NEW MEXICO 20.2.70.300.B(2) NMAC APPLICATION TO RENEW & MODIFY TITLE V OPERATING PERMIT P198-R3

TRUNK N COMPRESSOR STATION

Submitted By:

Harvest Four Corners, LLC

1755 Arroyo Drive
Bloomfield, New Mexico 87413

Prepared By:

Cirrus Consulting, LLC
951 Diestel Road
Salt Lake City, Utah 84105
(801) 484-4412

November 2020

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

Universal Air Quality Permit Application

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

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

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

Acknowledgements:

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

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

☐ Check No.: in the amount of

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

☐ This facility qualifies to receive assistance from the Small Business Environmental Assistance program (SBEAP) and qualifies for 50% of the normal application and permit fees. Enclosed is a check for 50% of the normal application fee which will be verified with the Small Business Certification Form for your company.

☐ This facility qualifies to receive assistance from the Small Business Environmental Assistance Program (SBEAP) but does not qualify for 50% of the normal application and permit fees. To see if you qualify for SBEAP assistance and for the small business certification form go to https://www.env.nm.gov/aqb/sbap/small_business_criteria.html).

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

Section 1 – Facility Information

Section 1-A: Company Information

		AI # if known (see 1st 3 to 5 #s of permit IDEA ID No.): **1303**	Updating Permit/NOI #: **P198-R3**
1	Facility Name: Trunk N Compressor Station	Plant primary SIC Code (4 digits): 1389	
		Plant NAIC code (6 digits): 213112	
a	Facility Street Address (If no facility street address, provide directions from a prominent landmark): From Aztec, drive north on Hwy 550 to Colorado 318. Turn right, and drive to the "T" junction at Colorado 172. Turn left into Ignacio. Turn right on 151 and drive to mile marker 9.9; turn right, and drive 4.2 miles on CR 328 (changes to NM 4010). Turn right, and drive 2.5 miles on CR 4004 to the site.		
2	Plant Operator Company Name: Harvest Four Corners, LLC	Phone/Fax: 505-632-4600 / 505-632-4782	

a	Plant Operator Address: 1755 Arroyo Drive, Bloomfield, NM 87413	
b	Plant Operator's New Mexico Corporate ID or Tax ID: 76-0451075	
3	Plant Owner(s) name(s): Harvest Four Corners, LLC	Phone/Fax: 505-632-4600 / 505-632-4782
a	Plant Owner(s) Mailing Address(s): 1755 Arroyo Drive, Bloomfield NM 87413	
4	Bill To (Company): Harvest Four Corners, LLC	Phone/Fax: 505-632-4600 / 505-632-4782
a	Mailing Address: 1755 Arroyo Drive, Bloomfield NM 87413	E-mail: N/A
5	☐ Preparer: ☑ Consultant: Lisa Killion, Cirrus Consulting, LLC	Phone/Fax: 505-466-1790 / 505-466-4599
a	Mailing Address:	E-mail: lkillion@cirrusllc.com
6	Plant Operator Contact: Monica Smith	Phone/Fax: 505-632-4625 / 505-632-4782
a	Address: 1755 Arroyo Drive, Bloomfield NM 87413	E-mail: msmith@harvestmidstream.com
7	Air Permit Contact: Monica Smith	Title: Environmental Specialist
a	E-mail: msmith@harvestmidstream.com	Phone/Fax: 505-632-4625 / 505-632-4782
b	Mailing Address: 1755 Arroyo Drive, Bloomfield NM 87413	
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? [x] Yes ☐ No	1.b If yes to question 1.a, is it currently operating in New Mexico? [x] 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 [x] 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? [x] Yes ☐ No
3	Is the facility currently shut down? ☐ Yes [x] 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? [x] 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 [x] N/A	
6	Does this facility have a Title V operating permit (20.2.70 NMAC)? [x] Yes ☐ No	If yes, the permit No. is: P-198-R3
7	Has this facility been issued a No Permit Required (NPR)? ☐ Yes [x] No	If yes, the NPR No. is:
8	Has this facility been issued a Notice of Intent (NOI)? ☐ Yes [x] No	If yes, the NOI No. is:
9	Does this facility have a construction permit (20.2.72/20.2.74 NMAC)? [x] Yes ☐ No	If yes, the permit No. is: 1546-M3-R6
10	Is this facility registered under a General permit (GCP-1, GCP-2, etc.)? ☐ Yes [x] 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: 4.2 mmcfh[(a)]	Daily: 100.3 mmcfd[(a)]	Annually: 36,602 mmcfy[(a)]
b	Proposed	Hourly: 4.2 mmcfh[(a)]	Daily: 100.3 mmcfd[(a)]	Annually: 36,602 mmcfy[(a)]
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: 4.2 mmcfh[(a)]	Daily: 100.3 mmcfd[(a)]	Annually: 36,602 mmcfy[(a)]

b	Proposed	Hourly: 4.2 mmcfh[(a)]	Daily: 100.3 mmcfd[(a)]	Annually: 36,602 mmcfy[(a)]

[(a)] Station capacity is a direct function of available horsepower. The throughput is therefore dependent on atmospheric temperature, gas temperature, atmospheric pressure, gas pressure, relative humidity and gas quality, as well as other factors. The "capacity" expressed in the application is a nominal quantity, neither an absolute maximum nor an average. The actual throughput will vary from the nominal amount.

Section 1-D: Facility Location Information

1	Section: 17	Range: 07W	Township: 32N	County: San Juan	Elevation (ft): 6,490
2	UTM Zone: ☐ 12 or ☒ 13			Datum: ☐ NAD 27 ☐ NAD 83 ☒ WGS 84	
a	UTM E (in meters, to nearest 10 meters): 269,710 m			UTM N (in meters, to nearest 10 meters): 4,096,160 m	
b	**AND** Latitude (deg., min., sec.): 36° 59' 00"			Longitude (deg., min., sec.): -107° 35' 15"	
3	Name and zip code of nearest New Mexico town: Navajo Dam, NM 87419				
4	Detailed Driving Instructions from nearest NM town (attach a road map if necessary): See Section 1-A.1.a.				
5	The facility is ~13.7 (distance) miles north-northeast (direction) of Navajo Dam, NM (nearest town).				
6	Status of land at facility (check one): ☐ Private ☐ Indian/Pueblo ☒ Federal BLM ☐ Federal Forest Service ☐ Other (specify)				
7	List all municipalities, Indian tribes, and counties within a ten (10) mile radius (20.2.72.203.B.2 NMAC) of the property on which the facility is proposed to be constructed or operated: None; So. Ute Tribe; Rio Arriba Co., & San Juan Co., NM.				
8	**20.2.72** NMAC applications **only**: Will the property on which the facility is proposed to be constructed or operated be closer than 50 km (31 miles) to other states, Bernalillo County, or a Class I area (see www.env.nm.gov/aqb/modeling/class1areas.html)? ☐ Yes ☐ No (20.2.72.206.A.7 NMAC) If yes, list all with corresponding distances in kilometers: N/A				
9	Name nearest Class I area: Weminuche Wilderness				
10	Shortest distance (in km) from facility boundary to the boundary of the nearest Class I area (to the nearest 10 meters): 48.31 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: ~1,450 meters				
12	Method(s) used to delineate the Restricted Area: Fencing "**Restricted Area**" is an area to which public entry is effectively precluded. Effective barriers include continuous fencing, continuous walls, or other continuous barriers approved by the Department, such as rugged physical terrain with steep grade that would require special equipment to traverse. If a large property is completely enclosed by fencing, a restricted area within the property may be identified with signage only. Public roads cannot be part of a Restricted Area.				
13	Does the owner/operator intend to operate this source as a portable stationary source as defined in 20.2.72.7.X NMAC? ☐ Yes ☒ No A portable stationary source is not a mobile source, such as an automobile, but a source that can be installed permanently at one location or that can be re-installed at various locations, such as a hot mix asphalt plant that is moved to different job sites.				
14	Will this facility operate in conjunction with other air regulated parties on the same property? ☒ No ☐ Yes If yes, what is the name and permit number (if known) of the other facility?				

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

1	Facility **maximum** operating ($\frac{\text{hours}}{\text{day}}$): 24	($\frac{\text{days}}{\text{week}}$): 7	($\frac{\text{weeks}}{\text{year}}$): 52	($\frac{\text{hours}}{\text{year}}$): 8,760		
2	Facility's maximum daily operating schedule (if less than 24 $\frac{\text{hours}}{\text{day}}$)? Start: N/A		AM PM	End: N/A		☐AM ☐PM
3	Month and year of anticipated start of construction: N/A					
4	Month and year of anticipated construction completion: N/A					
5	Month and year of anticipated startup of new or modified facility: N/A					
6	Will this facility operate at this site for more than one year? ☒ 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: N/A		NOV Tracking No: N/A
b	Is this application in response to any issue listed in 1-F, 1 or 1a above? ☐ Yes ☒ No If Yes, provide the 1c & 1d info below:		
c	Document Title: N/A	Date: N/A	Requirement # (or page # and paragraph #): N/A
d	Provide the required text to be inserted in this permit: N/A		
2	Is air quality dispersion modeling or modeling waiver being submitted with this application? ☐ Yes ☒ No		
3	Does this facility require an "Air Toxics" permit under 20.2.72.400 NMAC & 20.2.72.502, Tables A and/or B? ☐ Yes ☒ No		
4	Will this facility be a source of federal Hazardous Air Pollutants (HAP)? ☒ Yes ☐ No		
a	If Yes, what type of source? ☒ **Major** (☒ ≥10 tpy of any single HAP **OR** ☒ ≥25 tpy of any combination of HAPS) **OR** ☐ **Minor** (☐ <10 tpy of any single HAP **AND** ☐ <25 tpy of any combination of HAPS)		
5	Is any unit exempt under 20.2.72.202.B.3 NMAC? ☐ Yes ☒ No		
a	If yes, include the name of company providing commercial electric power to the facility: _____ Commercial power is purchased from a commercial utility company, which specifically does not include power generated on site for the sole purpose of the user.		

Section 1-G: Streamline Application

(This section applies to 20.2.72.300 NMAC Streamline applications only)

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

Section 1-H: Current Title V Information - Required for all applications from TV Sources

(Title V-source required information for all applications submitted pursuant to 20.2.72 NMAC (Minor Construction Permits), or 20.2.74/20.2.79 NMAC (Major PSD/NNSR applications), and/or 20.2.70 NMAC (Title V))

1	Responsible Official (R.O.) (20.2.70.300.D.2 NMAC): Travis Jones		Phone: 713-289-2630
a	R.O. Title: EH&S Manager	R.O. e-mail: trjones@harvestmidstream.com	
b	R. O. Address: 1111 Travis Street, Houston, TX 77002		
2	Alternate Responsible Official (20.2.70.300.D.2 NMAC): TBD		Phone: TBD
a	A. R.O. Title: TBD	A. R.O. e-mail: TBD	
b	A. R. O. Address: TBD		
3	Company's Corporate or Partnership Relationship to any other Air Quality Permittee (List the names of any companies that have operating (20.2.70 NMAC) permits and with whom the applicant for this permit has a corporate or partnership relationship): N/A		
4	Name of Parent Company ("Parent Company" means the primary name of the organization that owns the company to be permitted wholly or in part.): Hilcorp Energy Company		
a	Address of Parent Company: 1111 Travis Street, Houston, TX 77002		
5	Names of Subsidiary Companies ("Subsidiary Companies" means organizations, branches, divisions or subsidiaries, which are owned, wholly or in part, by the company to be permitted.): N/A		
6	Telephone numbers & names of the owners' agents and site contacts familiar with plant operations: N/A		
7	Affected Programs to include Other States, local air pollution control programs (i.e. Bernalillo) and Indian tribes: Will the property on which the facility is proposed to be constructed or operated be closer than 80 km (50 miles) from other states, local pollution control programs, and Indian tribes and pueblos (20.2.70.402.A.2 and 20.2.70.7.B)? If yes, state which ones and provide the distances in kilometers: Yes. Colorado (1.9 km), Southern Ute Tribe (1.9 km), Navajo Nation Tribal Lands (40.2 km); Jicarilla Apache Tribe (38.6 km), and Ute Mountain Tribe (66.0 km).		

Section 1-I – Submittal Requirements

Each 20.2.73 NMAC (**NOI**), a 20.2.70 NMAC (**Title V**), a 20.2.72 NMAC (**NSR** minor source), or 20.2.74 NMAC (**PSD**) application package shall consist of the following:

Hard Copy Submittal Requirements:

1) One hard copy **original signed and notarized application package** **printed double sided** **'head-to-toe'** **2-hole punched** as we bind the document on top, not on the side; except Section 2 (landscape tables), which should be head-to-head. Please use **numbered tab separators** in the hard copy submittal(s) as this facilitates the review process. For NOI submittals only, hard copies of UA1, Tables 2A, 2D & 2F, Section 3 and the signed Certification Page are required. Please include a copy of the check on a separate page.

2) If the application is for a minor NSR, PSD, NNSR, or Title V application, include one working hard **copy** for Department use. This copy should be printed in book form, 3-hole punched, and **must be double sided**. Note that this is in addition to the head-to-to 2-hole punched copy required in 1) above. Minor NSR Technical Permit revisions (20.2.72.219.B NMAC) only need to fill out Sections 1-A, 1-B, 3, and should fill out those portions of other Section(s) relevant to the technical permit revision. TV Minor Modifications need only fill out Sections 1-A, 1-B, 1-H, 3, and those portions of other Section(s) relevant to the minor modification. NMED may require additional portions of the application to be submitted, as needed.

3) The entire NOI or Permit application package, including the full modeling study, should be submitted electronically. Electronic files for applications for NOIs, any type of General Construction Permit (GCP), or technical revisions to NSRs must be submitted with compact disk (CD) or digital versatile disc (DVD). For these permit application submittals, **two** CD copies are required (in sleeves, not crystal cases, please), with additional CD copies as specified below. NOI applications require only a single CD submittal. Electronic files for other New Source Review (construction) permits/permit modifications or Title V permits/permit modifications can be submitted on CD/DVD or sent through AQB's secure file transfer service.

Electronic files sent by (check one):

☒ **CD/DVD attached to paper application**

☐ secure electronic transfer. Air Permit Contact Name_____

Email_____

Phone number _____

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

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

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

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

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

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

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

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

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

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

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

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Table 2-A: Regulated Emission Sources

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

Unit Number[1]	Source Description	Make	Model #	Serial #	Manufacturer's Rated Capacity[3] (Specify Units)	Requested Permitted Capacity[3] (Specify Units)	Date of Manufacture[2] / Date of Construction/ Reconstruction[2]	Controlled by Unit # / Emissions vented to Stack #	Source Classification Code (SCC)	For Each Piece of Equipment, Check One[5]	RICE Ignition Type (CI, SI, 4SLB, 4SRB, 2SLB)[4]	Replacing Unit No.
1	Compressor Engine	Waukesha	L7042GL	C-11898/1 (Package # 76769)	1,478 hp	1,368 hp	4/15/1996 / 4/15/1996	N/A / 1	20200202	☐ Existing (unchanged) ☐ To be Removed **X New/Additional** ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	4SLB	N/A
2	Compressor Engine	Waukesha	L7042GL	C-12554/2 (Package # 76735)	1,478 hp	1,368 hp	2/3/1998 / 2/3/1998	N/A / 2	20200202	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified **X To be Replaced**	4SLB	N/A
2	Compressor Engine	Waukesha	L7042GL	C-10795/2 (Package # 76770)	1,478 hp	1,368 hp	2/22/1993 / 2/22/1993	N/A / 2	20200202	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional **X Replacement Unit** ☐ To Be Modified ☐ To be Replaced	4SLB	2
3	Compressor Engine	Waukesha	L7042GL	C-11899/1 (Package # 76820)	1,478 hp	1,368 hp	4/25/1996 / 4/25/1996	N/A / 2	20200202	**X Existing (unchanged)** ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	4SLB	N/A
4	Compressor Engine	Waukesha	L7042GL	TBD	1,478 hp	1,368 hp	TBD / TBD	N/A / 4	20200202	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit **X To Be Modified** ☐ To be Replaced	4SLB	N/A
5	Compressor Engine	Waukesha	L7042GL	C-11898/1 (Package # 76769)	1,478 hp	1,368 hp	4/15/1996 / 4/15/1996	N/A / 5	20200202	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified **X To be Replaced**	4SLB	RICE moved to Unit 1
5	Compressor Engine	Waukesha	L7042GL	C-10607/15 (Package # 76771)	1,478 hp	1,368 hp	6/8/1992 / 6/8/1992	N/A / 5	20200202	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional **X Replacement Unit** ☐ To Be Modified ☐ To be Replaced	4SLB	5
6	Compressor Engine	Waukesha	L7042GL	C-11100/6 (Package # 76788)	1,478 hp	1,368 hp	2/21/1994 / 2/21/1994	N/A / 6	20200202	☐ Existing (unchanged) ☐ To be Removed **X New/Additional** ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	4SLB	N/A
7	Compressor Engine	Waukesha	L7042GL	C-12553/2 (Package # 76789)	1,478 hp	1,368 hp	2/13/1998 / 2/13/1998	N/A / 7	20200202	☐ Existing (unchanged) ☐ To be Removed **X New/Additional** ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	4SLB	N/A
8	Compressor Engine	Waukesha	L7042GL	361723 (Package # 76831)	1,478 hp	1,368 hp	3/2/1981 / 3/2/1981	N/A / 8	20200202	☐ Existing (unchanged) ☐ To be Removed **X New/Additional** ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	4SLB	N/A
9a	Dehydrator Still Vent	P&A	PA-12MM 1000-2P	TBD	12 mmcfd	12 mmcfd	TBD / TBD	N/A / 9a	31000227	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit **X To Be Modified** ☐ To be Replaced	N/A	N/A
9b	Dehydrator Reboiler	P&A	PA-12MM 1000-2P	TBD	1,208 scfh	1,208 scfh	TBD / TBD	N/A / 9b	31000228	**X Existing (unchanged)** ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
10a	Dehydrator Still Vent	P&A	PA-12MM 1000-2P	TBD	12 mmcfd	12 mmcfd	TBD / TBD	N/A / 10a	31000227	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit **X To Be Modified** ☐ To be Replaced	N/A	N/A
10b	Dehydrator Reboiler	P&A	PA-12MM 1000-2P	TBD	1,208 scfh	1,208 scfh	TBD / TBD	N/A / 10b	31000228	**X Existing (unchanged)** ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A

Unit Number[1]	Source Description	Make	Model #	Serial #	Manufacturer's Rated Capacity[3] (Specify Units)	Requested Permitted Capacity[3] (Specify Units)	Date of Manufacture[2] / Date of Construction/ Reconstruction[2]	Controlled by Unit # / Emissions vented to Stack #	Source Classification Code (SCC)	For Each Piece of Equipment, Check One[5]	RICE Ignition Type (CI, SI, 4SLB, 4SRB, 2SLB)[4]	Replacing Unit No.
11a	Dehydrator Still Vent	P&A	PA-12MM 1000-2P	TBD	12 mmcfd	12 mmcfd	TBD / TBD	N/A / 11a	31000227	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit **X To Be Modified** ☐ To be Replaced	N/A	N/A
11b	Dehydrator Reboiler	P&A	PA-12MM 1000-2P	TBD	1,208 scfh	1,208 scfh	TBD / TBD	N/A / 11b	31000228	**X Existing (unchanged)** ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
12a	Dehydrator Still Vent	P&A	PA-20MM 1000-2P	TBD	20 mmcfd	20 mmcfd	TBD / TBD	N/A / 12a	31000227	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit **X To Be Modified** ☐ To be Replaced	N/A	N/A
12b	Dehydrator Reboiler	P&A	PA-20MM 1000-2P	TBD	1,648 scfh	1,648 scfh	TBD / TBD	N/A / 12b	31000228	**X Existing (unchanged)** ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
13a	Dehydrator Still Vent	P&A	PA-20MM 1000-2P	TBD	20 mmcfd	20 mmcfd	TBD / TBD	N/A / 13a	31000227	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit **X To Be Modified** ☐ To be Replaced	N/A	N/A
13b	Dehydrator Reboiler	P&A	PA-20MM 1000-2P	TBD	1,648 scfh	1,648 scfh	TBD / TBD	N/A / 13b	31000228	**X Existing (unchanged)** ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
SSM	Compressor & Associated Piping	N/A	N/A	N/A	N/A	N/A	N/A / N/A	N/A / N/A	31000203	**X Existing (unchanged)** ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
M1	Malfunctions	N/A	N/A	N/A	N/A	N/A	N/A / N/A	N/A / N/A	31000299	**X Existing (unchanged)** ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
							/	/		☐ 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] 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.

[3] Specify dates required to determine regulatory applicability.

[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

[5] For RICE units 1-8, indicated "To Be Removed", "New/Additional", "To Be Modified", or "Replacement Unit" pertains to movement and/or exchanges of currently permitted units. Only engine serial numbers, package #s (and/or To Be Determined ("TBD") status) are affected.

[6] For simplicity, Title V Operating permit P197-R3, Table 104.A: Regulated Sources List: Unit "SSM for 1a, 2a, 4a, 5a" (Compressor and associated piping) is simplified to "SSM".

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

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

Unit Number	Source Description	Manufacturer	Model No. / Serial No.	Max Capacity / Capacity Units	List Specific 20.2.72.202 NMAC Exemption (e.g. 20.2.72.202.B.5) / Insignificant Activity citation (e.g. IA List Item #1.a)	Date of Manufacture /Reconstruction[2] / Date of Installation /Construction[2]	For Each Piece of Equipment, Check Onc
17	Storage Tank Heater			0.325 MMBtu/hr	20.2.72.202.B(5) NMAC Insignificant Activity List Item # 1		X **Existing (unchanged)** ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
18	Storage Tank Heater			0.325 MMBtu/hr	20.2.72.202.B(5) NMAC Insignificant Activity List Item # 1		X **Existing (unchanged)** ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
F1	Fugitive Equipment Leaks			N/A N/A	20.2.72.202.B(5) NMAC Insignificant Activity List Item # 1		X **Existing (unchanged)** ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
T3-T10	Lubrication Oil Storage Tank			500 gal	20.2.72.202.B(2) NMAC Insignificant Activity List Item # 5		X **Existing (unchanged)** ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
T11-T18	Used Oil Storage Tank			500 gal	20.2.72.202.B(2) NMAC Insignificant Activity List Item # 5		X **Existing (unchanged)** ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
T19-T23	TEG Storage Tank			500 gal	20.2.72.202.B(2) NMAC Insignificant Activity List Item # 5		X **Existing (unchanged)** ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
T24	Produced Water Storage Tank			16,800 gal	20.2.72.202.B(5) NMAC Insignificant Activity List Item # 1		☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit X **To Be Modified** ☐ To be Replaced
T25	Produced Water Storage Tank			16,800 gal	20.2.72.202.B(5) NMAC Insignificant Activity List Item # 1		☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit X **To Be Modified** ☐ To be Replaced
T26	Waste Water Storage Tank			1,890 gal	20.2.72.202.B(2) NMAC Insignificant Activity List Item # 5		X **Existing (unchanged)** ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
T27	Antifreeze Storage Tank			500 gal	20.2.72.202.B(2) NMAC Insignificant Activity List Item # 5		X **Existing (unchanged)** ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
T28	Soap Storage Tank			300 gal	For Information Only Not An Emissions Source		X **Existing (unchanged)** ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
T29	Water Storage Tank			1,000 gal	For Information Only Not An Emissions Source		X **Existing (unchanged)** ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
L1	Truck Loading (Produced Water)			N/A N/A	20.2.72.202.B(5) NMAC Insignificant Activity List Item # 1		X **Existing (unchanged)** ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
PR2, PR4	Pig Receiving			N/A N/A	20.2.72.202.B(5) NMAC Insignificant Activity List Item # 1		X **Existing (unchanged)** ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
							☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
							☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced

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

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

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
N/A						

[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)

X 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
Totals																		

[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
1	2.7	11.9	8.3	36.3	3.0	13.2	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
2	2.7	11.9	8.3	36.3	3.0	13.2	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
3	2.7	11.9	8.3	36.3	3.0	13.2	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
4	2.7	11.9	8.3	36.3	3.0	13.2	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
5	2.7	11.9	8.3	36.3	3.0	13.2	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
6	2.7	11.9	8.3	36.3	3.0	13.2	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
7	2.7	11.9	8.3	36.3	3.0	13.2	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
8	2.7	11.9	8.3	36.3	3.0	13.2	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
9a[2]	-	-	-	-	0.54	2.36	-	-	-	-	-	-	-	-	-	-	-	-
9b	4.29E-02	0.19	3.3E-02	0.14	4.8E-03	2.1E-02	8.3E-04	3.7E-03	3.3E-03	1.4E-02	3.3E-03	1.4E-02	3.3E-03	1.4E-02	-	-	6.0E-07	2.6E-06
10a[2]	-	-	-	-	0.54	2.36	-	-	-	-	-	-	-	-	-	-	-	-
10b	4.29E-02	0.19	3.3E-02	0.14	4.8E-03	2.1E-02	8.3E-04	3.7E-03	3.3E-03	1.4E-02	3.3E-03	1.4E-02	3.3E-03	1.4E-02	-	-	6.0E-07	2.6E-06
11a[2]	-	-	-	-	0.54	2.36	-	-	-	-	-	-	-	-	-	-	-	-
11b	4.29E-02	0.19	3.3E-02	0.14	4.8E-03	2.1E-02	8.3E-04	3.7E-03	3.3E-03	1.4E-02	3.3E-03	1.4E-02	3.3E-03	1.4E-02	-	-	6.0E-07	2.6E-06
12a[2]	-	-	-	-	0.55	2.42	-	-	-	-	-	-	-	-	-	-	-	-
12b	4.29E-02	0.19	4.5E-02	0.20	6.5E-03	2.8E-02	8.3E-04	3.7E-03	1.3E-02	5.5E-02	1.3E-02	5.5E-02	1.3E-02	5.5E-02	-	-	8.2E-07	3.6E-06
13a[2]	-	-	-	-	0.55	2.42	-	-	-	-	-	-	-	-	-	-	-	-
13b	4.3E-02	0.19	4.5E-02	0.20	6.5E-03	2.8E-02	8.3E-04	3.7E-03	1.3E-02	5.5E-02	1.3E-02	5.5E-02	1.3E-02	5.5E-02	-	-	8.2E-07	3.6E-06
SSM	-	-	-	-	unspecified	0.80	-	-	-	-	-	-	-	-	-	-	-	-
M1	-	-	-	-	unspecified	10.00	-	-	-	-	-	-	-	-	-	-	-	-
Totals	21.92	96.02	66.52	291.35	26.75	128.44	0.05	0.23	0.83	3.67	0.83	3.67	0.83	3.67	-	-	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).

[2] The dehydrator still vent emissions of VOC include a 25% safety factor.

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
SSM	-	-	-	-	unspecified	0.80	-	-	-	-	-	-	-	-	-	-	-	-
M1	-	-	-	-	unspecified	10.00	-	-	-	-	-	-	-	-	-	-	-	-
Totals	-	-	-	-	not specified	10.80	-	-	-	-	-	-	-	-	-	-	-	-

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

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

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

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

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

Stack No.	Serving Unit Number(s) from Table 2-A	NOx		CO		VOC		SOx		PM		PM10		PM2.5		□ H_2S or □ Lead	
		lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
Totals:																	

Table 2-H: Stack Exit Conditions

Unit and stack numbering must correspond throughout the application package. Include the stack exit conditions for each unit that emits from a stack, including blowdown venting parameters and tank emissions. If the facility has multiple operating scenarios, complete a separate Table 2-H for each scenario and, for each, type scenario name here:

Stack Number	Serving Unit Number(s) from Table 2-A	Orientation (H-Horizontal V=Vertical)	Rain Caps (Yes or No)	Height Above Ground (ft)	Temp. (F)	Flow Rate		Moisture by Volume (%)	Velocity (ft/sec)	Inside Diameter (ft)
						(acfs)	(dscfs)			
1	1	V	No	22	702	127			155	1.02
2	2	V	No	22	702	127			155	1.02
3	3	V	No	22	702	127			155	1.02
4	4	V	No	22	702	127			155	1.02
5	5	V	No	22	702	127			155	1.02
6	6	V	No	22	702	127			155	1.02
7	7	V	No	22	702	127			155	1.02
8	8	V	No	22	702	127			155	1.02
9b	9b	V	No	19	600	3.3			6.1	0.83
10b	10b	V	No	19	600	3.3			6.1	0.83
11b	11b	V	No	19	600	3.3			6.1	0.83
12b	12b	V	No	19	600	3.3			6.1	0.83
13b	13b	V	No	19	600	3.3			6.1	0.83

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		Benzene X HAP or □ TAP		Formaldehyde X HAP or □ TAP		Toluene X HAP or □ TAP		Xylenes X HAP or □ TAP		Provide Pollutant Name Here □ HAP or □ TAP		Provide Pollutant Name Here □ HAP or □ TAP		Provide Pollutant Name Here □ HAP or □ TAP		Provide Pollutant Name Here □ HAP or □ TAP	
		lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
1	1	0.53	2.3	0.51	2.2	0.51	2.2	-	-	-	-								
2	2	0.53	2.3	0.51	2.2	0.51	2.2	-	-	-	-								
3	3	0.53	2.3	0.51	2.2	0.51	2.2	-	-	-	-								
4	4	0.53	2.3	0.51	2.2	0.51	2.2	-	-	-	-								
5	5	0.53	2.3	0.51	2.2	0.51	2.2	-	-	-	-								
6	6	0.53	2.3	0.51	2.2	0.51	2.2	-	-	-	-								
7	7	0.53	2.3	0.51	2.2	0.51	2.2	-	-	-	-								
8	8	0.53	2.3	0.51	2.2	0.51	2.2	-	-	-	-								
9a[1]	9a[1]	0.3	1.1	-	0.1	-	-	0.1	0.5	0.1	0.5								
9b	9b	-	-	-	-	-	-	-	-	-	-								
10a[1]	10a[1]	0.3	1.1	-	0.1	-	-	0.1	0.5	0.1	0.5								
10b	10b	-	-	-	-	-	-	-	-	-	-								
11a[1]	11a[1]	0.3	1.1	-	0.1	-	-	0.1	0.5	0.1	0.5								
11b	11b	-	-	-	-	-	-	-	-	-	-								
12a[1]	12a[1]	0.3	1.2	-	0.1	-	-	0.1	0.5	0.1	0.6								
12b	12b	-	-	-	-	-	-	-	-	-	-								
13a[1]	13a[1]	0.3	1.2	-	0.1	-	-	0.1	0.5	0.1	0.6								
13b	13b	-	-	-	-	-	-	-	-	-	-								
SSM	SSM	-	-	-	-	-	-	-	-	-	-								
M1	M1	-	0.1	-	-	-	-	-	-	-	-								
Totals		5.6	24.6	0.3	1.3	4.1	17.8	0.6	2.7	0.6	2.7								

[1] The dehydrator still vent HAP emissions include a 25 % safety factor.

Table 2-J: Fuel

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

Unit No.	Fuel Type (low sulfur Diesel, ultra low sulfur diesel, Natural Gas, Coal, …)	Fuel Source: purchased commercial, pipeline quality natural gas, residue gas, raw/field natural gas, process gas (e.g. SRU tail gas) or other	Specify Units				
			Lower Heating Value	Hourly Usage	Annual Usage	% Sulfur	% Ash
1	Natural Gas	Raw/Field Natural Gas	900 Btu/scf	11.2 Mscf	98.1 MMscf	--	--
2	Natural Gas	Raw/Field Natural Gas	900 Btu/scf	11.2 Mscf	98.1 MMscf	--	--
3	Natural Gas	Raw/Field Natural Gas	900 Btu/scf	11.2 Mscf	98.1 MMscf	--	--
4	Natural Gas	Raw/Field Natural Gas	900 Btu/scf	11.2 Mscf	98.1 MMscf	--	--
5	Natural Gas	Raw/Field Natural Gas	900 Btu/scf	11.2 Mscf	98.1 MMscf	--	--
6	Natural Gas	Raw/Field Natural Gas	900 Btu/scf	11.2 Mscf	98.1 MMscf	--	--
7	Natural Gas	Raw/Field Natural Gas	900 Btu/scf	11.2 Mscf	98.1 MMscf	--	--
8	Natural Gas	Raw/Field Natural Gas	900 Btu/scf	11.2 Mscf	98.1 MMscf	--	--
9b	Natural Gas	Raw/Field Natural Gas	900 Btu/scf	1208 Mscf	10.58 MMscf	--	--
10b	Natural Gas	Raw/Field Natural Gas	900 Btu/scf	1208 Mscf	10.58 MMscf	--	--
11b	Natural Gas	Raw/Field Natural Gas	900 Btu/scf	1208 Mscf	10.58 MMscf	--	--
12b	Natural Gas	Raw/Field Natural Gas	900 Btu/scf	1648 Mscf	14.44 MMscf	--	--
13b	Natural Gas	Raw/Field Natural Gas	900 Btu/scf	1648 Mscf	14.44 MMscf	--	--

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

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

Tank No.	SCC Code	Material Name	Composition	Liquid Density (lb/gal)	Vapor Molecular Weight (lb/lb*mol)	Average Storage Conditions		Max Storage Conditions	
						Temperature (°F)	True Vapor Pressure (psia)	Temperature (°F)	True Vapor Pressure (psia)
T3-T10	40400313	Lubrication Oil	Lubrication Oil	Insignificant source under Insignificant Activites List, Item No. 5 (Vapor pressure < 10 mm Hg)					
T11-T18	40400313	Used Oil	Used Oil	Insignificant source under Insignificant Activites List, Item No. 5 (Vapor pressure < 10 mm Hg)					
T19-T23	40705218	TEG	Triethylene Glycol (TEG)	Insignificant source under Insignificant Activites List, Item No. 5 (Vapor pressure < 10 mm Hg)					
T24	40400315	Produced Water	Water; <1% hydrocarbon liquids	8.3	N/A*	N/A*	N/A*	N/A*	N/A*
T25	40400315	Produced Water	Water; <1% hydrocarbon liquids	8.3	N/A*	N/A*	N/A*	N/A*	N/A*
T26	40400313	Waste Water	Water; <1% heavy hydrocarbon liquid	Insignificant source under Insignificant Activites List, Item No. 5 (Vapor pressure < 10 mm Hg)					
T27	31000299	Antifreeze	Ethylene Glycol	Insignificant source under Insignificant Activites List, Item No. 5 (Vapor pressure < 10 mm Hg)					
T28	40400314	Soap	Soap	Not a source of regulated air contaminants.					
T29	- -	Water	Water	Not a source of regulated air contaminants.					
				* N/A: The emission calculations do not yield this data.					

Table 2-L: Tank Data

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

Tank No.	Date Installed	Materials Stored	Seal Type (refer to Table 2-LR below)	Roof Type (refer to Table 2-LR below)	Capacity		Diameter (M)	Vapor Space (M)	Color (from Table VI-C)		Paint Condition (from Table VI-C)	Annual Throughput (gal/yr)	Turnovers (per year)
					(bbl)	(M^3)			Roof	Shell			
T3-T10		Lubrication Oil	N/A	FX	12	1.9	Insignificant source under Insignificant Activites List, Item No. 5 (Vapor pressure < 10 mm Hg)						
T11-T18		Used Oil	N/A	FX	12	1.9	Insignificant source under Insignificant Activites List, Item No. 5 (Vapor pressure < 10 mm Hg)						
T19-T23		TEG	N/A	FX	12	1.9	Insignificant source under Insignificant Activites List, Item No. 5 (Vapor pressure < 10 mm Hg)						
T24		Produced Water	N/A	N/A	400	63.6	N/A*	N/A*	N/A*	N/A*	N/A*	403,200	- -
T25		Produced Water	N/A	FX	400	63.6	N/A*	N/A*	N/A*	N/A*	N/A*	with T24	- -
T26		Waste Water	N/A	FX	18	2.9	Insignificant source under Insignificant Activites List, Item No. 5 (Vapor pressure < 10 mm Hg)						
T27		Antifreeze	N/A	FX	12	1.9	Insignificant source under Insignificant Activites List, Item No. 5 (Vapor pressure < 10 mm Hg)						
T28		Soap	N/A	FX	7	1.1	Not a source of regulated air contaminants.						
T29		Water	N/A	FX	24	3.8	Not a source of regulated air contaminants.						
							* N/A: The emission calculations do not yield this data.						

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

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

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

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

Material Processed				Material Produced			
Description	**Chemical Composition**	**Phase (Gas, Liquid, or Solid)**	**Quantity (specify units)**	**Description**	**Chemical Composition**	**Phase**	**Quantity (specify units)**
Low pressure natural gas	C1-C6+	Gas	36,602 mmcfy[1]	High pressure natural gas	C1-C6+	Gas	36,602 mmcfy[1]
Produced water	H2O + trace of HC	Liquid	9,600 bpy	Produced water	H2O + trace of HC	Liquid	9,600 bpy

[1] The material processed and material produced are both a direct function of available horsepower. The material processing and production rates are therefore dependent on atmospheric temperature and pressure, gas temperature and pressure, relative humidity and gas quality, was well as other factors. The values expressed above are a nominal quantities (with a safety factor), neither an absolute maximum, nor an average. Actual values will vary from the nominal amount.

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								

Table 2-P: Green House 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.

Unit No.		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**							
1	**mass GHG**	6,010.5	0.0113	0.1133								6010.6	-
	CO_2e	6,010.5	3.4	2.8								-	6016.66
2	**mass GHG**	6,010.5	0.0113	0.1133								6010.6	-
	CO_2e	6,010.5	3.4	2.8								-	6016.7
3	**mass GHG**	6,010.5	0.0113	0.1133								6010.6	-
	CO_2e	6,010.5	3.4	2.8								-	6016.66
4	**mass GHG**	6,010.5	0.0113	0.1133								6010.6	-
	CO_2e	6,010.5	3.4	2.8								-	6016.7
5	**mass GHG**	6,010.5	0.0113	0.1133								6010.6	-
	CO_2e	6,010.5	3.4	2.8								-	6016.66
6	**mass GHG**	6,010.5	0.0113	0.1133								6010.6	-
	CO_2e	6,010.5	3.4	2.8								-	6016.7
7	**mass GHG**	6,010.5	0.0113	0.1133								6010.6	-
	CO_2e	6,010.5	3.4	2.8								-	6016.66
8	**mass GHG**	6,010.5	0.0113	0.1133								6010.6	-
	CO_2e	6,010.5	3.4	2.8								-	6016.7
SSM	**mass GHG**	27.3	-	151.94								179.23	-
	CO2e	27.3	-	3,798.55								-	3825.8

Unit No.		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**							
9a	**mass GHG**	16.6	--	4.35E+00								21.00	-
	CO_2e	16.6	-	108.8								-	125.4
9b	**mass GHG**	617.6	1.16E-03	0.01								617.65	-
	CO_2e	617.6	0.35	0.29								-	618.3
10a	**mass GHG**	16.6	--	4.4								21.0	-
	CO2e	16.6	-	108.8								-	125.4
10b	**mass GHG**	617.6	1.16E-03	0.01								617.6	-
	CO_2e	617.6	0.35	0.29								-	618.3
11a	**mass GHG**	16.6	--	4.4								21.0	-
	CO2e	16.6	-	108.8								-	125.4
11b	**mass GHG**	617.6	1.16E-03	0.01								617.6	-
	CO_2e	617.6	0.35	0.29								-	618.3
12a	**mass GHG**	16.2	--	4.2								20.5	-
	CO2e	16.2	-	105.3								-	121.6
12b	**mass GHG**	842.6	1.59E-03	0.02								842.6	-
	CO_2e	842.6	0.47	0.40								-	843.5
13a	**mass GHG**	16.2	--	4.2								20.5	-
	CO_2e	16.2	-	105.3								-	121.6
13b	**mass GHG**	842.6	1.59E-03	0.02								842.6	-
	CO_2e	842.6	0.47	0.40								-	843.5
F1	**mass GHG**	4.0	-	22.2								26.2	-
	CO_2e	4.0	-	556.2								-	560.2
M1	**mass GHG**	339.9	-	1,892.3								2232.2	-
	CO2e	339.9	-	47,307.9								-	47647.7
P2, P4	**mass GHG**	0.2	-	1.4								1.6	-
	CO_2e	0.2	-	34.2								-	34.4

Unit No.		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**							
Insignificant Storage Tanks	**mass GHG**	0.0	-	0.0								0.0	-
	CO2e	0.0	-	0.0								-	0.0
Reciprocating Compressors	**mass GHG**	86.7	-	483.5								570.2	-
	CO_2e	86.7	-	12,088.3								-	12175.0
Pneumatic Devices	**mass GHG**	27.0	-	150.2								177.1	-
	CO2e	27.0	-	3,753.8								-	3780.8
Pneumatic Pumps	**mass GHG**	2.5	-	13.72								16.2	-
	CO_2e	2.5	-	343.11								-	345.6
Total[6]	**mass GHG**	52,191.7	0.1	2,737.7								54,929.55	-
	CO_2e	52,191.7	29.0	68,443.4								-	#########

[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 GWI

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

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

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

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

Section 3

Application Summary

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

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

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

Harvest Four Corners, LLC (Harvest) is submitting this air quality permit application to the New Mexico Air Quality Bureau (NMAQB) for a renewal of and modification to its Title V Operating Permit P198-R3 for the Trunk N Compressor Station (Trunk N), issued on November 22, 2016, as administratively revised (including a change in ownership to Harvest Four Corners, LLC in October 2018). The facility also operates under the authority of New Source Review (NSR) Construction Permit 1546-M3, issued March 23, 2011, as administratively revised. This Title V Operating Permit renewal application is submitted under section 20.2.70.300.B(2) of the New Mexico Administrative Code (NMAC).

