, reject, classify or cancel any at any time. Errors must be reported in the first day of publication. Current Argus shall not be liable for any loss or expense that results from an error in or omission of an advertisement. No refunds for early cancellations of order.

Announcements Displays

Announcements

NOTICE!!! FREE AD!
Call 888-986-9877.
-If you have an item, asking less than $500, we will publish it in the paper for four weeks for free.
-Five lines or less.
-Must include price and phone number. No websites.
-You may also email: classifieds@currentargus.com
-Private party ads only (no commercial, business, service or pet ads)
-This offer is subject to change without prior notice.

Auction Displays

Garage Sales

Rummage Sale. May 17th @ 8:00 am- Sold. **129 Kircher St. Carlsbad**, NM. Clothes, Toys, Decor, Appliances, and much more!

BUSINESS & SERVICES

Tree Services

ROADRUNNERS TREE SERVICES. Fully insured. Quality work. Free estimates. 575-703-1604.

PUBLIC NOTICE

Public Notices

FIFTH JUDICIAL DISTRICT COURT COUNTY OF EDDY STATE OF NEW MEXICO D-503-PB-2025-00038

IN THE MATTER OF THE ESTATE OF LAURETTA SCHOTZ, also known as LAURIE SCHOTZ, DECEASED

NOTICE TO CREDITORS

Michael Schotz has been appointed Personal Representative for the Estate of **Lauretta Schotz**, also known as Laurie Schotz, Deceased. All persons having claims against this estate are required to present their claims within four (4) months after the date of the first publication of this notice, or the claims will be forever barred. Claims must be presented either to the undersigned Personal Representative in care of Hinkle Shanor LLP (Douglas L. Lunsford and Gabriel S. Dumea) P.O. Box 10, Roswell, New Mexico 88202-0010, or filed with the District Court of Eddy County, New Mexico.

Dated this 23 day of April, 2025.

/s/ Michael Schotz,
Personal Representative

Submitted by:
HINKLE SHANOR LLP
By /s/ Douglas Lunsford
Douglas L. Lunsford
Gabriel S. Dumea
P.O. Box 10
Roswell, NM 88202-0010
Attorneys for the Estate

Published in the Carlsbad Current-Argus May 15, 22 & 29, 2025.
#47410

PUBLIC NOITCE

I, Janice Winton, am bringing forth a Land Patent benefit for the following parcel located at 1508 Mission Avenue, New Mexico Republic, usA NON-DOMESTIC.
Any party interested in viewing or challenging this claim can view the associated documents here: https://davidruth7.wixsite.com/website-54/janice-winton

Published in the Carlsbad Current-Argus May 15, 22, 29, June 5, 12, 19, 26, July 3, 10 & 17, 2025.
#47060

Classified shoppers aren't desperate... just smart consumers that like to save money.

Request for Proposal

Southeast New Mexico College 1500 University Dr. Carlsbad NM 88220 is soliciting proposals from qualified firms to provide **Construction and Site Work** for (1) One New Energy Trades and Technologies Building. The request for proposals will be issued on April 21, 2025. Interested parties may visit SENMC.edu for more details and instructions on submitting proposals. Proposals must be received by SENMC Procurement Services no later than **5:00 pm MST** on **June 26, 2025**. Proposals received after this deadline will not be accepted. Please reference Request for Proposal #202504001.

Published in the Carlsbad Current-Argus May 1, 15, 29 & June 12, 2015.
#45380

STATE OF NEW MEXICO COUNTY OF EDDY FIFTH JUDICIAL DISTRICT D-503-PB-2025-00044

IN THE MATTER OF THE WILL OF HENRY E. McDONALD, also known as ENRICH HENRY McDONALD, Deceased.

NOTICE TO CREDITORS

Cas F. Tabor has been appointed Personal Representative of the Estate of Henry E. McDonald, deceased. All persons having claims against this estate are required to present their claims within four months after the date of the first publication of this notice or the claims will be forever barred. Claims must be presented either to the Personal Representative, Cas F. Tabor, Tabor Law Firm, LLC, P.O. Box 1718, Carlsbad, New Mexico 88221-1718 or filed with the Eddy County District Court, 102 N. Canal St., Ste 240, Carlsbad, NM 88220

DATED this 1st day of May, 2025.

/s/ Cas F. Tabor
112 North Canyon
P.O. Box 1718
Carlsbad, New Mexico
88221-1718

David R. Vandiver
VANDIVER
& BOWMAN, P. C.
611 West Mahone, Suite E

Classified shoppers are smart consumers. The ones with money call the good ads first.

Artesia, New Mexico
88210-2075
(575) 746-9841
Attorneys for
Personal Representative

Published in the Carlsbad Current-Argus May 8, 15 & 22, 2025.
#46330

There is a NEW group of people EVERY day, looking for a DEAL in the classifieds.

EDDY COUNTY, NM

EMPLOYMENT OPPORTUNITIES
101 W. GREENE ST – CARLSBAD, NM 88220
575-887-9511
www.eddycounty.org

OPEN UNTIL FILLED:
IT Specialist I - $24.35 - $26.87 per hour DOE
Staff Accountant - $28.93 - $31.93 per hour DOE
ECDC Licensed Mental Health Professional – $39.86 - $41.87 per hour DOE
ECDC Transport Officer - $23.75 - $26.21 per hour DOE
Detention Nurse – FT - $39.86 - $43.99 per hour DOE*
Detention Nurse – PT - $39.86 - $43.99 per hour DOE*
Detention Officer - $23.75 - $26.21 per hour DOE*
Firefighter/EMT – Uncertified - $20.49 per hour
Firefighter/EMT – Certified - $21.53 - $23.75 per hour DOE
Deputy Sheriff II – Certified - $28.23 - $31.15 per hour DOE
Deputy Sheriff II – Domestic Violence Enhanced Response Team (DVERT) - $28.23 - $31.15 per hour Certified DOE
Maintenance Tech I - $18.12 - $19.99 per hour DOE
Custodian - $16.83 - $18.57 per hour DOE
Light Equipment Operator – Carlsbad/ Artesia - $19.99 - $22.06 per hour DOE
Light Equipment/Roll Off Operator - Carlsbad - $19.99 - $22.06 per hour DOE
Mechanic – Carlsbad - $23.18 - $25.58 per hour DOE
Summer Mower – Carlsbad/Artesia - $16.83 - $18.57 per hour DOE
Landfill Laborer - $16.83 - $18.57 per hour DOE

SIGN ON INCENTIVE BONUS OF $5,000 FOR FULL-TIME DETENTION OFFICERS AND FULL-TIME/PART-TIME DETENTION NURSES

Excellent Benefits - paid vacation, sick leave and holiday pay; PERA retirement plans; health insurance paid at 100% for full-time employees and at 60% for their dependents.

