January 26, 2021

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

Re: Application to Revise New Source Review (NSR) **Construction Permit 1546-M3-R6**
Harvest Four Corners, LLC – Trunk N Compressor Station, A.I. No. 1303

Dear Mr. Schooley,

On behalf of Harvest Four Corners LLC (Harvest), Cirrus Consulting is pleased to submit this application to the New Mexico Air Quality Bureau (NMAQB) to revise Trunk N Compressor Station Construction Permit 1546-M3-R6. The proposed changes to the construction permit include

- Implement various compressor engine location changes, including the onsite re-positioning of 3 units, the removal of 1 unit, the removal and replacement of 1 unit with an identical engine, and installation of 2 permitted engines in empty slots. No permit emission increases are proposed for the engines;

- Various permitted natural gas compressor installments and exchanges, resulting in an overall increase in installed compressor horsepower; and

- Increases in the Potential To Emit (PTE) for volatile organic compounds (VOC) from the five triethylene glycol (TEG) dehydrators.

Note the increase in dehydrator VOC PTE was discovered during the preparation of the recent Title V Operating Permit (P198-R3) renewal application, submitted to the NMAQB in November 2020. The increase in PTE is solely due to changes in the VOC content of the natural gas at the facility, and does not result not from any operational changes. No permit limits have been exceeded.

This 20.2.72.219.D(1) NMAC construction permit revision application is submitted for concurrent review with the application to modify and renew Title V Operating Permit P098-R3, submitted in November 2020. In accordance with the instructions in the Universal Air Quality Permit Application, one hard copy application original, one hard copy application review copy, and two CDs containing the application electronic files are included.

If any additional information is needed with regard to this application, please contact Ms. Monica Smith of Harvest at (505) 632-4625.

Sincerely,

Lisa Killion

Lisa Killion
Sr. Environmental Scientist

Enclosures – One hard copy Trunk N Compressor Station NSR Construction Permit Revision application original
One hard copy application review copy
Two (2) CDs containing application electronic files

cc: Monica Smith, Harvest (electronic copy)
Bobby Myers, Cirrus (electronic copy)

NEW MEXICO 20.2.72.219.D(1) NMAC APPLICATION TO REVISE NSR CONSTRUCTION PERMIT 1546-M3

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

January 2021

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The Trunk N Compressor Station permit application was revised on 02/24/2021. The revised pages are at the end of the document.

Urshula Bajracharya
Permit Writer,
AQB-NMED.

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.: 2485 in the amount of $500.00

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

☐ 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: **20.2.72.219.D(1) 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 #: **1546-M3**
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: P198-R3 (as revised)
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 (as revised)
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: State of Colorado (1.9 km); and Southern Ute Tribe (1.9 km), Navajo Nation Tribal Lands (40.2 km), and Jicarilla Apache Tribe (38.6 km).				
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	RICE moved to Unit 1 slot from the Unit 5 slot
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	RICE moved to Unit 2 slot from the Unit 4 slot
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 from Unit 5 slot to the 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, Construction Permit 1546-M3, Table: Allowable SSM and Malfunction Emissions, Unit "1a-8a" 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).

Please see end of the document for revised Table 2-E.

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	4.5	19.8	8.0	35.0	3.0	13.2	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
2	4.5	19.8	8.0	35.0	3.0	13.2	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
3	4.5	19.8	8.0	35.0	3.0	13.2	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
4	4.5	19.8	8.0	35.0	3.0	13.2	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
5	4.5	19.8	8.0	35.0	3.0	13.2	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
6	4.5	19.8	8.0	35.0	3.0	13.2	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
7	4.5	19.8	8.0	35.0	3.0	13.2	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
8	4.5	19.8	8.0	35.0	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	4.30E-02	0.190	8.8E-03	3.8E-02	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	4.30E-02	0.190	8.8E-03	3.8E-02	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	4.30E-02	0.190	8.8E-03	3.8E-02	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	0.188	4.5E-02	2.0E-01	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	0.188	4.5E-02	2.0E-01	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	36.21	159.35	64.12	280.50	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	Exempt source under 20.2.72.202.B(2) NMAC (Vapor pressure < 0.2 PSI)					
T11-T18	40400313	Used Oil	Used Oil	Exempt source under 20.2.72.202.B(2) NMAC (Vapor pressure < 0.2 PSI)					
T19-T23	40705218	TEG	Triethylene Glycol (TEG)	Exempt source under 20.2.72.202.B(2) NMAC (Vapor pressure < 0.2 PSI)					
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	Exempt source under 20.2.72.202.B(2) NMAC (Vapor pressure < 0.2 PSI)					
T27	31000299	Antifreeze	Ethylene Glycol	Exempt source under 20.2.72.202.B(2) NMAC (Vapor pressure < 0.2 PSI)					
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	Exempt source under 20.2.72.202.B(2) NMAC (Vapor pressure < 0.2 PSI)						
T11-T18		Used Oil	N/A	FX	12	1.9	Exempt source under 20.2.72.202.B(2) NMAC (Vapor pressure < 0.2 PSI)						
T19-T23		TEG	N/A	FX	12	1.9	Exempt source under 20.2.72.202.B(2) NMAC (Vapor pressure < 0.2 PSI)						
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	Exempt source under 20.2.72.202.B(2) NMAC (Vapor pressure < 0.2 PSI)						
T27		Antifreeze	N/A	FX	12	1.9	Exempt source under 20.2.72.202.B(2) NMAC (Vapor pressure < 0.2 PSI)						
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								-	120,664.1

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

[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 an air quality permit revision to its Trunk N Compressor Station (Trunk N) New Source Review (NSR) Construction Permit 1546-M3 (issued March 23, 2011) as administratively revised through permit 1546-M3-R6. This construction permit revision application is submitted under section 20.2.72.219.D(1) of the New Mexico Administrative Code (NMAC).

The facility also operates under the authority of Title V Operating Permit P198-R3, issued November 22, 2016, as administratively revised (including a change in ownership to Harvest Four Corners, LLC in October 2018). A Title V Operating Permit renewal application was submitted in November of 2020. This construction permit revision application is submitted for concurrent review.

The Trunk N Compressor Station is a production gathering field compressor station that pressurizes and dehydrates natural gas for transport through natural gas pipelines. Construction Permit 1546-M3 allows the following regulated equipment/sources:

- Eight (8) uncontrolled Waukesha L7042GL natural gas-fired, spark ignition (SI), reciprocating internal combustion engines (RICE), 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, units 9, 10 and 11;
- Two (2) 20-mmcfd TEG dehydrators, units 12 and 13; and

- Up to 10 tons per year (tpy) of facility-wide malfunction emissions of VOC, unit M1.

Unregulated/exempt emission sources at the facility include produced water tanks (T24 and T25) and other miscellaneous exempt 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. Exemptions that are based on 20.2.72.202.B(5) NMAC (i.e., any emissions unit, operation, or activity that has a potential emission rate of no more than one-half (1/2) ton per year of any pollutant for which a national or New Mexico ambient air quality standard has been set or one-half (1/2) ton per year of any VOC) is demonstrated through emission calculations in section 6.