The Trunk N Compressor Station is a production gathering field compressor station that pressurizes and dehydrates natural gas for transport through natural gas pipelines. Operating Permit P198-R3 allows the following regulated equipment/sources:

- Eight (8) uncontrolled Waukesha L7042GL natural gas-fired reciprocating compressor engines (units 1 through 8);
- Emissions of volatile organic compounds (VOC) associated with startup, shutdown and routine maintenance activities (SSM);
- Three (3) 12-million cubic feet per day (mmcfd) triethylene glycol (TEG) dehydrators for the dehydration of natural gas;
- Two (2) 20-mmcfd TEG dehydrators; and
- Up to 10 tons per year (tpy) of facility-wide malfunction emissions of VOC (unit M1).

Unregulated/insignificant emission sources at the facility include produced water tanks (T24 and T25) and other insignificant storage tanks; produced water truck loading (unit L1); pipeline pig receiving (units PR2 and PR4); two small storage tank heaters (units 17 and 18), and fugitive emissions of VOC (F1). The regulatory justification for their insignificance is noted in Table 2-B of the application. Insignificance based on the NMAQB Operating Permit Program List of Insignificant Activities, Item #1 (i.e., emissions less than 1 ton per year (tpy)) is demonstrated through emission calculations provided in Section 6.

The Trunk N Compressor Station is authorized to operate continuously.

Based on emissions of carbon monoxide (CO) of greater than 250 tpy, the facility is a major source under the 20.2.74 NMAC Prevention of Significant Deterioration (PSD) program.

The facility is an area (minor) source of Hazardous Air Pollutants (HAP) under Title 40 of the Code of Federal Regulations, Part 63 (40 CFR 63), subpart HH, *National Emission Standards for Hazardous Air Pollutants [NESHAP] for Oil and Gas Production Facilities*; and is a HAP major source under 40 CFR 63, subpart ZZZZ, *NESHAP for Stationary Reciprocating Internal Combustion Engines*.

The changes to the compressor package/skid equipment (including those described below) triggers 40 CFR Part 60, *New Source Performance Standards* (NSPS), subpart OOOOa, *Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015*.

Construction Permit Administrative Permit Revisions

This Title V Operating Permit renewal application incorporates the following approved construction permit changes:

- Administrative Revision 1546-M3-R4 (October 1, 2019): Identical engine replacement of unit 5 (serial number (SN) C-11661/4 (package # 76738) with engine SN C-11898/1 (package # 73738).
- Administrative Revision 1546-M3-R5 (October 1, 2019): Identical engine replacement of unit 5 (serial number (SN) C-11899/1 (package # 76737) with engine SN C-10795/2 (package # 73737).
- Administrative Revision 1546-M3-R6 (October 2, 2019): Identical engine replacement of unit 5 (serial number (SN) 361723 (package # 76736) with engine SN C-11899/1 (package # 73736). (Note that replacement engine unit 3 is the same engine that was replaced in 1546-M3-R4 in the unit 5 slot.)

Harvest operates a fleet of natural gas compressor packages in the Four Corners Area field natural gas production region (including the Trunk N Compressor Station). The compressors and their Waukesha

L7042GL existing compressor driver engines are each from an existing fleet with manufacture and construction dates that pre-date December 19, 2002.

Identical engine replacements ("engine swings") involve the removal from the package/skid of a Waukesha 7042GL engine and its replacement with an identical Waukesha 7042GL engine, thus avoiding disruption of engine service and compression. The removed engine is taken offsite for maintenance, and is subsequently placed back into the fleet for future service. The engine service may either be at the original location or at a different Harvest facility.

The natural gas compressors are driven by the engines. When the engine is removed for maintenance, the compressor typically remains on the skid and is therefore identified with the skid #/package #. Under some circumstances the compressor may be exchanged with another compressor. As with the fleet of engines above, Harvest maintains a "fleet" of existing compressors that may be exchanged. (Generally, the compressor packages have manufacture/construction dates that predate regulatory applicability of NSPS subparts OOOO and OOOOa.)

Engine and Package Number Changes

In addition to identical engine replacements noted above, Harvest is also incorporating the following equipment changes for which one or more construction permit application(s) is being prepared and will be submitted for a concurrent NMAQB review:

Permitted Emission Unit #	Current Engine Serial #	Current Date of Engine Manufacture/ Reconstruction	Current Package # (Compressor Skid #)	**UPDATED** Engine Serial #	**UPDATED** Date of Engine Manufacture/ Reconstruction	**UPDATED** Package # (Compressor Skid #)
1	TBD	TBD	TBD	C-11898/1[a]	4/15/96	76769
2	C-12554/2	2/3/98	76735	C-10795/2[b]	5/14/93	76770
3	C-11899/1	4/25/96	76736	No changes	No changes	76820
4	C-10795/2[b]	5/14/93	76737	TBD	TBD	TBD
5	C-11898/1[a]	4/15/96	76738	C-10607/15[a]	6/8/92	76771
6	TBD	TBD	TBD	C-11100/6	2/21/94	76788
7	TBD	TBD	TBD	C-12553/2	2/3/98	76789
8	TBD	TBD	TBD	361723[d]	3/2/81	76831

[a] Engine SN C-11898/1 is relocated from the unit 5 slot to the unit 1 slot. A unit 5 slot "engine swing" follows with the Identical equipment exchange placement of engine SN C-10607/15 in the unit 5 slot.

[b] Engine SN C-10795/2 relocated from the unit 4 slot to the unit 2 slot.

[c] Existing fleet engines are being installed in the currently permitted but open slots for units 6 and 7.

[d] Prior to NSR 1546-M3-R6, 10/1/19, engine SN 361723 previously occupied the unit 3 slot before being temporarily removed offsite for maintenance. It is being placed in the unit 8 slot.

The updated package/compressor skids are moved either within the facility existing package/compressor skids, or from another Harvest facility.

Increase of TEG Dehydrator VOC Emission Rates

Potential To Emit (PTE) calculations for the three 12-mmcfd TEG dehydrator still vents (units 9a, 10a and 11a) and the two 20-mmcfd TEG dehydrator still vents (units 12a and 13a) were recently updated using GRI-GLYCalc emission estimation software and a recent natural gas extended gas sample. The calculations show that the PTE for VOC has increased from the currently permitted 0.5 tpy VOC (each) to 2.36 tpy and 2.42 tpy of VOC (including a +25 percent [%] safety factor), respectively. Thus, the dehydrators are no longer exempt under NSR, and are no longer "insignificant" sources under Title V.

There have been no operational changes to the facility; the increase in PTE for VOC is due solely to an increase of VOC in the composition of the field natural gas transferred to the facility via gathering pipelines from the various independent producers.

At the time of submittal of this Title V Operating Permit renewal application, the TEG dehydrators have not yet been installed. Thus, no actual exceedance of air emissions has occurred. An application for a significant modification to the construction permit is under preparation and will be submitted for a concurrent NMAQB review.

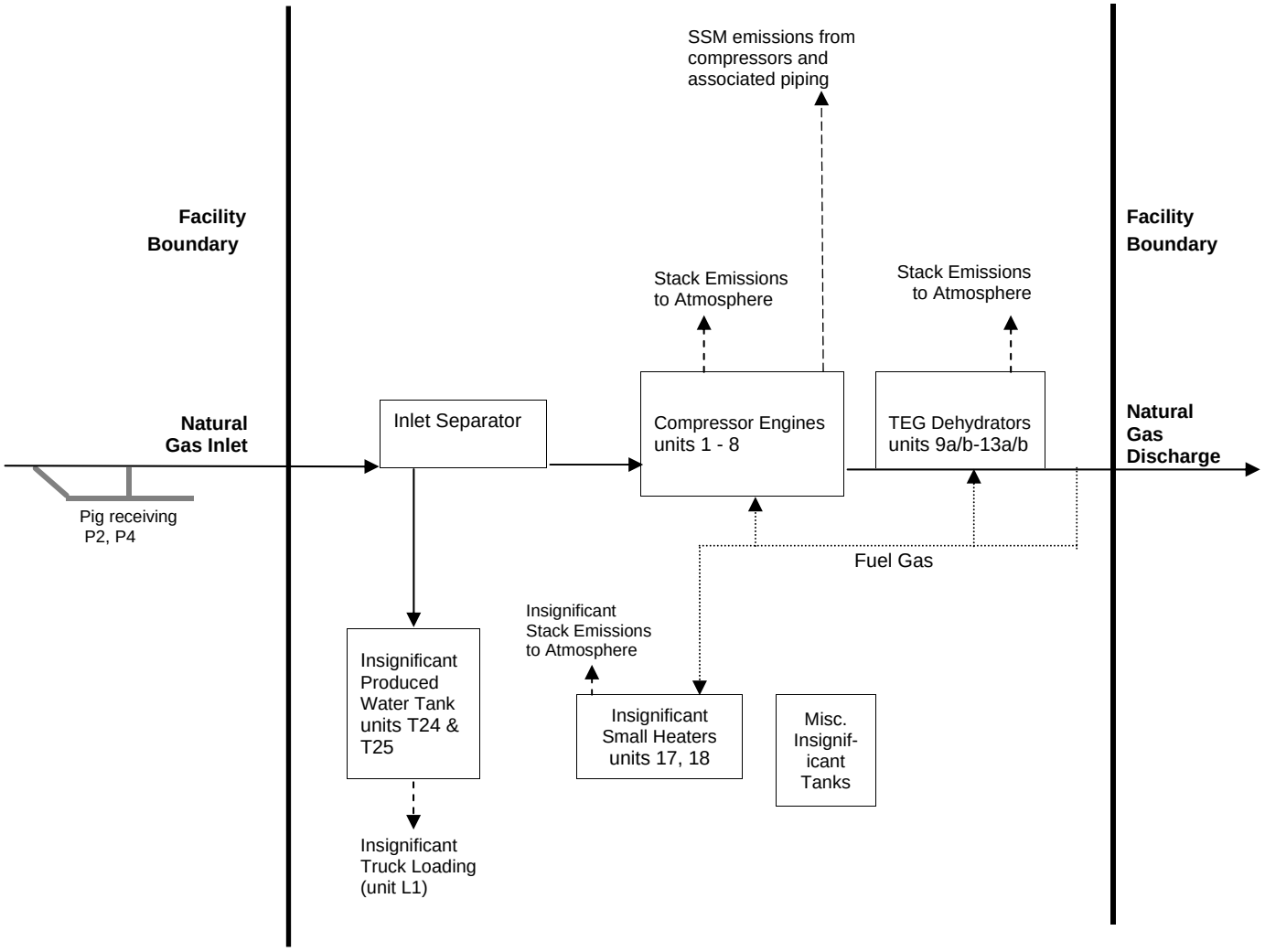
* * * * *

The above permit changes do not affect station operations, de-bottleneck impacts, or change the station's major/minor source status (both PSD and Title V).

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.



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.

Please see the following page(s).

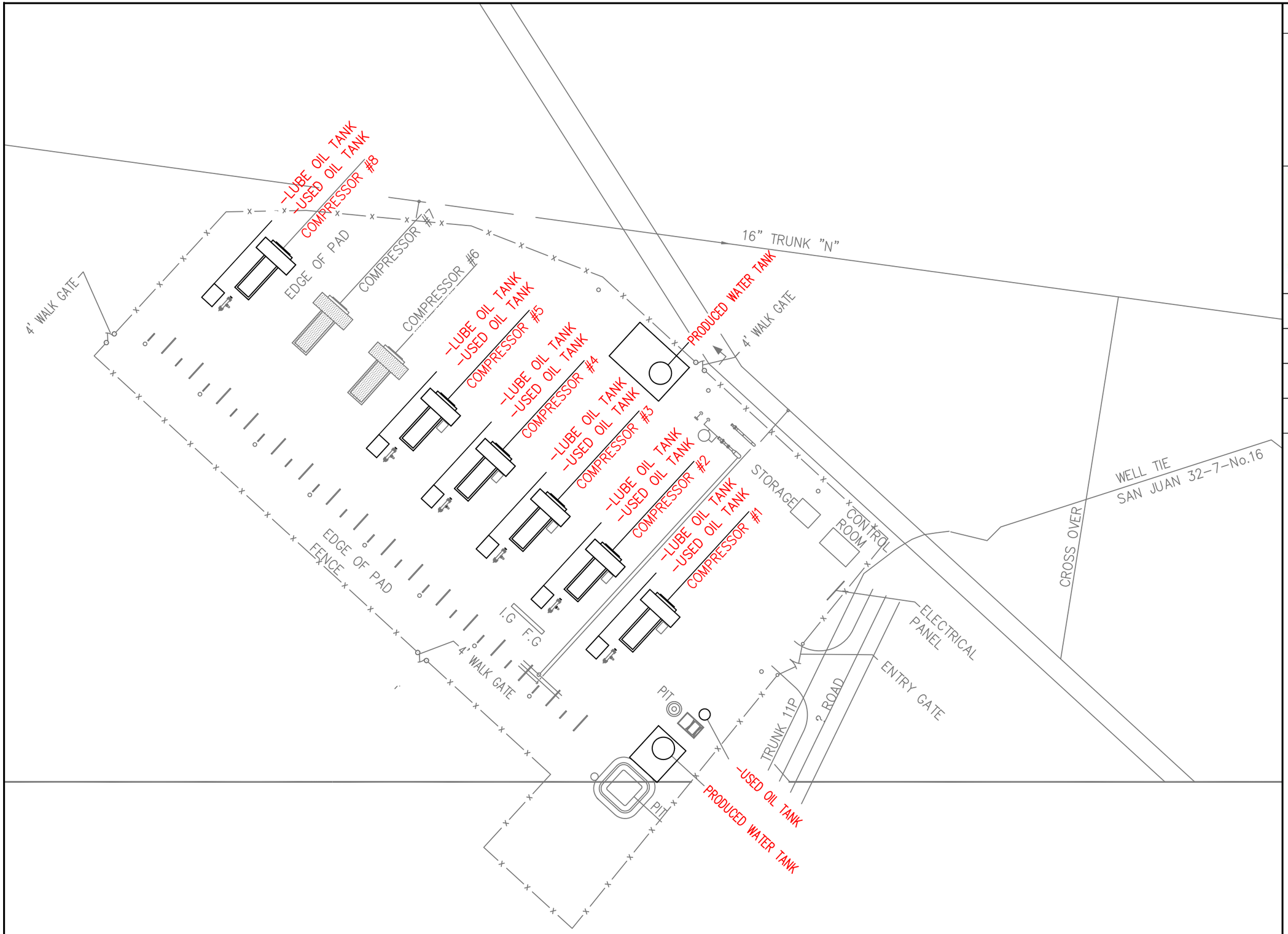
FIGURE 2

FACILITY LAYOUT
WILLIAMS FOUR CORNERS LLC
TRUNK N FACILITY
SW¼ NE¼, SECTION 17, T32N, R7W
SAN JUAN COUNTY, NEW MEXICO
N36.98303, W107.58655

Animas Environmental Services, LLC

DRAWN BY: C. Lameman	**DATE DRAWN:** December 5, 2013
REVISIONS BY: C. Lameman	**DATE REVISED:** December 5, 2013
CHECKED BY: K. Christiansen	**DATE CHECKED:** December 5, 2013
APPROVED BY: E. McNally	**DATE APPROVED:** December 5, 2013

NOTE: SITE DIAGRAM OBTAINED FROM WILLIAMS.



N

SCALE
50 30 0 50
10
(1 INCH = 50 FEET)

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.

Reciprocating Engines

Emissions of nitrogen oxides (NO_X), carbon monoxide (CO) and volatile organic compound (VOC) emissions from the Waukesha 7042GL engines (units 1 through 8) are calculated from engine manufacturer's data and the site-rated horsepower (hp) rating of the engine. Emissions of sulfur dioxide (SO_2) and particulate emissions are calculated from AP-42, Table 3.2-2 emission factors and the maximum fuel use. Uncontrolled hazardous air pollutants (HAPs) from the RICE are calculated with the GRI-HAPCalc 3.1 emissions estimation software. The emission calculations assume operation at full site capacity for 8,760 hours per year.

Each of the engines starts up with no load and a rich fuel mixture. As a result, emissions are minimized. Because the engine takes only minutes to reach the operating temperature of the engine, emissions during startup are not expected to exceed the steady-state allowable emission rate limits. There are no Environmental Protection Agency (EPA)-approved test methods available to measure emissions during startup.

Similarly, emissions during shut down do not exceed the steady-state allowable limits because fuel and air flow cease within seconds of shutdown. Emissions due to scheduled maintenance are negligible, as the engine is not in operation during maintenance.

The criteria pollutant emission calculations and GRI-HAPCalc 3.0 output file calculations are provided in this section.

Startup, Shutdown & Routine Maintenance (SSM) Emissions

Emissions associated with startups, shutdowns and routine maintenance (SSM) from the compressors and piping are vented to the atmosphere. SSM emissions from a compressor occur when high pressure gas is used to purge air from the compressor and associated piping prior to a startup. This gas is then vented to atmosphere. Also, after shutdowns, high pressure gas in the compressor(s) and associated piping is released to atmosphere as a safety precaution.

One common reason for compressor startups and shutdowns is a change in the amount of compression required from the station due to fluctuations in the pipeline. To prolong the life of equipment and reduce engine emissions, the compressors are shutdown when not needed. It is "routine or predictable" that the compressors at the station will come on-line and drop off-line many times during the course of operation. It is also standard industry practice.

The compressor is also shut down for maintenance of the engine, compressor or other equipment at the station. This maintenance is scheduled based on time in service and/or monitoring of equipment (visual and automated) in accordance with company and standard industry practice. This maintenance is also "routine or predictable".

The VOC and HAP emissions from blowdown of the compressors and piping associated with the facility are calculated from the composition of the natural gas, the quantity of gas vented during each event, and the estimated number of annual events. The composition of the natural gas is based an extended gas analysis sampled at the Trunk N Compressor Station on May 1, 2020. The quantity of gas vented during each event is determined by Harvest engineering. The annual number of blowdown events for the compressors are estimated based on historical data. A safety factor is added because VOC and HAP emissions from each blowdown event are dependent on the composition of the gas in the pipeline, and because the annual number of blowdowns may vary. Experience indicates the composition of the gas is also likely to vary. The use of the safety factor is also designed to ensure an adequate emissions limit, which includes any emissions from other non-blowdown miscellaneous startup, shutdown and maintenance activities.

The SSM emissions identified in this application are routine or predictable startup, shutdown and/or scheduled maintenance, and do not include malfunctions or upsets. Harvest does not seek any changes to the currently permitted SSM emissions. *Accordingly, the requested allowable emissions in Table 2-E are carried forward from the existing permit.*

SSM emission calculations are provided in this section.

Triethylene Glycol (TEG) Dehydrator Still Vents and Reboilers

A triethylene glycol (TEG) dehydration unit can be considered to consist of two emission units, a dehydrator still vent, and a dehydrator reboiler that is a small heater combustion source that provides heat to regenerate the rich TEG back to lean TEG. Therefore, the TEG dehydrator unit identification numbers have been divided into 'a' and 'b' sub-units to differentiate the dehydrator still vents (units 9a, 10a, 11a, 12a, and 13a) from the dehydrator reboilers (units 9b, 10b, 11b, 12b, and 13b). The TEG dehydrators are permitted to operate continuously.

The Potential To Emit (PTE) of VOC and HAP from the dehydrator still vents are calculated with GRI-GLYCalc 4.0 emission estimation software using the facility extended gas analysis mentioned above, the maximum daily dehydrator gas throughput, and the maximum allowed glycol pump rate as input. The emission calculations assume operation at full capacity for 8,760 hours per year.

Due to an increase of VOC in the composition of the field natural gas used in the calculations, the results of the GLYCalc emissions analysis indicate that the calculated PTE for the dehydrator still vents (units 9a, 10a, 11a, 12a, and 13a) are above the current permitted 0.5 tpy each for VOC by an increase of

approximately 1.9 tpy each (including a +25% safety factor). Therefore, the emissions from the dehydrator still vents are no longer considered insignificant under the Title V Insignificant Activities List (as well as no longer exempt under 20.2.72.202.B(5) NMAC). An application for a significant modification to the construction permit is under preparation and will be submitted for concurrent NMAQB review.

Emissions of NO_X, CO, VOC and SO_2 from dehydrator reboiler units 9a, 10b, 11b, 12b, and 13b, are calculated based on worst-case Enertek and Infab manufacturer emission factors. Particulate and lead emissions are calculated using AP-42 emission factors from Table 1.4-2. HAP emissions from the reboilers are calculated using GRI-HAPCalc 3.1 and the reboiler heat rate capacities. Based on total aggregated emission rates of less than 1 tpy for any regulated pollutant, the dehydrator reboilers (units 9a, 10b, 11b, 12b, and 13b) are insignificant under Item No. 1 of the NMAQB's *Operating Permit Program List of Insignificant Activities* (March 24, 2005).

During startup, the dehydrator reboiler is brought up to temperature before allowing glycol into the absorber. This prevents excess VOC and HAP from collecting in the glycol stream, and there are no excess startup emissions above those expected during steady-state operation. During shutdown, the reboiler is shut down in conjunction with the gas flow and glycol circulation. Again, this prevents excess VOC and HAP from collecting in the glycol stream, and there are no excess shutdown emissions above those expected during steady-state operation. Emissions due to scheduled maintenance are negligible; either the unit will not be in operation during maintenance, or maintenance is limited to tasks for which there are no excess emissions.

The GLYCalc input and output files, reboiler spreadsheet calculations, and HAPCalc output files are provided in this section.

Small Tank Heaters (Insignificant)

The criteria pollutant emissions from the 0.325 million British thermal units per hour (MMBtu) and 0.325 MMBtu natural gas-fired storage tank heaters (units 17 and 18) are calculated using AP-42 emission factors from Section 1.4. HAP emissions are calculated using GRI-HAPCalc 3.1. Emissions are calculated assuming each heater and reboiler operates at full site capacity for 8,760 hours per year.

The heaters startup with less fuel input than during steady-state operation, so emissions are lower than during steady-state operation. During shutdown, the fuel supply stops quickly, but air flow may not, causing the continued formation of NO_X. Even so, with no fuel, NO_X formation should be less than during steady-state operation. Emissions due to scheduled maintenance are negligible as the units are not in operation.

Based on total aggregated emission rates of less than 1 tpy for any regulated pollutant, the storage tank heaters are insignificant emission sources under Item No. 1 of the Title V Insignificant Activities List.

Fugitive Emissions (Insignificant)

Facility-wide fugitive emissions of VOC and HAP from equipment leaks (unit F1) are calculated using emission factors from Table 2.4 of the *1995 Protocol for Equipment Leak Emission Estimates* published by the Environmental Protection Agency (EPA), equipment counts from Harvest, and the gas stream composition obtained from the extended gas analysis. The HAP components of the natural gas are derived from the species molar percentages in the natural gas. Due to the nature of the source, it is estimated that SSM emissions from valves, connectors, seals, etc. are accounted for in the calculations.

The results of the emission calculations using the recent extended gas analysis indicate that the calculated VOC emissions are well below 1 ton per year, and the HAP emissions are below the Clean Air Act (CAA) section 112(g) HAP de minimus values. Therefore, the facility-wide fugitive emissions are insignificant under the Title V Insignificant Activities List, Item 1.

Insignificant Storage Tanks

All of the storage tanks at Trunk N are considered insignificant under the Title V Insignificant Activities List. Where insignificance is based on emissions less than 1 tpy, the emissions are calculated as noted:

- Aggregated VOC and HAP emissions from the two 400-barrel (16,800 gallons) produced water storage tanks (units T24 and T25) are calculated using TANKS 4.0.9d emissions calculation software and the maximum annual facility-wide produced water throughput. The calculations assume that the produced water is comprised of 99 percent (99%) water and one percent (1%) hydrocarbon liquids. The hydrocarbon liquid fraction (including VOC and HAP) is based on the GRI HAPCalc default speciation profile for natural gasoline. The calculated VOC emissions are below 1 ton per year, and the HAP emissions are below Clean Air Act (CAA) section 112(g) HAP de minimus values. Therefore, the produced water storage tanks are insignificant under the Title V Insignificant Activities List, Item 1.

- Residual Oil #6 is used to approximate the stored contents of the lube oil storage tanks (units T3 through T10) and used oil tanks (units T11 through T18). The residual oil liquid has a vapor pressure of less than 10 mm Hg (≈ 0.2 psia); therefore, the lube oil and used oil storage tanks are insignificant under the Insignificant Activities List, Item No. 5.

- The 45-barrel wastewater storage tank (unit T26) is assumed to contain one percent (1%) Residual Oil #6 and 99 percent (99%) water. The vapor pressure of the hydrocarbon liquid component of the stored contents is well under 10 mm Hg (≈ 0.2 psia); therefore, the wastewater storage tank is insignificant under the Insignificant Activities List, Item No. 5.

- The vapor pressure of triethylene glycol (TEG) is less than 10 mm Hg (≈ 0.2 psia); therefore, the TEG storage tanks (units T19 through T23) are insignificant under Item No. 5 of the Insignificant Activities List.

- The antifreeze storage tank (unit T27) contains ethylene glycol (glycol) and water. The vapor pressure of ethylene glycol is less than 10 mm Hg (≈ 0.2 psia); therefore, the antifreeze storage tank is an insignificant source under Item No. 5 of the Insignificant Activities List.

The soap (unit T28) and water (unit T29) storage tanks are not sources of regulated air pollutants.

Due to the nature of operations, startup and shutdown emissions from the insignificant storage tanks are accounted-for in the steady-state emission calculations. Emissions due to maintenance are negligible as the unit(s) would not be in operation.

Produced Water Truck Loading (Insignificant)

Emissions of VOC and HAP from produced water truck loading activities (unit L1) are estimated using emission factors from AP-42 Section 5.2, *Truck Loading* and the estimated maximum annual facility throughput of produced water, equivalent to the throughput used in the TANKS emission calculation. The HAP components of the emissions are based on the speciated HAP vapor mass fractions from the TANKS output file for produced water. The emission calculations assume submerged loading during transfer operations. The calculated emissions of VOC and HAPs are well below 1 tpy; therefore, the unit L1 truck loading activities are insignificant under Item No. 1 of the Title V Insignificant Activities List.

Pig Receiving (Insignificant)

Pipeline "pig receiving" (unit PR2, PR4) involves the capture of a pipeline "pig" device, inserted into the pipeline at a launch point upstream of the facility, and carried downstream via the internal pipeline pressure. Depending on the purpose and design of the device, a "pig" may conduct cleaning, measurement and/or inspection of the inside of the pipeline. The pig cleans the internal pipeline by pushing along any impurities and/or condensed liquids ahead of it. A "pig receiver" is a receptacle located at the terminus of the pipeline branch. As the pig approaches the downstream receiver facility, various isolation valves are opened and/or closed (depending on the design of the device), guiding the pig into the receiver. The isolation valves are closed, allowing the main pipeline natural gas to bypass the receiver device, and isolating the pressurized gas in the pig receiver. When the pig receiver is opened, the pressurized natural gas that is trapped inside the receptacle is released to atmosphere. The liquids and solids that were pushed through the inside the main pipeline are accessed and removed, along with the pig.

Emissions of VOC and HAP from the two pipeline pig receivers (unit PR2, PR4) are calculated from the composition of the natural gas, the quantity of gas vented during each event, and the estimated number of annual events. The composition of the natural gas is based the extended gas analysis identified above.

The quantity of gas vented during each event is determined by Harvest engineering. The calculated emissions of VOC and HAPs are well below 1 tpy; therefore, the unit PR2, PR4 pig receiving activities are insignificant under Item No. 1 of the Title V Insignificant Activities List.

Malfunctions

Malfunction (unit M1) emissions of VOC are set at 10 tpy. Based on the gas release rate associated with the set emission rate, HAP emissions are estimated using the natural gas extended analysis described above.

Engine Exhaust Emissions Calculations

Unit Number: 1, 2, 3, 4, 5, 6, 7, & 8
Description: Waukesha L7042GL - 4SLB RICE

Note: The data on this worksheet applies to each individual emissions unit identified above.

Horsepower Calculations

6,490	ft above MSL	Elevation	
1,478	hp	Nameplate hp	Mfg. data
1,368	hp	NMAQB Site-rated hp	NMAQB Procedure # 02.002-00 (loss of 3% for every 1,000 ft over 4,000 ft)
1,330	hp	Mfg. Site-rated hp	Mfg. product bulletin Power Derate, S8154-6, April 2001 (loss of 2% for every 1,000 ft over 1,500 ft)

Engine Specifications

1200	rpm	Engine rpm	Mfg. data
7040	cu in	Engine displacement	Mfg. data
128.21	psi	BMEP	Mfg. data (+[(792,000 x NMAQB Site-rated hp) / (rpm * in^3)])

Fuel Consumption

7370	Btu/hp-hr	Brake specific fuel consumption	Mfg. data
10.08	MMBtu/hr	Hourly fuel consumption	Btu/hp-hr x NMAQB site-rated hp / 1,000,000
11,198	scf/hr	Hourly fuel consumption	MMBtu/hr x 1,000,000 / Btu/scf
8,760	hr/yr	Annual operating time	Harvest
88,289	MMBtu/yr	Annual fuel consumption	MMBtu/hr x hr/yr
98.10	MMscf/yr	Annual fuel consumption	scf/hr x hr/yr / 1,000,000
900	Btu/scf	Field gas heating value	Nominal heat content

Steady-State Emission Rates

Pollutants	Emission Factors, g/hp-hr	Uncontrolled Emission Rates, pph	Uncontrolled Emission Rates, tpy
NO_X	0.90	2.71	11.89
CO	2.75	8.29	36.32
VOC	1.00	3.02	13.21

Emission factors taken from Waukesha Bulletin 7005 0107
Uncontrolled Emission Rates (pph) = g/hp-hr x NMAQB Site-rated hp / 453.59 g/lb
Uncontrolled Emission Rates (tpy) = Uncontrolled Emission Rates (pph) x hr/yr / 2,000 lb/ton

Pollutants	Emission Factors, lb/MMBtu	Uncontrolled Emission Rates, pph	Uncontrolled Emission Rates, tpy
SO_2	5.88E-04	5.93E-03	2.60E-02
PM	9.99E-03	0.101	0.441
PM_{10}	9.99E-03	0.101	0.441
$PM_{2.5}$	9.99E-03	0.101	0.441

Emission factors taken from AP-42, Table 3.2-2
Particulate factors include both filterable and condensible emissions

Exhaust Parameters

702	°F	Stack exit temperature	Mfg. data
7612	acfm	Stack flowrate	Mfg. data
1.02	ft	Stack exit diameter	Harvest
0.82	ft^2	Stack exit area	3.1416 x ((ft / 2) ^2)
155.3	fps	Stack exit velocity	acfm / ft^2 / 60 sec/min
22.00	ft	Stack height	Harvest

GRI-HAPCalc ® 3.01
Engines Report

Facility ID:	**TRUNK N C.S.**	**Notes:**	**Waukesha 7042GL RICE**
Operation Type:	**COMPRESSOR STATION**		
Facility Name:	**TRUNK N COMPRESSOR STATION**		
User Name:	**Cirrus Consulting**		
Units of Measure:	**U.S. STANDARD**		

Note: Emissions less than 5.00E-09 tons (or tonnes) per year are considered insignificant and are treated as zero. These emissions are indicated on the report with a "0". Emissions between 5.00E-09 and 5.00E-05 tons (or tonnes) per year are represented on the report with "0.0000".

Engine Unit

Unit Name: 7042GL

Hours of Operation:	8,760	Yearly
Rate Power:	1,368	hp
Fuel Type:	FIELD GAS	
Engine Type:	4-Stroke, Lean Burn	
Emission Factor Set:	EPA > FIELD > LITERATURE	
Additional EF Set:	-NONE-	

Calculated Emissions (ton/yr)

Chemical Name	Emissions	Emission Factor	Emission Factor Set
HAPs			
Formaldehyde	2.2212	0.16830000 g/bhp-hr	GRI Literature
Benzene	0.0686	0.00520000 g/bhp-hr	GRI Literature
Toluene	0.0277	0.00210000 g/bhp-hr	GRI Literature
Xylenes(m,p,o)	0.0185	0.00140000 g/bhp-hr	GRI Literature
Total	2.3360		

GRI-GLYCalc VERSION 4.0 - SUMMARY OF INPUT VALUES

Case Name: Trunk N - PTE 12 mmcfd TEG dehys (Gas 2020-05-01)
File Name: C:\Users\user\Documents\Cirrus\Permit applications\New Mexico\Harvest Four Corners (formerly WFC)\0 0 0Trunk N\TITLE V\2020-11 Nov Title V renewal\Analysis & Backgrnd\Lisa\GLYCalc\Trunk N GLYCalc_12 mmscf (EU 9, 10, 11).ddf
Date: June 03, 2020

DESCRIPTION:

Description: Dehy EU 9a, 10a, 11a
Capacity: 12 mmscfd each
Extended gas analysis:
Station Inlet, sampled 2020-05-01

Annual Hours of Operation: 8760.0 hours/yr

WET GAS:

Temperature: 120.00 deg. F
Pressure: 400.00 psig
Wet Gas Water Content: Saturated

Component	Conc. (vol %)
Carbon Dioxide	6.0850
Nitrogen	0.0395
Methane	92.9599
Ethane	0.7584
Propane	0.1068
Isobutane	0.0163
n-Butane	0.0211
Isopentane	0.0063
n-Pentane	0.0033
Cyclopentane	0.0001
n-Hexane	0.0005
Cyclohexane	0.0002
Other Hexanes	0.0009
Heptanes	0.0003
Methylcyclohexane	0.0005
Benzene	0.0001
Toluene	0.0002
Xylenes	0.0001
C8+ Heavies	0.0004

DRY GAS:

Flow Rate: 12.0 MMSCF/day
Absorber Stages: 2.0

LEAN GLYCOL:

Glycol Type: TEG
Water Content: 1.5 wt% H2O
Flow Rate: 7.5 gpm

PUMP:

Glycol Pump Type: Gas Injection
Gas Injection Pump Volume Ratio: 0.130 acfm gas/gpm glycol

FLASH TANK:

Flash Control: Recycle/recompression
Temperature: 120.0 deg. F
Pressure: 60.0 psig

GRI-GLYCalc VERSION 4.0 - AGGREGATE CALCULATIONS REPORT

Case Name: Trunk N - PTE 12 mmcfd TEG dehys (Gas 2020-05-01)
File Name: C:\Users\user\Documents\Cirrus\Permit applications\New Mexico\Harvest Four Corners (formerly WFC)\0 0 0Trunk N\TITLE V\2020-11 Nov Title V renewal\Analysis & Backgrnd\Lisa\GLYCalc\Trunk N GLYCalc_12 mmscf (EU 9, 10, 11).ddf
Date: June 03, 2020

DESCRIPTION:

Description: Dehy EU 9a, 10a, 11a
Capacity: 12 mmscfd each
Extended gas analysis:
Station Inlet, sampled 2020-05-01

Annual Hours of Operation: 8760.0 hours/yr

EMISSIONS REPORTS:

UNCONTROLLED REGENERATOR EMISSIONS

Component	lbs/hr	lbs/day	tons/yr
Methane	0.9935	23.844	4.3516
Ethane	0.0631	1.515	0.2764
Propane	0.0335	0.805	0.1469
Isobutane	0.0115	0.276	0.0504
n-Butane	0.0214	0.514	0.0938
Isopentane	0.0093	0.223	0.0407
n-Pentane	0.0067	0.160	0.0292
Cyclopentane	0.0012	0.030	0.0055
n-Hexane	0.0026	0.063	0.0115
Cyclohexane	0.0062	0.149	0.0272
Other Hexanes	0.0033	0.078	0.0143
Heptanes	0.0045	0.109	0.0198
Methylcyclohexane	0.0229	0.550	0.1004
Benzene	0.0251	0.603	0.1100
Toluene	0.0866	2.079	0.3794
Xylenes	0.0865	2.075	0.3788
C8+ Heavies	0.1100	2.639	0.4817
Total Emissions	1.4880	35.713	6.5175
Total Hydrocarbon Emissions	1.4880	35.713	6.5175
Total VOC Emissions	0.4314	10.354	1.8896
Total HAP Emissions	0.2008	4.820	0.8797
Total BTEX Emissions	0.1982	4.757	0.8682

FLASH GAS EMISSIONS

Note: Flash Gas Emissions are zero with the Recycle/recompression control option.

FLASH TANK OFF GAS

Component	lbs/hr	lbs/day	tons/yr

Methane	64.0440	1537.056	280.5127
Ethane	1.1399	27.357	4.9926
Propane	0.2691	6.457	1.1785
Isobutane	0.0600	1.439	0.2626
n-Butane	0.0845	2.027	0.3699
Isopentane	0.0317	0.762	0.1391
n-Pentane	0.0180	0.432	0.0789
Cyclopentane	0.0009	0.021	0.0038
n-Hexane	0.0039	0.093	0.0169
Cyclohexane	0.0023	0.056	0.0102
Other Hexanes	0.0064	0.153	0.0280
Heptanes	0.0032	0.076	0.0139
Methylcyclohexane	0.0065	0.157	0.0287
Benzene	0.0012	0.029	0.0053
Toluene	0.0026	0.063	0.0115
Xylenes	0.0010	0.024	0.0045
C8+ Heavies	0.0069	0.165	0.0300
Total Emissions	65.6820	1576.368	287.6871
Total Hydrocarbon Emissions	65.6820	1576.368	287.6871
Total VOC Emissions	0.4981	11.955	2.1818
Total HAP Emissions	0.0087	0.209	0.0382
Total BTEX Emissions	0.0049	0.117	0.0213

COMBINED REGENERATOR VENT/FLASH GAS EMISSIONS

Component	lbs/hr	lbs/day	tons/yr
Methane	0.9935	23.844	4.3516
Ethane	0.0631	1.515	0.2764
Propane	0.0335	0.805	0.1469
Isobutane	0.0115	0.276	0.0504
n-Butane	0.0214	0.514	0.0938
Isopentane	0.0093	0.223	0.0407
n-Pentane	0.0067	0.160	0.0292
Cyclopentane	0.0012	0.030	0.0055
n-Hexane	0.0026	0.063	0.0115
Cyclohexane	0.0062	0.149	0.0272
Other Hexanes	0.0033	0.078	0.0143
Heptanes	0.0045	0.109	0.0198
Methylcyclohexane	0.0229	0.550	0.1004
Benzene	0.0251	0.603	0.1100
Toluene	0.0866	2.079	0.3794
Xylenes	0.0865	2.075	0.3788
C8+ Heavies	0.1100	2.639	0.4817
Total Emissions	1.4880	35.713	6.5175
Total Hydrocarbon Emissions	1.4880	35.713	6.5175
Total VOC Emissions	0.4314	10.354	1.8896
Total HAP Emissions	0.2008	4.820	0.8797
Total BTEX Emissions	0.1982	4.757	0.8682

COMBINED REGENERATOR VENT/FLASH GAS EMISSION CONTROL REPORT:

Component	Uncontrolled tons/yr	Controlled tons/yr	% Reduction

Methane	284.8643	4.3516	98.47
Ethane	5.2690	0.2764	94.75
Propane	1.3254	0.1469	88.91
Isobutane	0.3130	0.0504	83.90
n-Butane	0.4637	0.0938	79.77
Isopentane	0.1797	0.0407	77.36
n-Pentane	0.1081	0.0292	73.00
Cyclopentane	0.0093	0.0055	41.15
n-Hexane	0.0284	0.0115	59.48
Cyclohexane	0.0374	0.0272	27.21
Other Hexanes	0.0423	0.0143	66.19
Heptanes	0.0337	0.0198	41.29
Methylcyclohexane	0.1291	0.1004	22.23
Benzene	0.1154	0.1100	4.61
Toluene	0.3909	0.3794	2.95
Xylenes	0.3832	0.3788	1.17
C8+ Heavies	0.5117	0.4817	5.87
Total Emissions	294.2047	6.5175	97.78
Total Hydrocarbon Emissions	294.2047	6.5175	97.78
Total VOC Emissions	4.0714	1.8896	53.59
Total HAP Emissions	0.9179	0.8797	4.16
Total BTEX Emissions	0.8895	0.8682	2.40

EQUIPMENT REPORTS:

ABSORBER

Specified Absorber Stages:	2.00	
Calculated Dry Gas Dew Point:	7.98	lbs. H2O/MMSCF
Temperature:	120.0	deg. F
Pressure:	400.0	psig
Dry Gas Flow Rate:	12.0000	MMSCF/day
Glycol Losses with Dry Gas:	0.1703	lb/hr
Wet Gas Water Content:	Saturated	
Calculated Wet Gas Water Content:	213.97	lbs. H2O/MMSCF
Calculated Lean Glycol Recirc. Ratio:	4.37	gal/lb H2O

Component	Remaining in Dry Gas	Absorbed in Glycol
Water	3.71%	96.29%
Carbon Dioxide	99.65%	0.35%
Nitrogen	99.97%	0.03%
Methane	99.97%	0.03%
Ethane	99.90%	0.10%
Propane	99.82%	0.18%
Isobutane	99.73%	0.27%
n-Butane	99.65%	0.35%
Isopentane	99.62%	0.38%
n-Pentane	99.52%	0.48%
Cyclopentane	98.01%	1.99%
n-Hexane	99.16%	0.84%
Cyclohexane	96.46%	3.54%
Other Hexanes	99.36%	0.64%
Heptanes	98.36%	1.64%

Methylcyclohexane	95.75%	4.25%
Benzene	74.73%	25.27%
Toluene	63.57%	36.43%
Xylenes	37.78%	62.22%
C8+ Heavies	87.29%	12.71%

FLASH TANK

Flash Control: Recycle/recompression
Flash Temperature: 120.0 deg. F
Flash Pressure: 60.0 psig

Component	Left in Glycol	Removed in Flash Gas
Water	99.90%	0.10%
Carbon Dioxide	16.48%	83.52%
Nitrogen	1.47%	98.53%
Methane	1.53%	98.47%
Ethane	5.25%	94.75%
Propane	11.09%	88.91%
Isobutane	16.10%	83.90%
n-Butane	20.23%	79.77%
Isopentane	22.85%	77.15%
n-Pentane	27.23%	72.77%
Cyclopentane	59.03%	40.97%
n-Hexane	40.74%	59.26%
Cyclohexane	73.60%	26.40%
Other Hexanes	34.26%	65.74%
Heptanes	58.88%	41.12%
Methylcyclohexane	78.60%	21.40%
Benzene	95.62%	4.38%
Toluene	97.28%	2.72%
Xylenes	98.98%	1.02%
C8+ Heavies	94.82%	5.18%

REGENERATOR

No Stripping Gas used in regenerator.