Detailed job specifications and applications may be obtained **at www.eddycounty.org.**

EQUAL OPPORTUNITY EMPLOYER M/F V/D

NOTICE OF AIR QUALITY PERMIT APPLICATION

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Published in the Carlsbad Current-Argus May 15, 2025.
#47070

New streaming service ESPN to cost $29.99 per month

(Reuters) - Walt Disney DIS.N said on Tuesday its new streaming service would be named ESPN and cost $29.99 per month, as the media company aims to tap sports fans who have never subscribed to traditional television.

The new service, which is set for launch this fall, will provide access to all ESPN networks, including professional and college football and basketball games.

"We are providing everything ESPN has to offer directly to fans and all in one place," ESPN Chairman Jimmy Pitaro said.

Media companies, including Paramount Global PARA.O, Comcast CMCSA.O and Disney, are doubling down on sports content to curb subscriber churn, boost engagement and bolster their ad-supported tiers in a competitive market.

The announcement comes a day after Fox Corp FOXA.Osaid its new subscription-based streaming service would be called "Fox One", whichwas set to launch before the fall American football season.

Disney said subscribers would be given an option to bundle ESPN with Disney+ and Hulu streaming services at $35.99 per month, with a promotional price of $29.99 monthly for the first year.

Existing ESPN+ subscribers will automatically become subscribers to the new service, based on their current subscription level, the company said.

AFFIDAVIT OF PUBLICATION

CARLSBAD CURRENT-ARGUS
PO BOX 507
HUTCHINSON, KS 67504-0507

STATE OF NEW MEXICO } SS
COUNTY OF EDDY }

Account Number: 1015
Ad Number: 47070
Description: High Life - Tap Rock Operating
Ad Cost: $318.97

Sherry Groves, being first duly sworn, says:

That she is the Agent of the the Carlsbad Current-Argus, a Weekly newspaper of general circulation, printed and published in Carlsbad, Eddy County, New Mexico; that the publication, a copy of which is attached hereto, was published in said newspaper on the following dates:

May 15, 2025

That said newspaper was regularly issued and circulated on those dates.
SIGNED:

Sherry Groves

Agent

Subscribed to and sworn to me this 15th day of May 2025.

Leanne Kaufenberg

Leanne Kaufenberg, Notary Public, Redwood County Minnesota

CHRIS MARTINEZ
CDH CONSULTING LLC
9446 CLERMONT ST
DENVER, CO 80229
cmartinez@cdhconsult.com

LEANNE JOY KAUFENBERG
Notary Public
State of Minnesota
My Commission Expires
January 31, 2030

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Nitrogen Oxides (NOX)	120.75	47.2
Carbon Monoxide (CO)	522.96	94.67
Volatile Organic Compounds (VOC)	407.94	89.08
Sum of all Hazardous Air Pollutant (HAPs)	2.07	9.09
Toxic Air Pollutant (TAP)	-	-
Green House Gas Emissions as Total CO2e	-	< 75,000 mT

The operating schedule of the facility will be continuous (24 hr/day, 7 days/wk, 52 wks/yr)

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#47070

FEDERAL,

Continued from A1

federal funding cuts.

"We shouldn't be singled out," Townsend said. "The president has the authority to act. If there are cuts, I want to make sure we aren't impacted more than others."

Carlsbad Mayor Rick Lopez, a Republican who said he voted for Trump in the 2024 election, said potential staff cuts at federal agencies were troubling, as Carlsbad is home to several federal agencies that oversee its key industries: oil and gas, nuclear waste, and tourism.

"It's a dilemma," he said. "These kinds of uncertainties are tough."

Ruidoso Mayor Lynn Crawford said despite Trump's actions, he expected the village would still receive relief dollars from the federal government he said it was entitled to via disaster declaration enacted by the Federal Emergency Management Agency (FEMA) in the wake of South Fork and Salt Fires.

The fires burned about 17,000 acres in spring 2024, leading to at least two deaths and destroying hundreds of homes in the Ruidoso area, subsequently causing devastating floods int he area.

Crawford did agree though that defying Trump's orders could interrupt other federal funds for the state.

'I can see where some funding could be interrupted. However, we are under a Presidential Disaster #4795 and that is not so much a political issue," he said.

"I can see that interfering with (Immigration and Customs Enforcement), Border Patrol or other agencies might get your funding stopped."

Meanwhile, Gov. Michelle Lujan Grisham indicated in recent months that she could call a special session before the regular 2026 Legislative Session to potentially deal with such impacts.

But Townsend maintained that the best policy was to follow Trump's orders.

"There are certain things President Trump asked the states to do," Townsend said, pointing to Trump's calls for states to block transgender women from playing women's sports and to enforce federal immigration laws. "We did the sanctuary thing, with was directly against him. I think those things will have direct consequences."

While New Mexico has no official state law declaring it a "sanctuary state" for undocumented residents of the U.S., major cities such as Albuquerque and Santa Fe have enacted policies to limit local compliance with federal immigration enforcement, according to a Feb. 18 report from the University of New Mexico.

On April 15, Lujan Grisham and four other Democrat governors – JB Pritzker of Illinois, Jared Polis of Colorado, Wes Moore of Maryland and Tina Kotek of Oregon – sent a letter to the Trump-led Centers for Medicare & Medicaid Services, opposing a rule proposed by the agency to increase federal oversight over health care insurance coverage under the Affordable Care Act.

The rule would have the effect, the governors wrote, of blocking states from regulating their own health care markets.

"The ACA marketplace has provided stable, affordable coverage for New Mexico families working hard to move up the economic ladder, ensuring continuity of care as incomes change," Lujan Grisham said in a statement.

"This proposed rule threatens to disrupt that progress, shift costs to New Mexicans, create unnecessary administrative barriers, and limit access to essential health services, ultimately hurting working families across our state."

'You can't run out of money.'

At the federally owned Waste Isolation Pilot Plant about 30 miles east of Carlsbad the Department of Energy already saw a 25% reduction in its federal workforce, mostly through DOGE-led voluntary terminations occurring when employees accepted buyouts allowing them to stop working in February but collect a salary through September.

WIPP is where the federal government disposes of transuranic nuclear waste (TRU), which is clothing materials, equipment and other debris irradiated during nuclear activities.

Most of the work is undertaken by Salado Isolation Mining Contractors, a contractor hired by the Department of Energy, which leads operations at WIPP. But about 50 of the 1,500 WIPP workers across Eddy and Lea counties are federal, employed by U.S. Department of Energy's Carlsbad Field Office.