The facility 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* with regard to the collection of fugitive emission sources at the facility.

The proposed construction permit revisions are as follows:

Identical Waukesha 7042GL Engine Exchanges

Harvest operates a fleet of existing natural gas compressor packages in the Four Corners Area field natural gas production basin which are “placed” (installed) at various compressor station facilities throughout the region, including at the Trunk N Compressor Station. The Waukesha L7042GL compressor driver engines are from an existing fleet with manufacture and construction dates that pre-date December 19, 2002.

An identical engine replacement (“engine swing”) may be performed when preventative maintenance is due on an engine that serves as a compressor driver (compressor engine). At the Trunk N facility, an engine swing involves removal of a Waukesha 7042GL compressor engine from its associated compressor package/skid, and its replacement with an identical Waukesha 7042GL engine, thus avoiding

disruption of engine service and compression. The removed engine is removed offsite for maintenance, and subsequently placed into the fleet for future service at either at the original location or at a different Harvest facility.

Table 3-1 (on the last page of this application section) presents a detailed summary of the identical engine exchanges, compressor, and package/skid exchanges. Each of the updated engine serial numbers in Table 3-1 are the result of an engine that is either

- Repositioned from one existing permitted slot into another existing permitted slot at the facility; or
- An engine brought in from the fleet of existing Waukesha 7042GL engines; or
- An existing unit moved to the Trunk N Compressor Station directly from another Harvest facility.

The act of repositioning or relocating an engine does not trigger any new NESHAP or NSPS regulatory requirements on that engine.

Compressor and Package/Skid Exchanges

Compressors are used to pressurize gathering field natural gas for pipeline transport. The compressors are powered by the compressor engines. As with their associated Waukesha 7042GL engine-drivers, the Ariel JGK-4 reciprocating compressors utilized at Harvest facilities in the Four Corners Area region generally predate the regulatory applicability dates of Title 40 of the Code of Federal Regulations, Part 60 (40 CFR 60), *Standards of Performance for New Stationary Sources (NSPS)* subparts OOOO and its update, subpart OOOOa (for *Crude Oil and Natural Gas Facilities*). The compressors may be of single-stage or multi-stage design.

Each compressor engine, each reciprocating compressor (frame) and each package/skid has a unique identification number or serial number. When an engine is removed from a package/skid for an identical engine exchange (engine swing), the compressor usually remains mounted on the package/skid from which the engine was removed. The replacement engine is subsequently installed on the package/skid and used to drive the existing compressor. Under some circumstances, a compressor may be exchanged or replaced with a compressor from another facility (or storage) during engine swing. With this application, several reciprocating compressors at the Trunk N Compressor Station are being exchanged with existing reciprocating compressors. (Note the Waukesha 7042GL compressor-driver is not affected by a compressor exchange, and no new regulatory requirements for the engine are triggered.)

NSPS subpart OOOOa provisions applicable to fugitive emissions provide that a ‘modification’ under the regulation 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. Thus, NSPS subpart OOOOa is triggered with regard to the collection of fugitive emissions components equipment at the facility (§60.5365a(j)), including monitoring, recordkeeping and reporting requirements and

demonstration of initial and continuous compliance. However, NSPS provisions directly applicable to reciprocating compressors themselves do not apply because the compressors are existing units, either repositioned from within the facility or brought to Trunk N Compressor Station from another Harvest facility. (Relocation does not trigger regulatory applicability.)

A detailed summary of the compressor and package/skid exchanges included in this application is presented in Table 3-1, on the last page of this application section.

Increase of TEG Dehydrator VOC Emission Rates

The Potential To Emit (PTE) calculations for the three 12-mmcfd TEG dehydrator still vents (units 9a, 10a and 11a) and 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 each, respectively, including a +25 percent [%] safety factor. Therefore, dehydrator still vent emissions (both before and after safety factor application) are no longer exempt units under 20.2.72.202.B(5) NMAC.

The increase in VOC PTE is not due to any operational changes to the facility; the increase is due solely to an increase of VOC in the field natural gas transferred to the facility via gathering pipelines from the various independent producers. The updated composition of the field natural gas (including VOC content) is based on a recent natural gas extended analysis sampled at the facility. The TEG dehydrators are not yet installed, and there has been no exceedance of the permitted VOC emission limits.

The emissions from the project proposed in this application are below the Table 2 – [PSD] Significant Emission Rates for NO_X, CO, VOC and particulate (20.2.74.502 NMAC).

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

Table 3-1 presents a detailed summary of the identical engine exchanges, compressor, and package/skid exchanges.

Table 3-1. Summary of Engine, Package/Skid, and Compressor Placements at the Trunk N Compressor Station

Unit #	Current Engine Serial #	Current Engine Date of Engine Manufacture/ Reconstruction	Current Package # (Compressor Skid #)	Current Compressor Serial #	**UPDATED** Engine Serial #	**UPDATED** Date of Engine Manufacture/ Reconstruction	**UPDATED** Package # (Compressor Skid #)	**UPDATED** Compressor Serial #	**UPDATED** Compressor Manufacture/ Reconstruction Date
1	TBD	TBD	TBD	TBD	C-11898/1[a]	4/15/96	76769 **From Martinez**	F-13305	Pre-2010[f]
2	C-12554/2	2/3/98	76735	F-12819[f]	C-10795/2[b]	5/14/93	76770 **From Laguna**	F-8363	Pre-2010[f]
3	C-11899/1	4/25/96	76736	F-12821[f]	No changes	No changes	76820 **From Trunk J**	F-13451	Pre-2010[f]
4	C-10795/2[b]	5/14/93	76737	F-12824[f]	TBD	TBD	TBD	TBD	TBD
5	C-11898/1[a]	4/15/96	76738	F-12823[f]	C-10607/15[c] **From Laguna**	6/8/92	76771 **From Laguna**	F-13307	Pre-2010[f]
6	TBD	TBD	TBD	TBD	C-11100/6[d]	2/21/94	76788 **From Carracas**	F-13309	Pre-2010[f]
7	TBD	TBD	TBD	TBD	C-12553/2[d]	2/3/98	76789 **From Carracas**	F-13310	Pre-2010[f]
8	TBD	TBD	TBD	TBD	361723[e] **Returned to Trunk N**	3/2/81	76831 **From Martinez**	F-13539	Pre-2010[f]

[a] Unit 5 engine SN C-11898/1 is repositioned within the facility to the unit 1 slot. An identical equipment exchange for unit 5 slot follows (see footnote 'c', below).

[b] Unit 4 engine SN C-10795/2 is repositioned within the facility to the unit 2 slot.

[c] Following the repositioning of C-11898/1 within the facility, an Identical equipment exchange follows, with placement of engine SN C-10607/15 in the unit 5 slot.