Component	Remaining in Glycol	Distilled Overhead
Water	37.92%	62.08%
Carbon Dioxide	0.00%	100.00%
Nitrogen	0.00%	100.00%
Methane	0.00%	100.00%
Ethane	0.00%	100.00%
Propane	0.00%	100.00%
Isobutane	0.00%	100.00%
n-Butane	0.00%	100.00%
Isopentane	1.22%	98.78%
n-Pentane	1.13%	98.87%
Cyclopentane	0.74%	99.26%
n-Hexane	0.90%	99.10%
Cyclohexane	4.02%	95.98%
Other Hexanes	1.99%	98.01%
Heptanes	0.72%	99.28%

Methylcyclohexane	4.76%	95.24%
Benzene	5.17%	94.83%
Toluene	8.06%	91.94%
Xylenes	12.99%	87.01%
C8+ Heavies	12.42%	87.58%

STREAM REPORTS:

WET GAS STREAM

Temperature: 120.00 deg. F
Pressure: 414.70 psia
Flow Rate: 5.03e+005 scfh

Component	Conc. (vol%)	Loading (lb/hr)
Water	4.51e-001	1.08e+002
Carbon Dioxide	6.06e+000	3.53e+003
Nitrogen	3.93e-002	1.46e+001
Methane	9.25e+001	1.97e+004
Ethane	7.55e-001	3.01e+002
Propane	1.06e-001	6.21e+001
Isobutane	1.62e-002	1.25e+001
n-Butane	2.10e-002	1.62e+001
Isopentane	6.27e-003	5.99e+000
n-Pentane	3.29e-003	3.14e+000
Cyclopentane	9.96e-005	9.25e-002
n-Hexane	4.98e-004	5.68e-001
Cyclohexane	1.99e-004	2.22e-001
Other Hexanes	8.96e-004	1.02e+000
Heptanes	2.99e-004	3.96e-001
Methylcyclohexane	4.98e-004	6.47e-001
Benzene	9.96e-005	1.03e-001
Toluene	1.99e-004	2.43e-001
Xylenes	9.96e-005	1.40e-001
C8+ Heavies	3.98e-004	8.98e-001
Total Components	100.00	2.37e+004

DRY GAS STREAM

Temperature: 120.00 deg. F
Pressure: 414.70 psia
Flow Rate: 5.00e+005 scfh

Component	Conc. (vol%)	Loading (lb/hr)
Water	1.68e-002	3.99e+000
Carbon Dioxide	6.07e+000	3.52e+003
Nitrogen	3.95e-002	1.46e+001
Methane	9.30e+001	1.97e+004
Ethane	7.58e-001	3.00e+002
Propane	1.07e-001	6.20e+001
Isobutane	1.63e-002	1.25e+001
n-Butane	2.10e-002	1.61e+001

Isopentane	6.28e-003	5.97e+000
n-Pentane	3.29e-003	3.12e+000
Cyclopentane	9.80e-005	9.06e-002
n-Hexane	4.96e-004	5.63e-001
Cyclohexane	1.93e-004	2.14e-001
Other Hexanes	8.95e-004	1.02e+000
Heptanes	2.95e-004	3.90e-001
Methylcyclohexane	4.79e-004	6.20e-001
Benzene	7.48e-005	7.70e-002
Toluene	1.27e-004	1.54e-001
Xylenes	3.78e-005	5.29e-002
C8+ Heavies	3.49e-004	7.84e-001
Total Components	100.00	2.36e+004

LEAN GLYCOL STREAM

Temperature: 120.00 deg. F
Flow Rate: 7.50e+000 gpm

Component	Conc. (wt%)	Loading (lb/hr)
TEG	9.85e+001	4.16e+003
Water	1.50e+000	6.33e+001
Carbon Dioxide	2.93e-011	1.24e-009
Nitrogen	9.97e-015	4.21e-013
Methane	4.42e-018	1.87e-016
Ethane	3.28e-009	1.38e-007
Propane	1.11e-010	4.67e-009
Isobutane	2.39e-011	1.01e-009
n-Butane	3.34e-011	1.41e-009
Isopentane	2.73e-006	1.15e-004
n-Pentane	1.81e-006	7.63e-005
Cyclopentane	2.19e-007	9.27e-006
n-Hexane	5.68e-007	2.40e-005
Cyclohexane	6.15e-006	2.60e-004
Other Hexanes	1.57e-006	6.63e-005
Heptanes	7.74e-007	3.27e-005
Methylcyclohexane	2.71e-005	1.15e-003
Benzene	3.24e-005	1.37e-003
Toluene	1.80e-004	7.60e-003
Xylenes	3.06e-004	1.29e-002
C8+ Heavies	3.69e-004	1.56e-002
Total Components	100.00	4.22e+003

RICH GLYCOL AND PUMP GAS STREAM

Temperature: 120.00 deg. F
Pressure: 414.70 psia
Flow Rate: 7.90e+000 gpm
NOTE: Stream has more than one phase.

Component	Conc. (wt%)	Loading (lb/hr)
TEG	9.42e+001	4.16e+003
Water	3.79e+000	1.67e+002
Carbon Dioxide	5.23e-001	2.31e+001

Nitrogen	1.10e-003	4.83e-002
Methane	1.47e+000	6.50e+001
Ethane	2.73e-002	1.20e+000
Propane	6.86e-003	3.03e-001
Isobutane	1.62e-003	7.15e-002
n-Butane	2.40e-003	1.06e-001
Isopentane	9.33e-004	4.12e-002
n-Pentane	5.61e-004	2.48e-002
Cyclopentane	4.83e-005	2.13e-003
n-Hexane	1.48e-004	6.51e-003
Cyclohexane	1.99e-004	8.79e-003
Other Hexanes	2.20e-004	9.72e-003
Heptanes	1.75e-004	7.74e-003
Methylcyclohexane	6.94e-004	3.06e-002
Benzene	6.28e-004	2.77e-002
Toluene	2.19e-003	9.68e-002
Xylenes	2.28e-003	1.00e-001
C8+ Heavies	3.00e-003	1.32e-001
Total Components	100.00	4.41e+003

FLASH TANK OFF GAS STREAM

Temperature: 120.00 deg. F
Pressure: 74.70 psia
Flow Rate: 1.70e+003 scfh

Component	Conc. (vol%)	Loading (lb/hr)
Water	2.09e-001	1.69e-001
Carbon Dioxide	9.75e+000	1.93e+001
Nitrogen	3.79e-002	4.76e-002
Methane	8.89e+001	6.40e+001
Ethane	8.44e-001	1.14e+000
Propane	1.36e-001	2.69e-001
Isobutane	2.30e-002	6.00e-002
n-Butane	3.24e-002	8.45e-002
Isopentane	9.80e-003	3.17e-002
n-Pentane	5.56e-003	1.80e-002
Cyclopentane	2.78e-004	8.74e-004
n-Hexane	9.98e-004	3.86e-003
Cyclohexane	6.14e-004	2.32e-003
Other Hexanes	1.65e-003	6.39e-003
Heptanes	7.07e-004	3.18e-003
Methylcyclohexane	1.49e-003	6.55e-003
Benzene	3.46e-004	1.21e-003
Toluene	6.36e-004	2.63e-003
Xylenes	2.14e-004	1.02e-003
C8+ Heavies	8.97e-004	6.86e-003
Total Components	100.00	8.52e+001

FLASH TANK GLYCOL STREAM

Temperature: 120.00 deg. F
Flow Rate: 7.71e+000 gpm

Component	Conc.	Loading

	(wt%)	(lb/hr)
TEG	9.60e+001	4.16e+003
Water	3.86e+000	1.67e+002
Carbon Dioxide	8.79e-002	3.80e+000
Nitrogen	1.64e-005	7.09e-004
Methane	2.30e-002	9.94e-001
Ethane	1.46e-003	6.31e-002
Propane	7.75e-004	3.35e-002
Isobutane	2.66e-004	1.15e-002
n-Butane	4.95e-004	2.14e-002
Isopentane	2.17e-004	9.40e-003
n-Pentane	1.56e-004	6.74e-003
Cyclopentane	2.91e-005	1.26e-003
n-Hexane	6.13e-005	2.65e-003
Cyclohexane	1.49e-004	6.47e-003
Other Hexanes	7.70e-005	3.33e-003
Heptanes	1.05e-004	4.56e-003
Methylcyclohexane	5.56e-004	2.41e-002
Benzene	6.12e-004	2.65e-002
Toluene	2.18e-003	9.42e-002
Xylenes	2.30e-003	9.94e-002
C8+ Heavies	2.90e-003	1.26e-001
Total Components	100.00	4.33e+003

FLASH GAS EMISSIONS

Control Method: Recycle/recompression
Control Efficiency: 100.00

Note: Flash Gas Emissions are zero with the Recycle/recompression control option.

REGENERATOR OVERHEADS STREAM

Temperature: 212.00 deg. F
Pressure: 14.70 psia
Flow Rate: 2.24e+003 scfh

Component	Conc. (vol%)	Loading (lb/hr)
Water	9.74e+001	1.04e+002
Carbon Dioxide	1.46e+000	3.80e+000
Nitrogen	4.28e-004	7.09e-004
Methane	1.05e+000	9.94e-001
Ethane	3.55e-002	6.31e-002
Propane	1.29e-002	3.35e-002
Isobutane	3.35e-003	1.15e-002
n-Butane	6.23e-003	2.14e-002
Isopentane	2.18e-003	9.29e-003
n-Pentane	1.56e-003	6.66e-003
Cyclopentane	3.01e-004	1.25e-003
n-Hexane	5.16e-004	2.63e-003
Cyclohexane	1.25e-003	6.21e-003
Other Hexanes	6.41e-004	3.27e-003
Heptanes	7.63e-004	4.52e-003
Methylcyclohexane	3.95e-003	2.29e-002

Benzene	5.44e-003	2.51e-002
Toluene	1.59e-002	8.66e-002
Xylenes	1.38e-002	8.65e-002
C8+ Heavies	1.09e-002	1.10e-001
Total Components	100.00	1.09e+002

Dehydrator Reboiler Exhaust Emissions Calculations

Unit Number: 9b, 10b, 11b
Description: Dehydrator Reboiler (12 MMSCFD)

Note: The data on this worksheet applies to each individual emissions unit identified above.

Fuel Consumption

1,208	scf/hr	Hourly fuel consumption	Mfg. data (Infab)
900	Btu/scf	Field gas heating value	Nominal heat content
1.09	MMBtu/hr	Capacity	scf/hr x Btu/scf / 1,000,000
8,760	hr/yr	Annual operating time	Harvest Four Corners, LLC
9,524	MMBtu/yr	Annual fuel consumption	MMBtu/hr x hr/yr
10.58	MMscf/yr	Annual fuel consumption	scf/hr x hr/yr / 1,000,000

Steady-State Emission Rates

Pollutants	Emission Factors, lb/day	Uncontrolled Emission Rates, pph	tpy
NOX	1.03	4.29E-02	0.188
CO	0.78	3.25E-02	0.142
VOC	0.12	4.79E-03	2.10E-02
SO2	0.02	8.33E-04	3.65E-03

NOX emission factor taken from August 1994 Enertek Letter
CO, TOC and SO2 emission factors taken from July 1998 InFab Letter
50% of TOC emissions are assumed to be VOC emissions, consistent with AP-42, Table 1.4-2
Uncontrolled Emission Rates (pph) = lb/day / 24 hr/day
Uncontrolled Emission Rates (tpy) = Uncontrolled Emission Rates (pph) x hr/yr / 2,000 lb/ton

Pollutants	Emission Factors, lb/MMscf	Uncontrolled Emission Rates, pph	tpy
PM	7.60	9.18E-03	4.02E-02
PM10	7.60	9.18E-03	4.02E-02
PM2.5	7.60	9.18E-03	4.02E-02
Lead	5.00E-04	6.04E-07	2.65E-06

Emission factors taken from AP-42, Table 1.4-2
Uncontrolled Emission Rates (pph) = lb/MMscf x (scf/hr / 1,000,000)
Uncontrolled Emission Rates (tpy) = Uncontrolled Emission Rates (pph) x hr/yr / 2,000 lb/ton

Exhaust Parameters

600	°F		Exhaust temperature	Mfg. data (Enertek & InFab)
199.62	cfm	3.33	Stack flowrate	fps x ft^2 x 60 sec/min
0.83	ft		Stack diameter	Mfg. data (Enertek)
0.55	ft^2		Stack exit area	3.1416 x ((ft / 2) ^2)
6.1	fps		Stack velocity	Mfg. data (Enertek & InFab)
19.1	ft		Stack height	Mfg. data (Enertek)

GRI-HAPCalc ® 3.01
External Combustion Devices Report

Facility ID:	**TRUNK N C.S.**	**Notes:**	**12 mmcfd Dehydrator Reboiler**
Operation Type:	**COMPRESSOR STATION**		
Facility Name:	**TRUNK N COMPRESSOR STATION**		
User Name:	**Cirrus Consulting**		
Units of Measure:	**U.S. STANDARD**		

Note: Emissions less than 5.00E-09 tons (or tonnes) per year are considered insignificant and are treated as zero. These emissions are indicated on the report with a "0". Emissions between 5.00E-09 and 5.00E-05 tons (or tonnes) per year are represented on the report with "0.0000".

External Combustion Devices

Unit Name: 12 MMSCFD

Hours of Operation:	8,760	Yearly
Heat Input:	*********	MMBtu/hr
Fuel Type:	NATURAL GAS	
Device Type:	BOILER	
Emission Factor Set:	EPA > FIELD > LITERATURE	
Additional EF Set:	-NONE-	

Calculated Emissions (ton/yr)

Chemical Name	Emissions	Emission Factor		Emission Factor Set
HAPs				
3-Methylcholanthrene	0.0000	0.0000000018	lb/MMBtu	EPA
7,12-Dimethylbenz(a)anthracene	0.0000	0.0000000157	lb/MMBtu	EPA
Formaldehyde	0.0004	0.0000735294	lb/MMBtu	EPA
Methanol	0.0021	0.0004333330	lb/MMBtu	GRI Field
Acetaldehyde	0.0014	0.0002909000	lb/MMBtu	GRI Field
1,3-Butadiene	0.0000	0.0000001830	lb/MMBtu	GRI Field
Benzene	0.0000	0.0000020588	lb/MMBtu	EPA
Toluene	0.0000	0.0000033333	lb/MMBtu	EPA
Ethylbenzene	0.0000	0.0000000720	lb/MMBtu	GRI Field
Xylenes(m,p,o)	0.0000	0.0000010610	lb/MMBtu	GRI Field
2,2,4-Trimethylpentane	0.0002	0.0000323000	lb/MMBtu	GRI Field
n-Hexane	0.0084	0.0017647059	lb/MMBtu	EPA
Phenol	0.0000	0.0000000950	lb/MMBtu	GRI Field
Naphthalene	0.0000	0.0000005980	lb/MMBtu	EPA
2-Methylnaphthalene	0.0000	0.0000000235	lb/MMBtu	EPA
Acenaphthylene	0.0000	0.0000000018	lb/MMBtu	EPA
Biphenyl	0.0000	0.0000011500	lb/MMBtu	GRI Field
Acenaphthene	0.0000	0.0000000018	lb/MMBtu	EPA
Fluorene	0.0000	0.0000000027	lb/MMBtu	EPA
Anthracene	0.0000	0.0000000024	lb/MMBtu	EPA
Phenanthrene	0.0000	0.0000000167	lb/MMBtu	EPA
Fluoranthene	0.0000	0.0000000029	lb/MMBtu	EPA
Pyrene	0.0000	0.0000000049	lb/MMBtu	EPA
Benz(a)anthracene	0.0000	0.0000000018	lb/MMBtu	EPA
Chrysene	0.0000	0.0000000018	lb/MMBtu	EPA

Benzo(a)pyrene	0.0000	0.0000000012	lb/MMBtu	EPA
Benzo(b)fluoranthene	0.0000	0.0000000018	lb/MMBtu	EPA
Benzo(k)fluoranthene	0.0000	0.0000000018	lb/MMBtu	EPA
Benzo(g,h,i)perylene	0.0000	0.0000000012	lb/MMBtu	EPA
Indeno(1,2,3-c,d)pyrene	0.0000	0.0000000018	lb/MMBtu	EPA
Dibenz(a,h)anthracene	0.0000	0.0000000012	lb/MMBtu	EPA
Lead	0.0000	0.0000004902	lb/MMBtu	EPA
Total	0.0125			

Criteria Pollutants

VOC	0.0257	0.0053921569	lb/MMBtu	EPA
PM	0.0356	0.0074509804	lb/MMBtu	EPA
PM, Condensible	0.0267	0.0055882353	lb/MMBtu	EPA
PM, Filterable	0.0089	0.0018627451	lb/MMBtu	EPA
CO	0.3932	0.0823529410	lb/MMBtu	EPA
NMHC	0.0407	0.0085294118	lb/MMBtu	EPA
NOx	0.4681	0.0980392157	lb/MMBtu	EPA
SO2	0.0028	0.0005880000	lb/MMBtu	EPA

Other Pollutants

Dichlorobenzene	0.0000	0.0000011765	lb/MMBtu	EPA
Methane	0.0108	0.0022549020	lb/MMBtu	EPA
Acetylene	0.0255	0.0053314000	lb/MMBtu	GRI Field
Ethylene	0.0025	0.0005264000	lb/MMBtu	GRI Field
Ethane	0.0145	0.0030392157	lb/MMBtu	EPA
Propylene	0.0045	0.0009333330	lb/MMBtu	GRI Field
Propane	0.0075	0.0015686275	lb/MMBtu	EPA
Butane	0.0098	0.0020588235	lb/MMBtu	EPA
Cyclopentane	0.0002	0.0000405000	lb/MMBtu	GRI Field
Pentane	0.0122	0.0025490196	lb/MMBtu	EPA
n-Pentane	0.0095	0.0020000000	lb/MMBtu	GRI Field
Cyclohexane	0.0002	0.0000451000	lb/MMBtu	GRI Field
Methylcyclohexane	0.0008	0.0001691000	lb/MMBtu	GRI Field
n-Octane	0.0002	0.0000506000	lb/MMBtu	GRI Field
n-Nonane	0.0000	0.0000050000	lb/MMBtu	GRI Field
CO2	561.6706	117.6470588235	lb/MMBtu	EPA

GRI-GLYCalc VERSION 4.0 - SUMMARY OF INPUT VALUES

Case Name: Trunk N - PTE 20 mmcfd TEG dehys (Gas 2020-05-01)
File Name: C:\Users\user\Documents\Cirrus\Permit applications\New Mexico\Harvest Four Corners (formerly WFC)\0 0 0Trunk N\TITLE V\2020-11 Nov Title V renewal\Analysis & Backgrnd\Lisa\GLYCalc\Trunk N GLYCalc_20 mmscf (EU 12 & 13).ddf
Date: June 03, 2020

DESCRIPTION:

Description: Dehy EU 12a, 13a
Capacity: 20 mmscfd each
Extended gas analysis:
Station Inlet, sampled 2020-05-01

Annual Hours of Operation: 8760.0 hours/yr

WET GAS:

Temperature: 120.00 deg. F
Pressure: 400.00 psig
Wet Gas Water Content: Saturated

Component	Conc. (vol %)
Carbon Dioxide	6.0850
Nitrogen	0.0395
Methane	92.9599
Ethane	0.7584
Propane	0.1068
Isobutane	0.0163
n-Butane	0.0211
Isopentane	0.0063
n-Pentane	0.0033
Cyclopentane	0.0001
n-Hexane	0.0005
Cyclohexane	0.0002
Other Hexanes	0.0009
Heptanes	0.0003
Methylcyclohexane	0.0005
Benzene	0.0001
Toluene	0.0002
Xylenes	0.0001
C8+ Heavies	0.0004

DRY GAS:

Flow Rate: 20.0 MMSCF/day
Absorber Stages: 2.0

LEAN GLYCOL:

Glycol Type: TEG
Water Content: 1.5 wt% H2O
Flow Rate: 7.5 gpm

PUMP:

Glycol Pump Type: Gas Injection
Gas Injection Pump Volume Ratio: 0.130 acfm gas/gpm glycol

FLASH TANK:

Flash Control: Recycle/recompression
Temperature: 120.0 deg. F
Pressure: 60.0 psig

GRI-GLYCalc VERSION 4.0 - AGGREGATE CALCULATIONS REPORT

Case Name: Trunk N - PTE 20 mmcfd TEG dehys (Gas 2020-05-01)
File Name: C:\Users\user\Documents\Cirrus\Permit applications\New Mexico\Harvest Four Corners (formerly WFC)\0 0 0Trunk N\TITLE V\2020-11 Nov Title V renewal\Analysis & Backgrnd\Lisa\GLYCalc\Trunk N GLYCalc_20 mmscf (EU 12 & 13).ddf
Date: June 03, 2020

DESCRIPTION:

Description: Dehy EU 12a, 13a
Capacity: 20 mmscfd each
Extended gas analysis:
Station Inlet, sampled 2020-05-01

Annual Hours of Operation: 8760.0 hours/yr

EMISSIONS REPORTS:

UNCONTROLLED REGENERATOR EMISSIONS

Component	lbs/hr	lbs/day	tons/yr
Methane	0.9620	23.087	4.2134
Ethane	0.0586	1.406	0.2566
Propane	0.0329	0.790	0.1442
Isobutane	0.0111	0.267	0.0488
n-Butane	0.0207	0.498	0.0908
Isopentane	0.0089	0.214	0.0390
n-Pentane	0.0064	0.153	0.0279
Cyclopentane	0.0012	0.028	0.0051
n-Hexane	0.0025	0.060	0.0109
Cyclohexane	0.0058	0.139	0.0253
Other Hexanes	0.0031	0.074	0.0135
Heptanes	0.0042	0.102	0.0185
Methylcyclohexane	0.0214	0.513	0.0937
Benzene	0.0255	0.612	0.1117
Toluene	0.0905	2.173	0.3965
Xylenes	0.1030	2.471	0.4510
C8+ Heavies	0.1044	2.506	0.4573
Total Emissions	1.4622	35.092	6.4044
Total Hydrocarbon Emissions	1.4622	35.092	6.4044
Total VOC Emissions	0.4416	10.599	1.9343
Total HAP Emissions	0.2215	5.316	0.9702
Total BTEX Emissions	0.2190	5.256	0.9593

FLASH GAS EMISSIONS

Note: Flash Gas Emissions are zero with the Recycle/recompression control option.

FLASH TANK OFF GAS

Component	lbs/hr	lbs/day	tons/yr

Methane	64.8903	1557.367	284.2195
Ethane	1.1482	27.558	5.0293
Propane	0.2716	6.519	1.1897
Isobutane	0.0604	1.450	0.2646
n-Butane	0.0851	2.042	0.3726
Isopentane	0.0320	0.768	0.1401
n-Pentane	0.0182	0.436	0.0795
Cyclopentane	0.0009	0.021	0.0039
n-Hexane	0.0039	0.094	0.0171
Cyclohexane	0.0024	0.058	0.0106
Other Hexanes	0.0064	0.155	0.0282
Heptanes	0.0032	0.078	0.0142
Methylcyclohexane	0.0068	0.164	0.0300
Benzene	0.0013	0.031	0.0057
Toluene	0.0029	0.070	0.0128
Xylenes	0.0013	0.031	0.0057
C8+ Heavies	0.0075	0.179	0.0327
Total Emissions	66.5425	1597.020	291.4562
Total Hydrocarbon Emissions	66.5425	1597.020	291.4562
Total VOC Emissions	0.5040	12.095	2.2074
Total HAP Emissions	0.0094	0.226	0.0413
Total BTEX Emissions	0.0055	0.132	0.0242

COMBINED REGENERATOR VENT/FLASH GAS EMISSIONS

Component	lbs/hr	lbs/day	tons/yr
Methane	0.9620	23.087	4.2134
Ethane	0.0586	1.406	0.2566
Propane	0.0329	0.790	0.1442
Isobutane	0.0111	0.267	0.0488
n-Butane	0.0207	0.498	0.0908
Isopentane	0.0089	0.214	0.0390
n-Pentane	0.0064	0.153	0.0279
Cyclopentane	0.0012	0.028	0.0051
n-Hexane	0.0025	0.060	0.0109
Cyclohexane	0.0058	0.139	0.0253
Other Hexanes	0.0031	0.074	0.0135
Heptanes	0.0042	0.102	0.0185
Methylcyclohexane	0.0214	0.513	0.0937
Benzene	0.0255	0.612	0.1117
Toluene	0.0905	2.173	0.3965
Xylenes	0.1030	2.471	0.4510
C8+ Heavies	0.1044	2.506	0.4573
Total Emissions	1.4622	35.092	6.4044
Total Hydrocarbon Emissions	1.4622	35.092	6.4044
Total VOC Emissions	0.4416	10.599	1.9343
Total HAP Emissions	0.2215	5.316	0.9702
Total BTEX Emissions	0.2190	5.256	0.9593

COMBINED REGENERATOR VENT/FLASH GAS EMISSION CONTROL REPORT:

Component	Uncontrolled tons/yr	Controlled tons/yr	% Reduction

Methane	288.4329	4.2134	98.54
Ethane	5.2860	0.2566	95.15
Propane	1.3339	0.1442	89.19
Isobutane	0.3134	0.0488	84.44
n-Butane	0.4634	0.0908	80.41
Isopentane	0.1791	0.0390	78.23
n-Pentane	0.1074	0.0279	73.99
Cyclopentane	0.0090	0.0051	43.58
n-Hexane	0.0280	0.0109	61.06
Cyclohexane	0.0359	0.0253	29.41
Other Hexanes	0.0417	0.0135	67.65
Heptanes	0.0328	0.0185	43.41
Methylcyclohexane	0.1237	0.0937	24.23
Benzene	0.1174	0.1117	4.83
Toluene	0.4094	0.3965	3.14
Xylenes	0.4567	0.4510	1.24
C8+ Heavies	0.4900	0.4573	6.68
Total Emissions	297.8606	6.4044	97.85
Total Hydrocarbon Emissions	297.8606	6.4044	97.85
Total VOC Emissions	4.1417	1.9343	53.30
Total HAP Emissions	1.0114	0.9702	4.08
Total BTEX Emissions	0.9834	0.9593	2.46

EQUIPMENT REPORTS:

ABSORBER

Specified Absorber Stages:	2.00	
Calculated Dry Gas Dew Point:	9.09	lbs. H2O/MMSCF
Temperature:	120.0	deg. F
Pressure:	400.0	psig
Dry Gas Flow Rate:	20.0000	MMSCF/day
Glycol Losses with Dry Gas:	0.2838	lb/hr
Wet Gas Water Content:	Saturated	
Calculated Wet Gas Water Content:	213.97	lbs. H2O/MMSCF
Calculated Lean Glycol Recirc. Ratio:	2.64	gal/lb H2O

Component	Remaining in Dry Gas	Absorbed in Glycol
Water	4.23%	95.77%
Carbon Dioxide	99.79%	0.21%
Nitrogen	99.98%	0.02%
Methane	99.98%	0.02%
Ethane	99.94%	0.06%
Propane	99.89%	0.11%
Isobutane	99.84%	0.16%
n-Butane	99.79%	0.21%
Isopentane	99.78%	0.22%
n-Pentane	99.72%	0.28%
Cyclopentane	98.85%	1.15%
n-Hexane	99.51%	0.49%
Cyclohexane	97.97%	2.03%
Other Hexanes	99.63%	0.37%
Heptanes	99.05%	0.95%

Methylcyclohexane	97.57%	2.43%
Benzene	84.57%	15.43%
Toluene	77.10%	22.90%
Xylenes	55.47%	44.53%
C8+ Heavies	92.71%	7.29%

FLASH TANK

Flash Control: Recycle/recompression
Flash Temperature: 120.0 deg. F
Flash Pressure: 60.0 psig

Component	Left in Glycol	Removed in Flash Gas
Water	99.90%	0.10%
Carbon Dioxide	16.04%	83.96%
Nitrogen	1.38%	98.62%
Methane	1.46%	98.54%
Ethane	4.85%	95.15%
Propane	10.81%	89.19%
Isobutane	15.56%	84.44%
n-Butane	19.59%	80.41%
Isopentane	21.98%	78.02%
n-Pentane	26.23%	73.77%
Cyclopentane	56.61%	43.39%
n-Hexane	39.17%	60.83%
Cyclohexane	71.45%	28.55%
Other Hexanes	32.80%	67.20%
Heptanes	56.77%	43.23%
Methylcyclohexane	76.67%	23.33%
Benzene	95.41%	4.59%
Toluene	97.11%	2.89%
Xylenes	98.92%	1.08%
C8+ Heavies	94.11%	5.89%

REGENERATOR

No Stripping Gas used in regenerator.

Component	Remaining in Glycol	Distilled Overhead
Water	26.95%	73.05%
Carbon Dioxide	0.00%	100.00%
Nitrogen	0.00%	100.00%
Methane	0.00%	100.00%
Ethane	0.00%	100.00%
Propane	0.00%	100.00%
Isobutane	0.00%	100.00%
n-Butane	0.00%	100.00%
Isopentane	1.25%	98.75%
n-Pentane	1.16%	98.84%
Cyclopentane	0.76%	99.24%
n-Hexane	0.93%	99.07%
Cyclohexane	4.12%	95.88%
Other Hexanes	2.05%	97.95%
Heptanes	0.74%	99.26%

Methylcyclohexane	4.86%	95.14%
Benzene	5.18%	94.82%
Toluene	8.08%	91.92%
Xylenes	13.02%	86.98%
C8+ Heavies	12.49%	87.51%

STREAM REPORTS:

WET GAS STREAM

Temperature: 120.00 deg. F
Pressure: 414.70 psia
Flow Rate: 8.37e+005 scfh

Component	Conc. (vol%)	Loading (lb/hr)
Water	4.51e-001	1.79e+002
Carbon Dioxide	6.06e+000	5.88e+003
Nitrogen	3.93e-002	2.43e+001
Methane	9.25e+001	3.28e+004
Ethane	7.55e-001	5.01e+002
Propane	1.06e-001	1.03e+002
Isobutane	1.62e-002	2.08e+001
n-Butane	2.10e-002	2.69e+001
Isopentane	6.27e-003	9.99e+000
n-Pentane	3.29e-003	5.23e+000
Cyclopentane	9.96e-005	1.54e-001
n-Hexane	4.98e-004	9.47e-001
Cyclohexane	1.99e-004	3.70e-001
Other Hexanes	8.96e-004	1.70e+000
Heptanes	2.99e-004	6.60e-001
Methylcyclohexane	4.98e-004	1.08e+000
Benzene	9.96e-005	1.72e-001
Toluene	1.99e-004	4.05e-001
Xylenes	9.96e-005	2.33e-001
C8+ Heavies	3.98e-004	1.50e+000
Total Components	100.00	3.95e+004

DRY GAS STREAM

Temperature: 120.00 deg. F
Pressure: 414.70 psia
Flow Rate: 8.33e+005 scfh

Component	Conc. (vol%)	Loading (lb/hr)
Water	1.91e-002	7.57e+000
Carbon Dioxide	6.07e+000	5.87e+003
Nitrogen	3.95e-002	2.43e+001
Methane	9.30e+001	3.28e+004
Ethane	7.58e-001	5.01e+002
Propane	1.07e-001	1.03e+002
Isobutane	1.63e-002	2.08e+001
n-Butane	2.11e-002	2.69e+001

Isopentane	6.29e-003	9.96e+000
n-Pentane	3.29e-003	5.22e+000
Cyclopentane	9.89e-005	1.52e-001
n-Hexane	4.98e-004	9.42e-001
Cyclohexane	1.96e-004	3.62e-001
Other Hexanes	8.97e-004	1.70e+000
Heptanes	2.97e-004	6.54e-001
Methylcyclohexane	4.88e-004	1.05e+000
Benzene	8.46e-005	1.45e-001
Toluene	1.54e-004	3.12e-001
Xylenes	5.55e-005	1.29e-001
C8+ Heavies	3.71e-004	1.39e+000
Total Components	100.00	3.93e+004

LEAN GLYCOL STREAM

Temperature: 120.00 deg. F
Flow Rate: 7.50e+000 gpm

Component	Conc. (wt%)	Loading (lb/hr)
TEG	9.85e+001	4.16e+003
Water	1.50e+000	6.33e+001
Carbon Dioxide	2.90e-011	1.23e-009
Nitrogen	9.56e-015	4.04e-013
Methane	4.28e-018	1.81e-016
Ethane	3.15e-009	1.33e-007
Propane	1.09e-010	4.62e-009
Isobutane	2.35e-011	9.94e-010
n-Butane	3.29e-011	1.39e-009
Isopentane	2.67e-006	1.13e-004
n-Pentane	1.77e-006	7.48e-005
Cyclopentane	2.10e-007	8.87e-006
n-Hexane	5.52e-007	2.33e-005
Cyclohexane	5.88e-006	2.48e-004
Other Hexanes	1.53e-006	6.45e-005
Heptanes	7.46e-007	3.15e-005
Methylcyclohexane	2.59e-005	1.09e-003
Benzene	3.30e-005	1.39e-003
Toluene	1.88e-004	7.96e-003
Xylenes	3.65e-004	1.54e-002
C8+ Heavies	3.53e-004	1.49e-002
Total Components	100.00	4.22e+003

RICH GLYCOL AND PUMP GAS STREAM

Temperature: 120.00 deg. F
Pressure: 414.70 psia
Flow Rate: 8.03e+000 gpm
NOTE: Stream has more than one phase.

Component	Conc. (wt%)	Loading (lb/hr)
TEG	9.27e+001	4.15e+003
Water	5.25e+000	2.35e+002
Carbon Dioxide	5.16e-001	2.31e+001

Nitrogen	1.09e-003	4.89e-002
Methane	1.47e+000	6.59e+001
Ethane	2.69e-002	1.21e+000
Propane	6.80e-003	3.05e-001
Isobutane	1.60e-003	7.16e-002
n-Butane	2.36e-003	1.06e-001
Isopentane	9.15e-004	4.10e-002
n-Pentane	5.49e-004	2.46e-002
Cyclopentane	4.60e-005	2.06e-003
n-Hexane	1.43e-004	6.41e-003
Cyclohexane	1.88e-004	8.44e-003
Other Hexanes	2.14e-004	9.60e-003
Heptanes	1.68e-004	7.52e-003
Methylcyclohexane	6.55e-004	2.93e-002
Benzene	6.29e-004	2.82e-002
Toluene	2.26e-003	1.01e-001
Xylenes	2.67e-003	1.20e-001
C8+ Heavies	2.83e-003	1.27e-001
Total Components	100.00	4.48e+003

FLASH TANK OFF GAS STREAM

Temperature: 120.00 deg. F
Pressure: 74.70 psia
Flow Rate: 1.73e+003 scfh

Component	Conc. (vol%)	Loading (lb/hr)
Water	2.95e-001	2.42e-001
Carbon Dioxide	9.69e+000	1.94e+001
Nitrogen	3.79e-002	4.82e-002
Methane	8.89e+001	6.49e+001
Ethane	8.39e-001	1.15e+000
Propane	1.35e-001	2.72e-001
Isobutane	2.29e-002	6.04e-002
n-Butane	3.22e-002	8.51e-002
Isopentane	9.74e-003	3.20e-002
n-Pentane	5.53e-003	1.82e-002
Cyclopentane	2.80e-004	8.93e-004
n-Hexane	9.95e-004	3.90e-003
Cyclohexane	6.29e-004	2.41e-003
Other Hexanes	1.64e-003	6.45e-003
Heptanes	7.13e-004	3.25e-003
Methylcyclohexane	1.53e-003	6.84e-003
Benzene	3.64e-004	1.29e-003
Toluene	7.00e-004	2.93e-003
Xylenes	2.67e-004	1.29e-003
C8+ Heavies	9.64e-004	7.47e-003
Total Components	100.00	8.62e+001

FLASH TANK GLYCOL STREAM

Temperature: 120.00 deg. F
Flow Rate: 7.84e+000 gpm

Component	Conc.	Loading

Component	(wt%)	(lb/hr)
TEG	9.45e+001	4.15e+003
Water	5.35e+000	2.35e+002
Carbon Dioxide	8.44e-002	3.71e+000
Nitrogen	1.53e-005	6.74e-004
Methane	2.19e-002	9.62e-001
Ethane	1.33e-003	5.86e-002
Propane	7.50e-004	3.29e-002
Isobutane	2.54e-004	1.11e-002
n-Butane	4.72e-004	2.07e-002
Isopentane	2.05e-004	9.01e-003
n-Pentane	1.47e-004	6.45e-003
Cyclopentane	2.65e-005	1.17e-003
n-Hexane	5.72e-005	2.51e-003
Cyclohexane	1.37e-004	6.03e-003
Other Hexanes	7.17e-005	3.15e-003
Heptanes	9.71e-005	4.27e-003
Methylcyclohexane	5.12e-004	2.25e-002
Benzene	6.12e-004	2.69e-002
Toluene	2.24e-003	9.85e-002
Xylenes	2.69e-003	1.18e-001
C8+ Heavies	2.72e-003	1.19e-001
Total Components	100.00	4.39e+003

FLASH GAS EMISSIONS

Control Method: Recycle/recompression
Control Efficiency: 100.00

Note: Flash Gas Emissions are zero with the Recycle/recompression control option.

REGENERATOR OVERHEADS STREAM

Temperature: 212.00 deg. F
Pressure: 14.70 psia
Flow Rate: 3.67e+003 scfh

Component	Conc. (vol%)	Loading (lb/hr)
Water	9.84e+001	1.72e+002
Carbon Dioxide	8.70e-001	3.71e+000
Nitrogen	2.48e-004	6.74e-004
Methane	6.19e-001	9.62e-001
Ethane	2.01e-002	5.86e-002
Propane	7.71e-003	3.29e-002
Isobutane	1.98e-003	1.11e-002
n-Butane	3.68e-003	2.07e-002
Isopentane	1.27e-003	8.90e-003
n-Pentane	9.13e-004	6.38e-003
Cyclopentane	1.70e-004	1.16e-003
n-Hexane	2.98e-004	2.49e-003
Cyclohexane	7.10e-004	5.78e-003
Other Hexanes	3.69e-004	3.08e-003
Heptanes	4.36e-004	4.24e-003
Methylcyclohexane	2.25e-003	2.14e-002

Benzene	3.37e-003	2.55e-002
Toluene	1.01e-002	9.05e-002
Xylenes	1.00e-002	1.03e-001
C8+ Heavies	6.33e-003	1.04e-001
Total Components	100.00	1.77e+002

Dehydrator Reboiler Exhaust Emissions Calculations

Unit Number: 12b, 13b
Description: Dehydrator Reboiler (20 MMSCFD)

Note: The data on this worksheet applies to each individual emissions unit identified above.