Reductions in the federal staff, along with hiring freezes that could be imposed on the budget that funds Salado could affect the long-term health of the WIPP facility, a major employer in the area, Lopez said. Along with being mayor of Carlsbad, Lopez also works at the WIPP site.

"Anyone could take it," Lopez said of the buyouts. "You could potentially lose an entire department."

He also alluded to the termination of 14 workers at Carlsbad Caverns National Park via DOGE in February, leading to the cancellation of ranger-guided tours and limited visitation hours. Lopez said he was unaware of any staff cuts at the Bureau of Land Management, which oversees oil and gas operations on federal land in the region.

Bureau officials declined to comment on any possible staff cuts at the agency.

What is certain, Townsend said, was that if the state skirts policy preferences coming from the White House, it could be in danger of retaliatory downsizing.

"Most of these things, we will have the ability to work around," he said of reductions tied to DOGE's activities, and other systemic reductions in spending. "But I think it's problematic to go against his initiatives. It's ludicrous to poke the bear and not expect him to bite you."

And while he expected the Village of Ruidoso to receive the federal funds needed to rebuild from the fires and future disasters, Crawford said he welcomes agency reforms under Trump.

"Of course, we are working on long term project planning that will need future funding, all conversations indicate disaster funding for FEMA projects will be coming," Crawford said.

"There is a consensus that FEMA will be overhauled, personally I think that is a good thing."

But concerns lingered for Lopez that the resulting cuts could also impact infrastructure grants the city relies on for road repairs and other improvements. He said the region that pumps enough oil to fund almost half of the state budget already sees little local return from Santa Fe.

"With oil and gas growing, we can't keep up with the roads as it is," Lopez said. "We don't always get a lot of state money this way. It's frustrating, but you can't run out of money. That's not how it works."

ART,

Continued from A1

his style. He seems like a cool guy. I've wanted to do a Morang exhibit since I first started here at the front desk."

The collection includes about 15 of Morang's paintings, prints and lithographs displayed in the museum's Mead Gallery, which is named after Carlsbad-based artist Roderick Mead and is used to spotlight local and regional works. The exhibit opened May 9 and runs until Aug. 31.

Lucas said the pieces showcase Morang's unique styles and will help educate the community on New Mexico's renowned art history.

"He was kind of known as a representative of the New Mexico art culture," Lucas said.

Lucas pointed to Morang's use of colors and texture in his paintings, with heavily defined brush strokes that blend into hues when the viewer takes several steps back.

But from inches away, one can see the wide range of colors and paints used in the designs – mostly landscapes and structures with a distinct "New Mexican theme," Lucas said. "He was a master of color. It's really neat to get up close and look at the texture of his work and the amount of color he used."

A 'true renaissance man'

Painting wasn't Morang's first passion. He played violin in his early days growing up in Maine and wrote short stories and articles – publishing several of his writings in newspapers and magazines in the area.

Morang suffered frequent illness after being infected with tuberculosis as a child and moved to New Mexico in 1937 with his wife Dorothy, on advice from a doctor who suggested he needed a warmer, drier climate to recover.

The artist quickly became known in New Mexico for his dynamic paintings and artwork filled with colors and textures that stood out among the galleries and exhibits that define Santa Fe.

"He was a true renaissance man," Lucas said. "He had an artistic restlessness about him. It kind of led to him having a life of extraordinary expression."

Before he died in a 1958 house fire at age 56, Morang came to Carlsbad at least twice to show his work, in 1943 and 1947.

The gallery that last week welcomed his return was part of a broader push by the museum to embrace local and New Mexico artwork, Van Scotter said.

"He just seems like such an interesting character worth highlighting," Van Scotter said. "This exhibit is cool because he's mostly known for his oil paintings, but we have some of the other media he used."

The museum is also setting up an exhibit this weekend for the Carlsbad Area Art Association, where local creators can submit their work to the Artist Gallery downtown on Canyon Street to be displayed at the museum.

The deadline for submissions is Saturday, May 17. The exhibit will be on display from May 19 until June 14.

That will be followed by a retrospective on Roderick Mead in the museum's main hall from Oct. 10 to Jan. 9, 2026.

"The more context we can put with our exhibits, the better," Van Scotter said. "If you travel to Santa Fe, you can't throw a stick without hitting an art gallery. We try to do that here with art education."

Managing Editor Adrian Hedden can be reached at 575-628-5516, or @AdrianHedden on the social media platform X.

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#47080

The New Mexico Law Offices of the Public Defender (LOPD) provides legal services to qualified adult and juvenile criminal clients in a professional and skilled manner in accordance with the Sixth Amendment to United States Constitution, Art. II., Section 14 of the New Mexico State Constitution, Gideon v. Wainright, 372 U.S. 335 (1963), the LOPD Performance Standards for Criminal Defense Representation, the NM Rules of Professional Conduct, and the applicable case law. Contract Counsel Legal Services (CCLS) is seeking qualified applicants to represent indigent clients throughout New Mexico, as Contract Counsel. The LOPD, by and through CCLS, will be accepting Proposals for the November 1, 2025 – October 31, 2029 contract period. All interested attorneys must submit a **Proposal** before **July 7, 2025 at 4:00 p.m. (MDT)** to be considered. For additional information, attorneys are encouraged to search the LOPD website (http://www.lopdnm.us) to download the Request for Proposals, as well as other required documents. Confirmation of receipt of the Request for Proposals must be received by email (ccls_RFP_mail@ccls.lopdnm.us) no later than **midnight (MDT)** on **June 9, 2025**.

Carlsbad Current-Argus

400-2 Cascades Ave. Suite 101 Carlsbad, NM 88220
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Account Number: 1015
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Description: High Life - Tap Rock Operating
Ad Cost: $318.97

Sherry Groves, being first duly sworn, says:

That she is the Agent of the the Carlsbad Current-Argus, a Weekly newspaper of general circulation, printed and published in Carlsbad, Eddy County, New Mexico; that the publication, a copy of which is attached hereto, was published in said newspaper on the following dates:

May 15, 2025

That said newspaper was regularly issued and circulated on those dates.
SIGNED:

Sherry Groves

Agent

Subscribed to and sworn to me this 15th day of May 2025.