[d] The engines being installed at units 6 and 7 are from the existing fleet of Waukesha 7042GL engines.

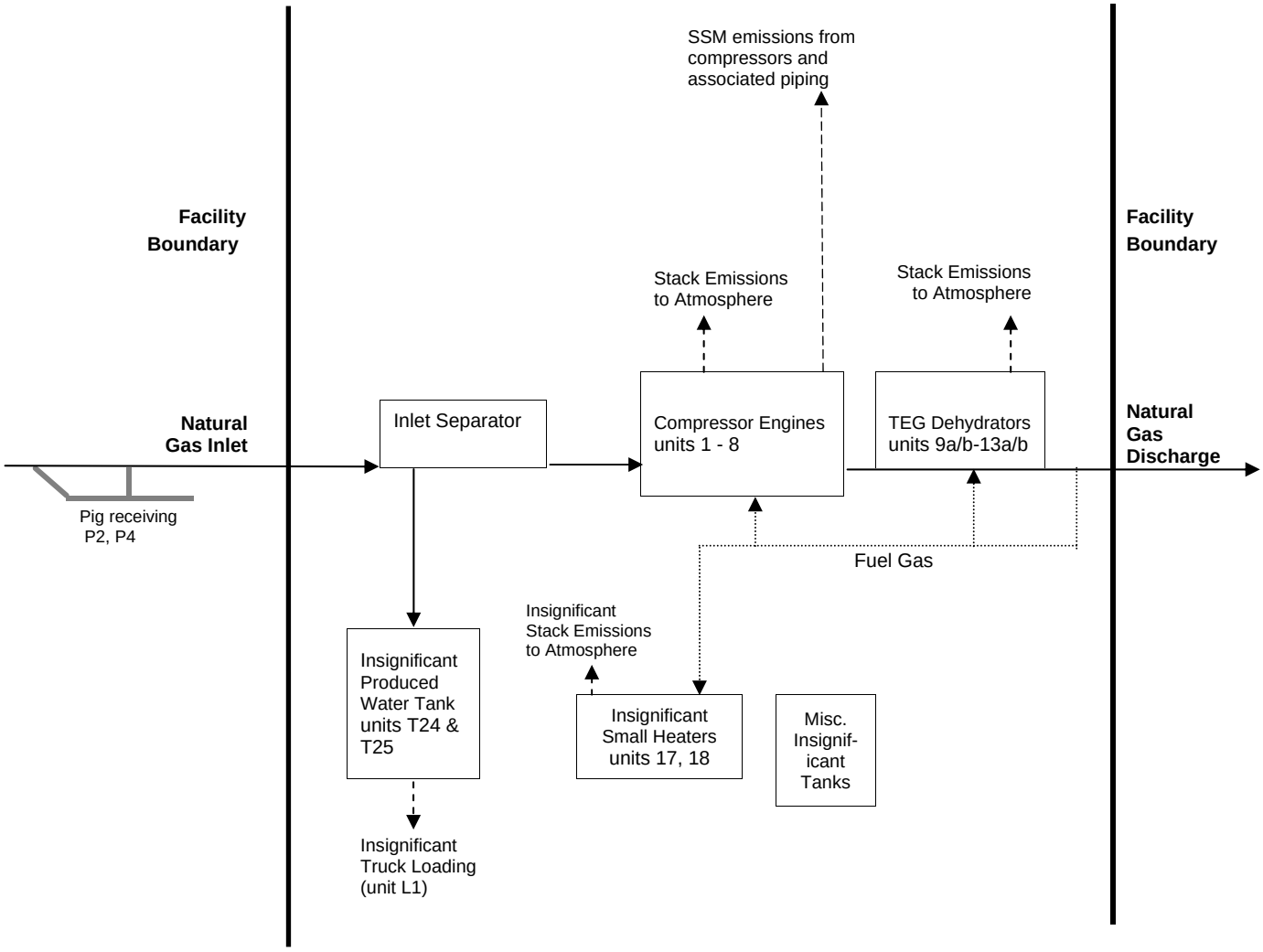
[e] Engine SN 361723 is repositioned within facility to the unit 8 slot following offsite maintenance.

[f] The 'Current Compressor Serial #', and both the Current and UPDATED columns for 'Compressor Manufacture/Reconstruction Date' are from 'Williams Engine and Frame Data 02-11-10.xls' previous owner records. According to the 2010 data, all of the compressor units installed at the Trunk N Compressor Station pre-date the 2010 data compilation date.

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).