Fuel Consumption

1,648	scf/hr	Hourly fuel consumption	Mfg. data (Infab)
900	Btu/scf	Field gas heating value	Nominal heat content
1.48	MMBtu/hr	Capacity	scf/hr x Btu/scf / 1,000,000
8,760	hr/yr	Annual operating time	Harvest Four Corners, LLC
12,993	MMBtu/yr	Annual fuel consumption	MMBtu/hr x hr/yr
14.44	MMscf/yr	Annual fuel consumption	scf/hr x hr/yr / 1,000,000

Steady-State Emission Rates

Pollutants	Emission Factors, lb/day	Uncontrolled Emission Rates, pph	tpy
NOX	1.03	4.29E-02	0.188
CO	1.07	4.46E-02	0.195
VOC	0.16	6.46E-03	2.83E-02
SO2	0.02	8.33E-04	3.65E-03

NOX emission factor taken from August 1994 Enertek Letter
CO, TOC and SO2 emission factors taken from July 1998 InFab Letter
Consistent with AP-42, Table 1.4-2, 50% of TOC emissions are assumed to be VOC.
Emission Rate (pph) = lb/day / 24 hr/day
Emission Rate (tpy) = Emission Rate (pph) x hr/yr / 2,000 lb/ton

Pollutants	Emission Factors, lb/MMscf	Uncontrolled Emission Rates, pph	tpy
PM	7.60	1.25E-02	5.49E-02
PM10	7.60	1.25E-02	5.49E-02
PM2.5	7.60	1.25E-02	5.49E-02
Lead	5.00E-04	8.24E-07	3.61E-06

Emission factors taken from AP-42, Table 1.4-2
Emission Rate (pph) = lb/MMscf x (scf/hr / 1,000,000)
Emission Rate (tpy) = Emission Rate (pph) x hr/yr / 2,000 lb/ton

Exhaust Parameters

600	°F		Exhaust temperature	Mfg. data (Enertek & InFab)
199.62	cfm	3.33	Stack flowrate	fps x ft^2 x 60 sec/min
0.83	ft		Stack diameter	Mfg. data (Enertek)
0.55	ft^2		Stack exit area	3.1416 x ((ft / 2) ^2)
6.1	fps		Stack velocity	Mfg. data (Enertek & InFab)
19.1	ft		Stack height	Mfg. data (Enertek)

GRI-HAPCalc ® 3.01
External Combustion Devices Report

Facility ID:	**TRUNK N C.S.**	**Notes:**	**20 mmcfd Dehydrator Reboiler**
Operation Type:	**COMPRESSOR STATION**		
Facility Name:	**TRUNK N COMPRESSOR STATION**		
User Name:	**Cirrus Consulting**		
Units of Measure:	**U.S. STANDARD**		

***Note:** Emissions less than 5.00E-09 tons (or tonnes) per year are considered insignificant and are treated as zero. These emissions are indicated on the report with a "0". Emissions between 5.00E-09 and 5.00E-05 tons (or tonnes) per year are represented on the report with "0.0000".*

External Combustion Devices

Unit Name: 20 MMSCFD

Hours of Operation:	8,760	Yearly
Heat Input:	*********	MMBtu/hr
Fuel Type:	NATURAL GAS	
Device Type:	BOILER	
Emission Factor Set:	EPA > FIELD > LITERATURE	
Additional EF Set:	-NONE-	

Calculated Emissions (ton/yr)

Chemical Name	Emissions	Emission Factor	Emission Factor Set
HAPs			
3-Methylcholanthrene	0.0000	0.0000000018 lb/MMBtu	EPA
7,12-Dimethylbenz(a)anthracene	0.0000	0.0000000157 lb/MMBtu	EPA
Formaldehyde	0.0005	0.0000735294 lb/MMBtu	EPA
Methanol	0.0028	0.0004333330 lb/MMBtu	GRI Field
Acetaldehyde	0.0019	0.0002909000 lb/MMBtu	GRI Field
1,3-Butadiene	0.0000	0.0000001830 lb/MMBtu	GRI Field
Benzene	0.0000	0.0000020588 lb/MMBtu	EPA
Toluene	0.0000	0.0000033333 lb/MMBtu	EPA
Ethylbenzene	0.0000	0.0000000720 lb/MMBtu	GRI Field
Xylenes(m,p,o)	0.0000	0.0000010610 lb/MMBtu	GRI Field
2,2,4-Trimethylpentane	0.0002	0.0000323000 lb/MMBtu	GRI Field
n-Hexane	0.0114	0.0017647059 lb/MMBtu	EPA
Phenol	0.0000	0.0000000950 lb/MMBtu	GRI Field
Naphthalene	0.0000	0.0000005980 lb/MMBtu	EPA
2-Methylnaphthalene	0.0000	0.0000000235 lb/MMBtu	EPA
Acenaphthylene	0.0000	0.0000000018 lb/MMBtu	EPA
Biphenyl	0.0000	0.0000011500 lb/MMBtu	GRI Field
Acenaphthene	0.0000	0.0000000018 lb/MMBtu	EPA
Fluorene	0.0000	0.0000000027 lb/MMBtu	EPA
Anthracene	0.0000	0.0000000024 lb/MMBtu	EPA
Phenanthrene	0.0000	0.0000000167 lb/MMBtu	EPA
Fluoranthene	0.0000	0.0000000029 lb/MMBtu	EPA
Pyrene	0.0000	0.0000000049 lb/MMBtu	EPA
Benz(a)anthracene	0.0000	0.0000000018 lb/MMBtu	EPA
Chrysene	0.0000	0.0000000018 lb/MMBtu	EPA

Benzo(a)pyrene	0.0000	0.0000000012	lb/MMBtu	EPA
Benzo(b)fluoranthene	0.0000	0.0000000018	lb/MMBtu	EPA
Benzo(k)fluoranthene	0.0000	0.0000000018	lb/MMBtu	EPA
Benzo(g,h,i)perylene	0.0000	0.0000000012	lb/MMBtu	EPA
Indeno(1,2,3-c,d)pyrene	0.0000	0.0000000018	lb/MMBtu	EPA
Dibenz(a,h)anthracene	0.0000	0.0000000012	lb/MMBtu	EPA
Lead	0.0000	0.0000004902	lb/MMBtu	EPA
Total	0.0168			

Criteria Pollutants

VOC	0.0350	0.0053921569	lb/MMBtu	EPA
PM	0.0483	0.0074509804	lb/MMBtu	EPA
PM, Condensible	0.0362	0.0055882353	lb/MMBtu	EPA
PM, Filterable	0.0121	0.0018627451	lb/MMBtu	EPA
CO	0.5338	0.0823529410	lb/MMBtu	EPA
NMHC	0.0553	0.0085294118	lb/MMBtu	EPA
NOx	0.6355	0.0980392157	lb/MMBtu	EPA
SO2	0.0038	0.0005880000	lb/MMBtu	EPA

Other Pollutants

Dichlorobenzene	0.0000	0.0000011765	lb/MMBtu	EPA
Methane	0.0146	0.0022549020	lb/MMBtu	EPA
Acetylene	0.0346	0.0053314000	lb/MMBtu	GRI Field
Ethylene	0.0034	0.0005264000	lb/MMBtu	GRI Field
Ethane	0.0197	0.0030392157	lb/MMBtu	EPA
Propylene	0.0061	0.0009333330	lb/MMBtu	GRI Field
Propane	0.0102	0.0015686275	lb/MMBtu	EPA
Butane	0.0133	0.0020588235	lb/MMBtu	EPA
Cyclopentane	0.0003	0.0000405000	lb/MMBtu	GRI Field
Pentane	0.0165	0.0025490196	lb/MMBtu	EPA
n-Pentane	0.0130	0.0020000000	lb/MMBtu	GRI Field
Cyclohexane	0.0003	0.0000451000	lb/MMBtu	GRI Field
Methylcyclohexane	0.0011	0.0001691000	lb/MMBtu	GRI Field
n-Octane	0.0003	0.0000506000	lb/MMBtu	GRI Field
n-Nonane	0.0000	0.0000050000	lb/MMBtu	GRI Field
CO2	762.6353	117.6470588235	lb/MMBtu	EPA

Heater Exhaust Emissions Calculations

Unit Number: 17 & 18
Description: Tank Heaters

Note: The data on this worksheet applies to each individual emissions unit identified above.

Fuel Consumption

0.325	MMBtu/hr	Capacity	Mfg. data
361	scf/hr	Hourly fuel consumption	MMBtu/hr x 1,000,000 / Btu/scf
8,760	hr/yr	Annual operating time	Williams Four Corners LLC
2,847	MMBtu/yr	Annual fuel consumption	MMBtu/hr x hr/yr
3.16	MMscf/yr	Annual fuel consumption	scf/hr x hr/yr / 1,000,000
900	Btu/scf	Field gas heating value	Nominal heat content

Steady-State Emission Rates

Pollutants	Emission Factors, lb/MMscf	Emission Rates, pph	Emission Rates, tpy
NOX	100	3.61E-02	0.158
CO	84	3.03E-02	0.133
VOC	5.5	1.99E-03	8.70E-03
SO2	0.6	2.17E-04	9.49E-04
PM	7.60	2.74E-03	1.20E-02
PM10	7.60	2.74E-03	1.20E-02
PM2.5	7.60	2.74E-03	1.20E-02
Lead	5.00E-04	1.81E-07	7.91E-07

Emission factors taken from AP-42, Tables 1.4-1 & 1.4-2
Emission Rates (pph) = lb/MMBtu x MMBtu/hr
Emission Rates (tpy) = Uncontrolled Emission Rates (pph) x hr/yr / 2,000 lb/ton

GRI-HAPCalc ® 3.01
External Combustion Devices Report

Facility ID:	**TRUNK N C.S.**	**Notes:**	**Exempt Heaters (0.325 MMBtu/hr)**
Operation Type:	**COMPRESSOR STATION**		
Facility Name:	**TRUNK N COMPRESSOR STATION**		
User Name:	**Cirrus Consulting**		
Units of Measure:	**U.S. STANDARD**		

***Note:** Emissions less than 5.00E-09 tons (or tonnes) per year are considered insignificant and are treated as zero. These emissions are indicated on the report with a "0". Emissions between 5.00E-09 and 5.00E-05 tons (or tonnes) per year are represented on the report with "0.0000".*

External Combustion Devices

Unit Name: HEATERS

Hours of Operation:	8,760	Yearly
Heat Input:	*********	MMBtu/hr
Fuel Type:	NATURAL GAS	
Device Type:	HEATER	
Emission Factor Set:	EPA > FIELD > LITERATURE	
Additional EF Set:	-NONE-	

Calculated Emissions (ton/yr)

Chemical Name	Emissions	Emission Factor	Emission Factor Set
HAPs			
7,12-Dimethylbenz(a)anthracene	0.0000	0.0000000157 lb/MMBtu	EPA
Formaldehyde	0.0001	0.0000735294 lb/MMBtu	EPA
Methanol	0.0014	0.0009636360 lb/MMBtu	GRI Field
Acetaldehyde	0.0011	0.0007375920 lb/MMBtu	GRI Field
1,3-Butadiene	0.0005	0.0003423350 lb/MMBtu	GRI Field
Benzene	0.0000	0.0000020588 lb/MMBtu	EPA
Toluene	0.0000	0.0000033333 lb/MMBtu	EPA
Ethylbenzene	0.0031	0.0021128220 lb/MMBtu	GRI Field
Xylenes(m,p,o)	0.0019	0.0013205140 lb/MMBtu	GRI Field
2,2,4-Trimethylpentane	0.0041	0.0028417580 lb/MMBtu	GRI Field
n-Hexane	0.0026	0.0017647059 lb/MMBtu	EPA
Phenol	0.0000	0.0000001070 lb/MMBtu	GRI Field
Styrene	0.0030	0.0020788960 lb/MMBtu	GRI Field
Naphthalene	0.0000	0.0000005980 lb/MMBtu	EPA
2-Methylnaphthalene	0.0000	0.0000000235 lb/MMBtu	EPA
Biphenyl	0.0000	0.0000004730 lb/MMBtu	GRI Field
Phenanthrene	0.0000	0.0000000167 lb/MMBtu	EPA
Pyrene	0.0000	0.0000000049 lb/MMBtu	EPA
Lead	0.0000	0.0000004902 lb/MMBtu	EPA
Total	0.0178		
Criteria Pollutants			
VOC	0.0078	0.0053921569 lb/MMBtu	EPA
PM	0.0108	0.0074509804 lb/MMBtu	EPA
PM, Condensible	0.0081	0.0055882353 lb/MMBtu	EPA
PM, Filterable	0.0027	0.0018627451 lb/MMBtu	EPA

CO	0.1190	0.0823529410	lb/MMBtu	EPA
NMHC	0.0123	0.0085294118	lb/MMBtu	EPA
NOx	0.1417	0.0980392157	lb/MMBtu	EPA
SO2	0.0008	0.0005880000	lb/MMBtu	EPA

Other Pollutants

Dichlorobenzene	0.0000	0.0000011765	lb/MMBtu	EPA
Methane	0.0033	0.0022549020	lb/MMBtu	EPA
Acetylene	0.0202	0.0140000000	lb/MMBtu	GRI Field
Ethylene	0.0014	0.0009476310	lb/MMBtu	GRI Field
Ethane	0.0044	0.0030392157	lb/MMBtu	EPA
Propylene	0.0034	0.0023454550	lb/MMBtu	GRI Field
Propane	0.0023	0.0015686275	lb/MMBtu	EPA
Isobutane	0.0021	0.0014640770	lb/MMBtu	GRI Field
Butane	0.0030	0.0020588235	lb/MMBtu	EPA
Cyclopentane	0.0016	0.0011304940	lb/MMBtu	GRI Field
Pentane	0.0037	0.0025490196	lb/MMBtu	EPA
n-Pentane	0.0021	0.0014221310	lb/MMBtu	GRI Field
Cyclohexane	0.0013	0.0009183830	lb/MMBtu	GRI Field
Methylcyclohexane	0.0032	0.0022011420	lb/MMBtu	GRI Field
n-Octane	0.0041	0.0028538830	lb/MMBtu	GRI Field
1,2,3-Trimethylbenzene	0.0049	0.0034224540	lb/MMBtu	GRI Field
1,2,4-Trimethylbenzene	0.0049	0.0034224540	lb/MMBtu	GRI Field
1,3,5-Trimethylbenzene	0.0049	0.0034224540	lb/MMBtu	GRI Field
n-Nonane	0.0053	0.0036604170	lb/MMBtu	GRI Field
CO2	170.0471	117.6470588235	lb/MMBtu	EPA

Compressor Blowdown Emissions Calculations

Unit Number: SSM
Description: Compressor & Piping Associated With Station

Throughput

8	# of units	Number of units	Harvest Four Corners
156	events/yr/unit	Blowdowns per year per unit	Harvest Four Corners
6,140	scf/event	Gas loss per blowdown	Harvest Four Corners
7,662,720	scf/yr	Annual gas loss	# of units x events/yr/unit x scf/event

Emission Rates

Pollutants	Emission Factors, lb/scf	Uncontrolled, Emission Rates, tpy
VOC	2.077E-04	0.80
2,2,4-Trimethylpentane	0.000E+00	0.00E+00
Benzene	2.059E-07	7.89E-04
Ethylbenzene	0.000E+00	0.00E+00
n-Hexane	1.136E-06	4.35E-03
Toluene	4.858E-07	1.86E-03
Xylene	2.799E-07	1.07E-03

Emission factors calculated from gas composition (see table below)
Uncontrolled Emission Rates (tpy) = scf/yr x lb/scf / 2,000 lb/ton

Emission Factors

Components	Mole Percents, %	Molecular Weights, lb/lb-mole	Emission Factors, lb/scf
Carbon dioxide	6.0850	44.01	7.060E-03
Hydrogen sulfide	0.0000	34.07	0.000E+00
Nitrogen	0.0395	28.01	2.917E-05
Methane	92.9599	16.04	3.931E-02
Ethane	0.7584	30.07	6.012E-04
Propane	0.1068	44.09	1.241E-04
Isobutane	0.0163	58.12	2.498E-05
n-Butane	0.0211	58.12	3.233E-05
Isopentane	0.0063	72.15	1.198E-05
n-Pentane	0.0033	72.15	6.277E-06
Cyclopentane	0.0001	70.14	1.849E-07
n-Hexane	0.0005	86.17	1.136E-06
Cyclohexane	0.0002	84.16	4.438E-07
Other hexanes	0.0009	86.18	2.045E-06
Heptanes	0.0003	100.20	7.925E-07
Methylcyclohexane	0.0005	98.19	1.294E-06
2,2,4-Trimethylpentane	0.0000	100.21	0.000E+00
Benzene	0.0001	78.11	2.059E-07
Toluene	0.0002	92.14	4.858E-07
Ethylbenzene	0.0000	106.17	0.000E+00
Xylenes	0.0001	106.17	2.799E-07
C8+ Heavies	0.0004	110.00	1.160E-06
Total	99.9999		
Total VOC			2.077E-04

Gas stream composition obtained from the Trunk N fuel header gas stream extended gas analyses sampled May 1, 2020.
Emission Factors (lb/scf) = (% / 100) x lb/lb-mole / 379.4 scf/lb-mole

Produced Water Speciation Profile for TANKS Input

For tanks containng produced water that has passed through a separator, assume the tanks contain 99% H2O and 1% natural gasoline liquids

Natural Gasoline Liquid Composition	
Component	% (by weight)
Butane	7.63
Pentane	48.60
n-Hexane	42.18
Benzene	0.62
Toluene	0.66
Ethylbenzene	0.10
Xylenes	0.25

Default values for non-flashing tanks obtained from GRI-HAPCalc 3.0

Natural Gasoline **(Prod. Water)** Liquid Composition	
Component	% (by weight)
Butane	0.0763
Pentane	0.4860
n-Hexane	0.4218
Benzene	0.0062
Toluene	0.0066
Ethylbenzene	0.0010
Xylenes	0.0025

Produced water = (Natural Gasoline % (by weight) x 0.01) plus 99% water

Storage Tank Emissions Data and Calculations

Unit Number: Produced Water storage tanks T24 and T25 - *Insignificant source demonstration*
Description: Storage tank emissions summary

Source	Description	Calculated Raw Uncontrolled Working / Breathing (W/B) Losses (TANKS 4.09d) (lb/yr)	(ton/yr)	Working / Breathing (W/B) Losses with Safety Factor Applied (ton/yr)	Calculated Raw Uncontrolled Flash Emissions (ton/yr)	Flash Emissions with Safety Factor Applied (ton/yr)	Total Uncontrolled Emissions (including Safety Factor) (ton/yr)
Tank T24	Produced Water Storage Tank (400 bbl)						
VOC		23.56	0.01	1.47E-02	N/A	N/A	1.47E-02
Benzene		0.03	1.50E-05	1.88E-05	N/A	N/A	1.88E-05
Ethylbenzene		0	0	0	N/A	N/A	0
n-Hexane		3.20	0.002	2.00E-03	N/A	N/A	2.00E-03
Toluene		0.01	5.00E-06	6.25E-06	N/A	N/A	6.25E-06
Xylenes		0	0	0	N/A	N/A	0
Tank T25	Produced Water Storage Tank (400 bbl)						
VOC		23.56	0.01	1.47E-02	N/A	N/A	1.47E-02
Benzene		0.03	1.50E-05	1.88E-05	N/A	N/A	1.88E-05
Ethylbenzene		0	0	0	N/A	N/A	0
n-Hexane		3.20	1.60E-03	2.00E-03	N/A	N/A	2.00E-03
Toluene		0.01	5.00E-06	6.25E-06	N/A	N/A	6.25E-06
Xylenes		0	0	0	N/A	N/A	0
FACILITY STORAGE TANK EMISSIONS TOTALS							
VOC		**47.12**	**0.02**	**2.95E-02**	**0**	**0**	**2.95E-02**
Benzene		0.06	3.00E-05	3.75E-05	0	0	3.75E-05
Ethylbenzene		0	0	0	0	0	0
n-Hexane		6.40	0.00	4.00E-03	0	0	4.00E-03
Toluene		0.02	1.00E-05	1.25E-05	0	0	1.25E-05
Xylene		0	0	0	0	0	0
Total HAP		**6.48**	**0.00**	**4.05E-03**	**0**	**0**	**4.05E-03**

Working/breathing losses are calculated using TANKS 4.0.9d.

Safety Factor Applied = **1.25**

(A safety factor of "1" means no safety factor was applied.)

Truck Loading Emissions Calculations

Unit Number: L1 - *Insignificant source demonstration*
Description: Truck Loading

Emission Factor

0.6		Saturation factor, S	AP-42, Table 5.2-1 (submerged loading& dedicated service)
0.5425	psia (maximum)	Maximum true vapor pressure of liquid, **P**	TANKS 4.0 Database
0.3488	psia (average)	Average true vapor pressure of liquid, **P**	TANKS 4.0 Database
18.02	lb/lb-mole	Molecular weight of vapors, **M**	TANKS 4.0 Database
87.69	°F (maximum)	Maximum temperature of liquid (°F)	TANKS 4.0 Database
547.36	°R (maximum)	Maximum temperature of liquid (°R) **T**	°F + 459.67
67.36	°F (average)	Average temperature of liquid (°F)	TANKS 4.0 Database
527.03	°R (average)	Average temperature of liquid (°R) **T**	°F + 459.67
0.134	lb/10^3 gal (maximum)	Emission factor, **L**	AP-42, Section 5.2, Equation 1
0.089	lb/10^3 gal (average)	Emission factor, **L**	AP-42, Section 5.2, Equation 1

$$L = 12.46 \frac{SPM}{T}$$

Production Rate

8.40	10^3 gal/hr	Maximum hourly production rate	Harvest
403.200	10^3 gal/yr	Maximum annual production rate	Harvest

Steady-State Emission Rates

Pollutant	Emission Rates, pph	tpy
VOC	1.12	0.018

Emission Rate (pph) = lb/10^3 gal x 10^3 gal/hr
Emission Rate (tpy) = lb/10^3 gal x 10^3 gal/yr / 2,000 lb/ton

Pollutants	Vapor Mass Fraction	Emission Rates pph	tpy
Benzene	0.0002	2.24E-06	3.59E-08
Ethylbenzene	0.0000	0.0000	0.0000
n-Hexane	0.0244	2.74E-04	4.39E-06
Toluene	0.0001	1.12E-06	1.80E-08
m-Xylene	0.0000	0.0000	0.0000

Vapor Mass Fraction is from the TANKS 4.0 results
Emission rate, pph = Vapor Mass Fraction x VOC Emission rate (pph)
Emission rate, tpy = Vapor Mass Fraction x VOC Emission rate (tpy)

Equipment Leaks Emissions Calculations

Unit Number: F1
Description: Valves, Connectors, Seals & Open-Ended Lines

Steady-State Emission Rates

Equipment	Number of Components, # of sources	Emission Factors, kg/hr/source	Emission Factors, lb/hr/source	Uncontrolled TOC Emission Rates, pph	tpy
Valves	783	0.0045	0.0099	7.75	33.95
Connectors	819	0.0002	0.0004	0.36	1.58
Pump Seals	10	0.0024	0.0053	0.05	0.23
Compressor Seals	56	0.0088	0.0194	1.08	4.75
Pressure Relief Valves	70	0.0088	0.0194	1.36	5.94
Open-Ended Lines	223	0.0020	0.0044	0.98	4.30
Total				**11.59**	**50.74**

Number of components based on the numbers of compressors and dehydrators at the station (see next page)
Emission factors taken from the EPA "1995 Protocol for Equipment Leak Emission Estimates"
Emission factors (lb/hr/source) = Emission factors (kg/hr/source) x 2.2 lb/kg
Uncontrolled TOC Emission Rates (pph) = lb/hr/source x # of sources
Uncontrolled TOC Emission Rates (tpy) = Uncontrolled TOC Emission Rates (pph) x 8,760 hr/yr / 2,000 lb/ton

Components	Mole Percents, %	Molecular Weights, lb/lb-mole	Component Weights, lb/lb-mole	Weight Percent of TOC, %	Uncontrolled Emission Rates, pph	tpy
Carbon dioxide	6.0850	44.010	267.801			
Hydrogen sulfide	0.0000	34.070	0.000			
Nitrogen	0.0395	28.013	1.107			
Methane	92.9599	16.043	1491.356	83.272		
Ethane	0.7584	30.070	22.805	1.273		
Propane	0.1068	44.097	4.710	0.263	3.05E-02	0.13
Isobutane	0.0163	58.123	0.947	0.053	6.13E-03	2.68E-02
n-Butane	0.0211	58.123	1.226	0.068	7.93E-03	3.47E-02
Isopentane	0.0063	72.150	0.455	0.025	2.94E-03	1.29E-02
n-Pentane	0.0033	72.150	0.238	0.013	1.54E-03	6.75E-03
Cyclopentane	0.0001	70.134	0.007	0.000	4.54E-05	1.99E-04
n-Hexane	0.0005	86.177	0.043	0.002	2.79E-04	1.22E-03
Cyclohexane	0.0002	84.161	0.017	0.001	1.09E-04	4.77E-04
Other hexanes	0.0009	86.177	0.078	0.004	5.02E-04	2.20E-03
Heptanes	0.0003	100.204	0.030	0.002	1.94E-04	8.52E-04
Methylcyclohexane	0.0005	98.188	0.049	0.003	3.18E-04	1.39E-03
2,2,4-Trimethylpentane	0.0000	114.231	0.000	0.000	0.00E+00	0.00E+00
Benzene	0.0001	78.114	0.008	0.000	5.05E-05	2.21E-04
Toluene	0.0002	92.141	0.018	0.001	1.19E-04	5.22E-04
Ethylbenzene	0.0000	106.167	0.000	0.000	0.00E+00	0.00E+00
Xylenes	0.0001	106.167	0.011	0.001	6.87E-05	3.01E-04
C8+ Heavies	0.0004	114.231	0.046	0.003	2.96E-04	1.29E-03
Total	99.9999		1790.950			
Total VOC				0.440	5.10E-02	0.22

Gas stream composition obtained from the Trunk N fuel header gas stream
extended gas analyses sampled May 1, 2020.
Component Weights (lb/lb-mole) = (% / 100) * Molecular Weights (lb/lb-mole)
Weight Percent of TOC (%) = 100 x Component Weights (lb/lb-mole) / Total Component Weight (lb/lb-mole)
Uncontrolled Emission Rates (pph) = Total Uncontrolled TOC Emission Rate (pph) x (% / 100)

Equipment Leaks Emissions Calculations

Unit Number: F1
Description: Valves, Connectors, Seals & Lines

Number of Compression Units at the Facility: 8
Number of Dehydrators at the Facility: 5

Process Equipment Description	Equipment Count						Instrument Count		
	Valves	Connectors	Pump Seals	Compressor Seals	Pressure Relief Valves	Open-end	Flow	Level	Pressure
Station inlet, meter run to pulsation dampener	17	14	0	0	1	13	3	0	3
Pulsation dampener	12	8	0	0	0	2	0	4	1
Compressor suction header	7	4	0	0	0	3	0	0	1
Suction header feed to instrument gas header	3	1	0	0	0	1	0	0	0
Compressor discharge header and bypass to station discharge	6	5	0	0	0	3	0	1	1
Compressor discharge header and suction header bypass lines	4	2	0	0	0	2	0	0	1
Fuel gas header	2	2	0	0	1	2	0	0	1
Instrument gas header	2	2	0	0	1	2	0	0	0
Station discharge header	9	5	0	0	1	6	0	0	2
Fuel gas recovery header	2	2	0	0	1	2	0	0	0
Fuel gas feed and filter loop	15	9	0	0	0	1	0	4	1
Instrument gas feed and filter loop	9	11	0	0	0	3	0	0	0
Produced water storage tank	1	0	0	0	0	1	0	1	0
ESD panel	12	0	0	0	0	0	0	0	0
Starting gas header	6	2	0	0	1	3	0	0	0
Hot gas header	2	2	0	0	0	2	0	0	0
Volume bottle lop	12	4	0	24	1	2	0	0	1
Components from Compressors	352	472	0	32	48	88	0	32	72
Components from dehydrators	30	50	10	0	15	30	0	15	20
Total	503	595	10	56	70	166	3	57	104
Adjusted Total	783	819	10	56	70	223			

The following additions are included in the Adjusted Total:

1 valve is added for each open end line
2 connectors are added for each flow meter
2 valves, 2 connectors and 1 open end line are added for each level gauge
1 connector is added for each pressure gauge

The component count is based on an evaluation of the Sim Mesa Compressor Station (two stage compression)

Pig Receiver Emissions Calculations

Unit Number: PR - *Insignificant source demonstration*
Description: Pig Receiver

Throughput

104	events/yr	Estimated max. # events per year	Harvest Four Corners, LLC
668.5	scf/event	Gas loss per event	Harvest Four Corners, LLC
69,524	scf/yr	Annual gas loss	events/yr x scf/event

Emission Rates

Pollutants	Emission Factors, lb/scf	Uncontrolled, Emission Rates, tpy
VOC	2.077E-04	7.22E-03
2,2,4-Trimethylpentane	0.00	0.00
Benzene	2.059E-07	7.16E-06
Ethylbenzene	0.00	0.00
n-Hexane	1.136E-06	3.95E-05
Toluene	4.857E-07	1.69E-05
Xylene	2.798E-07	9.73E-06

Emission factors calculated from gas composition (see table below)
Uncontrolled Emission Rates (tpy) = scf/yr x lb/scf / 2,000 lb/ton

Gas Composition

Components	Mole Percents, %	Molecular Weights, lb/lb-mole	Emission Factors, lb/scf
Carbon dioxide	6.0850	44.01	7.059E-03
Hydrogen sulfide	0.0000	34.07	0.000E+00
Nitrogen	0.0395	28.01	2.916E-05
Methane	92.9599	16.04	3.930E-02
Ethane	0.7584	30.07	6.011E-04
Propane	0.1068	44.09	1.241E-04
Isobutane	0.0163	58.12	2.497E-05
n-Butane	0.0211	58.12	3.232E-05
Isopentane	0.0063	72.15	1.198E-05
n-Pentane	0.0033	72.15	6.276E-06
Cyclopentane	0.0001	70.14	1.849E-07
n-Hexane	0.0005	86.17	1.136E-06
Cyclohexane	0.0002	84.16	4.436E-07
Other hexanes	0.0009	86.18	2.044E-06
Heptanes	0.0003	100.20	7.923E-07
Methylcyclohexane	0.0005	98.19	1.294E-06
Isooctane	0.0000	100.21	0.000E+00
Benzene	0.0001	78.11	2.059E-07
Toluene	0.0002	92.14	4.857E-07
Ethylbenzene	0.0000	106.17	0.000E+00
Xylenes	0.0001	106.17	2.798E-07
C8+ Heavies	0.0004	110.00	1.160E-06
Total	99.9999		
Total VOC			2.077E-04

Gas stream composition obtained from the Trunk N inlet gas stream extended gas analyses sampled May 1, 2020.
Emission Factors (lb/scf) = (% / 100) x lb/lb-mole / 379.4 scf/lb-mole

Malfunction Emissions Data and Calculations

Unit Number: M1
Description: Malfunctions

Emission Rates

Pollutants	Weight Percents, %	Uncontrolled Emission Rates, tpy
VOC		10.00
2,2,4-Trimethylpentane	0.000E+00	0.00E+00
Benzene	9.913E-02	9.91E-03
Ethylbenzene	0.000E+00	0.00E+00
n-Hexane	5.468E-01	5.47E-02
Toluene	2.339E-01	2.34E-02
Xylene	1.347E-01	1.35E-02

Weight percents calculated from gas composition (see table below)
Uncontrolled Emission Rates (tpy) = VOC Emission Rate (tpy) x (% / 100)

Gas Composition

Components	Mole Percents, %	Molecular Weights, lb/lb-mole	Component Weights, lb/lb-mole	Weight Percent, %
Carbon dioxide	6.0850	44.01		
Hydrogen sulfide	0.0000	34.07		
Nitrogen	0.0395	28.01		
Methane	92.9599	16.04		
Ethane	0.7584	30.07		
Propane	0.1068	44.09	0.0471	5.976E+01
Isobutane	0.0163	58.12	0.0095	1.202E+01
n-Butane	0.0211	58.12	0.0123	1.556E+01
Isopentane	0.0063	72.15	0.0045	5.769E+00
n-Pentane	0.0033	72.15	0.0024	3.022E+00
Cyclopentane	0.0001	70.14	0.0001	8.901E-02
n-Hexane	0.0005	86.17	0.0004	5.468E-01
Cyclohexane	0.0002	84.16	0.0002	2.136E-01
Other hexanes	0.0009	86.18	0.0008	9.843E-01
Heptanes	0.0003	100.20	0.0003	3.815E-01
Methylcyclohexane	0.0005	98.19	0.0005	6.231E-01
2,2,4-Trimethylpentane	0.0000	100.21	0.0000	0.000E+00
Benzene	0.0001	78.11	0.0001	9.913E-02
Toluene	0.0002	92.14	0.0002	2.339E-01
Ethylbenzene	0.0000	106.17	0.0000	0.000E+00
Xylenes	0.0001	106.17	0.0001	1.347E-01
C8+ Heavies	0.0004	110.00	0.0004	5.584E-01
Total	99.9999			
Total VOC			0.0788	

Gas stream composition obtained from the Trunk N fuel header gas stream
extended gas analyses sampled May 1, 2020.
Component Weights (lb/lb-mole) = (% / 100) x Molecular Weights (lb/lb-mole)
Weight Percents (%) = 100 x Component Weights (lb/lb-mole) / Total VOC Weight (lb/lb-mole)

Section 6.a

Green House Gas Emissions

(Submitting under 20.2.70, 20.2.72 20.2.74 NMAC)

Title V (20.2.70 NMAC), Minor NSR (20.2.72 NMAC), and PSD (20.2.74 NMAC) applicants must estimate and report greenhouse gas (GHG) emissions to verify the emission rates reported in the public notice, determine applicability to 40 CFR 60 Subparts, and to evaluate Prevention of Significant Deterioration (PSD) applicability. GHG emissions that are subject to air permit regulations consist of the sum of an aggregate group of these six greenhouse gases: carbon dioxide (CO_2), nitrous oxide (N_2O), methane (CH_4), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6).

Calculating GHG Emissions:

1. Calculate the ton per year (tpy) GHG mass emissions and GHG CO_2e emissions from your facility.
2. GHG mass emissions are the sum of the total annual tons of greenhouse gases without adjusting with the global warming potentials (GWPs). GHG CO_2e emissions are the sum of the mass emissions of each individual GHG multiplied by its GWP found in Table A-1 in 40 CFR 98 Mandatory Greenhouse Gas Reporting.
3. Emissions from routine or predictable start up, shut down, and maintenance must be included.
4. Report GHG mass and GHG CO_2e emissions in Table 2-P of this application. Emissions are reported in **short** tons per year and represent each emission unit's Potential to Emit (PTE).
5. All Title V major sources, PSD major sources, and all power plants, whether major or not, must calculate and report GHG mass and CO2e emissions for each unit in Table 2-P.
6. For minor source facilities that are not power plants, are not Title V, and are not PSD there are three options for reporting GHGs in Table 2-P: 1) report GHGs for each individual piece of equipment; 2) report all GHGs from a group of unit types, for example report all combustion source GHGs as a single unit and all venting GHGs as a second separate unit; 3) or check the following □ By checking this box, the applicant acknowledges the total CO2e emissions are less than 75,000 tons per year.

Sources for Calculating GHG Emissions:

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

Global Warming Potentials (GWP):
Applicants must use the Global Warming Potentials codified in Table A-1 of the most recent version of 40 CFR 98 Mandatory Greenhouse Gas Reporting. The GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to that of one unit mass of CO_2 over a specified time period.

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

Metric to Short Ton Conversion:
Short tons for GHGs and other regulated pollutants are the standard unit of measure for PSD and title V permitting programs. 40 CFR 98 Mandatory Greenhouse Reporting requires metric tons.
1 metric ton = 1.10231 short tons (per Table A-2 to Subpart A of Part 98 – Units of Measure Conversions)

Greenhouse Gas (GHG) Emissions

Greenhouse gas (GHG) emission calculations are provided. Carbon dioxide (CO_2), methane (CH_4) emissions, nitrous oxide (N_2O) (combustion sources only), and total GHG are reported in tons per year (tpy). Carbon dioxide equivalent (CO_2e) emissions (including CO_2, N_2O and CH_4) are reported in metric tonnes per year. The CO_2e is calculated by summing the estimated CO_2 emissions with the CH_4 emissions (adjusted for the Global Warming Potential (GWP) of the CH_4) and the N_2O emissions (adjusted for the GWP of the N_2O). The GWPs are from Title 40, Part 98 (40 CFR 98), *Mandatory Greenhouse Gas Reporting*, Table A-1.

The portion of 40 CFR 98, Table A-1 that includes the GWPs for CH_4 and N_2O is included in Section 7. 40 CFR 98, Subpart A (including Table A-1) is available for download in its entirety through the U.S. Government Publications Office (GPO) website at http://ecfr.gpoaccess.gov/ under the "Code of Federal Regulations" link.

Combustion Equipment GHG. GHG emissions, including carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O) exhaust emissions from the combustion equipment (reciprocating internal combustion engines) are calculated from emission factors from 40 CFR 98, Part C, Tables C-1 & C-2, and the engine higher heating value (HHV) design heat rate.

Emission factors and methodologies from 40 CFR 98, Table C-1 and C-2 are included in Section 7. 40 CFR 98, Subpart C (including Tables C-1 and C-2) is available for download in its entirety through the U.S. Government Publications Office (GPO) website at http://ecfr.gpoaccess.gov/ under the "Code of Federal Regulations" link.

Non-Combustion Equipment GHG (General). The non-combustion GHG emissions from the facility are based on 40 CFR 98, Subpart W, *Petroleum and Natural Gas Systems*, or an appropriate method published in the American Petroleum Institute's 2009 *Compendium of Greenhouse Gas Emission Estimates Methodologies for the Oil and Gas Industry* (API Compendium). The emission calculation methods is noted in the calculations spreadsheets.

40 CFR 98, Subpart W is published and available for download in its entirety through the U.S. Government Publications Office (GPO) website at http://ecfr.gpoaccess.gov/ under the "Code of Federal Regulations" link. The API Compendium in its entirety is available at http://www.api.org/environment-health-and-safety/climate-change/whats-new/compendium-ghg-methodologies-oil-and-gas-industry . Excerpts of the cited 40 CFR 98 and API Compendium materials are provided in Section 7.

SSM Compressor Blowdown GHG. Compressor blowdown emissions (SSM), including emissions from SSM and compressor venting, associated piping, and SSM pigging activities (as applicable) are calculated from the estimated total annual gas losses (scf/yr) and the molar fraction of CO_2 and CH_4 in the natural gas extended analysis. The SSM emissions are estimated from the annual blowdown volume of

gas. The emission calculations are provided in this section. The extended gas analysis used in the emission estimates is in Section 7.

Malfunction Emissions GHG. GHG emissions from the malfunction VOC emissions (unit M1) are calculated based on the estimated total volume of annual gas (scf/yr) associated with the specified tpy of VOC emissions and the molar fractions of CO_2 and CH_4 in the natural gas extended analysis.

Reciprocating Compressor Venting Emissions. Annual GHG emissions from reciprocating compressor vented emissions, including compressor blowdown valve leaks, rod packing leaks and isolation valve leaks, are estimated from the number of compressors; the estimated compressor operating times; the CO_2 and CH_4 molar composition of the gas stream; and the density of the GHG gases according to 40 CFR 98, Subpart W, equation W-36.

Isolation valve leakage occurs when the compressors are not in operation, i.e., when the compressors operate zero hours. The GHG emissions from isolation valve leakage are less than the combined blowdown valve leakage and rod packing emissions that occur when compressor(s) are in operation. Therefore, the PTE is calculated assuming 8,760 hours per year of compressor operation (corresponding with isolation valve leakage occurring zero hours per year).

Equipment Leaks Emissions. GHG emissions from facility-wide equipment leaks (unit F1) are based on the estimated total annual gas losses (scf/yr) associated with the estimated number of components, the corresponding emission factors from the EPA's 1995 *Protocol for Equipment Leak Emission Estimates*, and the molar fraction of CO_2 and CH_4 contained in the natural gas extended analysis.

Natural Gas Driven Pneumatic Device Venting Emissions and Natural Gas Driven Pneumatic Pump Venting Emissions. Gas-driven pneumatic device and pneumatic pump emissions are calculated from the facility gas stream composition for CO_2 and CH_4, the estimated number of devices, and the appropriate emission factors from 40 CFR 98, Subpart W, Table W-1A (Western U.S. - Gas Service).

Storage Tank and Truck Loading GHG. GHG emissions from working and breathing losses from the produced water, waste water, lube oil and used lube oil, TEG, and other insignificant storage tanks are considered to be zero, based on the stored contents are either non-flashing liquids or post-flashed liquid.

Similarly, any liquids transferred during truck loading do not contain appreciable amounts of any gases, including GHG.