Leanne Kaufenberg

Leanne Kaufenberg, Notary Public, Redwood County Minnesota

LEANNE JOY KAUFENBERG
Notary Public
State of Minnesota
My Commission Expires
January 31, 2030

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#47080

Section 10

Written Description of the Routine Operations of the Facility

---

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

Facility Routine Operations:

Well fluids are routed to individual initial separators where gas and liquids are separated. Liquids from the initial separators flow to heater treaters (HT 1-11). Oil from the heater treaters enters the vapor recovery towers (VRTs). Gas from the heater treaters joins the gas from the initial separators and is sent to the sales pipeline. Gas is sent to flare during short pipeline downtime periods (FL-2 (HP)). Prior to the sales point, a side stream of gas is removed and sent to gas lift compressors (ENG 1-2). The compressors direct the gas down hole to assist in bringing fluids to the surface. The compressor engines are gas fired and controlled with catalytic converters. Water from the heater treaters flows to atmospheric storage tanks (PWTK 1-4). Vapors from the water storage tanks are captured by the tank blower and routed to the VRU and then to the sales pipeline. When the blower is down for maintenance, the vapors are controlled by the low-pressure flare (FL-1 (BDT)). When enough water has accumulated in the tanks it is piped off-site for disposal. A small amount of truck loading is included for operational flexibility (PWLOAD-1, HR-1). Gas from the VRTs is routed to a Vapor Recovery Unit (VRU) and to the sales line. The oil from the VRTs is routed to the atmospheric oil storage tanks (TK 1-6). Vapors from the oil storage tanks are captured by the tank blower and routed to the VRU and then to the sales pipeline. When the blower is down for maintenance, the vapors are controlled by the flare (FL-1 (BDT)). When enough oil has accumulated in the tanks it is piped off-site for sale via LACT. A small amount of truck loading is included for operational flexibility (OILLOAD-1, HR-1). During periods of VRU downtime, the vapor stream is controlled by the flare (FL-1(VDT)). The facility utilizes six electrical generators (GEN 1-6) to provide power to the site.

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)**:**

High Life Upslope Fed Com CTB – no other facilities within 1 mile.

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. The "project" emissions listed below only result from changes described in this permit application, thus no emissions from other apply to this facility. 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: 35.85 TPY**
b. **CO: 63.20 TPY**
c. **VOC: 89.61 TPY**
d. **SOx: 0.09 TPY**
e. **PM: 3.25 TPY**
f. **PM10: 3.25 TPY**
g. **PM2.5: 3.25 TPY**
h. **Fluorides: -- TPY**
i. **Lead: -- TPY**
j. **Sulfur compounds (listed in Table 2): -- TPY**
k. **GHG: <75,000 TPY**

Section 13

Determination of State & Federal Air Quality Regulations

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

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

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

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

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

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

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

INCLUDE ANY OTHER INFORMATION NEEDED TO COMPLETE AN APPLICABILITY DETERMINATION OR THAT IS RELEVENT TO YOUR FACILITY'S NOTICE OF INTENT OR PERMIT.

EPA Applicability Determination Index for 40 CFR 60, 61, 63, etc: http://cfpub.epa.gov/adi/

To save paper and to standardize the application format, delete this sentence, and begin your submittal for this attachment on this page.

State Regulation Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
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 states maximum allowable concentrations of various regulated air pollutants in the atmosphere. This application includes a demonstration for meeting the NAAQS requirements.
20.2.7 NMAC	Excess Emissions	Yes	Facility	20.2.7 NMAC states procedures and requirements for notifying the NMED of excess emissions during malfunction, startup, or scheduled maintenance activities.
20.2.23 NMAC	Fugitive Dust Control	No	N/A	Facility is not located in an area requiring a mitigation plan per 40 CFR Part 51.930
20.2.33 NMAC	Gas Burning Equipment - Nitrogen Dioxide	No	N/A	This facility does have gas-fired heaters, but they are < 1,000,000 MMBTU per unit.
20.2.34 NMAC	Oil Burning Equipment: NO_2	No	N/A	This facility does not have any oil burning equipment.
20.2.35 NMAC	Natural Gas Processing Plant – Sulfur	No	N/A	This facility is not a natural gas processing plant.
20.2.37 and 20.2.36 NMAC	Petroleum Processing Facilities and Petroleum Refineries	N/A	N/A	**These regulations were repealed by the Environmental Improvement Board. If you had equipment subject to 20.2.37 NMAC before the repeal, your combustion emission sources are now subject to 20.2.61 NMAC.**
20.2.38 NMAC	Hydrocarbon Storage Facility	Yes	TK 1-6	This facility's total hydrocarbon storage capacity is greater than 65,000 gallons. The facility also lies within AQCR 155. Subparts 112 and 113 apply.
20.2.39 NMAC	Sulfur Recovery Plant - Sulfur	No	N/A	This facility is not a sulfur recovery plant.
20.2.50 NMAC	Oil and Gas Sector – Ozone Precursor Pollutants	Yes	All New	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:
20.2.61.109 NMAC	Smoke & Visible Emissions	Yes	HT 1-11, ENG 1-2, GEN 1-6, FL-LP, FL-HP	These units are stationary combustion equipment and are therefore subject to the requirements of 20.2.61.109 NMAC.
20.2.70 NMAC	Operating Permits	No	N/A	This facility is a minor source that does not have the potential to emit (PTE) 100 tpy or more of any regulated air pollutant. This facility is not a major source of HAPs.
20.2.71 NMAC	Operating Permit Fees	No	N/A	This facility is not subject to 20.2.70 NMAC because it is a minor source facility.
20.2.72 NMAC	Construction Permits	Yes	Facility	This facility has a potential emission rate (PER) greater than 10 pph or 25 tpy for some regulated air contaminants.
20.2.73 NMAC	NOI & Emissions Inventory Requirements	Yes	Facility	The facility is subject to Emissions Inventory Reporting because it is permitted under 20.2.72 NMAC.
20.2.74 NMAC	Permits – Prevention of Significant Deterioration (PSD)	No	N/A	The facility is not a PSD major source.
20.2.75 NMAC	Construction Permit Fees	Yes	Facility	This regulation applies if you are submitting an application pursuant to 20.2.72 NMAC.
20.2.77 NMAC	New Source Performance	Yes	FUG-1, ENG 1-2, GEN 1-6	This is a stationary source which is subject to the requirements of 40 CFR Part 60. FUG-1: Subject to Subpart OOOOb ENG 1-2, GEN 1-6: Subject to Subpart JJJJ
20.2.78 NMAC	Emission Standards for HAPS	No	N/A	This facility does not emit hazardous air pollutants which are subject to the requirements of 40 CFR Part 61.
20.2.79 NMAC	Permits – Nonattainment Areas	No	N/A	The is a minor source facility located in an attainment area.
20.2.80 NMAC	Stack Heights	Yes	HT 1-11, ENG 1-2, GEN 1-6, FL-LP, FL-HP	Stacks do not exceed GEP height and will be evaluated in the NSR permit.
20.2.82 NMAC	MACT Standards for source categories of HAPS	Yes	ENG 1-2, GEN 1-6	This regulation applies to all sources emitting hazardous air pollutants, which are subject to the requirements of 40 CFR Part 63. ENG 1-2, GEN 1-6: Subject to Subpart ZZZZ

Federal Regulation Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
40 CFR 50	NAAQS	Yes	Facility	The facility and units within the facility emit criteria pollutants that are subject to the NAAQS. The facility is subject to 20.2.72 NMAC.