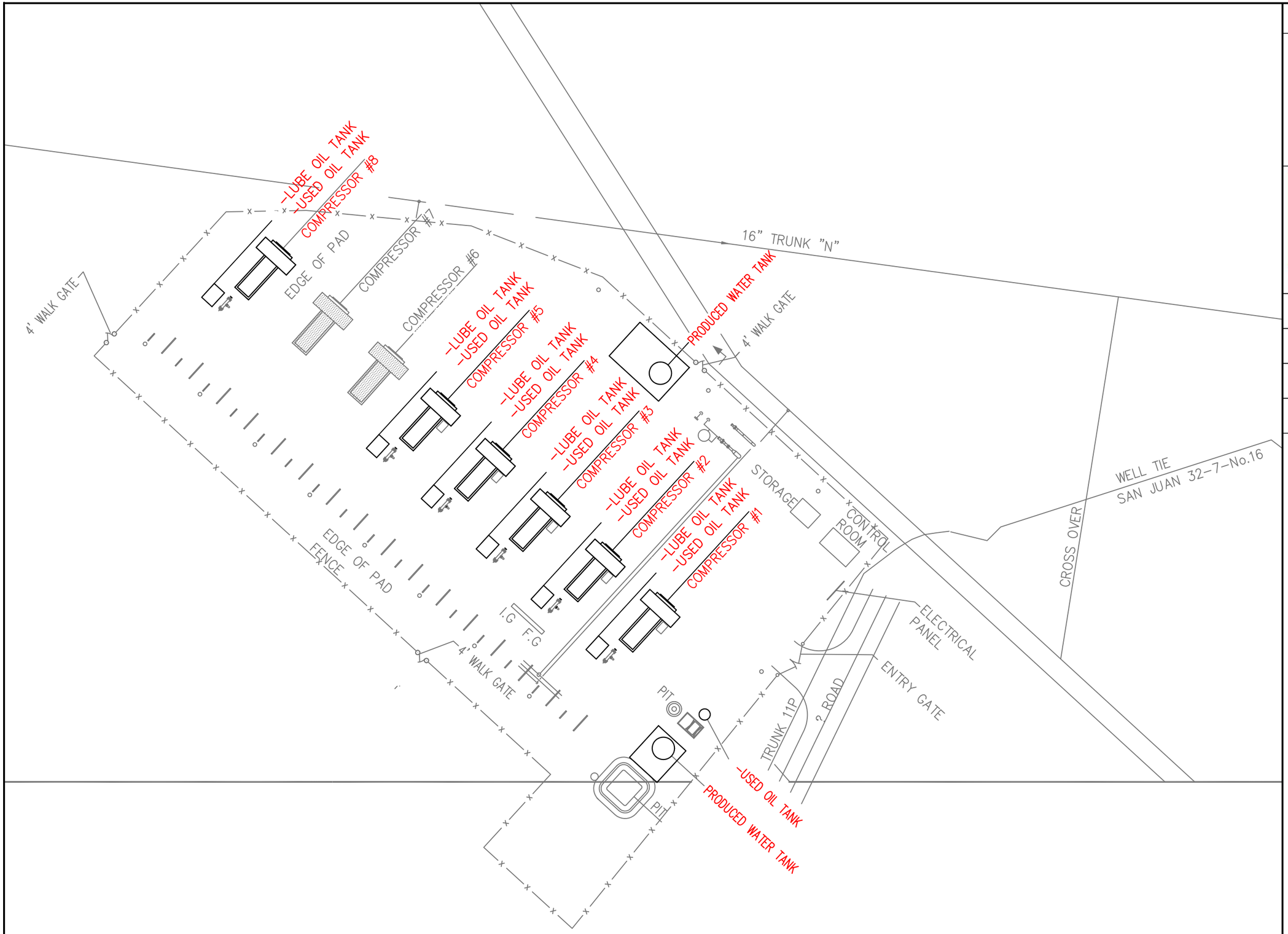
FIGURE 2

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 analyses 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, an increase in the permitted emission rates is requested in Table 2-E of this application.

Emissions of NO_X, CO, VOC and SO_2 from dehydrator reboiler units 9a, 10b, 11b, 12b, and 13b, are calculated based on the 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.

During startup, a 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. The reboiler is shut down in conjunction with its 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 (Exempt)

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 0.5 tpy for any regulated pollutant, the storage tank heaters are exempt under 20.2.72.202.B(5) NMAC.

Fugitive Emissions (Exempt)

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 0.5 tpy. Therefore, the facility-wide fugitive emissions are exempt under 20.2.72.202.B(5) NMAC

Miscellaneous Exempt Storage Tanks

Each of the storage tanks at Trunk N are considered exempt under either 20.2.72.202.B(2) or 20.2.72.202.B(5) NMAC. Where exemption is based on emissions less than 0.5 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 0.5 ton per year. Therefore, the produced water storage tanks are exempt under 20.2.72.202.B(5) NMAC.

- 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 0.2 pounds per square inch (psi); therefore, the lube oil and used oil storage tanks are exempt under 20.2.72.202.B(2) NMAC.

- 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 0.2 psi; therefore, the wastewater storage tank is exempt under 20.2.72.202.B(2) NMAC.

- The vapor pressure of triethylene glycol (TEG) is less than 0.2 psi; therefore, the TEG storage tanks (units T19 through T23) are exempt under 20.2.72.202.B(2) NMAC.

- The antifreeze storage tank (unit T27) contains ethylene glycol (glycol) and water. The vapor pressure of ethylene glycol is less than 0.2 psi; therefore, the antifreeze storage tank is exempt under 20.2.72.202.B(2) NMAC.

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 (Exempt)

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 is well below 0.5 tpy; therefore, the unit L1 truck loading activities are exempt under 20.2.72.202.B(5) NMAC.

Pig Receiving (Exempt)

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 is well below 0.5 tpy; therefore, the unit PR2, PR4 pig receiving activities are exempt under 20.2.72.202.B(5) NMAC.

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

	(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 - *Exempt source demonstration*
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 - *Exempt source demonstration*
Description: Storage tank emissions summary

Source	Description	Calculated Raw Uncontrolled Working / Breathing (W/B) Losses (TANKS 4.09d) (lb/yr)	Calculated Raw Uncontrolled Working / Breathing (W/B) Losses (TANKS 4.09d) (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 - *Exempt 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 *- Exempt source demonstration*
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 - *Exempt 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, hr/yr	Emission Rates			
		CO2, pph	CH4, pph		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

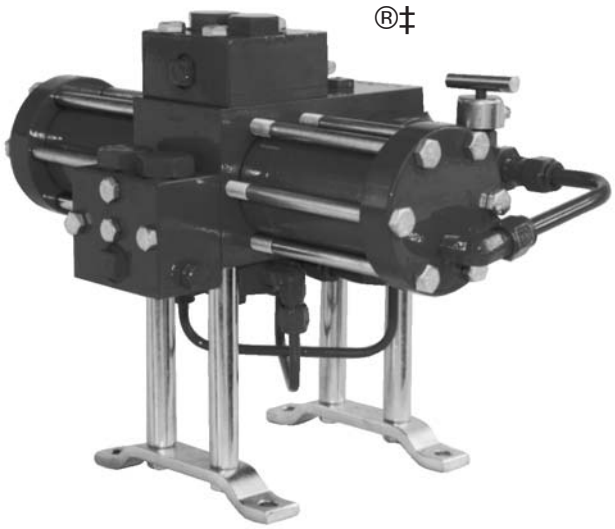
The table shown below gives the stack emissions for our larger dehydrators:

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)

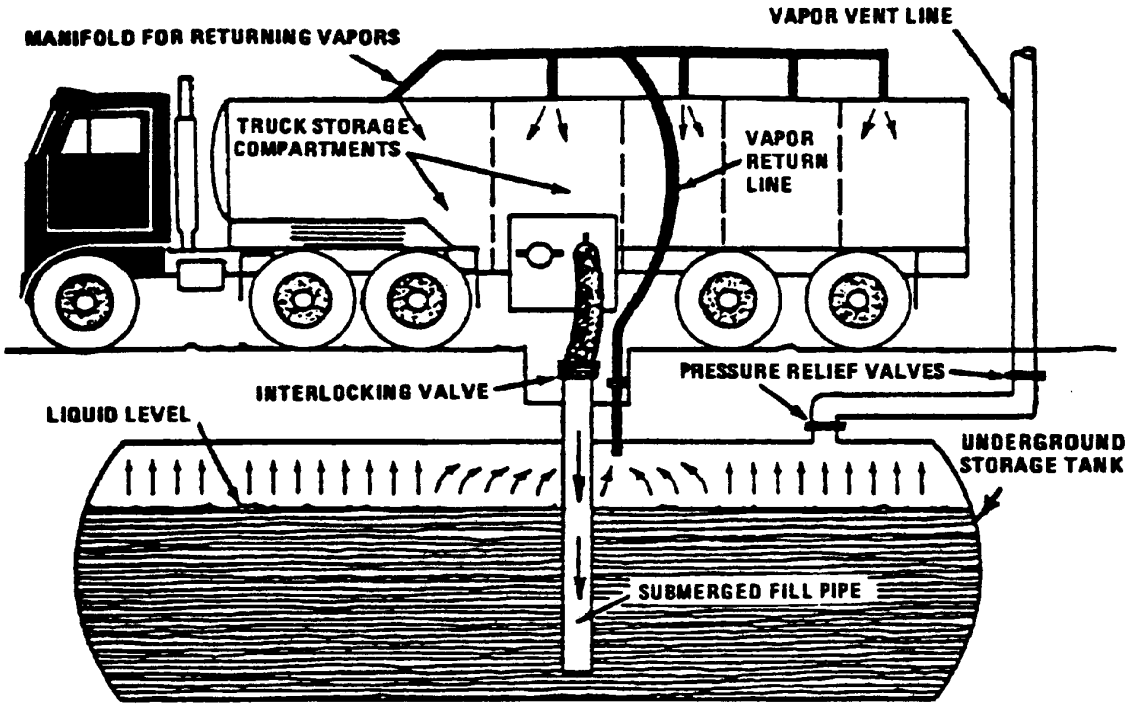


Figure 5.2-5. Tank truck unloading into a service station underground storage tank and practicing "vapor balance" form of emission control.