Green House Gas Emissions Data and Calculations

Sources	Facility Total Emissions				
	CO2, tpy	N2O, tpy	CH4, tpy	GHG, tpy	CO2e, tpy
Engine & Turbine Exhaust	48,083.62	0.091	0.91	48,084.62	48133.28
SSM Blowdowns	27.2892	-	151.9421	179.23	3825.84
Reciprocating Compressor Venting	86.71	-	483.53	570.24	12175.05
Dehydrators	82.43	--	21.48	103.91	619.47
Reboiler Exhaust	3,538.10	6.67E-03	6.67E-02	3,538.17	3541.75
Pig Launchers & Receivers	0.2454	--	1.3662	1.61	34.40
Equipment Leaks	3.99	-	22.25	26.24	560.19
Natural Gas Pneumatic Device Venting	26.99	-	150.15	177.14	3780.78
Natural Gas Driven Pneumatic Pump Venting	2.47	-	13.72	16.19	345.58
Malfunctions	339.86	-	1892.31	2,232.18	47647.74
Separators & Storage Tanks (Flash Emissions)	0.00	-	0.00	0.00	0.00
Total	52,191.71	9.73E-02	2,737.74	54,929.55	120,664.08

Engine & Turbine Exhaust Emissions

Unit Numbers	Description	Emission Factors			Emission Rates			
		CO2, kg/MMBtu	N2O, kg/MMBtu	CH4, kg/MMBtu	CO2, tpy	N2O, tpy	CH4, tpy	CO2e, tpy
1	Waukesha L7042GL	53.06	1.00E-04	1.00E-03	6,010.45	1.13E-02	1.13E-01	6,016.66
2	Waukesha L7042GL	53.06	1.00E-04	1.00E-03	6,010.45	1.13E-02	1.13E-01	6,016.66
3	Waukesha L7042GL	53.06	1.00E-04	1.00E-03	6,010.45	1.13E-02	1.13E-01	6,016.66
4	Waukesha L7042GL	53.06	1.00E-04	1.00E-03	6,010.45	1.13E-02	1.13E-01	6,016.66
5	Waukesha L7042GL	53.06	1.00E-04	1.00E-03	6,010.45	1.13E-02	1.13E-01	6,016.66
6	Waukesha L7042GL	53.06	1.00E-04	1.00E-03	6,010.45	1.13E-02	1.13E-01	6,016.66
7	Waukesha L7042GL	53.06	1.00E-04	1.00E-03	6,010.45	1.13E-02	1.13E-01	6,016.66
8	Waukesha L7042GL	53.06	1.00E-04	1.00E-03	6,010.45	1.13E-02	1.13E-01	6,016.66
	Total				48,083.62	0.091	0.91	48,133.28

The emissions factors are taken from 40 CFR 98, Subpart C, Tables C-1 & C-2
Emission Rates (tpy) = kg/MMBtu x 2.2 lb/kg x MMBtu/yr / 2,000 lb/ton

Unit Numbers	Description	Fuel Types	Operating Times, hr/yr	LHV Design Heat Rates, MMBtu/hr	HHV	
					Design Heat Rates, MMBtu/hr	Fuel Usages, MMBtu/yr
1	Waukesha L7042GL	Nat. Gas	8,760	10.58	11.76	102,979
2	Waukesha L7042GL	Nat. Gas	8,760	10.58	11.76	102,979
3	Waukesha L7042GL	Nat. Gas	8,760	10.58	11.76	102,979
4	Waukesha L7042GL	Nat. Gas	8,760	10.58	11.76	102,979
5	Waukesha L7042GL	Nat. Gas	8,760	10.58	11.76	102,979
6	Waukesha L7042GL	Nat. Gas	8,760	10.58	11.76	102,979
7	Waukesha L7042GL	Nat. Gas	8,760	10.58	11.76	102,979
8	Waukesha L7042GL	Nat. Gas	8,760	10.58	11.76	102,979

The fuel types and operating times are provided by Harvest
The LHV design heat rates are taken from manufacturers data
HHV Design Heat Rates (MMBtu/hr) = LHV Design Heat Rates (MMBtu/hr) / 0.9 LHV/HHV
HHV Fuel Usages (MMBtu/yr) = HHV Design Heat Rates (MMBtu/hr) x hr/yr

SSM Blowdown Emissions

Unit Numbers	Description	Total Gas Losses, scf/yr	CO2 Emission Factors, lb/scf	N2O Emission Factors, lb/scf	CH4 Emission Factors, lb/scf	Emission Rates			
						CO2, tpy	N2O, tpy	CH4, tpy	CO2e, tpy
SSM	SSM Blowdowns	7,732,244	0.0071	--	0.0393	27.29	-	151.94	3,825.84

The annual blowdown volumes are calculated from data provided by Harvest
The CO2 and CH4 emission factors are calculated from the facility extended gas analysis
Emission Rates (tpy) = scf/yr x lb/scf / 2,000 lb/ton

Green House Gas Emissions Data and Calculations

Reciprocating Compressor Venting Emissions

Unit Numbers	Description	Emission Rates			
		CO2, tpy	N2O tpy	CH4, tpy	CO2e, tpy
NA	Blowdown Valve Leakage	8.28	-	46.19	1,163.00
NA	Rod Packing Emissions	78.43	-	437.34	11,012.05
NA	Isolation Valve Leakage	0.00	-	0.00	-
	Total	86.71	-	483.53	12,175.05

Operating or standby mode - includes blowdown valve leakage through blowdown vent stack
Operating mode - includes rod packing emissions
Non-operating depressurized mode - includes isolation valve leakage through open blowdown vents (without blind flanges)
Rod packing gas emissions assume 4 cylinders per compressor
A combination of equations W-26 & W-36 (Subpart W) is used to calculate reciprocating compressor emissions
As the NMED requires CO2 & CH4 emissions rather than CO2e emissions, it is not necessary to include the global warming potential from equation W-36
CO2 Emission Rates (tpy) = # x scf/hr x hr/yr x (CO2 Mole Percent (%) / 100) x CO2 Density (kg/scf) x (2,204.6 lb/tonne / 2,000 lb/ton) / 1,000 kg/tonne
CH4 Emission Rates (tpy) = # x scf/hr x hr/yr x (CH4 Mole Percent (%) / 100) x CH4 Density (kg/scf) x (2,204.6 lb/tonne / 2,000 lb/ton) / 1,000 kg/tonne

Unit Numbers	Description	Number of Compressors #	Gas Emissions, scf/hr	Operating Times, hr/yr	CO2 Mole Percents, %	CH4 Mole Percents, %	CO2 Density, kg/scf	CH4 Density, kg/scf
NA	Blowdown Valve Leakage	8	33.5	8,760	6.09	92.96	0.0526	0.0192
NA	Rod Packing Emissions	8	317.2	8,760	6.09	92.96	0.0526	0.0192
NA	Isolation Valve Leakage	8	10.5	0	6.09	92.96	0.0526	0.0192

The number of compressors is provided by Harvest
Blowdown valve leakage (33.5 scf/hr) and rod packing emissions occur in operating mode
Blowdown valve leakage (10.5 scf/hr) occurs in standby pressurized mode
Emission factors are the three year rolling average (2012-2014) of all measurements in the Williams Field Services, LLC compressor fleet located at natural gas processing plants
The operating times (the average operating times for all station compressors combined) are provided by Harvest
The facility CO2 and CH4 contents are taken from the facility extended gas analysis
The CO2 & CH4 densities (kg/scf) are taken from Subpart W, Paragraph 98.233(v)

Dehydrator Emissions

Unit Numbers	Description	Emission Rates			
		CO2, tpy	N2O, tpy	CH4, tpy	CO2e, tpy
9a	Dehydrator (12 MMSCFD)	16.6440	--	4.3516	125.43
10a	Dehydrator (12 MMSCFD)	16.6440	--	4.3516	125.43
11a	Dehydrator (12 MMSCFD)	16.6440	--	4.3516	125.43
12a	Dehydrator (20 MMSCFD)	16.2498	--	4.2134	121.58
13a	Dehydrator (20 MMSCFD)	16.2498	--	4.2134	121.58
	Total	82.43	--	21.48	619.47

The emission rates are taken from the GRI-GLYCalc output file

Reboiler Exhaust Emissions

Unit Numbers	Description	Emission Factors			Emission Rates			
		CO2, kg/MMBtu	N2O, kg/MMBtu	CH4, kg/MMBtu	CO2, tpy	N2O, tpy	CH4, tpy	CO2e, tpy
9b	Reboiler (12 MMSCFD)	53.06	1.00E-04	1.00E-03	617.63	1.16E-03	1.16E-02	618.27
10b	Reboiler (12 MMSCFD)	53.06	1.00E-04	1.00E-03	617.63	1.16E-03	1.16E-02	618.27
11b	Reboiler (12 MMSCFD)	53.06	1.00E-04	1.00E-03	617.63	1.16E-03	1.16E-02	618.27
12b	Reboiler (20 MMSCFD)	53.06	1.00E-04	1.00E-03	842.60	1.59E-03	1.59E-02	843.47
13b	Reboiler (20 MMSCFD)	53.06	1.00E-04	1.00E-03	842.60	1.59E-03	1.59E-02	843.47
	Total				3,538.10	6.67E-03	6.67E-02	3,541.75

The emissions factors are taken from 40 CFR 98, Subpart C, Tables C-1 & C-2
Emission Rates (tpy) = kg/MMBtu x 2.2 lb/kg x MMBtu/yr / 2,000 lb/ton

Unit Numbers	Description	Fuel Types	Operating Times hr/yr	LHV			HHV	
				Fuel Usages, scf/hr	Fuel Heat Contents, Btu/scf	Fuel Usages, MMBtu/hr	Fuel Usages, MMBtu/hr	Fuel Usages, MMBtu/yr
9b	Reboiler (12 MMSCFD)	Nat. Gas	8,760	1,208	900	1.09	1.21	10,582
10b	Reboiler (12 MMSCFD)	Nat. Gas	8,760	1,208	900	1.09	1.21	10,582
11b	Reboiler (12 MMSCFD)	Nat. Gas	8,760	1,208	900	1.09	1.21	10,582
12b	Reboiler (20 MMSCFD)	Nat. Gas	8,760	1,648	900	1.48	1.65	14,436
13b	Reboiler (20 MMSCFD)	Nat. Gas	8,760	1,648	900	1.48	1.65	14,436

The fuel types and operating times are provided by Harvest
The LHV fuel usages (scf/hr) are taken from manufacturer's data
The LHV fuel heat contents are estimated based on the value typically used by manufacturers
LHV Fuel Usages (MMBtu/hr) = LHV Fuel Usages (scf/hr) x Btu/scf / 1,000,000 Btu/MMBtu

Green House Gas Emissions Data and Calculations

HHV Fuel Usages (MMBtu/hr) = LHV Fuel Usages (MMBtu/hr) / 0.9 LHV/HHV
HHV Fuel Usages (MMBtu/yr) = HHV Fuel Usages (MMBtu/hr) x hr/yr

Pig Launcher & Receiver Emissions

Unit Numbers	Description	Total Gas Losses, scf/yr	CO2 Emission Factors, lb/scf	CH4 Emission Factors, lb/scf	Emission Rates			
					CO2, tpy	N2O, tpy	CH4, tpy	CO2e, tpy
PR	Pig Receiver	69,524	0.0071	0.0393	0.25	--	1.37	34.40
	Total				0.2454	--	1.3662	34.40

The annual blowdown volumes are calculated from data provided by Harvest
The CO2 and CH4 emission factors are calculated from the facility extended gas analysis
Emission Rates (tpy) = scf/yr x lb/scf / 2,000 lb/ton

Equipment Leaks Emissions

Unit Numbers	Description	Emission Rates			
		CO2, tpy	N2O, tpy	CH4, tpy	CO2e, tpy
NA	Valves	2.9	-	16.3	411.14
NA	Connectors	0.4	-	2.4	60.42
NA	Open-Ended Lines	0.2	-	1.2	30.00
NA	Pressure Relief Valves	0.4	-	2.3	58.63
	Total	3.99	-	22.25	560.19

A combination of equations W-31 & W-36 (Subpart W) is used to calculate uncombusted CO2 & CH4 emissions
As the NMED requires CO2 & CH4 emissions rather than CO2e emissions, it is not necessary to include the global warming potential from equation W-36
CO2 Emission Rate (tpy) = # x scf/hr/component x (CO2 Content (mole %) / 100) x hr/yr x CO2 Density (kg/scf) x (2,204.6 lb/tonne / 2,000 lb/ton) / 1,000 kg/tonne
CH4 Emission Rate (tpy) = # x scf/hr/component x (CH4 Content (mole %) / 100) x hr/yr x CH4 Density (kg/scf) x (2,204.6 lb/tonne / 2,000 lb/ton) / 1,000 kg/tonne

Unit Numbers	Description	Number of Components, #	Emission Factors, scf/hr /component	CO2 Contents, mole %	CH4 Contents, mole %	Operating Times, hr/yr	CO2 Density, kg/scf	CH4 Density, kg/scf
NA	Valves	783	0.121	6.09	92.96	8,760	0.0526	0.0192
NA	Connectors	819	0.017	6.09	92.96	8,760	0.0526	0.0192
NA	Open-Ended Lines	223	0.031	6.09	92.96	8,760	0.0526	0.0192
NA	Pressure Relief Valves	70	0.193	6.09	92.96	8,760	0.0526	0.0192

The number of sources are calculated based on the number of compressors and dehydrators at the station (see criteria pollutant and HAP equipment leaks calculations)
The emission factors are taken from Subpart W, Table W-1A (Western U.S. - Gas Service)
The facility CO2 and CH4 contents are taken from the facility extended gas analysis
The operating times are provided by Harvest (default is the entire year)
The CO2 & CH4 densities are taken from Subpart W, Paragraph 98.233(v)

Green House Gas Emissions Data and Calculations

Natural Gas Pneumatic Device Venting Emissions

Unit Numbers	Description	Number of Devices, #	Emission Factors, scf/hr/device	Operating Times, hr/yr	Emission Rates			
					CO2, tpy	N2O, tpy	CH4, tpy	CO2e, tpy
NA	Continuous High Bleed Pneumatic Devices	4	37.3	8,760	4.61	-	25.66	646.12
NA	Intermittent Bleed Pneumatic Devices	53	13.5	8,760	22.12	-	123.06	3,098.54
NA	Continuous Low Bleed Pneumatic Devices	6	1.39	8,760	0.26	-	1.43	36.12
	Total				26.99	-	150.15	3,780.78

The number of devices and operating times are provided by Harvest
The emission factors are taken from Subpart W, Table W-1A (Western U.S. - Gas Service)
Equation W-1 (Subpart W) is used to calculate CO2 & CH4 emissions
As the NMED requires CO2 & CH4 emissions in addition to CO2e emissions, it is necessary to divide by the global warming potentials
CO2 Emission Rates (tpy) = # x scf/hr/device x (CO2 Content (mole %) / 100) x CO2 Conversion Factors (tonne CO2e/scf) x hr/yr
x (2,204.6 lb/tonne / 2,000 lb/ton) / CO2 Global Warming Potentials (tonne CO2e/tonne CO2)
CH4 Emission Rates (tpy) = # x scf/hr/device x (CH4 Contents (mole %) / 100) x CH4 Conversion Factors (tonne CO2e/scf) x hr/yr
x (2,204.6 lb/tonne / 2,000 lb/ton) / CH4 Global Warming Potentials (tonne CO2e/tonne CH4)

Unit Numbers	Description	CO2 Contents, mole %	CH4 Contents, mole %	CO2 Conversion Factors, tonne CO2e /scf	CH4 Conversion Factors, tonne CO2e /scf	CO2 Global Warming Potentials, tonne CO2e /tonne CO2	CH4 Global Warming Potentials, tonne CO2e /tonne CH4
NA	Continuous High Bleed Pneumatic Devices	6.09	92.96	5.262E-05	4.790E-04	1	25
NA	Continuous Low Bleed Pneumatic Devices	6.09	92.96	5.262E-05	4.790E-04	1	25
NA	Intermittent Bleed Pneumatic Devices	6.09	92.96	5.262E-05	4.790E-04	1	25

The facility CO2 and CH4 contents are taken from the facility extended gas analysis
The conversion factors are taken from Subpart W, Paragraph 98.233(a)
The global warming potentials are taken from 40 CFR Part 98, Table A-1

Natural Gas Driven Pneumatic Pump Venting Emissions

Emission Rates

Unit Number	Description	Number of Pumps, #	Emission Factor, scf/hr/pump	Operating Time, hr/yr	Emission Rates			
					CO2, tpy	N2O, tpy	CH4, tpy	CO2e, tpy
NA	Pneumatic Pump Venting	6	13.3	8,760	2.47	-	13.72	345.58

The number of pumps is provided by Harvest
The emission factor is taken from Subpart W, Table W-1A (Western U.S. - Gas Service)
The operating time is provided by Harvest (default is the entire year)
Equation W-2 (Subpart W) is used to calculate CO2 & CH4 emissions
As the NMED requires CO2 & CH4 emissions in addition to CO2e emissions, it is necessary to divide by the global warming potentials
CO2 Emission Rate (tpy) = # x scf/hr/pump x (CO2 Content (mole %) / 100) x CO2 Conversion Factor (tonne CO2e/scf) x hr/yr
x (2,204.6 lb/tonne / 2,000 lb/ton) / CO2 Global Warming Potentials (tonne CO2e/tonne CO2)
CH4 Emission Rate (tpy) = # x scf/hr/pump x (CH4 Content (mole %) / 100) x CH4 Conversion Factor (tonne CO2e/scf) x hr/yr
x (2,204.6 lb/tonne / 2,000 lb/ton) / CH4 Global Warming Potentials (tonne CO2e/tonne CH4)

Unit Number	Description	CO2 Content, mole %	CH4 Content, mole %	CO2 Conversion Factor, tonne CO2e /scf	CH4 Conversion Factor, tonne CO2e /scf	CO2 Global Warming Potential, tonne CO2e /tonne CO2	CH4 Global Warming Potential, tonne CO2e /tonne CH4
NA	Pneumatic Pump Venting	6.09	92.96	5.262E-05	4.790E-04	1	25

The facility CO2 and CH4 contents are taken from the facility extended gas analysis
The conversion factors are taken from Subpart W, Paragraph 98.233(a)
The operating time is provided by Harvest (the default is the entire year)
The global warming potentials are taken from 40 CFR Part 98, Table A-1

Malfunction Emissions

Unit Number	Description	Total Component Weight, lb/lb-mole	VOC Component Weight, lb/lb-mole	CO2 Weight % of Total, %	CH4 Weight % of Total, %	Emission Rates				
						VOC, tpy	CO2, tpy	N2O, tpy	CH4, tpy	CO2e, tpy
M1	Malfunctions	17.91	0.08	14.96	83.27	10.00	339.86	-	1,892.31	47,647.74

The total & VOC component weights and CO2 & CH4 weight % of totals are calculated from the facility extended gas analysis
The VOC emission rate is estimated (see calculations workbook)
CO2 Emission Rate (tpy) = VOC Emission Rate (tpy) x (Total Component Weight (lb/lb-mole) / VOC Component Weight (lb-lb-mole))
x (CO2 Weight % of Total (%) / 100)
CH4 Emission Rate (tpy) = VOC Emission Rate (tpy) x (Total Component Weight (lb/lb-mole) / VOC Component Weight (lb-lb-mole))
x (CH4 Weight % of Total (%) / 100)

Green House Gas Emissions Data and Calculations

Separators & Storage Tanks (Flash Emissions)

Unit Number	Description	Emission Rates		Operating Time,	Emission Rates			
		CO2, pph	CH4, pph	hr/yr	CO2, tpy	N2O, tpy	CH4, tpy	CO2e, tpy
N/A	Not applicable	--	--	--	0.000	-	0.000	-
	Total				0.0000	-	0.0000	-

Emission rates (tpy) - ProMax '/Tank_Flash_Emissions (Material Stream)' 'Equilibrium Results' 'Mass Flow [lb/h]' x (8760 hr/yr /2000 lb/ton)
x 'MassFraction [Fraction]' for individual GHG (i.e., CO2 or CH4), *multiplied by the proposed total VOC limit (10 tpy) / calculated total VOC (1.79 tpy)* .
The operating times are provided by Harvest
Emission Rate (tpy) = Emission Rate (pph) x Operating Time (hr/yr) / 2,000 lb/ton

Gas Stream Composition

Components	Mole Percents, %	Molecular Weights, lb/lb-mole	Component Weights, lb/lb-mole	Weight Percent of Total, %	Emission Factors, lb/scf
Carbon Dioxide	6.0850	44.01	2.68	14.9554	0.0071
Hydrogen Sulfide	0.0000	34.07	0.00	0.0000	0.0000
Nitrogen	0.0395	28.01	0.01	0.0618	0.0000
Methane	92.9599	16.04	14.91	83.2693	0.0393
Ethane	0.7584	30.07	0.23	1.2736	0.0006
Propane	0.1068	44.09	0.05	0.2630	0.0001
IsoButane	0.0163	58.12	0.01	0.0529	0.0000
Normal Butane	0.0211	58.12	0.01	0.0685	0.0000
IsoPentane	0.0063	72.15	0.00	0.0254	0.0000
Normal Pentane	0.0033	72.15	0.00	0.0133	0.0000
Cyclopentane	0.0001	70.14	0.00	0.0004	0.0000
n-Hexane	0.0005	86.17	0.00	0.0024	0.0000
Cyclohexane	0.0002	84.16	0.00	0.0009	0.0000
Other Hexanes	0.0009	86.18	0.00	0.0043	0.0000
Heptanes	0.0003	100.20	0.00	0.0017	0.0000
Methylcyclohexane	0.0005	98.19	0.00	0.0027	0.0000
2,2,4-Trimethylpentane	0.0000	100.21	0.00	0.0000	0.0000
Benzene	0.0001	78.11	0.00	0.0004	0.0000
Toluene	0.0002	92.14	0.00	0.0010	0.0000
Ethylbenzene	0.0000	106.17	0.00	0.0000	0.0000
Xylenes	0.0001	106.17	0.00	0.0006	0.0000
C8+ heavies	0.0004	110.00	0.00	0.0025	0.0000
Total	99.9999		17.91	100.0000	0.0472
VOC			0.08	--	0.0002

Gas stream composition obtained from the Trunk N fuel header gas stream
extended gas analyses sampled May 1, 2020.

Component Weights (lb/lb-mole) = [Mole Percents (%) / 100] x Molecular Weights (lb/lb-mole)
Weight Percent of Total (%) = 100 x Component Weights (lb/lb-mole) / Total Component Weight (lb/lb-mole)
Emission Factors (lb/scf) = [Mole Percents (%) / 100] x Molecular Weights (lb/lb-mole) / 379.4 scf/lb-mole

Section 7

Information Used To Determine Emissions

Information Used to Determine Emissions shall include the following:

- [X] 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.
- [X] 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.
- [X] If an EPA document or other material is referenced, include a complete copy.
- [X] Fuel specifications sheet.
- [X] 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.

Please see the following pages.

Engine Exhaust Emission Data

POI Unit No.		**Date:**	30-Sep-99
State:	New Mexico	**Completed By:**	Don Schmidt - POI
Emission Point Number:	Trunk N Station	**Requested By:**	Lee Bauerle - WFS

Engine Specifications

Engine Manufacturer	Waukesha	**Model No.**	L7042GL
Horsepower	1368 **HP**	**@ Site Elevation of**	6490 **ft**
@ RPM	1200 **rpm**		
Engine Displacement	7040 **cu.in**		
BMEP	128 **psi**		

Engine Operating Data at 130° F Intercooler Water Temperature

Fuel Consumption	10024.08 **BTU/HR*1000**	10.02 **MMBTU/HR**
Fuel Lower Heating Value	900.00 **BTU/SCF**	
Annual Fuel Consumption	97.57 **MMSCF/yr**	
Brake Specific Fuel Consumption	7329.72 **BTU/BHP-HR**	
Exhaust Stack Temperature	702 **Deg F**	
Exhaust Flowrate	14821.37 **lbs/hr**	7568.798 **ACFM**
Exhaust Stack Height	19.50 **FT**	
Exhaust Stack Diameter	1.00 **FT**	
Exhaust Stack Velocity	160.61 **FT/sec**	

Engine Emission Rates

Pollutant	g/BHP-hr	lbs/hr	Tons/Year
NOx	0.90	2.71	11.87
CO	2.75	8.28	36.28
VOC	1.00	3.01	13.19

Notes:

1) Engine HP deration is based on State of New Mexico required elevation deration procedures of 3% per 1000 ft above 4000 ft elevation.
2) Manufacturer's Sea Level HP Rating for this engine is 1478 HP @ 1200 rpm.
3) Engine Operating Data taken from Waukesha Heat Rejection and Operating Data (S6124-63) and are based on given HP and RPM.
4) Engine Emissions Data taken from Waukesha Publication 7005A and is based on given HP and RPM.

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

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

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

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

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

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

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

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

[b] Based on approximately 100% conversion of fuel carbon to CO_2. $CO_2[lb/10^6 \text{ scf}] = (3.67)(CON)(C)(D)$, where CON = fractional conversion of fuel carbon to CO_2, C = carbon content of fuel by weight (0.76), and D = density of fuel, 4.2×10^4 $lb/10^6$ scf.

[c] All PM (total, condensible, and filterable) is assumed to be less than 1.0 micrometer in diameter. Therefore, the PM emission factors presented here may be used to estimate PM_{10}, $PM_{2.5}$ or PM_1 emissions. Total PM is the sum of the filterable PM and condensible PM. Condensible PM is the particulate matter collected using EPA Method 202 (or equivalent). Filterable PM is the particulate matter collected on, or prior to, the filter of an EPA Method 5 (or equivalent) sampling train.

[d] Based on 100% conversion of fuel sulfur to SO_2. Assumes sulfur content is natural gas of 2,000 grains/10^6 scf. The SO_2 emission factor in this table can be converted to other natural gas sulfur contents by multiplying the SO_2 emission factor by the ratio of the site-specific sulfur content (grains/10^6 scf) to 2,000 grains/10^6 scf.

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

Pollutant	Emission Factor (lb/MMBtu)[b] (fuel input)	Emission Factor Rating
Criteria Pollutants and Greenhouse Gases		
NO_x[c] 90 - 105% Load	4.08 E+00	B
NO_x[c] <90% Load	8.47 E-01	B
CO[c] 90 - 105% Load	3.17 E-01	C
CO[c] <90% Load	5.57 E-01	B
CO_2[d]	1.10 E+02	A
SO_2[e]	5.88 E-04	A
TOC[f]	1.47 E+00	A
Methane[g]	1.25 E+00	C
VOC[h]	1.18 E-01	C
PM10 (filterable)[i]	7.71 E-05	D
PM2.5 (filterable)[i]	7.71 E-05	D
PM Condensable[j]	9.91 E-03	D
Trace Organic Compounds		
1,1,2,2-Tetrachloroethane[k]	<4.00 E-05	E
1,1,2-Trichloroethane[k]	<3.18 E-05	E
1,1-Dichloroethane	<2.36 E-05	E
1,2,3-Trimethylbenzene	2.30 E-05	D
1,2,4-Trimethylbenzene	1.43 E-05	C
1,2-Dichloroethane	<2.36 E-05	E
1,2-Dichloropropane	<2.69 E-05	E
1,3,5-Trimethylbenzene	3.38 E-05	D
1,3-Butadiene[k]	2.67E-04	D
1,3-Dichloropropene[k]	<2.64 E-05	E
2-Methylnaphthalene[k]	3.32 E-05	C
2,2,4-Trimethylpentane[k]	2.50 E-04	C
Acenaphthene[k]	1.25 E-06	C

Extended Gas Analysis

Gas Composition

Components	Mole Percents, %	Molecular Weights, lb/lb-mole	Component Weights, lb/lb-mole	Weight Percent, %	Emission Factors, **lb/scf**
Carbon dioxide	6.0850	44.01	2.6780	14.9554	7.059E-03
Hydrogen sulfide	0.0000	34.07	0.0000	0.0000	0.000E+00
Nitrogen	0.0395	28.01	0.0111	0.0618	2.916E-05
Methane	92.9599	16.04	14.9108	83.2693	3.930E-02
Ethane	0.7584	30.07	0.2281	1.2736	6.011E-04
Propane	0.1068	44.09	0.0471	0.2630	1.241E-04
Isobutane	0.0163	58.12	0.0095	0.0529	2.497E-05
n-Butane	0.0211	58.12	0.0123	0.0685	3.232E-05
Isopentane	0.0063	72.15	0.0045	0.0254	1.198E-05
n-Pentane	0.0033	72.15	0.0024	0.0133	6.276E-06
Cyclopentane	0.0001	70.14	0.0001	0.0004	1.849E-07
n-Hexane	0.0005	86.17	0.0004	0.0024	1.136E-06
Cyclohexane	0.0002	84.16	0.0002	0.0009	4.436E-07
Other hexanes	0.0009	86.18	0.0008	0.0043	2.044E-06
Heptanes	0.0003	100.20	0.0003	0.0017	7.923E-07
Methylcyclohexane	0.0005	98.19	0.0005	0.0027	1.294E-06
2,2,4-Trimethylpentane	0.0000	100.21	0.0000	0.0000	0.000E+00
Benzene	0.0001	78.11	0.0001	0.0004	2.059E-07
Toluene	0.0002	92.14	0.0002	0.0010	4.857E-07
Ethylbenzene	0.0000	106.17	0.0000	0.0000	0.000E+00
Xylenes	0.0001	106.17	0.0001	0.0006	2.798E-07
C8+ Heavies	0.0004	110.00	0.0004	0.0025	1.160E-06
Total Gas	99.9999		17.9067		4.720E-02
Total VOC			0.0788		2.077E-04

Gas stream composition obtained from the Trunk N fuel header gas stream extended gas analyses sampled May 1, 2020.

Emission Factors (lb/scf) = (% / 100) x lb/lb-mole / 379.4 scf/lb-mole

2030 Afton Place
Farmington, NM 87401
(505) 325-6622

Analysis No: HM200039
Cust No: 33700-10495

Well/Lease Information

Customer Name:	HARVEST MIDSTREAM	Source:	FUEL HEADER
Well Name:	TRUNK N CDP; Fuel Header	Well Flowing:	
County/State:	SAN JUAN NM	Pressure:	150 PSIG
Location:		Flow Temp:	93 DEG. F
Lease/PA/CA:		Ambient Temp:	81 DEG. F
Formation:		Flow Rate:	36.8 MCF/D
Cust. Stn. No.:		Sample Method:	Purge & Fill
		Sample Date:	05/01/2020
		Sample Time:	12.15 PM
		Sampled By:	DANIEL LOVATO
Heat Trace:	N	Sampled by (CO):	HARVEST
Remarks:	Calculated Molecular Weight = 17.9097		

Analysis

Component:	Mole%:	Unormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.0395	0.0403	0.0040	0.00	0.0004
CO2	6.0850	6.2094	1.0400	0.00	0.0925
Methane	92.9599	94.8602	15.7900	938.90	0.5149
Ethane	0.7584	0.7739	0.2030	13.42	0.0079
Propane	0.1068	0.1090	0.0290	2.69	0.0016
Iso-Butane	0.0163	0.0166	0.0050	0.53	0.0003
N-Butane	0.0211	0.0215	0.0070	0.69	0.0004
Neopentane 2,2 dmc3	0.0000	0.0000	0.0000	0.00	0.0000
I-Pentane	0.0063	0.0064	0.0020	0.25	0.0002
N-Pentane	0.0033	0.0034	0.0010	0.13	0.0001
Neohexane	0.0000	N/R	0.0000	0.00	0.0000
2-3-Dimethylbutane	0.0001	N/R	0.0000	0.00	0.0000
Cyclopentane	0.0001	N/R	0.0000	0.00	0.0000
2-Methylpentane	0.0006	N/R	0.0000	0.03	0.0000
3-Methylpentane	0.0002	N/R	0.0000	0.01	0.0000
C6	0.0005	0.0035	0.0000	0.02	0.0000
Methylcyclopentane	0.0000	N/R	0.0000	0.00	0.0000
Benzene	0.0001	N/R	0.0000	0.00	0.0000
Cyclohexane	0.0002	N/R	0.0000	0.01	0.0000
2-Methylhexane	0.0001	N/R	0.0000	0.01	0.0000
3-Methylhexane	0.0000	N/R	0.0000	0.00	0.0000
2-2-4-Trimethylpentane	0.0000	N/R	0.0000	0.00	0.0000
i-heptanes	0.0000	N/R	0.0000	0.00	0.0000
Heptane	0.0002	N/R	0.0000	0.01	0.0000

Methylcyclohexane	0.0005	N/R	0.0000	0.03	0.0000
Toluene	0.0002	N/R	0.0000	0.01	0.0000
2-Methylheptane	0.0001	N/R	0.0000	0.01	0.0000
4-Methylheptane	0.0001	N/R	0.0000	0.01	0.0000
i-Octanes	0.0000	N/R	0.0000	0.00	0.0000
Octane	0.0001	N/R	0.0000	0.01	0.0000
Ethylbenzene	0.0000	N/R	0.0000	0.00	0.0000
m, p Xylene	0.0001	N/R	0.0000	0.01	0.0000
o Xylene (& 2,2,4 tmc7)	0.0000	N/R	0.0000	0.00	0.0000
i-C9	0.0000	N/R	0.0000	0.00	0.0000
C9	0.0001	N/R	0.0000	0.01	0.0000
i-C10	0.0000	N/R	0.0000	0.00	0.0000
C10	0.0000	N/R	0.0000	0.00	0.0000
i-C11	0.0000	N/R	0.0000	0.00	0.0000
C11	0.0000	N/R	0.0000	0.00	0.0000
C12P	0.0000	N/R	0.0000	0.00	0.0000
Total	100.00	102.044	17.081	956.77	0.6183

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY
**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBLITY FACTOR (1/Z):	1.0022	CYLINDER #:	4077
BTU/CU.FT IDEAL:	959.0	CYLINDER PRESSURE:	131 PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	961.1	ANALYSIS DATE:	05/06/2020
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	944.4	ANALYIS TIME:	04:03:56 AM
DRY BTU @ 15.025:	980.3	ANALYSIS RUN BY:	PATRICIA KING
REAL SPECIFIC GRAVITY:	0.6195		

GPM, BTU, and SPG calculations as shown above are based on current GPA constants.
GPA Standard: GPA 2286-14
GC: SRI Instruments 8610 **Last Cal/Verify: 05/08/2020**
GC Method: C12+BTEX Gas

HARVEST MIDSTREAM

WELL ANALYSIS COMPARISON

Lease: TRUNK N CDP; Fuel Header FUEL HEADER 05/08/2020

Stn. No.: 33700-10495

Mtr. No.:

Smpl Date:	05/01/2020
Test Date:	05/06/2020
Run No:	HM200039
Nitrogen:	0.0395
CO2:	6.0850
Methane:	92.9599
Ethane:	0.7584
Propane:	0.1068
I-Butane:	0.0163
N-Butane:	0.0211
2,2 dmc3:	0.0000
I-Pentane:	0.0063
N-Pentane:	0.0033
Neohexane:	0.0000
2-3-Cyclopentane:	0.0001
2-Methylpentane:	0.0001
3-Methylpentane:	0.0006
C6:	0.0002
Methylcyclopentane:	0.0005
Benzene:	0.0000
Cyclohexane:	0.0001
2-Methylhexane:	0.0002
3-Methylhexane:	0.0001
2-2-4-i-heptanes:	0.0000
Heptane:	0.0000
Methylcyclohexane:	0.0000
Toluene:	0.0002
2-Methylheptane:	0.0005
4-Methylheptane:	0.0002
i-Octanes:	0.0001
Octane:	0.0001
Ethylbenzene:	0.0000
m, p Xylene:	0.0001
o Xylene (& 2,2,4	0.0000
i-C9:	0.0000
C9:	0.0001
i-C10:	0.0000
C10:	0.0000
i-C11:	0.0000
C11:	0.0000
C12P:	0.0000
BTU:	961.1
GPM:	17.0830
SPG:	0.6195

Oil and Gas
Production Equipment
S. Enertek, Inc.
4901 East Main Street
Farmington, NM 87401
505/326-1151
FAX: 505/325-0317

ENERTEK

VIA FACSIMILE
Fax No. (801) 584-7760
Pages: 1

August 19, 1994

Mr. Lee Batteria
Williams Field Services
Salt Lake City, UT

The following table shows the stack emissions at maximum firing conditions for the dehydrators noted:

Dehydrator	NO_x #/Day	CO #/Day	Fuel SCFH	Total Stack Gases ACFH	Stack Ht. Ft	Stack Dia Inches	Stack Temp F	Stack Velocity FPS
J2P10M11109	0.86	0.17	357	10010	18'-8"	8	600	5.1
J2P10M749	1.03	0.21	429	12012	19'-1"	10	600	6.1
J2P12M11109	0.86	0.17	357	10010	18'-8"	8	600	5.1
J2P12M749	1.03	0.21	429	12012	19'-1"	10	600	6.1
J2P20M11109	1.03	0.21	429	12012	19'-1"	10	600	6.1

Please call me if you need additional information.

Sincerely,

Frosty Heath

FH/nb

InFab
INDUSTRIAL FABRICATION

5928 U.S. Highway 64
Farmington, NM 87401

Office: (505)632-2200
Fax: (505)632-8070

July 22, 1998

Mr. Bobby Myers
Williams Field Services
Environmental Affairs
295 Chipeta Way
P O Box 58900
Salt Lake City, UT 84158-0900

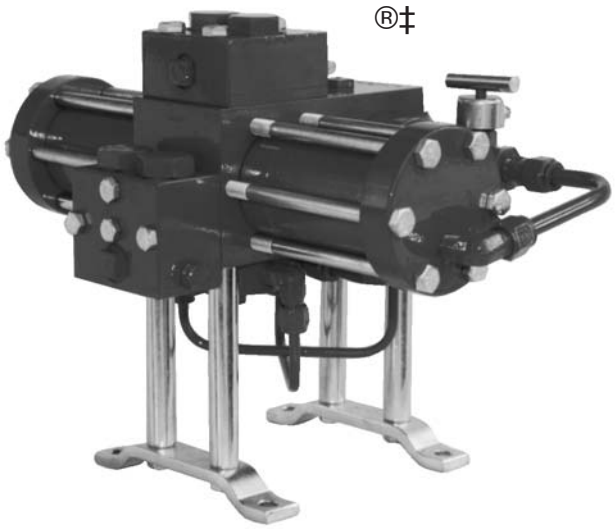
The table shown below gives the stack emissions for our larger dehydrators:

Unit Description	SO lb/day	NO_x lb/ Day	CO lb/ Day	Fuel SCFH	Total Organic Comp. Lb/d	Stack Ht. Ft.	Stack Dia inches	Stack Temp °F	Stack Velocity
10 MM LP	.01	.27	.43	659	.13	10'	8	600	5.1
10 MM HP	.01	.27	.43	659	.13	10'	10	600	6.1
12 MM LP	.02	.49	.78	1208	.23	10'	8	600	5.1
12 MM HP	.02	.49	.78	1208	.23	10'	10	600	6.1
15 MM	.02	.54	.85	1318	.25	10'	8	600	5.1
20 MM LP	.02	.67	1.07	1648	.31	10'	8	600	5.1
20 MM HP	.02	.67	1.07	1648	.31	10'	12	600	6.1

If you need any additional information please call me.

Sincerely,

Darby West
VP Engineering



PUMPS AVAILABLE:

“PV” SERIES GLYCOL PUMPS					
Catalog Number	Model Number	Capacity Gal. / Hr.		Working Pressure	
		Min.	Max.**	Min.	Max.
GAA	315 PV	3	13	100	1500
GAD	1715 PV	8	40	300	1500
GAB	4015 PV	12	40	300	1500
GAF	9015 PV	27	90	300	1500
GAH	21015 PV	66	210	400	1500
GAJ	45015 PV	166	450	400	1500

**Maximum output is affected by system pressure drops. See system operation parameter for maximum output curves.

“SC” SERIES GLYCOL PUMPS					
Catalog Number	Model Number	Capacity Gal. / Hr.		Working Pressure	
		Min.	Max.**	Min.	Max.
GAC	2015 SC*	8	20	100	500
GAG	5015 SC*	12	50	100	500
GAI	10015 SC*	22	100	100	500
GAK	20015 SC*	60	200	100	500

NOTE: To order a Pump with Viton O Rings add 1 to Catalog number. Example: To order GAA with Viton O Rings, specify: GAA1.

MAXIMUM DESIGN PRESSURE FOR P.V. AND S.C. MODELS IS 1500 psig

APPLICATIONS:

Circulating pump for gas glycol dehydrators
Circulating pump for gas amine desulphurizers

FEATURES:

Eliminates absorber liquid level controls
No auxiliary power supply required
Low gas consumption
Completely sealed system prevents loss glycol
No springs or toggles, only two moving assemblies
Hydraulic “cushioned” check valves with removable seats of hardened stainless steel

OPERATION:

Materials for the vital working parts have been selected for greatest wear resistance. These materials include stainless steel, hard chrome plating, satellite, nylon and teflon. Moving “O” Ring seals are compounded specifically for ethylene glycol service. A complete operational check is given each pump after assembly.

“O” Ring sealed check valve darts are standard in all except the model 315 PV. Teflon sealed darts are available. Capsule type ball checks are used in the 315 PV and are available for 1715 PV, 2015 SC and 4015 PV.

*These pumps are designed for operating pressures between 100 and 500 psig maximum design pressure for all models is 1500 psig.

EPA-453/R-95-017

1995 Protocol for Equipment Leak Emission Estimates

Emission Standards Division

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Air and Radiation
Office of Air Quality Planning and Standards
Research Triangle Park, North Carolina 27711

November 1995

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

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

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

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

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

loading operation, resulting in high levels of vapor generation and loss. If the turbulence is great enough, liquid droplets will be entrained in the vented vapors.

A second method of loading is submerged loading. Two types are the submerged fill pipe method and the bottom loading method. In the submerged fill pipe method, the fill pipe extends almost to the bottom of the cargo tank. In the bottom loading method, a permanent fill pipe is attached to the cargo tank bottom. During most of submerged loading by both methods, the fill pipe opening is below the liquid surface level. Liquid turbulence is controlled significantly during submerged loading, resulting in much lower vapor generation than encountered during splash loading.

The recent loading history of a cargo carrier is just as important a factor in loading losses as the method of loading. If the carrier has carried a nonvolatile liquid such as fuel oil, or has just been cleaned, it will contain vapor-free air. If it has just carried gasoline and has not been vented, the air in the carrier tank will contain volatile organic vapors, which will be expelled during the loading operation along with newly generated vapors.

Cargo carriers are sometimes designated to transport only one product, and in such cases are practicing "dedicated service". Dedicated gasoline cargo tanks return to a loading terminal containing air fully or partially saturated with vapor from the previous load. Cargo tanks may also be "switch loaded" with various products, so that a nonvolatile product being loaded may expel the vapors remaining from a previous load of a volatile product such as gasoline. These circumstances vary with the type of cargo tank and with the ownership of the carrier, the petroleum liquids being transported, geographic location, and season of the year.

One control measure for vapors displaced during liquid loading is called "vapor balance service", in which the cargo tank retrieves the vapors displaced during product unloading at bulk plants or service stations and transports the vapors back to the loading terminal. Figure 5.2-5 shows a tank truck in vapor balance service filling a service station underground tank and taking on displaced gasoline vapors for return to the terminal. A cargo tank returning to a bulk terminal in vapor balance service normally is saturated with organic vapors, and the presence of these vapors at the start of submerged loading of the tanker truck results in greater loading losses than encountered during nonvapor balance, or "normal", service. Vapor balance service is usually not practiced with marine vessels, although some vessels practice emission control by means of vapor transfer within their own cargo tanks during ballasting operations, discussed below.