Federal Regulation Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
NSPS 40 CFR 60, Subpart A	General Provisions	Yes	FUG-1, ENG 1-2, GEN 1-6	Applies if any other Subpart in 40 CFR 60 applies. FUG-1: Subject to Subpart OOOOb ENG 1-2, GEN 1-6: Subject to Subpart JJJJ
NSPS 40 CFR60.40a, Subpart Da	Subpart Da, Performance Standards for **Electric Utility Steam Generating Units**	No	N/A	This facility does not have any electric utility steam generating units.
NSPS 40 CFR60.40b Subpart Db	**Electric Utility Steam Generating Units**	No	N/A	This facility does not have any electric utility steam generating units.
40 CFR 60.40c, Subpart Dc	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units	No	N/A	This facility does not have any electric utility steam generating units.
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	The facility was not constructed during the applicable timeframe.
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	Does not apply to vessels with a design capacity less than or equal to 1,589.874 m^3 used for petroleum or condensate stored, processed, or treated prior to custody transfer.
NSPS 40 CFR 60.330 Subpart GG	**Stationary Gas Turbines**	No	N/A	The facility does not have any gas turbines.
NSPS 40 CFR 60, Subpart KKK	Leaks of VOC from **Onshore Gas Plants**	No	N/A	The facility is not a gas plant.

Federal Regulation Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
NSPS 40 CFR Part 60 Subpart LLL	Standards of Performance for **Onshore Natural Gas Processing**: SO_2 Emissions	No	N/A	The facility is not a gas processing plant.
NSPS 40 CFR Part 60 Subpart OOOO	Standards of Performance for Crude Oil and Natural Gas Production, Transmission, and Distribution for which construction, modification or reconstruction commenced after August 23, 2011 and before September 18, 2015	No	N/A	Facility commenced construction after September 18th, 2015, and therefore this subpart does not apply.
NSPS 40 CFR Part 60 Subpart OOOOa	Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015 and before December 6, 2022,	No	N/A	Facility commenced construction after December 6th, 2022, and therefore this subpart does not apply.
NSPS 40 CFR Part 60 Subpart OOOOb	Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced **After** December 6, 2022	Yes	FUG-1	This subpart applies to the fugitive emissions at this facility due to the construction of the facility occurring after December 6, 2022.
NSPS 40 CFR 60 Subpart IIII	Standards of performance for Stationary Compression Ignition Internal Combustion Engines	No	N/A	No applicable units at this facility.
NSPS 40 CFR Part 60 Subpart JJJJ	Standards of Performance for Stationary Spark Ignition Internal	Yes	ENG 1-2, GEN 1-6	Due to the engine size and date of manufacture, these units are subject to this subpart.

Federal Regulation Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
	Combustion Engines			
NSPS 40 CFR 60 Subpart TTTT	Standards of Performance for Greenhouse Gas Emissions for Electric Generating Units	No	N/A	No applicable units at this facility.
NSPS 40 CFR 60 Subpart UUUU	Emissions Guidelines for Greenhouse Gas Emissions and Compliance Times for Electric Utility Generating Units	No	N/A	No applicable units at this facility.
NSPS 40 CFR 60, Subparts WWW, XXX, Cc, and Cf	Standards of performance for Municipal Solid Waste (MSW) Landfills	No	N/A	Facility is not a MSW landfill.
NESHAP 40 CFR 61 Subpart A	General Provisions	No	N/A	No subparts of 40 CFR 61 apply.
NESHAP 40 CFR 61 Subpart E	National Emission Standards for **Mercury**	No	N/A	The facility does not process mercury ore to recover mercury, use mercury chlor-alkali cells to produce chlorine gas and alkali metal hydroxide, or incinerate or dry wastewater treatment plant sludge.
NESHAP 40 CFR 61 Subpart V	National Emission Standards for **Equipment Leaks** (Fugitive Emission Sources)	No	N/A	No applicable units at this facility.
MACT 40 CFR 63, Subpart A	General Provisions	Yes	ENG 1-2, GEN 1-6	Applies if any other Subpart in 40 CFR 63 applies.
MACT 40 CFR 63.760 Subpart HH	**Oil and Natural Gas Production Facilities**	No	N/A	The facility is not subject to this subpart as there are no glycol dehydrators.
MACT 40 CFR 63 Subpart HHH	National Emission Standards for Hazardous Air Pollutants From Natural Gas Transmission and Storage Facilities	No	N/A	This subpart does not apply because the facility is not a major source or HAPs nor a natural gas transmission and storage facilities.
MACT 40 CFR 63 Subpart DDDDD	National Emission Standards for Hazardous Air Pollutants for Major Industrial, Commercial, and Institutional Boilers & Process Heaters	No	N/A	Facility is not a major source of HAPs.

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	No applicable units at this facility.
MACT 40 CFR 63 Subpart ZZZZ	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (**RICE MACT**)	Yes	ENG 1-2, GEN 1-6	These units are applicable to the subpart and will demonstrate compliance by complying with 40 CFR 60 Subpart JJJJ.
40 CFR 64	**Compliance Assurance Monitoring**	No	N/A	Facility is not a TV major source.
40 CFR 68	**Chemical Accident Prevention**	No	N/A	The facility does not have more than the threshold quantity of any of the regulated substances as determined under §68.115.
Title IV – Acid Rain 40 CFR 72	**Acid Rain**	No	N/A	The 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	The 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	The 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	The facility does not generate commercial electric power or electric power for sale.
Title VI – 40 CFR 82	Protection of **Stratospheric Ozone**	No	N/A	The facility does not use 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.

To save paper and to standardize the application format, delete this sentence, and begin your submittal for this attachment on this page.

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.

This facility does not have any alternative operating scenarios.

Section 16

Air Dispersion Modeling

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

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

Check each box that applies:

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

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

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

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

☐ No modeling is required.

Universal Application 4

Air Dispersion Modeling Report

Refer to and complete Section 16 of the Universal Application form (UA3) to assist your determination as to whether modeling is required. If, after filling out Section 16, you are still unsure if modeling is required, e-mail the completed Section 16 to the AQB Modeling Manager for assistance in making this determination. If modeling is required, a modeling protocol would be submitted and approved prior to an application submittal. The protocol should be emailed to the modeling manager. A protocol is recommended but optional for minor sources and is required for new PSD sources or PSD major modifications. Fill out and submit this portion of the Universal Application form (UA4), the "Air Dispersion Modeling Report", only if air dispersion modeling is required for this application submittal. This serves as your modeling report submittal and should contain all the information needed to describe the modeling. No other modeling report or modeling protocol should be submitted with this permit application.