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

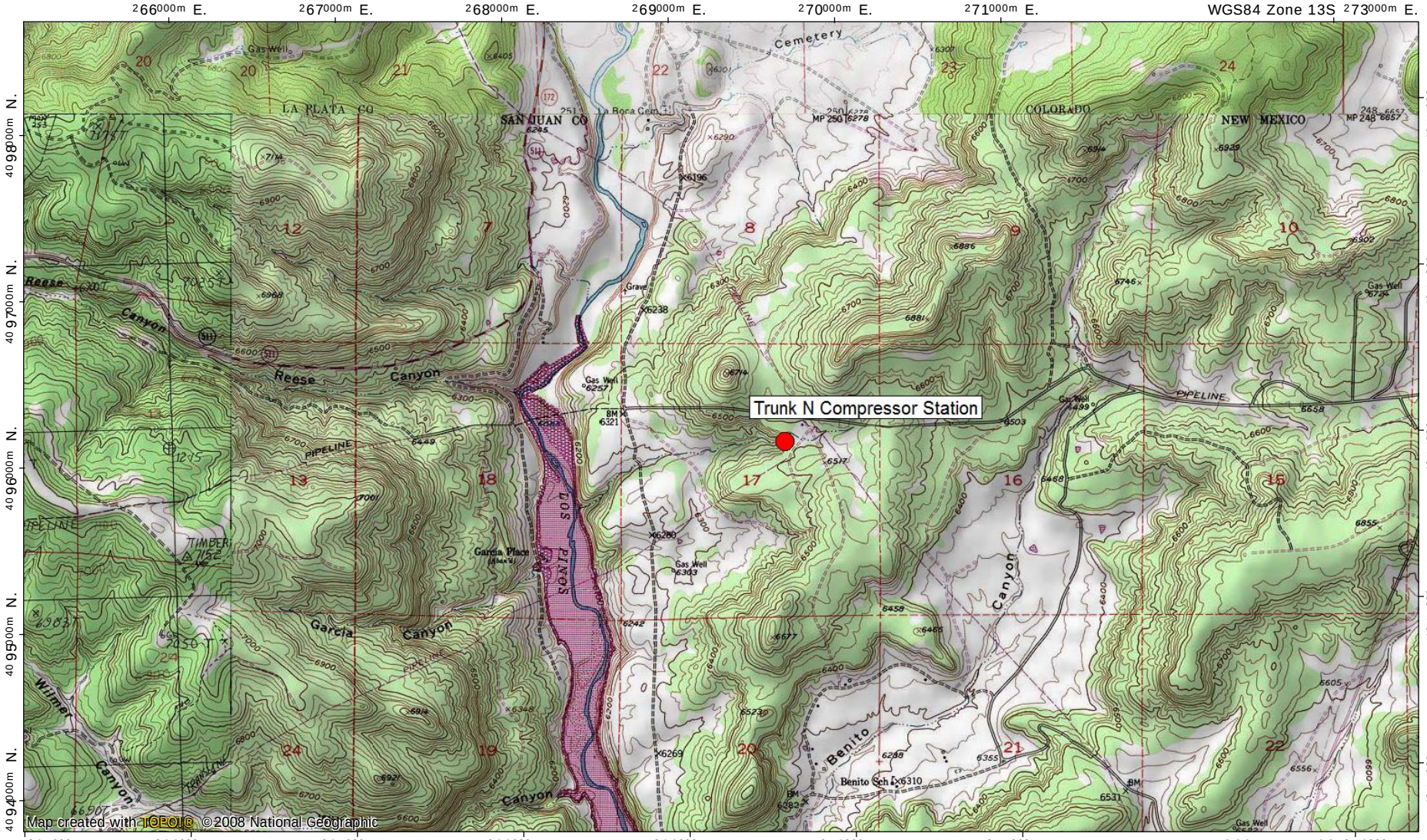
Map(s)

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



WGS84 Zone 13S

0.0 0.5 1.0 miles
0.0 0.5 1.0 1.5 km

TN MN 9°

06/03/20

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.

San Juan County is classified as an "A" county, according to the New Mexico Department of Finance and Administration (http://www.nmdfa.state.nm.us/County_Classifications.aspx). As such, according to 20.2.72.203.B(1)(a) NMAC, public notice must be provided by certified mail to the owners of record within one hundred (100) feet of the property on which the facility is located.

Table 1 identifies the land owners within 100 feet of the Trunk N Compressor Station that received public notice letters of the proposed permit modification. Land owner information was obtained from the San

Juan County Assessor's Office online parcel mapping viewer at https://webmaps.sjcounty.net/portal/apps/webappviewer/index.html?id=e970ec2c29e74b37b8440dfe364c3dbf .

Table 1

Land Owners Receiving Public Notice Letters Within 100 Feet of the Property on Which the Trunk N Compressor Station is Located
Federal Bureau of Land Management (BLM)