Emissions from loading petroleum liquid can be estimated (with a probable error of ±30 percent)[4] using the following expression:

$$L_L = 12.46 \frac{SPM}{T} \quad (1)$$

where:

L_L = loading loss, pounds per 1000 gallons ($lb/10^3$ gal) of liquid loaded

S = a saturation factor (see Table 5.2-1)
P = true vapor pressure of liquid loaded, pounds per square inch absolute (psia) (see Figure 7.1-5, Figure 7.1-6, and Table 7.1-2)
M = molecular weight of vapors, pounds per pound-mole (lb/lb-mole) (see Table 7.1-2)
T = temperature of bulk liquid loaded, °R (°F + 460)

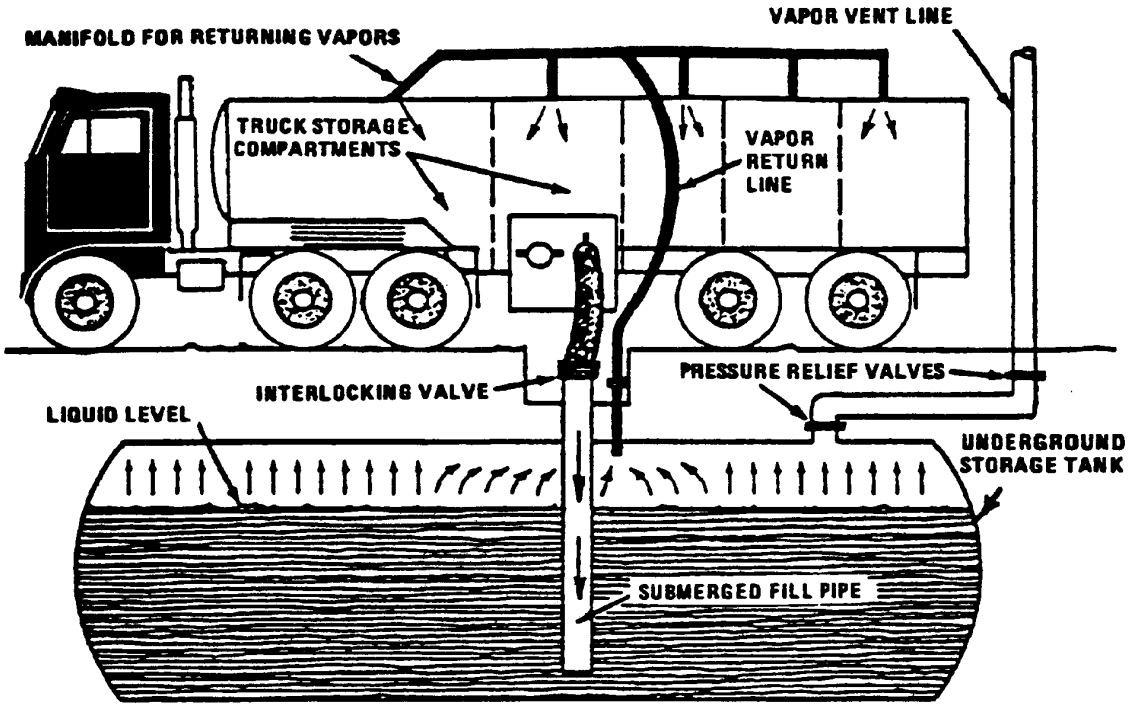


Figure 5.2-5. Tank truck unloading into a service station underground storage tank and practicing "vapor balance" form of emission control.

Table 5.2-1. SATURATION (S) FACTORS FOR CALCULATING PETROLEUM LIQUID LOADING LOSSES

Cargo Carrier	Mode Of Operation	S Factor
Tank trucks and rail tank cars	Submerged loading of a clean cargo tank	0.50
	Submerged loading: dedicated normal service	0.60
	Submerged loading: dedicated vapor balance service	1.00
	Splash loading of a clean cargo tank	1.45
	Splash loading: dedicated normal service	1.45
	Splash loading: dedicated vapor balance service	1.00
Marine vessels[a]	Submerged loading: ships	0.2
	Submerged loading: barges	0.5

[a] For products other than gasoline and crude oil. For marine loading of gasoline, use factors from Table 5.2-2. For marine loading of crude oil, use Equations 2 and 3 and Table 5.2-3.

Table A–1 to Subpart A of Part 98—Global Warming Potentials

[100-Year Time Horizon]

Name	CAS No.	Chemical formula	Global warming potential (100 yr.)
Carbon dioxide	124–38–9	CO_2	1
Methane	74–82–8	CH_4	[a] 25
Nitrous oxide	10024–97–2	N_2O	[a] 298
HFC–23	75–46–7	CHF_3	[a] 14,800
HFC–32	75–10–5	CH_2F_2	[a] 675
HFC–41	593–53–3	CH_3F	[a] 92
HFC–125	354–33–6	C_2HF_5	[a] 3,500
HFC–134	359–35–3	$C_2H_2F_4$	[a] 1,100
HFC–134a	811–97–2	CH_2FCF_3	[a] 1,430
HFC–143	430–66–0	$C_2H_3F_3$	[a] 353
HFC–143a	420–46–2	$C_2H_3F_3$	[a] 4,470
HFC–152	624–72–6	CH_2FCH_2F	53
HFC–152a	75–37–6	CH_3CHF_2	[a] 124
HFC–161	353–36–6	CH_3CH_2F	12
HFC–227ea	431–89–0	C_3HF_7	[a] 3,220
HFC–236cb	677–56–5	$CH_2FCF_2CF_3$	1,340
HFC–236ea	431–63–0	CHF_2CHFCF_3	1,370
HFC–236fa	690–39–1	$C_3H_2F_6$	[a] 9,810
HFC–245ca	679–86–7	$C_3H_3F_5$	[a] 693
HFC–245fa	460–73–1	$CHF_2CH_2CF_3$	1,030
HFC–365mfc	406–58–6	$CH_3CF_2CH_2CF_3$	794
HFC–43–10mee	138495–42–8	$CF_3CFHCFHCF_2CF_3$	[a] 1,640
Sulfur hexafluoride	2551–62–4	SF_6	[a] 22,800
Trifluoromethyl sulphur pentafluoride	373–80–8	SF_5CF_3	17,700
Nitrogen trifluoride	7783–54–2	NF_3	17,200
PFC–14 (Perfluoromethane)	75–73–0	CF_4	7,390
PFC–116 (Perfluoroethane)	76–16–4	C_2F_6	[a] 12,200
PFC–218 (Perfluoropropane)	76–19–7	C_3F_8	[a] 8,830

Name	CAS No.	Chemical formula	Global warming potential (100 yr.)
Perfluorocyclopropane	931–91–9	$C\text{-}C_3F_6$	17,340
PFC–3–1–10 (Perfluorobutane)	355–25–9	C_4F_{10}	[a] 8,860
Perfluorocyclobutane	115–25–3	$C\text{-}C_4F_8$	[a] 10,300
PFC–4–1–12 (Perfluoropentane)	678–26–2	C_5F_{12}	[a] 9,160
PFC–5–1–14 (Perfluorohexane)	355–42–0	C_6F_{14}	[a] 9,300
PFC–9–1–18	306–94–5	$C_{10}F_{18}$	7,500
HCFE–235da2 (Isoflurane)	26675–46–7	$CHF_2OCHClCF_3$	350
HFE–43–10pccc (H–Galden 1040x)	E1730133	$CHF_2OCF_2OC_2F_4OCHF_2$	1,870
HFE–125	3822–68–2	CHF_2OCF_3	14,900
HFE–134	1691–17–4	CHF_2OCHF_2	6,320
HFE–143a	421–14–7	CH_3OCF_3	756
HFE–227ea	2356–62–9	$CF_3CHFOCF_3$	1,540
HFE–236ca12 (HG–10)	78522–47–1	$CHF_2OCF_2OCHF_2$	2,800
HFE–236ea2 (Desflurane)	57041–67–5	$CHF_2OCHFCF_3$	989
HFE–236fa	20193–67–3	$CF_3CH_2OCF_3$	487
HFE–245cb2	22410–44–2	$CH_3OCF_2CF_3$	708
HFE–245fa1	84011–15–4	$CHF_2CH_2OCF_3$	286
HFE–245fa2	1885–48–9	$CHF_2OCH_2CF_3$	659
HFE–254cb2	425–88–7	$CH_3OCF_2CHF_2$	359
HFE–263fb2	460–43–5	$CF_3CH_2OCH_3$	11
HFE–329mcc2	67490–36–2	$CF_3CF_2OCF_2CHF_2$	919
HFE–338mcf2	156053–88–2	$CF_3CF_2OCH_2CF_3$	552
HFE–338pcc13 (HG–01)	188690–78–0	$CHF_2OCF_2CF_2OCHF_2$	1,500
HFE–347mcc3	28523–86–6	$CH_3OCF_2CF_2CF_3$	575
HFE–347mcf2	E1730135	$CF_3CF_2OCH_2CHF_2$	374
HFE–347pcf2	406–78–0	$CHF_2CF_2OCH_2CF_3$	580
HFE–356mec3	382–34–3	$CH_3OCF_2CHFCF_3$	101
HFE–356pcc3	160620–20–2	$CH_3OCF_2CF_2CHF_2$	110
HFE–356pcf2	E1730137	$CHF_2CH_2OCF_2CHF_2$	265
HFE–356pcf3	35042–99–0	$CHF_2OCH_2CF_2CHF_2$	502

Name	CAS No.	Chemical formula	Global warming potential (100 yr.)
HFE–365mcf3	378–16–5	$CF_3CF_2CH_2OCH_3$	11
HFE–374pc2	512–51–6	$CH_3CH_2OCF_2CHF_2$	557
HFE–449sl (HFE–7100) Chemical blend	163702–07–6 163702–08–7	$C_4F_9OCH_3$ $(CF_3)_2CFCF_2OCH_3$	297
HFE–569sf2 (HFE–7200) Chemical blend	163702–05–4 163702–06–5	$C_4F_9OC_2H_5$ $(CF_3)_2CFCF_2OC_2H_5$	59
Sevoflurane	28523–86–6	$CH_2FOCH(CF_3)_2$	345
HFE–356mm1	13171–18–1	$(CF_3)_2CHOCH_3$	27
HFE–338mmz1	26103–08–2	$CHF_2OCH(CF_3)_2$	380
(Octafluorotetramethy-lene)hydroxymethyl group	NA	$X\text{-}(CF_2)_4CH(OH)\text{-}X$	73
HFE–347mmy1	22052–84–2	$CH_3OCF(CF_3)_2$	343
Bis(trifluoromethyl)-methanol	920–66–1	$(CF_3)_2CHOH$	195
2,2,3,3,3-pentafluoropropanol	422–05–9	$CF_3CF_2CH_2OH$	42
PFPMIE	NA	$CF_3OCF(CF_3)CF_2OCF_2OCF_3$	10,300

[a] The GWP for this compound is different than the GWP in the version of Table A-1 to subpart A of part 98 published on October 30, 2009.

Table C–1 to Subpart C of Part 98—Default CO_2 Emission Factors and High Heat Values for Various Types of Fuel

Table C–1 to Subpart C—Default CO_2 Emission Factors and High Heat Values for Various Types of Fuel

Fuel type	Default high heat value	Default CO_2 emission factor
Coal and coke	**mmBtu/short ton**	**kg CO_2/mmBtu**
Anthracite	25.09	103.69
Bituminous	24.93	93.28
Subbituminous	17.25	97.17
Lignite	14.21	97.72
Coal Coke	24.80	113.67
Mixed (Commercial sector)	21.39	94.27
Mixed (Industrial coking)	26.28	93.90
Mixed (Industrial sector)	22.35	94.67
Mixed (Electric Power sector)	19.73	95.52
Natural gas	**mmBtu/scf**	**kg CO_2/mmBtu**
(Weighted U.S. Average)	1.026×10^{-3}	53.06
Petroleum products	**mmBtu/gallon**	**kg CO_2/mmBtu**
Distillate Fuel Oil No. 1	0.139	73.25
Distillate Fuel Oil No. 2	0.138	73.96
Distillate Fuel Oil No. 4	0.146	75.04
Residual Fuel Oil No. 5	0.140	72.93
Residual Fuel Oil No. 6	0.150	75.10
Used Oil	0.138	74.00
Kerosene	0.135	75.20
Liquefied petroleum gases (LPG)[1]	0.092	61.71
Propane[1]	0.091	62.87
Propylene[2]	0.091	67.77
Ethane[1]	0.068	59.60
Ethanol	0.084	68.44
Ethylene[2]	0.058	65.96
Isobutane[1]	0.099	64.94
Isobutylene[1]	0.103	68.86
Butane[1]	0.103	64.77
Butylene[1]	0.105	68.72
Naphtha (<401 deg F)	0.125	68.02
Natural Gasoline	0.110	66.83

Fuel type	Default high heat value	Default CO_2 emission factor
Other Oil (>401 deg F)	0.139	76.22
Pentanes Plus	0.110	70.02
Petrochemical Feedstocks	0.125	71.02
Petroleum Coke	0.143	102.41
Special Naphtha	0.125	72.34
Unfinished Oils	0.139	74.54
Heavy Gas Oils	0.148	74.92
Lubricants	0.144	74.27
Motor Gasoline	0.125	70.22
Aviation Gasoline	0.120	69.25
Kerosene-Type Jet Fuel	0.135	72.22
Asphalt and Road Oil	0.158	75.36
Crude Oil	0.138	74.54
Other fuels-solid	**mmBtu/short ton**	**kg CO_2/mmBtu**
Municipal Solid Waste	9.95[3]	90.7
Tires	28.00	85.97
Plastics	38.00	75.00
Petroleum Coke	30.00	102.41
Other fuels—gaseous	**mmBtu/scf**	**kg CO_2/mmBtu**
Blast Furnace Gas	0.092×10^{-3}	274.32
Coke Oven Gas	0.599×10^{-3}	46.85
Propane Gas	2.516×10^{-3}	61.46
Fuel Gas[4]	1.388×10^{-3}	59.00
Biomass fuels—solid	**mmBtu/short ton**	**kg CO_2/mmBtu**
Wood and Wood Residuals (dry basis)5	17.48	93.80
Agricultural Byproducts	8.25	118.17
Peat	8.00	111.84
Solid Byproducts	10.39	105.51
Biomass fuels—gaseous	**mmBtu/scf**	**kg CO_2/mmBtu**
Landfill Gas	0.485×10^{-3}	52.07
Other Biomass Gases	0.655×10^{-3}	52.07
Biomass Fuels—Liquid	**mmBtu/gallon**	**kg CO_2/mmBtu**
Ethanol	0.084	68.44
Biodiesel (100%)	0.128	73.84
Rendered Animal Fat	0.125	71.06
Vegetable Oil	0.120	81.55

[1] The HHV for components of LPG determined at 60 °F and saturation pressure with the exception of ethylene.

[2] Ethylene HHV determined at 41 °F (5 °C) and saturation pressure.

[3] Use of this default HHV is allowed only for: (a) Units that combust MSW, do not generate steam, and are allowed to use Tier 1; (b) units that derive no more than 10 percent of their annual heat input from MSW and/or tires; and (c) small batch incinerators that combust no more than 1,000 tons of MSW per year.

[4] Reporters subject to subpart X of this part that are complying with § 98.243(d) or subpart Y of this part may only use the default HHV and the default CO2 emission factor for fuel gas combustion under the conditions prescribed in § 98.243(d)(2)(i) and (d)(2)(ii) and § 98.252(a)(1) and (a)(2), respectively. Otherwise, reporters subject to subpart X or subpart Y shall use either Tier 3 (Equation C-5) or Tier 4.

[5] Use the following formula to calculate a wet basis HHV for use in Equation C-1:

$$HHV_w = ((100 - M)/100)*HHV_d$$

where

HHV_w = wet basis HHV,
M = moisture content (percent) and
HHV_d = dry basis HHV from Table C-1.

[74 FR 56374, Oct. 30, 2009, as amended at 75 FR 79153, Dec. 17, 2010; 78 FR 71950, Nov. 29, 2013]

Section 8

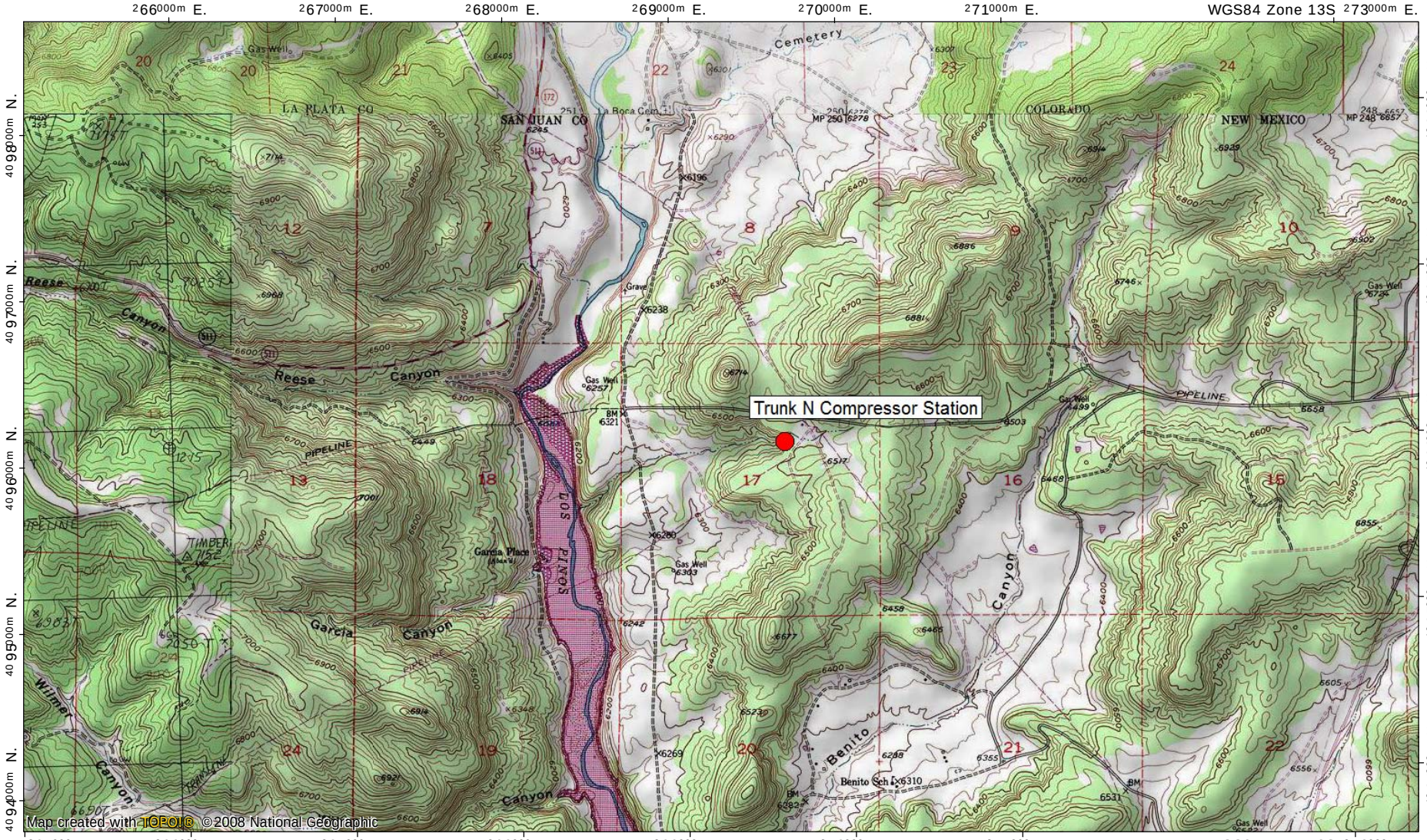
Map(s)

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	

Please see the following page(s).

HARVEST FOUR CORNERS, LLC - TRUNK N COMPRESSOR STATION - San Juan County, NM T 32 N, R 07 W, Section 17



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.

Not applicable.

Section 10

Written Description of the Routine Operations of the Facility

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

The Trunk N facility compresses production field natural gas. The gas is received from independent producers via gathering pipelines and is compressed for pipeline transmission using compressors driven by the natural gas-fired reciprocating internal combustion engines. The natural gas stream typically contains liquids including produced water, which drops out of the gas stream via an inlet separator. The produced water is stored in above ground fixed roof storage tanks until offsite transport via tank truck.

Storage tanks are also used to store lube oil and used oil, glycol, produced water, and waste water. Waste products are hauled off-site as required.

Other emission sources include: startups, shutdowns and routine maintenance (SSM) from the compressors and piping, pig receiving (units P2, P4), and fugitive emissions from process piping (valves, flanges, seals, etc.).

There are no process bottlenecks that limit production.

The facility is authorized to operate continuously.

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)**:**

Trunk N Compressor Station

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.

Not applicable.

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/

Federal Regulations

Federal standards and requirements are embodied in Title 40 (Protection of the Environment), Subchapter C (Air Programs) of the CFR, Parts 50 through 99. The applicability of those parts of the CFR that are consistent with the limited list of standards and requirements defined as applicable requirements are identified in the following pages.

FEDERAL REGULATIONS APPLICABILITY CHECKLIST

FEDERAL REGU-LATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
40 CFR 50	**National Ambient Air Quality Standards (NAAQS)**	Yes	Facility	The requirement to comply with the National Ambient Air Quality Standards applies to all sources operating within the State of New Mexico, including the station.
40 CFR 51	**Requirements for Preparation, Adoption, and Submittal of Implementation Plans**	No		The responsibility to prepare, adopt and submit for EPA approval Implementation Plans applies to local and state/tribal governmental agencies. The facility is not a local, state or tribal governmental agency and therefore, the regulation does not apply.
40 CFR 52	**Approval and Promulgation of Implementation Plans**	Yes		40 CFR 52.21, *Prevention of Significant Deterioration of Air Quality* is applicable to the facility, as it is a Prevention of Significant Deterioration (PSD) major source based on PTE for CO that exceeds 250 tpy. The remainder of the subpart is not applicable as it addresses approval of local, state and/or tribal agency Implementation Plans for administering the Prevention of Deterioration (PSD) program.
NSPS 40 CFR 60, Subpart A	**General Provisions**	Yes	The collection of fugitive emissions components	Applies if any other NSPS subpart applies. NSPS subpart OOOOa is applicable to the collection of fugitive emission components at the facility.
NSPS 40 CFR60, Subpart Da	Performance Standards for **Electric Utility Steam Generating Units**	No		The subpart applies to each electric utility steam generating unit that is capable of combusting more than 73 megawatts (MW) (250 million British thermal units per hour (MMBtu/hr)) heat input of fossil fuel (either alone or in combination with any other fuel); and that commences construction, modification, or reconstruction after September 18, 1978. The compressor station is not an affected facility as defined under the regulation; therefore, the subpart does not apply.
NSPS 40 CFR 60, Subpart Db	Standards of Performance for **Industrial-Commercial-Institutional Steam Generating Units**	No		The subpart applies to each steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity from fuels combusted in the steam generating unit of greater than 29 MW (100 million Btu/hour). The compressor station is not an affected facility as defined in the regulation; therefore, the subpart does not apply.

FEDERAL REGU-LATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
NSPS 40 CFR 60, Subpart Dc	Standards of Performance for **Small Industrial-Commercial-Institutional Steam Generating Units**	No		The subpart applies to each steam generating unit that commences construction, modification, or reconstruction after June 9, 1989, and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/hr)) or less, but greater than or equal to 2.9 MW (10 MMBtu/hr). The facility does not have any affected sources under the regulation; therefore, the subpart does not apply.
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		The affected facility to which this subpart applies are storage tanks with capacity greater than 151,416 liters (40,000 gallons) that are used to store petroleum liquids for which construction is commenced after May 18, 1978. The facility does not have equipment defined as an affected facility under the regulation; therefore, the subpart does not apply.
NSPS 40 CFR 60, Subpart Kb	Standards of Performance for **Volatile Organic Liquid Storage Vessels** (Including **Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984**	No		The affected facility to which this subpart applies is any storage vessel with a capacity greater than or equal to 75 cubic meters (m^3) used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification is commenced after July 23, 1984. All of the storage tanks at the facility are below 75 m^3 (approx. 471.7 barrels) capacity. The subpart does not apply.
NSPS 40 CFR 60 Subpart GG	Standards of Performance for **Stationary Gas Turbines**	No		Affected facilities under the subpart are stationary gas turbines with a heat input at peak load equal to or greater than 10.7 gigajoules (10 MMBtu) per hour and for which construction commenced after October 3, 1977 There are no turbines at the facility. Therefore, the subpart is not applicable.
NSPS 40 CFR 60, Subpart KKK	Standards of Performance for **Leaks of VOC from Onshore Gas Plants**	No		An affected facility under the subpart is an onshore gas plant that commences construction, reconstruction, or modification after January 20, 1984, and includes the group of all equipment (each pump, pressure relief device, open-ended valve or line, valve, compressor, and flange or other connector that is in VOC service or in wet gas service, and any device or system required by this subpart) except compressors (defined in § 60.631) within a process unit. A compressor station, dehydration unit, sweetening unit, underground storage tank, field gas gathering system, or liquefied natural gas unit is covered by this subpart if it is located at an onshore natural gas processing plant. If the unit is not located at the plant site, then it is exempt from the provisions of the subpart. The facility is not an onshore gas plant and the subpart does not apply.
NSPS 40 CFR 60, Subpart LLL	Standards of Performance for **Onshore Natural Gas Processing: SO_2 Emissions**	No		An affected facility is each sweetening unit, and each sweetening unit followed by a sulfur recovery unit, for which construction or modification commenced after January 20, 1984 at a natural gas processing plant. The facility is not a natural gas processing plant and does not include any affected units as defined by the subpart; therefore the subpart does not apply.

FEDERAL REGU-LATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
NSPS 40 CFR 60, Subpart JJJJ	Standards of Performance for **Stationary Spark Ignition Internal Combustion Engines**	No		Under § 60.4230, the requirements of the subpart apply to spark-ignition (SI), reciprocating internal combustion engines (RICE) constructed, modified or reconstructed after June 12, 2006. As shown in the Regulated Equipment (Table 2-A), each of the installed Waukesha L7042GL compressor RICE (units 1, 2, 3, 5, 6, 7, and 8) are existing RICE under the regulation, constructed prior to the regulatory applicability date. The Waukesha L7042GL engines deployed by Harvest in the Four Corners Area field production region (including the Trunk N Compressor Station) are from an existing fleet of Waukesha L7042GL engines with manufacture and construction dates that pre-date the June 12, 2006 regulatory applicability date. Engine units yet identified as To Be Determined ("TBD") (including unit 4), when installed, will also be from the fleet of existing engines. None of the engines installed engines have undergone a "modification" or "reconstruction". Therefore, the subpart is not applicable to RICE units 1 through 3, and 5 through 8. Although it is likely the unit 4 engine will be placed from the existing fleet of engines (and therefore not subject to the subpart), the applicability of the subpart to the unit 4 engine (as well as any future identical engine exchange at the station) will be evaluated upon its installation. Harvest will will comply with the regulatory requirements under the subpart as they apply to that engine.
NSPS 40 CFR 60, Subpart KKKK	Standards of Performance for **Stationary Combustion Turbines**	No		This subpart establishes emission standards and compliance schedules for the control of emissions from stationary combustion turbines that commenced construction, modification or reconstruction after February 18, 2005. There are no stationary gas turbines at the facility. Therefore, the subpart does not apply.
NSPS 40 CFR 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 on or before September 18, 2015**	No		Subpart OOOO establishes natural gas production, processing, transmission and distribution emission and equipment standards, including well completions; single continuous bleed, natural gas driven pneumatic controllers operating at bleed rates greater than 6 scfh and located between a wellhead and point of custody transfer; equipment leaks and sweetening units at natural gas processing plants; reciprocating compressors; centrifugal compressors; and storage vessels at well sites. The regulation includes provisions for initial and continuous compliance demonstrations, and recordkeeping and reporting requirements. As it applies to the natural gas production segment, "affected sources" include the following sources constructed, modified or reconstructed after August 23, 2011 and before September 18, 2015: - Each affected single natural gas well, as described in the regulation; - Each reciprocating compressor, unless it is located at a well site or adjacent well site; - Each single continuous bleed, natural gas driven pneumatic controller operating at a bleed rate of greater than 6 scfh and located between a wellhead and point of custody transfer; - Each single storage vessel affected facility with VOC emissions of six (6) tpy or greater. The equipment at the facility were constructed prior to the applicability date; therefore, the regulation is not applicable to the existing equipment.

FEDERAL REGU-LATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
NSPS 40 CFR 60, Subpart OOOOa	Standards of Performance for **Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015**	Yes	The collection of fugitive emissions components	Subpart OOOOa establishes emission standards and compliance schedules for the control of GHG methane emission limits as well as emission standards and compliance schedules for the control of VOC and SO2 emissions from crude oil and natural gas facilities that commence construction, modification, or reconstruction after September 18, 2015. As it applies to equipment at a compressor station in the natural gas production segment, "affected sources" include the following emission sources constructed, modified or reconstructed after September 18, 2015 (§60.5365a): - Each single reciprocating compressor (§60.5365a(c)); - Each pneumatic controller that is a single continuous bleed natural gas-driven pneumatic controller operating at a natural gas bleed rate greater than 6 scfh (§60.5365a(d)(1)); - Each single storage vessel with the potential for VOC emissions equal to or greater than 6 tpy (§60.5365a(e)); and - The collection of fugitive emissions components at a compressor station, as defined in §60.5430a (§60.5365a(j)). The reciprocating compressors and pneumatic controllers were each constructed prior to the applicability date or do not otherwise trigger the applicability of the regulation. Under §60.5365a(j), a modification under the subpart occurs when one or more compressors at a compressor station is replaced by one or more compressors of greater total horsepower than the compressor(s) being replaced. The updated compressor packages increase the overall compression capacity at the facility. Therefore, a modification is triggered and the subpart is applicable including applicable VOC emission standards and monitoring requirements under §60.5397a or §60.5398a; and initial and ongoing compliance demonstration and reporting requirements, as applicable, to the collection of fugitive emissions components equipment at the facility. Should a new affected source be installed at the facility, the applicability of the subpart to that source shall be evaluated upon installation. As applicable, Harvest will comply with the applicable requirements in the subpart for any installed affected source(s).
NESHAP 40 CFR 61, Subpart A	**General Provisions**	No		40 CFR 61National Emission Standards for Hazardous Air Pollutants (NESHAP) provides standards for equipment that emits hazardous air pollutants by specific source types. Subpart A, General Provisions, applies if any other 40 CFR 61 NESHAP subpart applies. Subpart A is not applicable because there are no stationary sources at this facility for which a standard is prescribed under this part.
NESHAP 40 CFR 61, Subpart V	National Emission Standard for **Equipment Leaks (Fugitive Emission Sources)**	No		40 CFR 61, subpart V provides equipment standards, and monitoring, recordkeeping and reporting standards for specified equipment in VHAP service, including fugitive emissions from pumps, compressors, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, surge control vessels, bottoms receivers, and required control devices or systems. Subpart V is not applicable because none of the potentially affected sources are in VHAP service.
MACT 40 CFR 63, Subpart A	**General Provisions**	Yes	Dehy units 9a/b, 10a/b, 11a/b, 12a/b, & 13a/b	Applies if any other 40 CFR 63 (NESHAP/MACT) subpart applies. Subpart HH applies to the TEG dehydrators.

FEDERAL REGU-LATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
MACT 40 CFR 63, Subpart M	National Emission Standard for **Asbestos**	No		The subpart includes standards for minimizing asbestos emissions from several operations, including demolition and renovation activities. No existing or planned operation or activity at this facility triggers the applicability of this requirement. Therefore, the regulation does not apply.
MACT 40 CFR 63, Subpart HH	National Emission Standards for Hazardous Air Pollutants From **Oil and Natural Gas Production Facilities**	Yes	Dehy units 9a/b, 10a/b, 11a/b, 12a/b, & 13a/b	Under § 63.760, the subpart applies to owners and operators of affected sources located at oil and natural gas production facilities, including facilities that are major and area sources of hazardous air pollutants (HAP). Under the definitions provided in §63.761, the facility is a natural gas production field facility. As such, the definition of "major source" in §63.762 provides that only HAP emissions from glycol dehydration units and storage vessels are aggregated for to determine if the facility is a major [or an area] source. The aggregated HAP emissions from the facility dehydrators and storage vessels are below the major HAP source thresholds; therefore, the facility is an **area** source of HAP under Subpart HH. The TEG dehydrators are located in an area that is not within an UA plus offset and UC boundary (as defined in §63.761). Under §63.764(e)(1)(ii), the owner or operator of an affected area source [TEG dehydrator] with actual average benzene emissions from the process vent to the atmosphere of less than 0.90 megagrams per year (~1 tpy) is exempt from the operational, recordkeeping and notification requirements in §63.764(d), provided that documentation of the exemption determination is maintained as required in §63.774(d)(1).
MACT 40 CFR 63 Subpart HHH	National Emission Standards for Hazardous Air Pollutants From **Natural Gas Transmission and Storage Facilities**	No		Under §63.1270, applies to owners and operators of natural gas transmission and storage facilities that transport or store natural gas prior to entering the pipeline to a local distribution company or to a final end user (if there is no local distribution company), and that are major sources of hazardous air pollutants (HAP) emissions as defined in §63.1271. A production segment natural gas compressor station is not in the natural gas transmission and storage source category covered by the subpart. Therefore, the regulation does not apply.
MACT 40 CFR 63 Subpart YYYY	National Emission Standards for Hazardous Air Pollutants From **Stationary Combustion Turbines**	No		Under § 63.6080, subpart YYYY establishes emission and operating limitations for stationary combustion turbines located at a major source of HAP emissions. Under § 63.6175, "*Major source*, as used in this subpart, has the same meaning as in §63.2, except that . . . (3) For production field facilities, only HAP emissions from glycol dehydration units, storage vessel with the potential for flash emissions, combustion turbines and reciprocating internal combustion engines shall be aggregated for a major source determination . . . " The facility is not a major source of HAP, and does not have any affected units as defined in the regulation. Therefore, the subpart does not apply.
MACT 40 CFR 63, Subpart ZZZZ	National Emission Standards for Hazardous Air Pollutants for **Stationary Reciprocating Internal Combustion Engines**	No		40 CFR 63, Subpart ZZZZ establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from existing, new, modified and reconstructed stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP. The regulation contains provisions for initial and continuous compliance demonstration. As defined at §63.6585(c), the station is an **major** source of HAP. Under §63.6590 (a)(1)(i) a stationary RICE with a site rating of more than 500 bhp located at a major source of HAP is an <u>existing</u> RICE if its

FEDERAL REGU-LATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
				construction or reconstruction commenced before December 19, 2002. As shown in Table 2-A of this application, each of the installed engines (units 1, 2, 3, 5, 6, 7, and 8) were constructed prior to the December 19, 2002 existing source threshold date. All of the Waukesha L7042GL engines deployed by Harvest in the Four Corners Area field production region (including at the Trunk N Compressor Station) are from an existing fleet of Waukesha L7042GL engines with manufacture and construction dates that pre-date December 19, 2002. Engine units yet identified as To Be Determined ("TBD") (including unit 4), when installed, will likely be from the fleet of existing engines. Therefore, each of the permitted RICE are an "existing" engine under the subpart; none of the engines have undergone a "modification" or "reconstruction". Under §63.6590(b)(3)(ii), an existing 4-stroke, lean burn (4SLB) stationary RICE with a site rating of more than 500 hp, located at a major source of HAP, does not have to meet the requirements of the subpart and of subpart A, including initial notification requirements. Therefore, the subpart *is not* applicable to RICE units 1 through 3, and 5 through 8. The applicability of the subpart to the unit 4 engine (as well as any future identical engine exchange at the station) will be evaluated upon its installation. If ever a new, modified or reconstructed engine is installed at the facility, Harvest will evaluate the applicability of the regulation as it applies to that engine, and will comply with the regulatory requirements under the subpart as they apply to that engine.
MACT 40 CFR 63 Subpart DDDDD	National Emission Standards for Hazardous Air Pollutants for **Industrial, Commercial, and Institutional Boilers and Process Heaters**	No		40 CFR 63, Subpart DDDDD establishes emission limits and work practice standards for industrial, commercial, or institutional boiler or process heaters, as defined in § 63.7575, that are located at or are part of a major source of HAP, as defined under § 63.2 except as specified under § 63.7491. As defined under the regulation, the facility is an area source of HAP. Further, under § 63.7506(c)(3), existing small gaseous fuel boilers and process heaters are not subject to any requirements under the subpart or of subpart A, including notification provisions. Therefore, the regulation is not applicable.
MACT 40 CFR 63 Subpart JJJJJJ	National Emission Standards for Hazardous Air Pollutants for **Industrial, Commercial, and Institutional Boilers Area Sources**	No		40 CFR 63, Subpart JJJJJJ establishes emission limits, work practice standards, emission reduction measures, and management practices for new, reconstructed, or existing affected sources that are industrial, commercial, or institutional boilers within a subcategory listed in §63.11200 and defined in §63.11237, and that are located at an area source of HAP. The facility does not have industrial, commercial or institutional boilers of one of the listed subcategories in §63.11200. Also, under § 63.11195(e), the regulation does not apply to gas-fired units. Therefore, the regulation does not apply.
40 CFR 64	**Compliance Assurance Monitoring**	No		40 CFR 64, *Compliance Assurance Monitoring* (CAM) monitoring requirements are applicable to sources that are located at a at a major source, that are required to obtain a part 70 or 71 permit, and with uncontrolled criteria pollutant emission rates equal to or exceeding the major source threshold (100 tons per year), that use a control device to achieve compliance with an emission limit or standard, and which the resulting controlled emissions are less than the major source threshold. Passive control devices such as lean-burn technology are not considered a control device as defined in 40 CFR 64 definitions and as clarified in discussions with EPA. There are no emission units at the facility with uncontrolled emissions that are a major source. Therefore, the regulation is not applicable under §64.2(a).

FEDERAL REGU-LATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
40 CFR 68	**Chemical Accident Prevention Provisions**	No		40 CFR 68, *Chemical Accident Prevention Provisions*, is not applicable because the facility does not store any of the identified toxic and flammable substances in quantities exceeding the applicability thresholds.
40 CFR 70	**State Operating Permit Programs**	No		40 CFR 70, *State Operating Permit Programs*, is not applicable: The regulation provides for the establishment of comprehensive State air quality permitting programs consistent with the requirements of title V of the Clean Air Act (Act). New Mexico Environment Department (NMED) was delegated authority by the EPA to administer the State operating permit program through regulations adopted into the State Implementation Plant (SIP) and 20.2.70 NMAC. Although Harvest is subject to the Operating Permit Program for facilities within NMED jurisdiction as implemented by the State, there are no specific requirements of the regulation that are applicable directly to applicants. Therefore, the regulation does not apply.
40 CFR 71	**Federal Operating Permit Programs**	No		40 CFR 71, *Federal Operating Permit Programs* sets forth requirements and the corresponding standards and procedures by which the EPA Administrator issues operating permits in the absence of an approved State operating permit program. NMAQB has received delegated authority to administer Title V permits under the State operating permit program approved under 40 CFR Part 70. There are no specific requirements applicable directly to applicants with facilities in NMED jurisdiction. Therefore, 40 CFR 71 does not apply.
40 CFR 72	**Permits Regulation**	No		40 CFR 72, *Permits Regulation*, is not applicable because the facility does not operate a source subject to Title IV of the Clean Air Act (CAA).
40 CFR 73	**Sulfur Dioxide Allowance System**	No		40 CFR 73, *Sulfur Dioxide Allowance System*, is not applicable to the facility because it does not operate a source subject to Title IV of the Clean Air Act (CAA).
40 CFR 75	**Continuous Emission Monitoring**	No		40 CFR 75, *Continuous Emission Monitoring*, is not applicable to the facility because it does not operate a source subject to Title IV of the Clean Air Act (CAA) and does not measure emissions with Continuous Emission Monitoring Systems (CEMS).
40 CFR 76	**Acid Rain Nitrogen Dioxide Emission Reduction Program**	No		40 CFR 76, *Acid Rain Nitrogen Dioxide Emission Reduction Program*, is not applicable to the facility because it does not operate a source subject to Title IV of the Clean Air Act (CAA).
40 CFR 77	**Excess Emissions**	No		40 CFR 77, *Excess Emissions*, is not applicable to the facility because it does not operate a source subject to Title IV of the Clean Air Act (CAA).
40 CFR 78	**Appeal Procedures for Acid Rain Program**	No		40 CFR 78, *Appeal Procedures for Acid Rain Program*, is not applicable to the facility because it does not operate a source subject to Title IV of the Clean Air Act (CAA).
40 CFR 82	**Protection of Stratospheric Ozone**	No		The purpose of 40 CFR 82, *Protection of Stratospheric Ozone* is to implement the *Montreal Protocol on Substances that Deplete the Ozone Layer*. Under §82.1(b), the subpart applies to anyone that produces, transforms, destroys, imports or exports a controlled substance or imports or exports a controlled product. The facility does not carry out any of the listed activities, nor does it maintain or service motor vehicle air conditioning units or refrigeration equipment. The facility does not sell, distribute, or offer for sale or distribution any product that contains ozone-depleting substances. Therefore, the subpart does not have direct applicability to the facility.