16-A: Identification

1	Name of facility:	High Life Upslope Fed Com 1 CTB
2	Name of company:	Tap Rock Operating, LLC
3	Current Permit number:	NA
4	Name of applicant's modeler:	Chris Martinez – CDH Consulting, LLC
5	Phone number of modeler:	(303) 594-7951
6	E-mail of modeler:	cmartinez@cdhconsult.com

16-B: Brief

1	Was a modeling protocol submitted and approved?	Yes☐	No☒
2	Why is the modeling being done?	Adding New Equipment	
3	Describe the permit changes relevant to the modeling.		
	Significant modification to NSR facility. Increased emissions/sources		
4	What geodetic datum was used in the modeling?	NAD83	
5	How long will the facility be at this location?	Permanent	
6	Is the facility a major source with respect to Prevention of Significant Deterioration (PSD)?	Yes☐	No☒

7	Identify the Air Quality Control Region (AQCR) in which the facility is located	155	
8	List the PSD baseline dates for this region (minor or major, as appropriate).		
	NO2	03/16/1988	
	SO2	03/16/1988	
	PM10	02/20/1979	
	PM2.5	11/13/2013	
9	Provide the name and distance to Class I areas within 50 km of the facility (300 km for PSD permits).		
	Carlsbad Caverns NP: 2.4 km Guadalupe Mountains NP: 38.0 km		
10	Is the facility located in a non-attainment area? If so describe below	Yes☐	No☒
11	Describe any special modeling requirements, such as streamline permit requirements.		
	None		

16-C: Modeling History of Facility

Describe the modeling history of the facility, including the air permit numbers, the pollutants modeled, the National Ambient Air Quality Standards (NAAQS), New Mexico AAQS (NMAAQS), and PSD increments modeled. (Do not include modeling waivers).

1	Pollutant	Latest permit and modification number that modeled the pollutant facility-wide.	Date of Permit	Comments
	CO	November 2024	3/20/2025	NSR# 10432, AI# 41218
	NO_2	November 2024	3/20/2025	NSR# 10432, AI# 41218
	SO_2	None		
	H_2S	None		
	PM2.5	November 2024	3/20/2025	NSR# 10432, AI# 41218
	PM10	November 2024	3/20/2025	NSR# 10432, AI# 41218
	Lead	None		
	Ozone (PSD only)	None		
	NM Toxic Air Pollutants (20.2.72.402 NMAC)	None		

16-D: Modeling performed for this application

For each pollutant, indicate the modeling performed and submitted with this application.
Choose the most complicated modeling applicable for that pollutant, i.e., culpability analysis assumes ROI and cumulative analysis were also performed.

1	Pollutant	ROI	Cumulative analysis	Culpability analysis	Waiver approved	Pollutant not emitted or not changed.

	CO	☒	☐	☐	☐	☐
	NO_2	☒	☒	☐	☐	☐
	SO_2	☐	☐	☐	☐	☒
	H_2S	☐	☐	☐	☐	☒
	PM2.5	☒	☒	☐	☐	☐
	PM10	☒	☒	☐	☐	☐
	Lead	☐	☐	☐	☐	☒
	Ozone	☐	☐	☐	☐	☒
	State air toxic(s) (20.2.72.402 NMAC)	☐	☐	☐	☐	☒

16-E: New Mexico toxic air pollutants modeling

1 List any New Mexico toxic air pollutants (NMTAPs) from Tables A and B in 20.2.72.502 NMAC that are modeled for this application. NA

2 List any NMTAPs that are emitted but not modeled because stack height correction factor. Add additional rows to the table below, if required.

Pollutant	Emission Rate (pounds/hour)	Emission Rate Screening Level (pounds/hour)	Stack Height (meters)	Correction Factor	Emission Rate/ Correction Factor
NA					

16-F: Modeling options

1	Was the latest version of AERMOD used with regulatory default options? If not explain below.	Yes☒	No☐

16-G: Surrounding source modeling

1	Date of surrounding source retrieval	May 9, 2025

2 If the surrounding source inventory provided by the Air Quality Bureau was believed to be inaccurate, describe how the sources modeled differ from the inventory provided. If changes to the surrounding source inventory were made, use the table below to describe them. Add rows as needed.

AQB Source ID	Description of Corrections

16-H: Building and structure downwash

1	How many buildings are present at the facility?	1 – tank farm modeled as building		
2	How many above ground storage tanks are present at the facility?	10 – modeled as building		
3	Was building downwash modeled for all buildings and tanks? If not explain why below.		Yes☒	No☐
4	Building comments	Tank farm was modeled as a solid building.		

16-I: Receptors and modeled property boundary

1	"Restricted Area" is an area to which public entry is effectively precluded. Effective barriers include continuous fencing, continuous walls, or other continuous barriers approved by the Department, such as rugged physical terrain with a steep grade that would require special equipment to traverse. If a large property is completely enclosed by fencing, a restricted area within the property may be identified with signage only. Public roads cannot be part of a Restricted Area. A Restricted Area is required in order to exclude receptors from the facility property. If the facility does not have a Restricted Area, then receptors shall be placed within the property boundaries of the facility. Describe the fence or other physical barrier at the facility that defines the restricted area.						
2	Receptors must be placed along publicly accessible roads in the restricted area. Are there public roads passing through the restricted area?					Yes☐	No☒
3	Are restricted area boundary coordinates included in the modeling files?					Yes☒	No☐
4	Describe the receptor grids and their spacing. The table below may be used, adding rows as needed.						
	Grid Type	Shape	Spacing	Start distance from restricted area or center of facility	End distance from restricted area or center of facility	Comments	
	RISK	Square	50 m	0 m	500 m		
	RISK	Square	100 m	500 m	1,000 m		
	RISK	Square	250 m	1,000 m	2,500 m		
	RISK	Square	500 m	2,500 m	5,000 m		
	RISK	Square	1,000 m	5,000 m	10,000 m		
5	Describe receptor spacing along the fence line.						
	50 m spacing						
6	Describe the PSD Class I area receptors.						
	Receptors on 500 m spacing on area boundary (Eastern portion) as well as 1,000 m grid inside Class I area for increment analysis.						