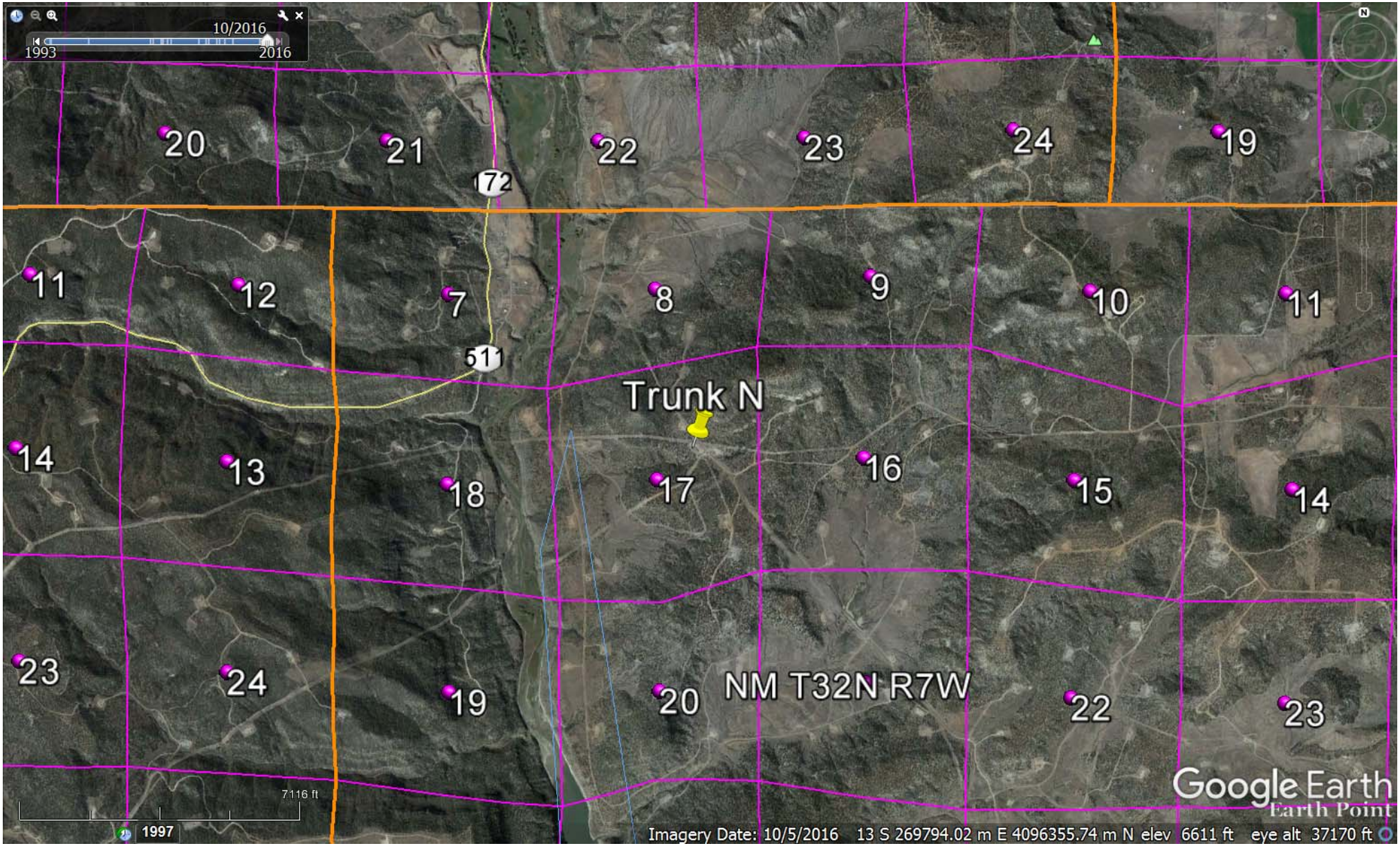
20.2.72.203.B(2) NMAC requires public notice be provided by certified mail to all municipalities, counties in which the facility is located, and to municipalities, counties and Indian Tribes within a 10 mile radius of the property on which the facility is located.

Table 2 identifies the counties, municipalities and tribes located within ten miles of the Trunk N Compressor Station that received public notice letters.

Table 2

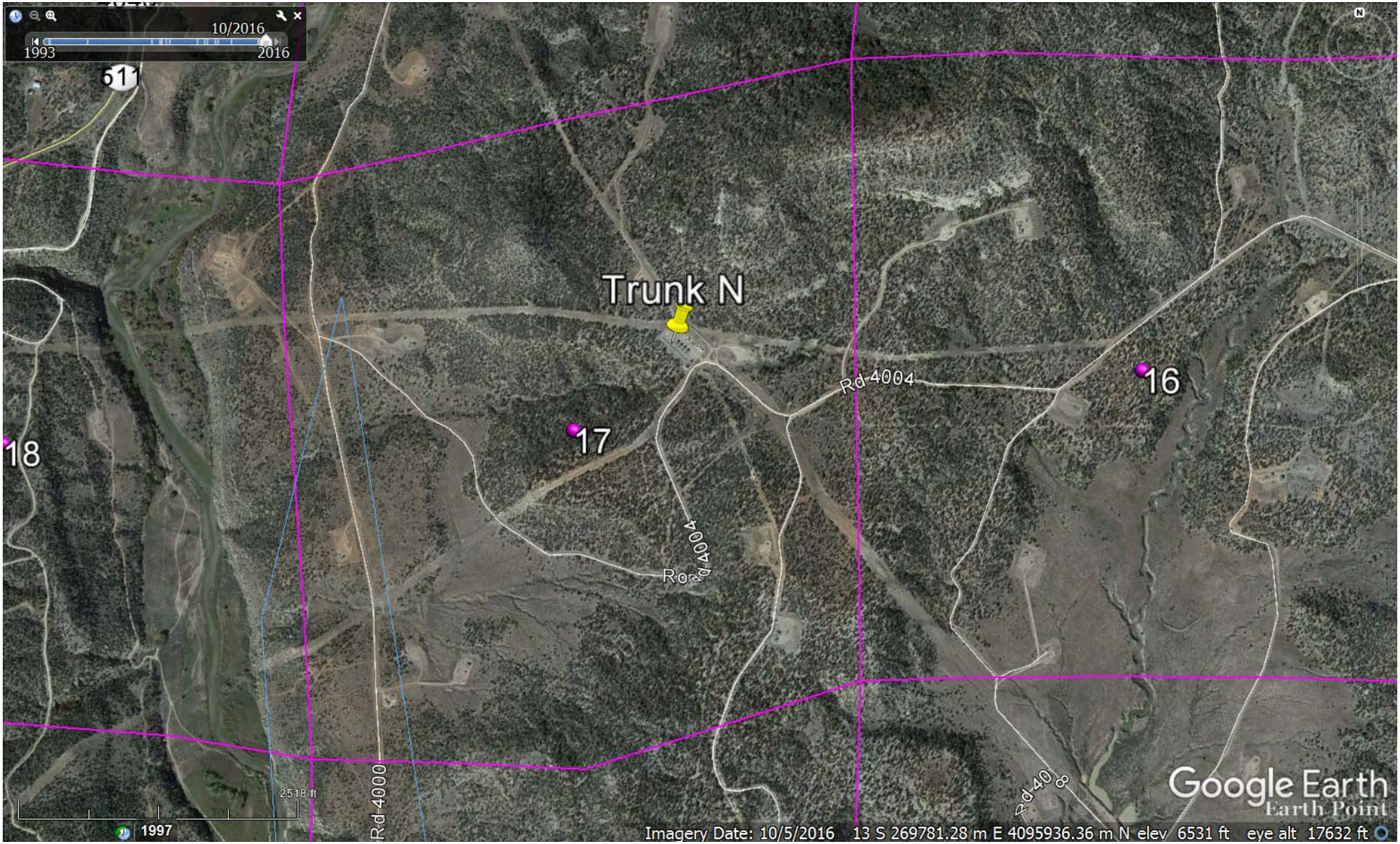
Municipalities, Counties and Tribes Within 10 Miles of the Trunk N Compressor Station Receiving Public Notice Letters	
Municipalities	**Addressed to**
None	- -
Counties	**Addressed to**
San Juan County	County Clerk
Rio Arriba County	County Clerk
Tribes	**Addressed to**
Southern Ute Tribe	Environmental Programs Division