FEDERAL REGU-LATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
40 CFR 98	**Mandatory Greenhouse Gas Reporting**	Yes		40 CFR 98, *Mandatory Greenhouse Gas Reporting*, is a federal requirement that is applicable to facilities that include source categories listed in Subpart A, Table A-3, or to facilities with annual emissions of 25,000 metric tons of CO_2 equivalent (CO_2e) or more in combined emissions from stationary fuel combustion units, miscellaneous uses of carbonate, and all applicable source categories listed in Table A–3 and Table A–4 of Subpart A. The regulation applies to the facility as its annual CO_2e emissions exceed the reporting threshold as defined in Subpart A, *General Provision*, Subpart C, *General Stationary Fuel Combustion Sources*, and, as applicable, Subpart W, *Petroleum Oil and Natural Gas Systems.* The GHG emissions inventory is reported annually.
CAA Section 112(r)	**Chemical Accident Prevention Provisions**	No		CAA Section 112(r), *Chemical Accident Prevention Provisions*. The station does not store designated toxic and flammable chemicals in quantities exceeding the applicable thresholds.

State Regulations

Applicable state requirements are embodied in the New Mexico SIP, the New Mexico Administrative Code (NMAC), and the terms and conditions of any preconstruction permits issued pursuant to regulations promulgated through rulemaking under Title I of the CAA. A summary of the applicability of the NMACs is presented on the following pages.

STATE REGULATIONS APPLICABILITY CHECKLIST

STATE REGU-LATIONS CITATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
20.2.1 NMAC	**General Provisions ***	Yes	Facility	20.2.1 NMAC, *General Provisions*, establishes procedures for protecting confidential information, procedures for seeking a variance, NMAQB's authority to require sampling equipment, severability, the effective date for conformance with the NMACs, and prohibits the violation of other requirements in attempting to comply with NMACs. Although this regulation may apply to the facility, it does not impose any specific requirements.
20.2.2 NMAC	**Definitions ***	No		20.2.2 NMAC, *Definitions*, establishes definitions used throughout the remaining regulations. Although this regulation may apply to the facility, it does not impose any specific requirements on the operation of the facility as described in the permit. Therefore, the regulation is considered not applicable.
20.2.3 NMAC	**Ambient Air Quality Standards**	Yes	Facility	20.2.3 NMAC, *Ambient Air Quality Standards*, is a SIP-approved regulation that limits the maximum allowable concentration of total suspended particulates (TSP), sulfur compounds, carbon monoxide (CO) and nitrogen dioxide (NO_2) in the areas of New Mexico under the jurisdiction of the Environmental Improvement Board. Under subsection 20.2.3.9, the requirements of the part are not considered applicable requirements under 20.2.70 NMAC (i.e., federally enforceable requirements), as defined by that part. However, the

STATE REGU-LATIONS CITATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
				regulation applies to sources required to obtain a permit under 20.2.72 NMAC, and it does not limit which terms and conditions of permits issued pursuant to 20.2.72 NMAC are applicable requirements for permits issued pursuant to 20.2.70 NMAC.
20.2.5 NMAC	**Source Surveillance**	No		20.2.5 NMAC, *Source Surveillance*, establishes the NMAQB's authority to require recordkeeping/ surveillance upon request. Although this regulation may apply to the facility, it does not impose any specific requirements on the operation of the facility as described in the permit. Therefore, the regulation is considered not applicable.
20.2.7 NMAC	**Excess Emissions**	Yes	Facility	20.2.7 NMAC, *Excess Emissions*, is applicable because it prohibits excess emissions and proscribes notification procedures in the event of excess emissions.
20.2.8 NMAC	**Emissions Leaving New Mexico ***	No		20.2.8 NMAC, *Emissions Leaving New Mexico*, establishes prohibitions on the release of pollutants that cross New Mexico State boundaries. Although this regulation may apply to the facility, it does not impose any specific requirements on the operation of the facility as described in the permit. Therefore, the regulation is considered not applicable.
20.2.33 NMAC	**Gas Burning Equipment - Nitrogen Dioxide**	No		20.2.33 NMAC, *Gas Burning Equipment - Nitrogen Dioxide*, does not apply to the station because the compressor station does not include new or existing gas burning equipment (external combustion emission sources, such as gas fired boilers and heaters) having a heat input of greater than 1,000,000 million British Thermal Units per year per unit.
20.2.34 NMAC	**Oil Burning Equipment: NO_2**	No		20.2.34 NMAC, *Oil Burning Equipment: NO_2*, does not apply to the station because the compressor station does not have oil burning equipment.
20.2.35 NMAC	**Natural Gas Processing Plant – Sulfur**	No		20.2.35 NMAC, *Natural Gas Processing Plant – Sulfur*, applies to new natural gas processing plants for which a modification commenced on or after July 1, 1974. The regulation is not applicable to the station because the facility is not a natural gas processing plant.
20.2.38 NMAC	**Hydrocarbon Storage**	No		20.2.38 NMAC, *Hydrocarbon Storage Facilities*, is not applicable because the facility does not store hydrocarbons containing hydrogen sulfide; does not have a hydrocarbon liquid throughput of 50,000 barrels or greater located within a municipality or within five miles of a municipality with population of 20,000 or more; nor is there a new hydrocarbon tank battery with storage capacity of 65,000 gallons or greater.
20.2.50 NMAC	**Oil and Gas Sector – Ozone Precursor Pollutants**	Yes	RICE units 1-8; dehy still vents 9a - 13a; SSM; F1; and M-1	This regulation is applicable because the facility is equipped with affected equipment as defined by the regulation: natural gas-fired spark ignition engines; reciprocating compressors; glycol dehydrator still vents; equipment leaks and fugitive emissions; and pneumatic controllers and pumps.
20.2.61.109 NMAC	**Smoke & Visible Emissions**	Yes	RICE units 1-8; sm. heater units 17&18	20.2.61 NMAC, *Smoke and Visible Emissions*, limits visible emissions from stationary combustion equipment to less than 20 percent opacity. The station compressor engines are subject to the regulation as they are each a stationary combustion source.

STATE REGU-LATIONS CITATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
20.2.70 NMAC	**Operating Permits**	Yes		20.2.70 NMAC, *Operating Permits*, contains permitting requirements for major sources of criteria and hazardous air pollutants subject to Part 70 (Title V) permitting requirements. The facility is a major source of NO_X, CO, and VOC under Title V. Therefore, the regulation is applicable. The current Title V Operating Permit is permit No. **P198-R3**.
20.2.71 NMAC	**Operating Permit Fees**	Yes		20.2.71 NMAC, *Operating Permit Emission Fees*, specifies fees for emissions from facilities subject to Part 70 (Title V) permitting requirements under 20.2.70 NMAC. The regulation is applicable as the facility is subject to permitting requirements under 20.2.70 NMAC.
20.2.72 NMAC	**Construction Permits**	Yes		20.2.72 NMAC, *Construction Permits*, requires a construction [NSR] permit for stationary source with emissions greater than 10 pounds per hour or 25 tons per year of criteria pollutants. The station emissions exceed the permit requirement thresholds; therefore, the station is required to apply for and obtain an NSR permit. The construction (NSR) permit issued under 20.2.72 for this facility is permit No. **1546-M3**, as revised.
20.2.73 NMAC	**NOI & Emissions Inventory Requirements**	Yes		20.2.73 NMAC requires that owners/operators intending to construct a new stationary source that has a potential emission rate (uncontrolled emissions) greater than 10 tons per year of any regulated air contaminant, or 1 ton per year of lead, must file a notice of intent (NOI) with the department. The station emits regulated air pollutants in amounts greater than 10 tons per year. Therefore, the facility is subject to the regulation. The requirement to file an NOI with the Department is fulfilled with the application for a construction permit under 20.2.72 NMAC.
20.2.74 NMAC	**Permits – PSD**	Yes		20.2.74 NMAC, Permits, Prevention of Significant Deterioration (PSD), provides requirements for sources subject to permit requirements for PSD facilities. The facility emissions of CO exceed the PSD permit threshold level of 250 tpy. Therefore, the regulation is applicable.
20.2.75 NMAC	**Construction Permit Fees**	Yes		20.2.75 NMAC, *Construction Permit Fees*, establishes the fee schedule associated with the filing of permits and permit revisions. The regulation is applicable to the facility for its construction permit submitted under 20.2.72 NMAC.
20.2.77 NMAC	**New Source Performance Standards**	Yes	The collection of fugitive emissions components	20.2.77 NMAC, *New Source Performance Standards*, incorporates by reference specific Standards of Performance for New Stationary Sources (NSPS) codified under 40 CFR 60, as amended through January 15, 2017. The facility updated equipment are subject to an NSPS.
20.2.78 NMAC	**Emission Standards for HAPS**	No		20.2.78 NMAC, *Emission Standards for Hazardous Air Pollutants*, incorporates by reference specific National Emission Standards for Hazardous Air Pollutants (NESHAPs) codified under 40 CFR 61, as amended through January 15, 2017. The regulation is not applicable as none of the emission units at the facility are subject to any NESHAP under 40 CFR 61.
20.2.79 NMAC	**Permits – Nonattainment Areas**	No		20.2.79 NMAC, *Permits - Nonattainment Areas*, is not applicable to the station because the compressor station is not located within a non-attainment area.

STATE REGU-LATIONS CITATION	**Title**	**Applies? Enter Yes or No**	**Unit(s) or Facility**	**JUSTIFICATION:**
20.2.80 NMAC	**Stack Heights**	No		20.2.80 NMAC, *Stack Heights*, establishes guidelines for the selection of an appropriate stack height for the purposes of atmospheric dispersion modeling. As noted in section 16 of the application, atmospheric dispersion modeling was previously provided in support of the facility's construction permit. Based on the NMAQB dispersion modeling guidance document, air quality dispersion modeling is not required for this Title V Operating Permit renewal application.
20.2.82 NMAC	**MACT Standards for source categories of HAPS**	No		20.2.82 NMAC, *Maximum Achievable Control Technology Standards for Source Categories of Hazardous Air Pollutants*, incorporates by reference specified federal Maximum Available Control Technology (MACT) Standards codified in 40 CFR 63, as amended through January 15, 2017. None of the facility engines are are subject to MACT subpart ZZZZ.
20.2.84 NMAC	**Acid Rain Permits**	No		20.2.84 NMAC, *Acid Rain Permits*, is not applicable to the station because the compressor station does not operate an affected unit under the regulation.

***** = These NMACs are administrative in nature and do not establish prohibitions, standards, or requirements.

Section 14

Operational Plan to Mitigate Emissions

(Submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

[X] **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.

[X] **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.

[X] **Title V** (20.2.70 NMAC)**, NSR** (20.2.72 NMAC)**, PSD** (20.2.74 NMAC) **& Nonattainment** (20.2.79 NMAC) **Sources:** By checking this box and certifying this application the permittee certifies that it has established and implemented a Plan to Minimize Emissions During Routine or Predictable Startup, Shutdown, and Scheduled Maintenance through work practice standards and good air pollution control practices as required by 20.2.7.14.A and B NMAC. This plan shall be kept on site or at the nearest field office to be made available to the Department upon request. This plan should not be submitted with this application.

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Section 15

Alternative Operating Scenarios

(Submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

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

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

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

Not applicable.

Section 16

Air Dispersion Modeling

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

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

Check each box that applies:

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

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

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

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

☒ **No modeling is required.**

An ambient air quality impact analysis including dispersion modeling was previously submitted in the permit application for NSR permit 1546-M1. The dispersion modeling demonstrated compliance with the National Ambient Air Quality Standards and applicable PSD increments.

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

Unit No.	Test Description	Test Date
1	Compliance test for NO_X and CO, in accordance with Condition A201.B	March 27, 2020
2	Compliance test for NO_X and CO, in accordance with Condition A201.B	March 27, 2020
3	Compliance test for NO_X and CO, in accordance with Condition A201.B	March 26, 2020
5	Compliance test for NO_X and CO, in accordance with Condition A201.B	August 23, 2019
6	Compliance test for NO_X and CO, in accordance with Condition A201.B	April 21, 2020
7	Compliance test for NO_X and CO, in accordance with Condition A201.B	June 11, 2019
8	Compliance test for NO_X and CO, in accordance with Condition A201.B	March 26, 2020

Section 18

Addendum for Streamline Applications

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

Streamline Applications do not require a complete application. Submit Sections 1-A, 1-B, 1-D, 1-F, 1-G, 2-A, 2-C thru L, Sections 3 thru 8, Section 13, Section 18, Section 22, and Section 23 (Certification). Other sections may be required at the discretion of the Department. 20.2.72.202 NMAC Exemptions do not apply to Streamline sources. 20.2.72.219 NMAC revisions and modifications do not apply to Streamline sources, thus 20.2.72.219 type actions require a complete new application submittal. Please do not print sections of a streamline application that are not required.

Not applicable.

Section 19

Requirements for Title V Program

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

Who Must Use this Attachment:

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

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

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

Trunk N is not subject to 40 CFR, Part 64, Compliance Assurance Monitoring (CAM); consequently, a monitoring protocol is not required with this application.

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

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

Trunk N is in compliance with all applicable requirements affecting the facility. A copy of Part 1 (Permit Requirements Certification Table) of the 2020 Annual Compliance Certification (ACC) is provided in Section 20, Other Relevant Information. It identifies the requirements of the current Title V operating permit and the methods and data used to determine compliance with that permit. It is assumed that compliance with the Title V operating permit ensures compliance with the construction permit and New Mexico regulations.

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

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

Trunk N will continue to be in compliance with applicable requirements for which it is in compliance at the time of this permit application. In addition, the station will, in a timely manner or consistent with such schedule expressly required by the applicable requirement, comply with other applicable requirements as they come into effect during the permit term.

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

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

The submittal of compliance certifications during the five-year term of the operating permit will occur annually.

19.5 - Stratospheric Ozone and Climate Protection

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

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

2. Does any air conditioner(s) or any piece(s) of refrigeration equipment contain a refrigeration charge greater than 50 lbs? **Yes** **No**
   (If the answer is yes, describe the type of equipment and how many units are at the facility.)

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

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

The station does not produce, manufacture, transform, destroy, import, or export any stratospheric ozone-depleting substances (CFCs, HCFCs); does not maintain or service motor vehicle air conditioning units or refrigeration equipment; and does not sell, distribute, or offer for sale any product that may contain stratospheric ozone-depleting substances.

Harvest shall continue to maintain compliance with the conditions stipulated in 40 CFR 82, Subparts A-G of the Stratospheric Ozone Protection Program (Title VI of the Clean Air Act Amendments).

19.6 - Compliance Plan and Schedule

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

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

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

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

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

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

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

Trunk N is in compliance with all applicable requirements; consequently, a compliance plan, a compliance schedule, and a schedule of certified progress reports is not required.

Trunk N is not equipped with any acid rain sources; consequently, compliance with the acid rain provisions is not required as a part of this permit application.

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

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

Trunk N is not subject to 40 CFR 68, Chemical Accident Prevention Provisions; consequently, a Risk Management Plan is not required.

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

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

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

Yes, the property on which the station is constructed and operated on is closer than 80 km (50 miles) from other states, local pollution control programs and Indian tribes and pueblos as described below:

Neighboring States, Class I Areas, and Indian Lands

	Approximate Distance to Facility (kilometers)
Neighboring States	
Colorado	1.9
Indian Lands	
Southern Ute Tribe	1.9
Jicarilla Apache Tribe	38.6
Navajo Nation	40.2
Ute Mountain Ute Tribe	66.0

19.9 - Responsible Official

The responsible official for Trunk N is Travis Jones, EH&S Manager.

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.

As discussed in Section 19.2, this section contains the Part 1 (Permit Requirements Certification Table) of the 2020 Annual Compliance Certification (ACC) for Trunk N Compressor Station.

Title V Annual Compliance Certification
for Permits P198-R3 & P198-R3M1

Title (TV) Permit Administration Amendment

On **December 19, 2018** NMED AQB issued an Administrative Amendment to Operating Permit **P198-R3**.

The Administrative Amendment **P198-R3M1** corrected the following:

- Permittee changed to **Harvest Four Corners LLC**
  1755 Arroyo Dr
  Bloomfield, NM 87413
- Facility Owner is **Harvest Four Corners LLC**
  1755 Arroyo Dr
  Bloomfield, NM 87413

For this Administrative Amendment **(P198-R3M1)**, the facility can use one Annual Compliance Certification (ACC) Form which will cover both TV Permits.

Although the facility is only required to submit one ACC Form, the facility shall submit **two (2)** separate TV Report Certification Forms. Each form shall list the corresponding TV Permit number, TV Permit Issue Date and Reporting Period.

Please note that this is a one-time authorization. Submittal forms for future Administrative Revisions will be evaluated on a case by case basis.

This form can also be used for future submittals that cover only the **P198-R3M1** permit.

Part 1 - Permit Requirements Certification Table

Annual Compliance Certification Data for Title V Permit No. P198-R3 & P198-R3M1				
1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
FACILITY SPECIFIC REQUIREMENTS **A101 Permit Duration (expiration)** A. The term of this permit is five (5) years. It will expire five years from the date of issuance. Application for renewal of this permit is due twelve (12) months prior to the date of expiration. (20.2.70.300.B.2 and 302.B NMAC)	Submittal of a renewal application 12 months prior to expiration of permit P198-R3, November 22, 2021, will demonstrate compliance with this condition.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**
A101 Permit Duration (expiration) B. If a timely and complete application for a permit renewal is submitted, consistent with 20.2.70.300 NMAC, but the Department has failed to issue or disapprove the renewal permit before the end of the term of the previous permit, then the permit shall not expire and all the terms and conditions of the permit shall remain in effect until the renewal permit has been issued or disapproved. (20.2.70.400.D NMAC)	Submittal of a renewal application 12 months prior to expiration of permit P198-R3, November 22, 2021, will demonstrate compliance with this condition.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**
A102 Facility: Description B. This facility is located at UTM Zone 13, UTM Easting 269,710 meters, UTM Northing 4,096,160 meters, in Township 32N, Range 7W, Section 17, approximately 25 miles northeast of Aztec, New Mexico in San Juan County. This facility is a stationary source and not allowed to relocate. (20.2.70.302.F NMAC)	Semi-annual reports and this ACC are used to determine that the source continues to comply with this condition.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
A103 Facility: Applicable Regulations A. The permittee shall comply with all applicable sections of the requirements listed in Table 103.A	Semi-annual reports and the annual emissions inventory are used to demonstrate compliance with the identified applicable requirements of Table 103-A.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**

Table 103.A: Applicable Requirements

Applicable Requirements	Federally Enforceable	Unit No.
NSR Permit No: 1546M2, R1-R5; 1546M3, R1-R3 (Per 20.2.72 NMAC)	X	Entire Facility
20.2.1 NMAC General Provisions (Sampling Equipment, Severability, Effective Date, and Conflicts)	X	Entire Facility
20.2.7 NMAC Excess Emissions	X	Entire Facility
20.2.61 NMAC Smoke and Visible Emissions	X	1-8, 9b-13b
20.2.70 NMAC Operating Permits	X	Entire Facility
20.2.71 NMAC Operating Permit Emission Fees	X	Entire Facility
20.2.72 NMAC Construction Permit	X	Entire Facility
20.2.73 NMAC Notice of Intent and Emissions Inventory Requirements	X	Entire Facility
20.2.74 NMAC Permits – Prevention of Significant Deterioration (PSD)	X	Entire Facility
20.2.77 NMAC New Source Performance	X	(1, 6, 7 and 8 potentially)
20.2.82 NMAC MACT Standards for Source Categories of HAPS	X	2, 3, 4, 5; 9a-13a; (1, 6, 7 and 8 potentially)
40 CFR 50 National Ambient Air Quality Standards	X	Entire Facility
40 CFR 60, Subpart A, General Provisions	X	(1, 6, 7 and 8 potentially)
40 CFR 60, Subpart JJJJ	X	(1, 6, 7 and 8 potentially)
40 CFR 63, Subpart A, General Provisions	X	2, 3, 4, 5; 9a-13a; (1, 6, 7 and 8 potentially)
40 CFR 63, Subpart HH	X	9a-13a
40 CFR 63, Subpart ZZZZ	X	2, 3, 4, 5; (1, 6, 7 and 8 potentially)

A103 Facility: Applicable Regulations C. Compliance with the terms and conditions of this permit regarding source emissions and	Semi-annual reports and the annual emissions inventory are used to demonstrate compliance with the terms and conditions of this permit.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
operation demonstrate compliance with national ambient air quality standards specified at 40 CFR 50, which were applicable at the time air dispersion modeling was performed for the facility's NSR Permit 1542-M1.				
A104 Facility: Regulated Sources A. Table 104.A lists the emission units authorized for this facility. Emission units identified as insignificant or trivial activities (as defined in 20.2.70.7 NMAC) and/or equipment not regulated pursuant to the Act are not included.	Semi-annual reports and the annual emissions inventory, along with the Management of Change Request (MOCR) procedures, are used to determine that no unauthorized equipment has been added or operated during the applicable period.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**

Table 104.A: Regulated Sources List

Unit No.	Source Description	Make Model	Serial No.	Capacity	Manufacture Date
1 (1)	4SLB RICE	Waukesha L7042GL	TBD, not installed	max 1478 hp/ site 1368 hp w/1200 rpm	TBD
2	4SLB RICE	Waukesha L7042GL	Engine # C-12554/2 (Package # 76735)	max 1478 hp/ site 1368 hp w/1200 rpm	2/3/1998
3	4SLB RICE	Waukesha L7042GL	Engine# 361723 Package#76736	max 1478 hp/ site 1368 hp w/1200 rpm	3/2/1981
4	4SLB RICE	Waukesha L7042GL	Engine #C-11899/1 Package #76737	max 1478 hp/ site 1368 hp w/1200 rpm	4/25/1996
5	4SLB RICE	Waukesha L7042GL	Engine# C-11661/4 Package# 76738	max 1478 hp/ site 1368 hp w/1200 rpm	6/20/1995
6	4SLB RICE	Waukesha L7042GL	TBD	max 1478 hp/ site 1368 hp w/1200 rpm	TBD
7	4SLB RICE	Waukesha L7042GL	TBD	max 1478 hp/ site 1368 hp w/1200 rpm	TBD
8	4SLB RICE	Waukesha L7042GL	TBD	max 1478 hp/ site 1368 hp w/1200 rpm	TBD
9a	Glycol Dehy Still	P&A PA-12MM-1000-2P	TBD	Inlet Capacity: 12 MMscfd	TBD

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?

	Vent/Flash Tank			Lean Glycol Recirc Pump Capacity	
9b	Glycol Dehy Reboiler Burner	P&A PA-12MM-1000-2P	TBD	Heater Capacity: 0.4 MMBtu/hr	TBD
10a	Glycol Dehy Still Vent/Flash Tank	P&A PA-12MM-1000-2P	TBD	Inlet Capacity: 12 MMscfd Lean Glycol Recirc Pump Capacity	TBD
10b	Glycol Dehy Reboiler Burner	P&A PA-12MM-1000-2P	TBD	Heater Capacity: 0.4 MMBtu/hr	TBD
11a	Glycol Dehy Still Vent/Flash Tank	P&A PA-12MM-1000-2P	TBD	Inlet Capacity: 12 MMscfd Lean Glycol Recirc Pump Capacity	TBD
11b	Glycol Dehy Reboiler Burner	P&A PA-12MM-1000-2P	TBD	Heater Capacity: 0.4 MMBtu/hr	TBD
12a	Glycol Dehy Still Vent/Flash Tank	P&A PA-20MM-1000-2P	TBD	Inlet Capacity: 12 MMscfd Lean Glycol Recirc Pump Capacity	TBD
12b	Glycol Dehy Reboiler Burner	P&A PA-20MM-1000-2P	TBD	Heater Capacity: 0.4 MMBtu/hr	TBD
13a	Glycol Dehy Still Vent/Flash Tank	P&A PA-20MM-1000-2P	TBD	Inlet Capacity: 12 MMscfd Lean Glycol Recirc	TBD
13b	Glycol Dehy Reboiler Burner	P&A PA-20MM-1000-2P	TBD	Heater Capacity: 0.4 MMBtu/hr	TBD
SSM	Compressors and piping				
M1	Malfunctions				

(1) Units 1-8 have associated compressors (Units 1a – 8a) with separate emission limits.

Note: All TBD (to be determined) units and like-kind engine replacements must be evaluated for applicability to NSPS and MACT requirements.

A106 Facility: Allowable Emissions A. The following Section lists the emission units, and their allowable emission limits. (40 CFR 50; 40 CFR 60, Subparts A and JJJJ; 40 CFR 63, Subparts A, HH and ZZZZ; Paragraphs 1, 7, and 8 of 20.2.70.302.A NMAC; and NSR Permit 1546-M2, -M3.	Semi-annual reports, periodic monitoring, the annual emissions inventory and this ACC are used to determine that the source continues to comply with allowable emissions.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?

Table 106.A: Allowable Emissions

Unit No.	[1] NO_x pph	NO_x tpy	CO pph	CO tpy	VOC pph	VOC tpy
Unit 1	2.7	11.9	8.3	36.3	3.0	13.2
Unit 2	2.7	11.9	8.3	36.3	3.0	13.2
Unit 3	2.7	11.9	8.3	36.3	3.0	13.2
Unit 4	2.7	11.9	8.3	36.3	3.0	13.2
Unit 5	2.7	11.9	8.3	36.3	3.0	13.2
Unit 6	2.7	11.9	8.3	36.3	3.0	13.2
Unit 7	2.7	11.9	8.3	36.3	3.0	13.2
Unit 8	2.7	11.9	8.3	36.3	3.0	13.2
Unit 9a	-	-	-	-	<	0.5
Unit 10a	-	-	-	-	<	0.5
Unit 11a	-	-	-	-	<	0.5
Unit 12a	-	-	-	-	<	0.5
Unit 13a	-	-	-	-	<	0.5

1 Nitrogen dioxide emissions include all oxides of nitrogen expressed as NO_2.

Note: Title V annual fee assessments are based on the sum of allowable tons per year emission limits in Sections A106 and A107.

"-" indicates the application represented emissions are not expected for this pollutant.

"<" indicates the application represented uncontrolled emissions less than 1.0 pph or 1.0 tpy for this pollutant. Allowable limits are not imposed on this level of emissions, except for flares and pollutants with controls.

A107 Facility: Allowable Startup, Shutdown, & Maintenance (SSM) and Malfunction Emissions The maximum allowable SSM and Malfunction emissions limits for this facility are listed in Table 107.A and were relied upon by the Department to determine compliance with applicable regulations.	Records of SSM and malfunction emissions are maintained to ensure compliance.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?

A107 Facility: Allowable SSM and Malfunction Emissions

Unit No.	Description	VOC tpy
Units 1a – 8a	Compressor & Associated Piping Blowdowns	0.8
	Facility Wide Blowdowns & Malfunctions	10.0

A107 Facility: Allowable Startup, Shutdown, & Maintenance (SSM) and Malfunction Emissions A. SSM VOC Emissions for venting of gas **Requirement:** The permittee shall perform a facility inlet gas analysis once every year and complete the following recordkeeping to demonstrate compliance with routine and predictable startup, shutdown, and maintenance (SSM) emission limits in Table 107.A.	Records of SSM emissions are maintained to ensure compliance.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**
Monitoring: The permittee shall monitor the permitted routine and predictable startups and shutdowns and scheduled maintenance events.	Records of SSM emissions are maintained to ensure compliance.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**
Recordkeeping: The permittee shall record the calculated emissions and parameters used in calculations in accordance with Condition B109, except the requirement in B109.E to record the start and end times of SSM events shall not apply to the venting of known quantities of VOC.	Records of SSM events and associated volumes, along with extended gas analyses, are maintained to ensure compliance.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**
Reporting: The permittee shall report in accordance with Section B110.	Records of SSM emissions are included in the applicable semi-annual reports.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
A107 Facility: Allowable Startup, Shutdown, & Maintenance (SSM) and Malfunction Emissions B. Malfunction Emissions **Requirement:** The permittee shall perform a facility inlet gas analysis once every year and complete the following recordkeeping to demonstrate compliance with malfunction (M1) emission limits in Table 107.A.	Malfunctions that occurred during the applicable monitoring peirods are recorded as required and documented as to whether emissions resulting from recorded malfunction events are being used toward the permitted tpy value.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**
Monitoring: The permittee shall monitor all malfunction events that result in VOC emissions including identification of the equipment or activity that is the source of emissions.	Malfunctions that occurred during the applicable monitoring peirods are recorded as required and documented as to whether emissions resulting from recorded malfunction events are being used toward the permitted tpy value.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**
Recordkeeping: To demonstrate compliance, each month records shall be kept of the cumulative total of VOC emissions due to malfunction events during the first 12 months and, thereafter of the monthly rolling 12 month total of VOC emissions due to malfunction events. Records shall also be kept of the inlet gas analysis, the percent VOC of the gas based on the most recent gas analysis, of the volume of total gas vented in MMscf used to calculate the VOC emissions, a description of the event, and whether the emissions resulting from the event will be used toward the permitted malfunction emission limit or whether the event is reported under 20.2.7 NMAC. The permittee shall record the calculated emissions and parameters used in calculations	Malfunctions that occurred during the applicable monitoring peirods are recorded as required and documented as to whether emissions resulting from recorded malfunction events are being used toward the permitted tpy value.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
in accordance with Condition B109, except the requirement in B109.E to record the start and end times of malfunction events shall not apply to the venting of known quantities of VOC.				
Reporting: The permittee shall report in accordance with Section B110.	Malfunction records, should malfunctions have occurred, are included in the applicable semi-annual reports.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**
A108 Facility: Hours of Operation A. This facility is authorized for continuous operation. Monitoring, recordkeeping, and reporting are not required to demonstrate compliance with continuous hours of operation.	no requirement.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**
A109 Facility: Reporting Schedules (20.2.70.302.E NMAC) A. A Semi-Annual Report of monitoring activities is due within 45 days following the end of every 6-month reporting period. The six month reporting periods start on February 1st and August 1st of each year.	The first semi-annual report for this compliance period was submitted September 13, 2019, within 45 days of July 31. Submittal of the semi-annual report associated with this ACC within 45 days of January 31 will demonstrate compliance with this requirement.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**
A109 Facility: Reporting Schedules (20.2.70.302.E NMAC) B. The Annual Compliance Certification Report is due within 30 days of the end of every 12-month reporting period. The 12-month reporting period starts on February 1st of each year.	This ACC will be submitted within 30 days of January 31.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**
A110 Facility: Fuel and Fuel Sulfur Requirements	Only natural gas is used for fuel.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
A. Fuel and Fuel Sulfur Requirements (Units 1-8 and 9b-13b) **Requirement**: All combustion emission units shall combust only natural gas containing no more than 0.20 grains of total sulfur per 100 dry standard cubic feet.				
Monitoring: None **Recordkeeping**: The permittee shall demonstrate compliance with the natural gas or fuel oil limit on total sulfur content by maintaining records of a current, valid purchase contract, tariff sheet or transportation contract for the gaseous or liquid fuel, or fuel gas analysis, specifying the allowable limit or less. Alternatively, compliance may be demonstrated by keeping a receipt or invoice from a commercial fuel supplier, with each fuel delivery, which shall include the delivery date, the fuel type delivered, the amount of fuel delivered, and the maximum sulfur content of the fuel. If fuel gas analysis is used, the analysis shall not be older than one year.	Fuel gas analysis results are maintained as required.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**
Reporting: The permittee shall report in accordance with Section B110.	Fuel gas analysis results are included with the applicable semi-annual report.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**
A111 Facility: 20.2.61 NMAC Opacity A. 20.2.61 NMAC Opacity Requirements (Units 1-8 and 9b-13b)	Only natural gas is used for fuel.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
Requirement: Visible emissions from all stationary combustion emission stacks shall not equal or exceed an opacity of 20 percent in accordance with the requirements at 20.2.61.109 NMAC.				
Monitoring: Use of natural gas fuel constitutes compliance with 20.2.61 NMAC unless opacity equals or exceeds 20% averaged over a 10-minute period. When any visible emissions are observed during operation other than during startup mode, opacity shall be measured over a 10-minute period, in accordance with the procedures at 40 CFR 60, Appendix A, Reference Method 9 (EPA Method 9) as required by 20.2.61.114 NMAC, or the operator will be allowed to shut down the equipment to perform maintenance/repair to eliminate the visible emissions. Following completion of equipment maintenance/repair, the operator shall conduct visible emission observations following startup in accordance with the following procedures: • Visible emissions observations shall be conducted over a 10-minute period during operation after completion of startup mode in accordance with the procedures at 40 CFR 60, Appendix A, Reference Method 22 (EPA Method 22). If no visible emissions are observed, no further action is required. • If any visible emissions are observed during completion of the EPA Method 22 observation, subsequent opacity observations shall be conducted over a 10-minute period, in accordance with the procedures at EPA Method 9 as required by 20.2.61.114 NMAC.	Only natural gas is used for fuel.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
For the purposes of this condition, Startup mode is defined as the startup period that is described in the facility's startup plan.				
Recordkeeping: If no visible emissions were observed, none. If any visible emissions observations were conducted, the permittee shall keep records in accordance with the requirements of Section B109 and as follows: • For any visible emissions observations conducted in accordance with EPA Method 22, record the information on the form referenced in EPA Method 22, Section 11.2. For any opacity observations conducted in accordance with the requirements of EPA Method 9, record the information on the form referenced in EPA Method 9, Sections 2.2 and 2.4.	Only natural gas is used for fuel.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**
Reporting: The permittee shall report in accordance with Section B110.	Only natural gas is used for fuel.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**
EQUIPMENT SPECIFIC REQUIREMENTS **OIL AND GAS INDUSTRY** **A201 Engines** A. Maintenance and Repair Monitoring (Units 1-8) **Requirement**: Compliance with the allowable emission limits in Table 106.A shall be	Records of engine maintenance and repair included in the applicable semi-annual reports demonstrate compliance with emissions limits.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
demonstrated by properly maintaining and repairing the units.				
Monitoring: Maintenance and repair shall meet the minimum manufacturer's or permittee's recommended maintenance schedule. Activities that involve maintenance, adjustment, replacement, or repair of functional components with the potential to affect the operation of an emission unit shall be documented as they occur for the following events: (1) Routine maintenance that takes a unit out of service for more than two hours during any twenty-four hour period. (2) Unscheduled repairs that require a unit to be taken out of service for more than two hours in any twenty-four hour period.	Records of engine maintenance and repair are included with the applicable semi-annual reports.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**
Recordkeeping: The permittee shall maintain records in accordance with Section B109, including records of maintenance and repairs activities and a copy of the manufacturer's or permittee's recommended maintenance schedule.	Records of engine maintenance and repair are maintained as required and included with the applicable semi-annual reports.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**
Reporting: The permittee shall report in accordance with Section B110.	Records of engine maintenance and repair are included with the applicable semi-annual reports.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**
A201 Engines B. Periodic Emissions Testing (Units 1-8) **Requirement**: Compliance with the	The periodic test reports included in the applicable semi-annual reports demonstrate compliance with emissions limits.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
allowable emission limits in Table 106.A shall be demonstrated by completing periodic emission tests during the monitoring period. (NSR 1546-M2, Condition 6)				
Monitoring: The permittee shall test using a portable analyzer or EPA Reference Methods subject to the requirements and limitations of Section B108, General Monitoring Requirements. Emission testing is required for NOx and CO and shall be carried out as described below. Test results that demonstrate compliance with the CO emission limits shall also be considered to demonstrate compliance with the VOC emission limits. For units with g/hp-hr emission limits, in addition to the requirements stated in Section B108, the engine load shall be calculated by using the following equation: Load(Hp) = Fuel consumption (scfh) x Measured fuel heating value (LHV) Manufacturer's rated BSFC (btu/bhp-hr) at 100% load (1) The testing shall be conducted as follows: a. Testing frequency shall be once per year. b. The monitoring period is defined as a calendar year. (2) The tests shall continue based on the existing testing schedule.	Test results are included with the applicable semi-annual reports.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
(3) All subsequent monitoring shall occur in each succeeding monitoring period. No two monitoring events shall occur closer together in time than 25% of a monitoring period. (4) The permittee shall follow the General Testing Procedures of Section B111 (5) Performance testing required by 40 CFR 60, Subpart JJJJ or IIII or 40 CFR 63, Subpart ZZZZ may be used to satisfy these periodic testing requirements if they meet the requirements of this condition and are completed during the specified monitoring period.				
Recordkeeping: The permittee shall maintain records in accordance with Section B109, B110, and B111.	Test results are maintained as required and included with the applicable semi-annual reports.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**
Reporting: The permittee shall report in accordance with Section B109, B110, and B111.	Test results are included with the applicable semi-annual reports.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**
A201 Engines C. 40 CFR 63, Subpart ZZZZ (Units 2, 3, 4, 5) **Requirement**: The units are subject to 40 CFR 63, Subpart ZZZZ and the permittee shall comply with all applicable requirements of Subpart A and Subpart ZZZZ.	Records of regulatory applicabilty for existing units are retained as required by ZZZZ.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
Monitoring: The permittee shall comply with all applicable monitoring requirements of 40 CFR 63, Subpart A and Subpart ZZZZ.	Records of regulatory applicabilty for existing units are retained as required by ZZZZ.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**
Recordkeeping: The permittee shall comply with all applicable recordkeeping requirements of 40 CFR 63, Subpart A and Subpart ZZZZ, including but not limited to 63.6655 and 63.10.	Records of regulatory applicabilty for existing units are retained as required by ZZZZ.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**
Reporting: The permittee shall comply with all applicable reporting requirements of 40 CFR 63, Subpart A and ZZZZ, including but not limited to 63.6645, 63.6650, 63.9, and 63.10.	Records of regulatory applicabilty for existing units are retained as required by ZZZZ. Initial notifications have been submitted as required.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**
A201 Engines D. Initial Compliance Test (Units 1, 6, 7, and 8) **Requirement**: Compliance with the allowable emission limits in Table 106.A shall be demonstrated by performing an initial compliance test.	Units 1, 6, 7 and 8 were not installed during this compliance period.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**
Monitoring: The permittee shall perform an initial compliance test in accordance with the General Testing Requirements of Section B111. Emission testing is required for NOx and CO. Test results that demonstrate compliance with the CO emission limits shall also be considered to demonstrate compliance with the VOC emission limits.	Units 1, 6, 7 and 8 were not installed during this compliance period.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
The monitoring exemptions of Section B108 do not apply to this requirement. For units with g/hp-hr emission limits, the engine load shall be calculated by using the following equation: Load(Hp) = Fuel consumption (scfh) x Measured fuel heating value (LHV) Manufacturer's rated BSFC (btu/bhp-hr) at 100% load				
Recordkeeping: The permittee shall maintain records in accordance with the applicable Sections in B109, B110, and B111.	Units 1, 6, 7 and 8 were not installed during this compliance period.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**
Reporting: The permittee shall report in accordance with the applicable Sections in B109, B110, and B111.	Units 1, 6, 7 and 8 were not installed during this compliance period.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**
A201 Engines E. 40 CFR 60, Subpart JJJJ (Units 1, 6, 7, 8) **Requirement**: The units 1, 6, and 7 will be subject to 40 CFR 60, Subparts A and JJJJ if the unit is constructed (ordered) and manufactured after the applicability dates in 40 CFR 60.4230 and the permittee shall comply with the notification requirements in Subpart A and the specific requirements of Subpart JJJJ.	Units 1, 6, 7 and 8 were not installed during this compliance period. Regulatory applicability will be determined prior to installation.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**
Monitoring: The permittee shall comply with all applicable monitoring requirements in 40 CFR 60, Subpart A and Subpart JJJJ, including but not limited to 60.4243.	Units 1, 6, 7 and 8 were not installed during this compliance period. Regulatory applicability will be determined prior to installation.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
Recordkeeping: The permittee shall comply with all applicable recordkeeping requirements in 40 CFR 60, Subpart A and Subpart JJJJ, including but not limited to 60.4245.	Units 1, 6, 7 and 8 were not installed during this compliance period. Regulatory applicability will be determined prior to installation.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**
Reporting: The permittee shall comply with all applicable reporting requirements in 40 CFR 60, Subpart A and Subpart JJJJ, including but not limited to 60.4245.	Units 1, 6, 7 and 8 were not installed during this compliance period. Regulatory applicability will be determined prior to installation.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**
A201 Engines F. 40 CFR 63, Subpart ZZZZ (Units 1, 6, 7, 8) **Requirement**: The units will be subject to 40 CFR 63, Subparts A and ZZZZ if they meet the applicability criteria in 40 CFR 63.6590. The permittee shall comply with any applicable notification requirements in Subpart A and any specific requirements of Subpart ZZZZ.	Units 1, 6, 7 and 8 were not installed during this compliance period. Regulatory applicability will be determined prior to installation.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**
Monitoring: The permittee shall comply with all applicable monitoring requirements of 40 CFR 63, Subpart A and Subpart ZZZZ.	Units 1, 6, 7 and 8 were not installed during this compliance period. Regulatory applicability will be determined prior to installation.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**
Recordkeeping: The permittee shall comply with all applicable recordkeeping requirements of 40 CFR 63, Subpart A and Subpart ZZZZ, including but not limited to 63.6655 and 63.10.	Units 1, 6, 7 and 8 were not installed during this compliance period. Regulatory applicability will be determined prior to installation.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**
Reporting: The permittee shall comply with all applicable reporting requirements of 40 CFR 63, Subpart A and ZZZZ, including but not limited to 63.6645, 63.6650, 63.9, and 63.10.	Units 1, 6, 7 and 8 were not installed during this compliance period. Regulatory applicability will be determined prior to installation.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
A202 Glycol Dehydrators A. Extended Gas Analysis and GRI-GLYCalc calculation (Units 9a-13a) **Requirement**: Compliance with the allowable VOC emission limits in Table 106.A shall be demonstrated by conducting an annual extended gas analysis on the dehydrator inlet gas and by calculating emissions using GRI-GLYCalc.	No dehydrators have been installed to date.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**
Monitoring: The permittee shall conduct an annual GRI-GlyCalc analysis using the most recent extended gas analysis, and verify the input data. The permittee may use a method of calculating dehydrator emissions other than the most current version of GRI-GlyCalc if approved by the Department. Changes in the calculated emissions due solely to a change in the calculation methodology shall not be deemed an exceedance of an emission limit.	No dehydrators have been installed to date.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**
Recordkeeping: The permittee shall identify in a summary table all parameters that were used as inputs in the GRI-GLYcalc model. The permittee shall keep a record of the results, noting the VOC and HAP emission rates for the dehydrator obtained from estimates using GRI-GLYcalc.	No dehydrators have been installed to date.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**
Reporting: The permittee shall report in accordance with Section B110.	No dehydrators have been installed to date.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
A202 Glycol Dehydrators B. Glycol pump circulation rate (Units 9a-13a) **Requirement**: Compliance with the allowable VOC emission limits in Table 106.A shall be demonstrated by monitoring the glycol pump circulation rate for each unit shall not exceed 450 gallons per hour (7.5 gallons per minute).	No dehydrators have been installed to date.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**
Monitoring: The permittee shall monitor the circulation rate quarterly, based on a calendar quarter (January 1st through March 31st, April 1 through June 30th, July 1st through September 30th, and October 1st through December 31st). Monitoring shall include a calibration or visual inspection of pump rate setting.	No dehydrators have been installed to date.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**
Recordkeeping: The permittee shall maintain records that include a description of the monitoring and are in accordance with Section B109.	No dehydrators have been installed to date.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**
Reporting: The permittee shall report in accordance with Section B110.	No dehydrators have been installed to date.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**
A202 Glycol Dehydrators C. 40 CFR 63, Subpart HH (Units 9a-13a) **Requirement**: The units are subject to 40 CFR 63, Subpart HH and the permittee shall comply with all applicable requirements.	No dehydrators have been installed to date.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
Monitoring: The permittee shall monitor as required by 40 CFR 63.772(b)(2) to demonstrate facility is exempt from general standards.	No dehydrators have been installed to date.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**
Recordkeeping: The permittee shall generate and maintain the records required by 40 CFR 63.774(d)(1)(ii) to demonstrate compliance with the general standard exemptions found in 40 CFR 63.764(e).	No dehydrators have been installed to date.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**
Reporting: The permittee shall meet all applicable reporting in 40 CFR 63, Subparts A and HH and in Section B110.	No dehydrators have been installed to date.	☐ **Continuous** ☒ **Intermittent**	☒ **Yes** ☐ **No**	☐ **Yes** ☒ **No**