16-J: Sensitive areas

1	Are there schools or hospitals or other sensitive areas near the facility? If so describe below. This information is optional (and purposely undefined) but may help determine issues related to public notice.	Yes☐	No☒
3	The modeling review process may need to be accelerated if there is a public hearing. Are there likely to be public comments opposing the permit application?	Yes☐	No☒

16-K: Modeling Scenarios

1	Identify, define, and describe all modeling scenarios. Examples of modeling scenarios include using different production rates, times of day, times of year, simultaneous or alternate operation of old and new equipment during transition periods, etc. Alternative operating scenarios should correspond to all parts of the Universal Application and should be fully described in Section 15 of the Universal Application (UA3).		
	Flare SSM emissions modeled as intermittent sources. Limited to < 300 hr/yr. Hourly rate = annual total/8760 hrs		
2	Which scenario produces the highest concentrations? Why?		
	NA		
3	Were emission factor sets used to limit emission rates or hours of operation? (This question pertains to the "SEASON", "MONTH", "HROFDY" and related factor sets, not to the factors used for calculating the maximum emission rate.)	Yes☐	No☒
4	If so, describe factors for each group of sources. List the sources in each group before the factor table for that group. (Modify or duplicate table as necessary. It's ok to put the table below section 16-K if it makes formatting easier.) Sources:		

5

Hour of Day	Factor	Hour of Day	Factor								
1		13									
2		14									
3		15									
4		16									
5		17									
6		18									
7		19									
8		20									
9		21									
10		22									
11		23									
12		24									

If hourly, variable emission rates were used that were not described above, describe them below.

6	Were different emission rates used for short-term and annual modeling? If so describe below.	Yes☐	No☒

16-L: NO_2 Modeling

1	Which types of NO_2 modeling were used? Check all that apply.	
	☒	ARM2
	☐	100% NO_X to NO_2 conversion
	☐	PVMRM
	☐	OLM
	☐	Other:
2	Describe the NO_2 modeling.	
	Modeled facility for SIL impacts. Exceeded SIL for NAAQS and Class I area. Initial resulted with added background resulted in levels below the NAAQS. Refined model for Class I increment used with surrounding sources and receptors within the Class I area. Results below Class I increment.	
3	Were default NO_2/NO_X ratios (0.5 minimum, 0.9 maximum or equilibrium) used? If not describe and justify the ratios used below.	Yes☒ / No☐
4	Describe the design value used for each averaging period modeled.	
	1-hour: 98th percentile as calculated by AERMOD Annual: Highest Annual Average of Three Years	

16-M: Particulate Matter Modeling

1	Select the pollutants for which plume depletion modeling was used.	
	☐	PM2.5
	☐	PM10
	☒	None
2	Describe the particle size distributions used. Include the source of information.	
3	Does the facility emit at least 40 tons per year of NO_X or at least 40 tons per year of SO_2? Sources that emit at least 40 tons per year of NO_X or at least 40 tons per year of SO_2 are considered to emit significant amounts of precursors and must account for secondary formation of PM2.5.	Yes☐ / No☒
4	Was secondary PM modeled for PM2.5?	Yes☐ / No☒
5	If MERPs were used to account for secondary PM2.5 fill out the information below. If another method was used describe below.	

	NO_X (ton/yr)	SO_2 (ton/yr)	$[PM2.5]_{annual}$	$[PM2.5]_{24\text{-}hour}$

16-N: Setback Distances

1	Portable sources or sources that need flexibility in their site configuration requires that setback distances be determined between the emission sources and the restricted area boundary (e.g. fence line) for both the initial location and future locations. Describe the setback distances for the initial location.
	NA
2	Describe the requested, modeled, setback distances for future locations, if this permit is for a portable stationary source. Include a haul road in the relocation modeling.
	NA

16-O: PSD Increment and Source IDs

1	The unit numbers in the Tables 2-A, 2-B, 2-C, 2-E, 2-F, and 2-I should match the ones in the modeling files. Do these match? If not, provide a cross-reference table between unit numbers if they do not match below.	Yes☐	No☒

Unit Number in UA-2	Unit Number in Modeling Files
FL-2 HP SSM	FL-HP
FL-1 LP-SSM	FL-LP

2	The emission rates in the Tables 2-E and 2-F should match the ones in the modeling files. Do these match? If not, explain why below.	Yes☐	No☒
	Flare SSM emissions modeled as intermittent sources. Annual total/8760 hrs		
3	Have the minor NSR exempt sources or Title V Insignificant Activities" (Table 2-B) sources been modeled?	Yes☐	No☒

4 Which units consume increment for which pollutants?

Unit ID	NO_2	SO_2	PM10	PM2.5
FL-HP	X	-	-	-
FL-LP	X	-	-	-
ENG-1	X	-	X	X
ENG-2	X	-	X	X
GEN-1	X	-	X	X
GEN-2	X	-	X	X
GEN-3	X	-	X	X
GEN-4	X	-	X	X
GEN-5	X	-	X	X
GEN-6	X	-	X	X
HT-1	X	-	X	X
HT-2	X	-	X	X

	HT-3	X	-	X	X
	HT-4	X	-	X	X
	HT-5	X	-	X	X
	HT-6	X	-	X	X
	HT-7	X	-	X	X
	HT-8	X	-	X	X
	HT-9	X	-	X	X
	HT-10	X	-	X	X
	HT-11	X	-	X	X
5	PSD increment description for sources. (for unusual cases, i.e., baseline unit expanded emissions after baseline date).				
6	Are all the actual installation dates included in Table 2A of the application form, as required? This is necessary to verify the accuracy of PSD increment modeling. If not please explain how increment consumption status is determined for the missing installation dates below.			Yes☒	No☐
	Not yet installed/construction.				

16-P: Flare Modeling

1	For each flare or flaring scenario, complete the following			
	Flare ID (and scenario)	Average Molecular Weight	Gross Heat Release (cal/s)	Effective Flare Diameter (m)
	FL-HP	21.38	113,160,097	9.3832
	FL-LP	42.21	1,307,648	0.9486

16-Q: Volume and Related Sources

1	Were the dimensions of volume sources different from standard dimensions in the Air Quality Bureau (AQB) Modeling Guidelines? If not please explain how increment consumption status is determined for the missing installation dates below.	Yes☐	No☒
	NA		
2	Describe the determination of sigma-Y and sigma-Z for fugitive sources.		
	NA		
3	Describe how the volume sources are related to unit numbers. Or say they are the same.		
	NA		
4	Describe any open pits.		
	NA		
5	Describe emission units included in each open pit.		