Location of Trunk N Compressor Station within Township 32 N, Range 07 W, Section 17:



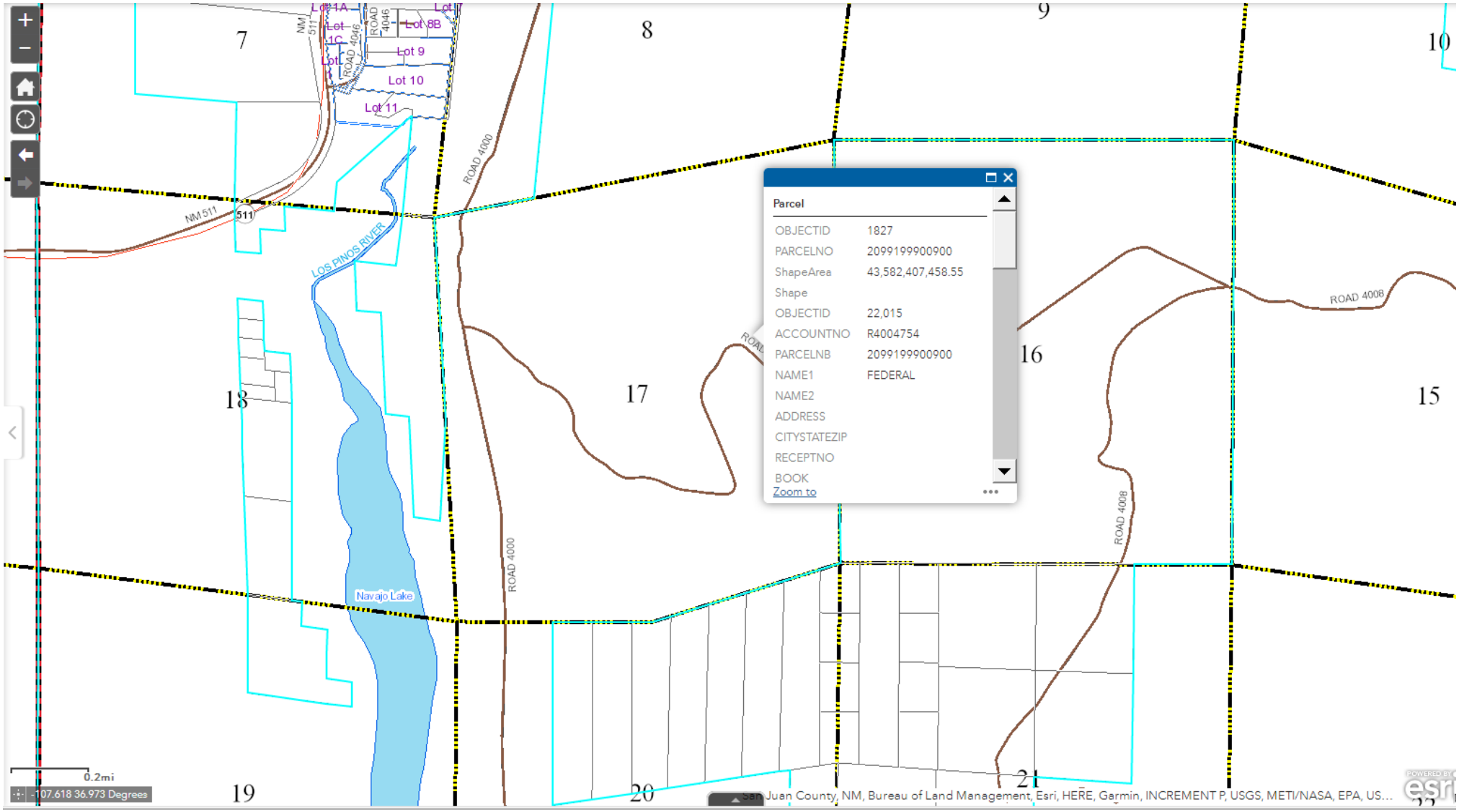
Source: Google Earth, Dec. 1, 2020.

Location of Trunk N Compressor Station within Section 17 of Township 32 N, Range 07 W:



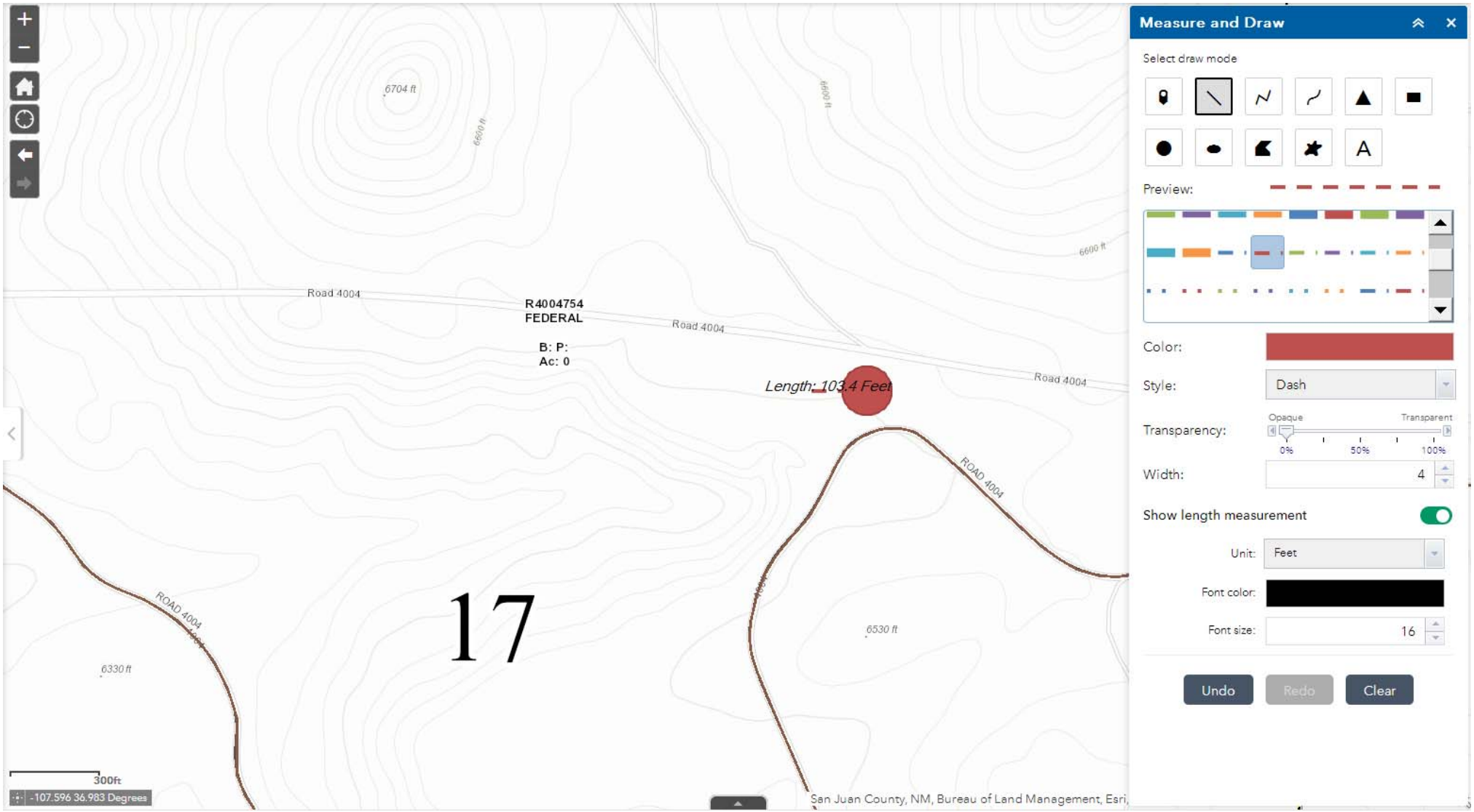
Source: Google Earth, Dec. 1, 2020.