PART 1 B General Conditions

1. Have these General Conditions been met during this reporting period? ***If the section Heading is marked as N/A no remarks are required.*** ***Check only one box per subject heading.*** ***Explain answers in remarks row under subject heading.***	2. Was this facility in compliance with this requirement during the reporting period?		3. Does not apply
B100 Introduction A. N/A	☐ **Yes** Explain Below	☐ **No** Explain Below	☐ **N/A** Explain Below
REMARKS:			
B101 Legal A. Permit Terms and Conditions (20.2.70 sections 7, 201.B, 300, 301.B, 302, 405 NMAC) (1) The permittee shall abide by all terms and conditions of this permit, except as allowed under Section 502(b)(10) of the Federal Act, and 20.2.70.302.H.1 NMAC. Any permit noncompliance is grounds for enforcement action, and significant or repetitious noncompliance may result in termination of this permit. Additionally, noncompliance with federally enforceable conditions of this permit constitutes a violation of the Federal Act. (20.2.70.302.A.2.a NMAC) (2) Emissions trading within a facility (20.2.70.302.H.2 NMAC) (a) The Department shall, if an applicant requests it, issue permits that contain terms and conditions allowing for the trading of emissions increases and decreases in the permitted facility solely for the purpose of complying with a federally enforceable emissions cap that is established in the permit in addition to any applicable requirements. Such terms and conditions shall include all terms and conditions required under 20.2.70.302 NMAC to determine compliance. If applicable requirements apply to the requested emissions trading, permit conditions shall be issued only to the extent that the applicable requirements provide for trading such increases and decreases without a case-by-case approval. (b) The applicant shall include in the application proposed replicable procedures and permit terms that ensure the emissions trades are quantifiable and enforceable. The Department shall not include in the emissions trading provisions any emissions units for which emissions are not quantifiable or for which there are no replicable procedures to enforce the emissions trades. The permit shall require compliance with all applicable requirements. (3) It shall not be a defense for the permittee in an enforcement action to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. (20.2.70.302.A.2.b NMAC)	☒ **Yes** Explain Below	☐ **No** Explain Below	☐ **N/A** Explain Below

(4) If the Department determines that cause exists to modify, reopen and revise, revoke and reissue, or terminate this permit, this shall be done in accordance with 20.2.70.405 NMAC. (20.2.70.302.A.2.c NMAC)

(5) The permittee shall furnish any information the Department requests in writing to determine if cause exists for reopening and revising, revoking and reissuing, or terminating the permit, or to determine compliance with the permit. This information shall be furnished within the time period specified by the Department. Additionally, the permittee shall furnish, upon request by the Department, copies of records required by the permit to be maintained by the permittee. (20.2.70.302.A.2.f NMAC)

(6) A request by the permittee that this permit be modified, revoked and reissued, or terminated, or a notification by the permittee of planned changes or anticipated noncompliance, shall not stay any conditions of this permit. (20.2.70.302.A.2.d NMAC)

(7) This permit does not convey property rights of any sort, or any exclusive privilege. (20.2.70.302.A.2.e NMAC)

(8) In the case where an applicant or permittee has submitted information to the Department under a claim of confidentiality, the Department may also require the applicant or permittee to submit a copy of such information directly to the Administrator of the EPA. (20.2.70.301.B NMAC)

(9) The issuance of this permit, or the filing or approval of a compliance plan, does not relieve the permittee from civil or criminal liability for failure to comply with the state or Federal Acts, or any applicable state or federal regulation or law. (20.2.70.302.A.6 NMAC and the New Mexico Air Quality Control Act NMSA 1978, Chapter 74, Article 2)

(10) If any part of this permit is challenged or held invalid, the remainder of the permit terms and conditions are not affected and the permittee shall continue to abide by them. (20.2.70.302.A.1.d NMAC)

(11) A responsible official (as defined in 20.2.70.7.AE NMAC) shall certify the accuracy, truth and completeness of every report and compliance certification submitted to the Department as required by this permit. These certifications shall be part of each document. (20.2.70.300.E NMAC)

(12) Revocation or termination of this permit by the Department terminates the permittee's right to operate this facility. (20.2.70.201.B NMAC)

(13) The permittee shall continue to comply with all applicable requirements. For applicable requirements that will become effective during the term of the permit, the permittee shall meet such requirements on a timely basis. (Sections 300.D.10.c and 302.G.3 of 20.2.70 NMAC)

B. Permit Shield (20.2.70.302.J NMAC)

(1) Compliance with the conditions of this permit shall be deemed to be compliance with any applicable requirements existing as of the date of permit issuance and identified in Table 103.A. The requirements in Table 103.A are applicable to this facility with specific requirements identified for individual emission units.

(2) The Department has determined that the requirements in Table 103.B as identified in the permit application are not applicable to this source, or they do not impose any conditions in this permit. (3) This permit shield does not extend to administrative amendments (Subsection A of 20.2.70.404 NMAC), to minor permit modifications (Subsection B of 20.2.70.404 NMAC), to changes made under Section 502(b)(10), changes under Paragraph 1 of subsection H of 20.2.70.302 of the Federal Act, or to permit terms for which notice has been given to reopen or revoke all or part under 20.2.70.405 and 20.2.70.302J(6). (4) This permit shall, for purposes of the permit shield, identify any requirement specifically identified in the permit application or significant permit modification that the department has determined is not applicable to the source, and state the basis for any such determination. (20.2.70.302.A.1.f NMAC) C. The owner or operator of a source having an excess emission shall, to the extent practicable, operate the source, including associated air pollution control equipment, in a manner consistent with good air pollutant control practices for minimizing emissions. (20.2.7.109 NMAC). The establishment of allowable malfunction emission limits does not supersede this requirement.			
REMARKS: Facility was in compliance with applicable requirements during the applicable period.			
B102 Authority A. This permit is issued pursuant to the federal Clean Air Act ("Federal Act"), the New Mexico Air Quality Control Act ("State Act") and regulations adopted pursuant to the State and Federal Acts, including Title 20, New Mexico Administrative Code, Chapter 2, Part 70 (20.2.70 NMAC) - Operating Permits. B. This permit authorizes the operation of this facility. This permit is valid only for the named permittee, owner, and operator. A permit modification is required to change any of those entities. C. The Department specifies with this permit, terms and conditions upon the operation of this facility to assure compliance with all applicable requirements, as defined in 20.2.70 NMAC at the time this permit is issued. (20.2.70.302.A.1 NMAC) D. Pursuant to the New Mexico Air Quality Control Act NMSA 1978, Chapter 74, Article 2, all terms and conditions in this permit, including any provisions designed to limit this facility's potential to emit, are enforceable by the	☒ **Yes** Explain Below	☐ **No** Explain Below	☐ **N/A** Explain Below

Department. All terms and conditions are enforceable by the Administrator of the United States Environmental Protection Agency ("EPA") and citizens under the Federal Act, unless the term or condition is specifically designated in this permit as not being enforceable under the Federal Act. (20.2.70.302.A.5 NMAC) E. The Department is the Administrator for 40 CFR Parts 60, 61, and 63 pursuant to the Modification and Exceptions of Section 10 of 20.2.77 NMAC (NSPS), 20.2.78 NMAC (NESHAP), and 20.2.82 NMAC (MACT).			
REMARKS: Only the permitted owner operated the facility during the applicable period.			
B103 Annual Fee A. The permittee shall pay Title V fees to the Department consistent with the fee schedule in 20.2.71 NMAC - Operating Permit Emission Fees. The fees will be assessed and invoiced separately from this permit. (20.2.70.302.A.1.e NMAC)	☒ **Yes** Explain Below	☐ **No** Explain Below	☐ **N/A** Explain Below
REMARKS: 2018 operating permit emission fees were submitted on May 30, 2019.			
B104 Appeal Procedures (20.2.70.403.A NMAC) A. Any person who participated in a permitting action before the Department and who is adversely affected by such permitting action, may file a petition for a hearing before the Environmental Improvement Board ("board"). The petition shall be made in writing to the board within thirty (30) days from the date notice is given of the Department's action and shall specify the portions of the permitting action to which the petitioner objects, certify that a copy of the petition has been mailed or hand-delivered, and attach a copy of the permitting action for which review is sought. Unless a timely request for a hearing is made, the decision of the Department shall be final. The petition shall be copied simultaneously to the Department upon receipt of the appeal notice. If the petitioner is not the applicant or permittee, the petitioner shall mail or hand-deliver a copy of the petition to the applicant or permittee. The Department shall certify the administrative record to the board. Petitions for a hearing shall be sent to: Secretary, New Mexico Environmental Improvement Board 1190 St. Francis Drive, Runnels Bldg. Rm N2153 Santa Fe, New Mexico 87502	☒ **Yes** Explain Below	☐ **No** Explain Below	☐ **N/A** Explain Below

PART 1 B General Conditions

REMARKS:
Department action.

B105 Submittal of Reports and Certifications

☒ **Yes** Explain Below | ☐ **No** Explain Below | ☐ **N/A** Explain Below

A. Stack Test Protocols and Stack Test Reports shall be submitted electronically to Stacktest.AQB@state.nm.us or as directed by the Department.

B. Excess Emission Reports shall be submitted as directed by the Department. (20.2.7.110 NMAC)

C. Compliance Certification Reports, Semi-Annual monitoring reports, compliance schedule progress reports, and any other compliance status information required by this permit shall be certified by the responsible official and submitted to the mailing address below, or as directed by the Department:

Manager, Compliance and Enforcement Section
New Mexico Environment Department
Air Quality Bureau
525 Camino de los Marquez, Suite 1
Santa Fe, NM 87505-1816

D. Compliance Certification Reports shall also be submitted to the Administrator at the address below (20.2.70.302.E.3 NMAC):

Chief, Air Enforcement Section
US EPA Region-6, 6EN-AA
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

REMARKS:
Stack test reports, semi-annual reports and ACCs are submitted to the appropriate regulatory personnel

PART 1 B General Conditions

B106 NSPS and/or MACT Startup, Shutdown, and Malfunction Operations	☒ Yes Explain Below	☐ No Explain Below	☐ N/A Explain Below
A. If a facility is subject to a NSPS standard in 40 CFR 60, each owner or operator that installs and operates a continuous monitoring device required by a NSPS regulation shall comply with the excess emissions reporting requirements in accordance with 40 CFR 60.7(c). B. If a facility is subject to a NSPS standard in 40 CFR 60, then in accordance with 40 CFR 60.8(c), operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test nor shall emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard. C. If a facility is subject to a MACT standard in 40 CFR 63, then the facility is subject to the requirement for a Startup, Shutdown and Malfunction Plan (SSM) under 40 CFR 63.6(e)(3), unless specifically exempted in the applicable subpart. (20.2.70.302.A.1 and A.4 NMAC)			
REMARKS: Although NSPS and/or NESHAP standards apply to this facility, no units currently operating are subject to their requirements.			

B107 Startup, Shutdown, and Maintenance Operations	☒ Yes Explain Below	☐ No Explain Below	☐ N/A Explain Below
A. The establishment of permitted startup, shutdown, and maintenance (SSM) emission limits does not supersede the requirements of 20.2.7.14.A NMAC. Except for operations or equipment subject to Condition B106, the permittee shall establish and implement a plan to minimize emissions during routine or predictable start up, shut down, and scheduled maintenance (SSM work practice plan) and shall operate in accordance with the procedures set forth in the plan. (20.2.7.14.A NMAC)			
REMARKS: The facility is operated in accordance with the permittee's SSM work practice plan			

PART 1 B General Conditions

B108 General Monitoring Requirements (20.2.70. 302.A and C NMAC)	☒ Yes Explain Below	☐ No Explain Below	☐ N/A Explain Below
A. These requirements do not supersede or relax requirements of federal regulations.			
B. The following monitoring and/or testing requirements shall be used to determine compliance with applicable requirements and emission limits. Any sampling, whether by portable analyzer or EPA reference method, that measures an emission rate over the applicable averaging period greater than an emission limit in this permit constitutes noncompliance with this permit. The Department may require, at its discretion, additional tests pursuant to EPA Reference Methods at any time, including when sampling by portable analyzer measures an emission rate greater than an emission limit in this permit; but such requirement shall not be construed as a determination that the sampling by portable analyzer does not establish noncompliance with this permit and shall not stay enforcement of such noncompliance based on the sampling by portable analyzer.			
C. If the emission unit is shutdown at the time when periodic monitoring is due to be accomplished, the permittee is not required to restart the unit for the sole purpose of performing the monitoring. Using electronic or written mail, the permittee shall notify the Department's Enforcement Section of a delay in emission tests prior to the deadline for accomplishing the tests. Upon recommencing operation, the permittee shall submit any pertinent pre-test notification requirements set forth in the current version of the Department's Standard Operating Procedures For Use Of Portable Analyzers in Performance Test, and shall accomplish the monitoring.			
D. The requirement for monitoring during any monitoring period is based on the percentage of time that the unit has operated. However, to invoke monitoring period exemptions at B108.D(2), hours of operation shall be monitored and recorded.			
(1) If the emission unit has operated for more than 25% of a monitoring period, then the permittee shall conduct monitoring during that period.			
(2) If the emission unit has operated for 25% or less of a monitoring period then the monitoring is not required. After two successive periods without monitoring, the permittee shall conduct monitoring during the next period regardless of the time operated during that period, except that for any monitoring period in which a unit has operated for less than 10% of the monitoring period, the period will not be considered as one of the two successive periods.			
(3) If invoking the monitoring period exemption in B108.D(2), the actual operating time of a unit shall not exceed the monitoring period required by this permit before the required monitoring is performed. For example, if the monitoring period is annual, the operating hours of the unit shall not exceed 8760 hours before monitoring is			

conducted. Regardless of the time that a unit actually operates, a minimum of one of each type of monitoring activity shall be conducted during the five year term of this permit. E. The permittee is not required to report a deviation for any monitoring or testing in a Specific Condition if the deviation was authorized in this General Condition B108. F. For all periodic monitoring events, except when a federal or state regulation is more stringent, three test runs shall be conducted at 90% or greater of the unit's capacity as stated in this permit, or in the permit application if not in the permit, and at additional loads when requested by the Department. If the 90% capacity cannot be achieved, the monitoring will be conducted at the maximum achievable load under prevailing operating conditions except when a federal or state regulation requires more restrictive test conditions. The load and the parameters used to calculate it shall be recorded to document operating conditions and shall be included with the monitoring report. G. When requested by the Department, the permittee shall provide schedules of testing and monitoring activities. Compliance tests from previous NSR and Title V permits may be re-imposed if it is deemed necessary by the Department to determine whether the source is in compliance with applicable regulations or permit conditions. H. If monitoring is new or is in addition to monitoring imposed by an existing applicable requirement, it shall become effective 120 days after the date of permit issuance. For emission units that have not commenced operation, the associated new or additional monitoring shall not apply until 120 days after the units commence operation. All pre-existing monitoring requirements incorporated in this permit shall continue to apply from the date of permit issuance. All monitoring periods, unless stated otherwise in the specific permit condition or federal requirement, shall commence at the beginning of the 12 month reporting period as defined at condition A109.B.			
REMARKS: Periodic monitoring reports will included in the applicable semi-annual reports.			

PART 1 B General Conditions

B109 General Recordkeeping Requirements (20.2.70.302.D.1 NMAC) A. The permittee shall maintain records to assure and verify compliance with the terms and conditions of this permit and any applicable requirements that become effective during the term of this permit. The minimum information to be included in these records is (20.2.70.302.D.1 NMAC): (1) Records required for testing and sampling: (a) equipment identification (include make, model and serial number for all tested equipment and emission controls); (b) date(s) and time(s) of sampling or measurements; (c) date(s) analyses were performed; (d) the company or entity that performed the analyses; (e) analytical or test methods used; (f) results of analyses or tests; and (g) operating conditions existing at the time of sampling or measurement. (2) Records required for equipment inspections and/or maintenance required by this permit: (a) equipment identification number (including make, model and serial number) (b) date(s) and time(s) of inspection, maintenance, and/or repair (c) date(s) any subsequent analyses were performed (if applicable) (d) name of the person or qualified entity conducting the inspection, maintenance, and/or repair (e) copy of the equipment manufacturer's or the owner or operator's maintenance or repair recommendations (if required to demonstrate compliance with a permit condition) (f) description of maintenance or repair activities conducted (g) all results of any required parameter readings (h) a description of the physical condition of the equipment as found during any required inspection (i) results of required equipment inspections including a description of any condition which required adjustment to bring the equipment back into compliance and a description of the required adjustments	☒ **Yes** Explain Below	☐ **No** Explain Below	☐ **N/A** Explain Below

B. The permittee shall keep records of all monitoring data, equipment calibration, maintenance, and inspections, Data Acquisition and Handling System (DAHS) if used, reports, and other supporting information required by this permit for at least five (5) years from the time the data was gathered or the reports written. Each record shall clearly identify the emissions unit and/or monitoring equipment, and the date the data was gathered. (20.2.70.302.D.2 NMAC)

C. If the permittee has applied and received approval for an alternative operating scenario, then the permittee shall maintain a log at the facility, which documents, contemporaneously with any change from one operating scenario to another, the scenario under which the facility is operating. (20.2.70.302.A.3 NMAC)

D. The permittee shall keep a record describing off permit changes made at this source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under this permit, and the emissions resulting from those changes. (20.2.70.302.I.2 NMAC)

E. Unless otherwise indicated by Specific Conditions, the permittee shall keep the following records for malfunction emissions and routine and predictable emissions during startup, shutdown, and scheduled maintenance (SSM):

(1) The owner or operator of a source subject to a permit, shall establish and implement a plan to minimize emissions during routine or predictable startup, shutdown, and scheduled maintenance through work practice standards and good air pollution control practices. This requirement shall not apply to any affected facility defined in and subject to an emissions standard and an equivalent plan under 40 CFR Part 60 (NSPS), 40 CFR Part 63 (MACT), or an equivalent plan under 20.2.72 NMAC - Construction Permits, 20.2.70 NMAC - Operating Permits, 20.2.74 NMAC - Permits - Prevention of Significant Deterioration (PSD), or 20.2.79 NMAC - Permits - Nonattainment Areas. (20.2.7.14.A NMAC) The permittee shall keep records of all sources subject to the plan to minimize emissions during routine or predictable SSM and shall record if the source is subject to an alternative plan and therefore, not subject to the plan requirements under 20.2.7.14.A NMAC.

(2) If the facility has allowable SSM emission limits in this permit, the permittee shall record all SSM events, including the date, the start time, the end time, a description of the event, and a description of the cause of the event. This record also shall include a copy of the manufacturer's, or equivalent, documentation showing that any maintenance qualified as scheduled. Scheduled maintenance is an activity that occurs at an established frequency pursuant to a written protocol published by the manufacturer or other reliable source. The authorization of allowable SSM emissions does not supersede any applicable federal or state standard. The most stringent requirement applies.

(3) If the facility has allowable malfunction emission limits in this permit, the permittee shall record all malfunction events to be applied against these limits. The permittee shall also include the date, the start time, the end time,

and a description of the event. **Malfunction means** any sudden and unavoidable failure of air pollution control equipment or process equipment beyond the control of the owner or operator, including malfunction during startup or shutdown. A failure that is caused entirely or in part by poor maintenance, careless operation, or any other preventable equipment breakdown shall not be considered a malfunction. (20.2.7.7.E NMAC) The authorization of allowable malfunction emissions does not supersede any applicable federal or state standard. The most stringent requirement applies. This authorization only allows the permittee to avoid submitting reports under 20.2.7 NMAC for total annual emissions that are below the authorized malfunction emission limit. (4) The owner or operator of a source shall meet the operational plan defining the measures to be taken to mitigate source emissions during malfunction, startup or shutdown. (20.2.72.203.A(5) NMAC)			
REMARKS: Records are maintained in accordance with recordkeeping requirements.			
B110 General Reporting Requirements (20.2.70.302.E NMAC) A. Reports of required monitoring activities for this facility shall be submitted to the Department on the schedule in section A109. Monitoring and recordkeeping requirements that are not required by a NSPS or MACT shall be maintained on-site or (for unmanned sites) at the nearest company office, and summarized in the semi-annual reports, unless alternative reporting requirements are specified in the equipment specific requirements section of this permit. B. Reports shall clearly identify the subject equipment showing the emission unit ID number according to this operating permit. In addition, all instances of deviations from permit requirements, including those that occur during emergencies, shall be clearly identified in the reports required by section A109. (20.2.70.302.E.1 NMAC) C. The permittee shall submit reports of all deviations from permit requirements, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken. These reports shall be submitted as follows: (1) Deviations resulting in excess emissions as defined in 20.2.7.7 NMAC (including those classified as emergencies as defined in section B114.A) shall be reported in accordance with the timelines specified by 20.2.7.110 NMAC and in the semi-annual reports required in section A109. (20.2.70.302.E.2 NMAC) (2) All other deviations shall be reported in the semi-annual reports required in section A109. (20.2.70.302.E.2 NMAC).	☒ **Yes** Explain Below	☐ **No** Explain Below	☐ **N/A** Explain Below

D. The permittee shall submit reports of excess emissions in accordance with 20.2.7.110.A NMAC.

E. Results of emission tests and monitoring for each pollutant (except opacity) shall be reported in pounds per hour (unless otherwise specified) and tons per year. Opacity shall be reported in percent. The number of significant figures corresponding to the full accuracy inherent in the testing instrument or Method test used to obtain the data shall be used to calculate and report test results in accordance with 20.2.1.116.B and C NMAC. Upon request by the Department, CEMS and other tabular data shall be submitted in editable, MS Excel format.

F. At such time as new units are installed as authorized by the applicable NSR Permit, the permittee shall fulfill the notification requirements in the NSR permit.

G. Periodic Emissions Test Reporting: The permittee shall report semi-annually a summary of the test results.

H. The permittee shall submit an emissions inventory for this facility annually. The emissions inventory shall be submitted by the later of April 1 or within 90 days after the Department makes such request. (20.2.73 NMAC and 20.2.70.302.A.1 NMAC)

(1) The facility emits, or has the potential to emit, 5 tons per year or more of lead or lead compounds, or 100 tons per year or more of PM10, PM2.5, sulfur oxides, nitrogen oxides, carbon monoxide, or volatile organic compounds.

(2) The facility is defined as a major source of hazardous air pollutants under 20.2.70 NMAC (Operating Permits).

(3) The facility is located in an ozone nonattainment area and which emits, or has the potential to emit, 25 tons per year or more of nitrogen oxides or volatile organic compounds.

(4) Upon request by the department.

(5) The permittee shall submit the emissions inventory report by April 1 of each year, unless a different deadline is specified by the current operating permit.

I. Emissions trading within a facility (20.2.70.302.H.2 NMAC)

(1) For each such change, the permittee shall provide written notification to the department and the administrator at least seven (7) days in advance of the proposed changes. Such notification shall state when the change will occur and shall describe the changes in emissions that will result and how these increases and decreases in emissions will comply with the terms and conditions of the permit.

(2) The permittee and department shall attach each such notice to their copy of the relevant permit.

PART 1 B General Conditions

REMARKS:
Reports are submitted in accordance with reporting requirements. However, as explained in the applicable semi-annual report, a deviation was not reported in a timely manner as defined by 20.2.7.110.A(1).

B111 General Testing Requirements	☒ **Yes** Explain Below	☐ **No** Explain Below	☐ **N/A** Explain Below
A. Compliance Tests			
(1) Compliance test requirements from previous permits (if any) are still in effect, unless the tests have been satisfactorily completed. Compliance tests may be re-imposed if it is deemed necessary by the Department to determine whether the source is in compliance with applicable regulations or permit conditions. (20.2.72 NMAC Sections 210.C and 213)			
(2) Compliance tests shall be conducted within sixty (60) days after the unit(s) achieve the maximum normal production rate. If the maximum normal production rate does not occur within one hundred twenty (120) days of source startup, then the tests must be conducted no later than one hundred eighty (180) days after initial startup of the source.			
(3) Unless otherwise indicated by Specific Conditions or regulatory requirements, the default time period for each test run shall be **at least** 60 minutes and each performance test shall consist of three separate runs using the applicable test method. For the purpose of determining compliance with an applicable emission limit, the arithmetic mean of results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances, beyond the owner or operator's control, compliance may, upon the Department approval, be determined using the arithmetic mean of the results of the two other runs.			
(4) Testing of emissions shall be conducted with the emissions unit operating at 90 to 100 percent of the maximum operating rate allowed by the permit. If it is not possible to test at that rate, the source may test at a lower operating rate, subject to the approval of the Department.			
(5) Testing performed at less than 90 percent of permitted capacity will limit emission unit operation to 110 percent of the tested capacity until a new test is conducted.			
(6) If conditions change such that unit operation above 110 percent of tested capacity is possible, the source must submit a protocol to the Department within 30 days of such change to conduct a new emissions test.			
B. EPA Reference Method Tests			

(1) All compliance tests required by this permit, unless otherwise specified by Specific Conditions of this permit, shall be conducted in accordance with the requirements of 40 CFR 60, Subpart A, General Provisions, and the following EPA Reference Methods as specified by 40 CFR 60, Appendix A:

(a) Methods 1 through 4 for stack gas flowrate

(b) Method 5 for TSP

(c) Method 6C and 19 for SO_2

(d) Method 7E for NO_X (test results shall be expressed as nitrogen dioxide (NO_2) using a molecular weight of 46 lb/lb-mol in all calculations (each ppm of NO/NO_2 is equivalent to 1.194 x 10-7 lb/SCF)

(e) Method 9 for opacity

(f) Method 10 for CO

(g) Method 19 may be used in lieu of Methods 1-4 for stack gas flowrate upon approval of the Department. A justification for this proposal must be provided along with a contemporaneous fuel gas analysis (preferably on the day of the test) and a recent fuel flow meter calibration certificate (within the most recent quarter).

(h) Method 7E or 20 for Turbines per 60.335 or 60.4400

(i) Method 29 for Metals

(j) Method 201A for filterable PM_{10} and $PM_{2.5}$

(k) Method 202 for condensable PM

(l) Method 320 for organic Hazardous Air Pollutants (HAPs)

(m) Method 25A for VOC reduction efficiency

(n) Method 30B for Mercury

(2) Alternative test method(s) may be used if the Department approves the change.

C. Periodic Monitoring and Portable Analyzer Requirements

(1) Periodic emissions tests (periodic monitoring) may be conducted in accordance with EPA Reference Methods or by utilizing a portable analyzer. Periodic monitoring utilizing a portable analyzer shall be conducted in accordance with the requirements of the current version of ASTM D 6522. However, if a facility has met a previously approved Department criterion for portable analyzers, the analyzer may be operated in accordance

with that criterion until it is replaced.

(2) Unless otherwise indicated by Specific Conditions or regulatory requirements, the default time period for each test run shall be **at least** 20 minutes.

Each performance test shall consist of three separate runs. The arithmetic mean of results of the three runs shall be used to determine compliance with the applicable emission limit.

(3) Testing of emissions shall be conducted in accordance with the requirements at Section B108.F.

(4) During emissions tests, pollutant and diluent concentration shall be monitored and recorded. Fuel flow rate shall be monitored and recorded if stack gas flow rate is determined utilizing Method 19. This information shall be included with the test report furnished to the Department.

(5) Stack gas flow rate shall be calculated in accordance with 40 CFR 60, Appendix A, Method 19 utilizing fuel flow rate (scf) determined by a dedicated fuel flow meter and fuel heating value (Btu/scf) determined from a fuel sample obtained preferably during the day of the test, but no earlier than three months prior to the test date. Alternatively, stack gas flow rate may be determined by using EPA Methods 1-4.

D. Test Procedures:

(1) The permittee shall notify the Department's Program Manager, Compliance and Enforcement Section at least thirty (30) days before the test to afford a representative of the Department an opportunity to be present at the test. (40CFR 60.8(d))

(2) Equipment shall be tested in the "as found" condition. Equipment may not be adjusted or tuned prior to any test for the purpose of lowering emissions, and then returned to previous settings or operating conditions after the test is complete.

(3) Contents of test notifications, protocols and test reports shall conform to the format specified by the Department's Universal Test Notification, Protocol and Report Form and Instructions. Current forms and instructions are posted to NMED's Air Quality web site under Compliance and Enforcement Testing.

(4) The permittee shall provide (a) sampling ports adequate for the test methods applicable to the facility, (b) safe sampling platforms, (c) safe access to sampling platforms and (d) utilities for sampling and testing equipment.

(5) The stack shall be of sufficient height and diameter and the sample ports shall be located so that a representative test of the emissions can be performed in accordance with the requirements of EPA Method 1 or ASTM D 6522-00 as applicable.

(6) Where necessary to prevent cyclonic flow in the stack, flow straighteners shall be installed

(7) Unless otherwise indicated by Specific Conditions or regulatory requirements, test reports shall be submitted to the Department no later than 30 days after completion of the test.

PART 1 B General Conditions

REMARKS: Testing that occurred during the applicable period was completed in accordance with the appropriate procedures			
B112 Compliance A. The Department shall be given the right to enter the facility at all reasonable times to verify the terms and conditions of this permit. Required records shall be organized by date and subject matter and shall at all times be readily available for inspection. The permittee, upon verbal or written request from an authorized representative of the Department who appears at the facility, shall immediately produce for inspection or copying any records required to be maintained at the facility. Upon written request at other times, the permittee shall deliver to the Department paper or electronic copies of any and all required records maintained on site or at an off-site location. Requested records shall be copied and delivered at the permittee's expense within three business days from receipt of request unless the Department allows additional time. Required records may include records required by permit and other information necessary to demonstrate compliance with terms and conditions of this permit. (NMSA 1978, Section 74-2-13) B. A copy of the most recent permit(s) issued by the Department shall be kept at the permitted facility or (for unmanned sites) at the nearest company office and shall be made available to Department personnel for inspection upon request. (20.2.70.302.G.3 NMAC) C. Emissions limits associated with the energy input of a Unit, i.e. lb/MMBtu, shall apply at all times unless stated otherwise in a Specific Condition of this permit. The averaging time for each emissions limit, including those based on energy input of a Unit (i.e. lb/MMBtu) is one (1) hour unless stated otherwise in a Specific Condition of this permit or in the applicable requirement that establishes the limit. (20.2.70.302.A.1 and G.3 NMAC) D. The permittee shall submit compliance certification reports certifying the compliance status of this facility with respect to all permit terms and conditions, including applicable requirements. These reports shall be made on the pre-populated Compliance Certification Report Form that is provided to the permittee by the Department, and shall be submitted to the Department and to EPA at least every 12 months. For the most current form, please contact the Compliance Reports Group at email:reportsgroup.aqb@state.nm.us. For additional reporting guidance see http://www.nmenv.state.nm.us/aqb/enforce_compliance/TitleVReporting.htm. (20.2.70.302.E.3 NMAC) E. The permittee shall allow representatives of the Department, upon presentation of credentials and other documents as may be required by law, to do the following (20.2.70.302.G.1 NMAC):	☒ **Yes** Explain Below	☐ **No** Explain Below	☐ **N/A** Explain Below

(1) enter the permittee's premises where a source or emission unit is located, or where records that are required by this permit to be maintained are kept; (2) have access to and copy, at reasonable times, any records that are required by this permit to be maintained; (3) inspect any facilities, equipment (including monitoring and air pollution control equipment), work practices or operations regulated or required under this permit; and (4) sample or monitor any substances or parameters for the purpose of assuring compliance with this permit or applicable requirements or as otherwise authorized by the Federal Act.			
REMARKS: Records and permits are maintained as required. Representatives have not been denied access to the facility and applicable files during the applicable period.			
B113 Permit Reopening and Revocation A. This permit will be reopened and revised when any one of the following conditions occurs, and may be revoked and reissued when A(3) or A(4) occurs. (20.2.70.405.A.1 NMAC) (1) Additional applicable requirements under the Federal Act become applicable to a major source three (3) or more years before the expiration date of this permit. If the effective date of the requirement is later than the expiration date of this permit, then the permit is not required to be reopened unless the original permit or any of its terms and conditions has been extended due to the Department's failure to take timely action on a request by the permittee to renew this permit. (2) Additional requirements, including excess emissions requirements, become applicable to this source under Title IV of the Federal Act (the acid rain program). Upon approval by the Administrator, excess emissions offset plans will be incorporated into this permit. (3) The Department or the Administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the terms and conditions of the permit. (4) The Department or the Administrator determines that the permit must be revised or revoked and reissued to assure compliance with an applicable requirement. B. Proceedings to reopen or revoke this permit shall affect only those parts of this permit for which cause to reopen or	☒ **Yes** Explain Below	☐ **No** Explain Below	☐ **N/A** Explain Below

revoke exists. Emissions units for which permit conditions have been revoked shall not be operated until new permit conditions have been issued for them. (20.2.70.405.A.2 NMAC)			

REMARKS:
No communication has been received from the regulating agency to indicate that the permit has been reopened, revoked or revised.

B114 Emergencies (20.2.70.304 NMAC)	☒ **Yes** Explain Below	☐ **No** Explain Below	☐ **N/A** Explain Below

A. An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the permittee, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, or careless or improper operation.

B. An emergency constitutes an affirmative defense to an action brought for noncompliance with technology-based emission limitations contained in this permit if the permittee has demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

(1) An emergency occurred and that the permittee can identify the cause(s) of the emergency;

(2) This facility was at the time being properly operated;

(3) During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit; and

(4) The permittee submitted notice of the emergency to the Department within 2 working days of the time when emission limitations were exceeded due to the emergency. This notice fulfills the requirement of 20.2.70.302.E.2 NMAC. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

C. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.

D. This provision is in addition to any emergency or upset provision contained in any applicable requirement.

PART 1 B General Conditions

REMARKS:
No emergencies occurred during this period.

B115 Stratospheric Ozone (20.2.70.302.A.1 NMAC)	☐ **Yes** Explain Below	☐ **No** Explain Below	☒ **N/A** Explain Below
A. If this facility is subject to 40 CFR 82, Subpart F, the permittee shall comply with the following standards for recycling and emissions reductions: (1) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices, except for motor vehicle air conditioners (MVAC) and MVAC-like appliances. (40 CFR 82.156) (2) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment. (40 CFR 82.158) (3) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program. (40 CFR 82.161)			

REMARKS:
The facililty is not subject to 40CFR 82 subpart F

B116 Acid Rain Sources (20.2.70.302.A.9 NMAC)	☐ **Yes** Explain Below	☐ **No** Explain Below	☒ **N/A** Explain Below
A. If this facility is subject to the federal acid rain program under 40 CFR 72, this section applies. B. Where an applicable requirement of the Federal Act is more stringent than an applicable requirement of regulations promulgated under Title IV of the Federal Act, both provisions are incorporated into this permit and are federally enforceable. C. Emissions exceeding any allowances held by the permittee under Title IV of the Federal Act or the regulations promulgated thereunder are prohibited. D. No modification of this permit is required for increases in emissions that are authorized by allowances acquired			

pursuant to the acid rain program, provided that such increases do not require a permit modification under any other applicable requirement. E. The permittee may not use allowances as a defense to noncompliance with any other applicable requirement. F. No limit is placed on the number of allowances held by the acid rain source. Any such allowance shall be accounted for according to the procedures established in regulations promulgated under Title IV of the Federal Act. G. The acid rain permit is an enclosure of this operating permit.			
REMARKS: The facililty is not subject to 40CFR 72.			
B117 Risk Management Plan (20.2.70.302.A.1 NMAC) A. If this facility is subject to the federal risk management program under 40 CFR 68, this section applies. B. The owner or operator shall certify annually that they have developed and implemented a RMP and are in compliance with 40 CFR 68. C. If the owner or operator of the facility has not developed and submitted a risk management plan according to 40 CFR 68.150, the owner or operator shall provide a compliance schedule for the development and implementation of the plan. The plan shall describe, in detail, procedures for assessing the accidental release hazard, preventing accidental releases, and developing an emergency response plan to an accidental release. The plan shall be submitted in a method and format to a central point as specified by EPA prior to the date specified in 40 CFR 68.150.b.	☐ **Yes** Explain Below	☐ **No** Explain Below	☒ **N/A** Explain Below
REMARKS: The facililty is not subject to 40CFR 68.			

Part 2

ACC Deviation Summary Report for Permit P198-R3 & P198-R3M1

1. Are there any deviations identified in Part 1, Column 5. If NO, no further information is required on Part 2 of this form. If YES, answer question 2 below.	☐ **Yes** ☒ **No**
2. Have all deviations identified in Part 1, Column 5 been reported to the NMED as required by 20.2.7 NMAC or in a Semi-Annual Monitoring Report (20.2.70.302.E.1 NMAC)? If Yes, no further information is required on Part 2 of this form. If No, answer question 3 below and enter the required information in the Deviation Summary Table for each deviation not yet reported to the NMED.	☐ **Yes** ☐ **No**
3. Did any of the deviations result in excess emissions? For excess emissions deviations that have not previously been reported per requirements of 20.2.7 NMAC, a completed Excess Emission Form for each deviation must be attached to this report.	☐ **Yes** ☐ **No**

Deviation Summary Table for deviations not yet reported.

No.	Applicable Requirement (Include Rule Citation)	Emission Unit ID(s)	Cause of Deviation	Corrective Action Taken
1				
2				
3				
4				
5				

Deviation Summary Table (cont.)

	Deviation Started		Deviation Ended					Did you attach an excess emission form?
No.	Date	Time	Date	Time	Pollutant	Monitoring Method	Amount of Emissions	
1								☐ **Yes** ☐ **No**
2								☐ **Yes** ☐ **No**
3								☐ **Yes** ☐ **No**
4								☐ **Yes** ☐ **No**
5								☐ **Yes** ☐ **No**

Section 21

Addendum for Landfill Applications

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

Landfill Applications are not required to complete Sections 1-C Input Capacity and Production Rate, 1-E Operating Schedule, 17 Compliance Test History, and 18 Streamline Applications. Section 12 – PSD Applicability is required only for Landfills with Gas Collection and Control Systems and/or landfills with other non-fugitive stationary sources of air emissions such as engines, turbines, boilers, heaters. All other Sections of the Universal Application Form are required.

EPA Background Information for MSW Landfill Air Quality Regulations:
https://www3.epa.gov/airtoxics/landfill/landflpg.html

NM Solid Waste Bureau Website: https://www.env.nm.gov/swb/

Not applicable.

Section 22: Certification

Company Name: HARVEST MIDSTREAM

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

Signed this 9TH day of NOVEMBER, 2020, upon my oath or affirmation, before a notary of the State of NEW MEXICO.

*Signature — Date: 11/9/2020

TRAVIS JONES — Printed Name

EHS MANAGER — Title

Scribed and sworn before me on this 9 day of November, 2020.

My authorization as a notary of the State of New Mexico expires on the 31st day of August, 2021.

Notary's Signature — Date: 11/9/2020

Jodi L. Bohannon — Notary's Printed Name

Official Seal
JODI L BOHANNON
Notary Public
State of New Mexico
My Comm. Expires 8/31/21

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