	NA

16-R: Background Concentrations

1	Were NMED provided background concentrations used? Identify the background station used below. If non-NMED provided background concentrations were used describe the data that was used.	Yes☒	No☐
	CO: N/A		
	NO_2: Outside Carlsbad (350151005)		
	PM2.5: Hobbs-Jefferson (350450019)		
	PM10: Hobbs-Jefferson (350250008)		
	SO_2: Choose an item.		
	Other:		
	Comments:		
2	Were background concentrations refined to monthly or hourly values? If so describe below.	Yes☐	No☒

16-S: Meteorological Data

1	Was NMED provided meteorological data used? If so select the station used. Carlsbad	Yes☒	No☐
2	If NMED provided meteorological data was not used describe the data set(s) used below. Discuss how missing data were handled, how stability class was determined, and how the data were processed.		
	NA		

16-T: Terrain

1	Was complex terrain used in the modeling? If not, describe why below.	Yes☒	No☐
2	What was the source of the terrain data?		
	WebGIS – NED 1/3 (USA ~30m)		

16-U: Modeling Files

1	Describe the modeling files: AERMOD input/output, BPIPPRIME input/output.		
	File name (or folder and file name)	Pollutant(s)	Purpose (ROI/SIA, cumulative, culpability analysis, other)
	High_Life_NOx_SIL	NO2	SIA
	High_Life_NO2_CL1	NO2	Class I Increment
	CO_SIL	CO	SIA
	PM10_SIL	PM10	SIA
	PM10_NAAQS	PM10	Cumulative NAAQS and Class II Increment
	PM25_SIL	PM2.5	SIA
	PM25_NAAQS	PM2.5	Cumulative NAAQS and Class II Increment

16-V: PSD New or Major Modification Applications - Not Applicable

1	A new PSD major source or a major modification to an existing PSD major source requires additional analysis. Was preconstruction monitoring done (see 20.2.74.306 NMAC and PSD Preapplication Guidance on the AQB website)?	Yes☐	No☐
2	If not, did AQB approve an exemption from preconstruction monitoring?	Yes☐	No☐
3	Describe how preconstruction monitoring has been addressed or attach the approved preconstruction monitoring or monitoring exemption.		
4	Describe the additional impacts analysis required at 20.2.74.304 NMAC.		
5	If required, have ozone and secondary PM2.5 ambient impacts analyses been completed? If so describe below.	Yes☐	No☐

16-W: Modeling Results

1	If ambient standards are exceeded because of surrounding sources, a culpability analysis is required for the source to show that the contribution from this source is less than the significance levels for the specific pollutant. Was culpability analysis performed? If so describe below.	Yes☐	No☒
2	Identify the maximum concentrations from the modeling analysis. Rows may be modified, added and removed from the table below as necessary.		

Pollutant, Time Period and Standard	Modeled Facility Concentration (µg/m3)	Modeled Concentration with Surrounding Sources (µg/m3)	Secondary PM (µg/m3)	Background Concentration (µg/m3)	Cumulative Concentration (µg/m3)	Value of Standard (µg/m3)	Percent of Standard	Location		
								UTM E (m)	UTM N (m)	Elevation (ft)
NO_2 1-hr NAAQS	103.22	-	-	54.5	157.72	188.03	84%	558,730	3,556,611	1,069.3
NO_2 annual Class I Increment	0.34	1.09	-	-	1.09	2.5	44%	558,109	3,559,023	1,097.9
NO_2 annual Class II Increment	11.00	-	-	9.3	20.30	25	81%	558,830	3,556,611	1,068.5
CO 8-hr SIL	107.76	-	-	-	107.76	500	22%	558,875	3,556,606	1,068.1
CO 1-hr SIL	165.13	-	-	-	165.13	2,000	8%	558,830	3,556,606	1,068.4
PM_{10} 24-hr NAAQS	7.28	7.30	-	100.7	108.00	150	72%	558,875	3,556,606	1,068.1
PM_{10} annual Class I	0.04	-	-	-	0.04	0.2	20%	558,115	3,559,068	1,098.8
PM_{10} 24-hr Class I	0.27	-	-	-	0.27	0.3	90%	558,115	3,559,068	1,098.8
PM_{10} annual Class II	1.25	1.53	-	-	1.53	17	9%	558,730	3,556,661	1,069.6
PM_{10} 24-hr Class II	7.28	7.30	-	-	7.30	30	24%	558,875	3,556,606	1,068.1

Pollutant, Time Period and Standard	Modeled Facility Concentration (µg/m3)	Modeled Concentration with Surrounding Sources (µg/m3)	Secondary PM (µg/m3)	Background Concentration (µg/m3)	Cumulative Concentration (µg/m3)	Value of Standard (µg/m3)	Percent of Standard	Location		
								UTM E (m)	UTM N (m)	Elevation (ft)
$PM_{2.5}$ annual NAAQS	1.25	1.42	-	7.1	8.52	12	71%	558,730	3,556,661	1,069.6
$PM_{2.5}$ 24-hr NAAQS	5.45	5.52	-	16.5	22.02	35	63%	558,875	3,556,606	1,068.1
$PM_{2.5}$ Annual Class I	0.04	-	-	-	0.04	0.05	80%	558,115	3,559,068	1,098.8
$PM_{2.5}$ 24-hr Class I	0.18	-	-	-	0.18	0.27	67%	558,115	3,559,068	1,098.8
$PM_{2.5}$ Annual Class II	1.25	1.42	-	-	1.42	4.0	36%	558,730	3,556,661	1,069.6
$PM_{2.5}$ 24-hr Class II	5.45	5.52	-	-	5.52	9.0	61%	558,875	3,556,606	1,068.1

16-X: Summary/conclusions	
1	A statement that modeling requirements have been satisfied and that the permit can be issued.
	Modeling requirements have been met and all concentrations are below applicable standards.

Section 17

Compliance Test History

(Submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

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

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

Unit No.	Test Description	Test Date
NA	NA	NA

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.

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**
Tap Rock Operating, LLC		May 2025
Permittee/Company Contact	**Phone**	**Email**
Bill Ramsey	(720) 360-4032	bramsey@taprk.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. TAP-Multi-2001 was issued to Tap Rock for failure to apply for and obtain a construction permit for 4 facilities before commencing construction under 20.2.72.200.A & E. These violations have been rectified.	

Section 22: Certification

Company Name: **Tap Rock Operating, LLC**

I, **Bill Ramsey**, 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 14th day of May, 2025, upon my oath or affirmation, before a notary of the State of Colorado.

*Signature

5/14/2025
Date

Bill Ramsey
Printed Name

Sr. Environmental and Regulatory Specialist
Title

Scribed and sworn before me on this 14th day of May, 2025.

My authorization as a notary of the State of Colorado expires on the 9th day of July, 2025.

MELISSA LIMON HOLGUIN
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 20244025544
MY COMMISSION EXPIRES JULY 9, 2028

Notary's Signature

5/14/25
Date

Melissa Limon Holguin
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.