The parcel on which the Trunk N Compressor Station is located is federal land managed by the Federal Bureau of Land Management (BLM):



Source: San Juan County Assessor's Map, San Juan County Geohub. Dec. 1, 2020.
https://webmaps.sjcounty.net/portal/apps/webappviewer/index.html?id=e970ec2c29e74b37b8440dfe364c3dbf

Sole parcel ownership within 100 feet of the Trunk N Compressor Station is the BLM:



Source: San Juan County Assessor's Map, San Juan County Geohub. Dec. 1, 2020.
https://webmaps.sjcounty.net/portal/apps/webappviewer/index.html?id=e970ec2c29e74b37b8440dfe364c3dbf

Harvest Four Corners, LLC
1755 Arroyo Drive
Bloomfield, NM 87413
Phone: 505/632-4600
Fax: 505/209632-4782
harvestmidstream.com

CERTIFIED MAIL 7011 3500 0001 5644 4865

January 15, 2021

Bureau of Land Management
6251 College Blvd., Suite A
Farmington, NM 87402

Dear Madam or Sir,

Harvest Four Corners, LLC (HFC) announces its application to the New Mexico Environment Department (NMED) for an air quality permit modification for its natural gas gathering and compression station known as the **Trunk N Compressor Station**. The expected date of application submittal to the Air Quality Bureau is on or near January 25, 2021.

The exact location of the facility is latitude 36° 59' 00" and longitude -107° 35' 15", approximately 13.7 miles north-northeast of the U.S. Post Office in the town of Navajo Dam in San Juan County.

The following permit modifications are proposed:

- Implement various compressor engine location changes, including the onsite re-positioning of 3 units, the removal of 1 unit, the removal and replacement of 1 unit with an identical engine, and installation of 2 permitted engines in empty slots. No permit emission increases are proposed for the engines;
- Various permitted natural gas compressor installments and exchanges, resulting in an overall increase in installed compressor horsepower; and
- Increase the permitted volatile organic compound (VOC) emissions from five (5) natural gas triethylene glycol dehydration units, from 0.5 tons per year (tpy) each to 2.4 tpy each.

The estimated facility total maximum quantities of any regulated air contaminant are presented below in pound per hour (pph) and tons per year (tpy), and may change slightly during the course of the Department's review:

Pollutant:	Pounds per hour	Tons per year
Nitrogen Oxides (NO_X)	22	97
Carbon Monoxide (CO)	67	292
Volatile Organic Compounds (VOC)	29	129
Particulate Matter (PM)	1	4
Particulate Matter less than 10 um diameter (PM_{10})	1	4
Particulate Matter less than 2.5 um diameter ($PM_{2.5}$)	1	4
Total sum of all Hazardous Air Pollutants (HAPs)	5.6	24.6
Green House Gas Emissions as Total CO_2e	n/a	120,664

The standard and maximum operating schedule of the facility will continue to be from midnight to midnight (24 hours a day), seven days a week, 52 weeks a year.

The owner/operator of the facility is Harvest Four Corners LLC, 1755 Arroyo Drive, Bloomfield, New Mexico, 87413.

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

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

Attención

Este es un aviso de la oficina de Calidad del Aire del Departamento del Medio Ambiente de Nuevo México, acerca de las emisiones producidas por un establecimiento en esta área. Si usted desea información en español, por favor comuníquese con esa oficina al teléfono 505-476-5557.

Sincerely,

Lisa Killion for

Monica Smith
Environmental Specialist

Harvest Four Corners LLC
1755 Arroyo Drive
Bloomfield, NM 87413

Notice of Non-Discrimination

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

Harvest Four Corners, LLC
1755 Arroyo Drive
Bloomfield, NM 87413
Phone: 505/632-4600
Fax: 505/209632-4782
harvestmidstream.com

CERTIFIED MAIL 7011 3500 0001 5644 4896

January 15, 2021

Air Quality Program
Southern Ute Indian Tribe
P.O. Box 737
Ignacio, CO 81137

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Sincerely,

Lisa Killion for

Monica Smith
Environmental Specialist

Harvest Four Corners LLC
1755 Arroyo Drive
Bloomfield, NM 87413

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Total Postage & Fees	$0.55
	$4.10

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Total Postage & Fees	$0.55
	$4.10

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City, State, ZIP+4: Tierra Amarilla, NM 87575

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Return Receipt Fee (Endorsement Required)	$0.00
Restricted Delivery Fee (Endorsement Required)	$0.00
Total Postage & Fees	$0.55
	$4.10

CORONADO STATION JAN 21 2021 SANTA FE NM 87505

0501 20

Postmark Here

01/21/2021

Sent To

Street, Apt. No.; or PO Box No.: Air Quality Program, Southern Ute Indian Tribe, P.O. Box 737

City, State, ZIP+4: Ignacio, CO 81137

PS Form 3800, August 2006 See Reverse for Instructions

7011 3500 0001 5644 4896

NOTICE OF AIR QUALITY PERMIT APPLICATION

Harvest Four Corners, LLC announces its application to the New Mexico Environment Department (NMED) for an air quality permit modification for its natural gas pipeline gathering and compression station known as the **Trunk N Compressor Station**. The expected date of application submittal to the Air Quality Bureau is on or near January 25, 2021.

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Volatile Organic Compounds (VOC)	29	129
Particulate Matter (PM)	1	4
Particulate Matter less than 10 um diameter (PM10)	1	4
Particulate Matter less than 10 um diameter (PM2.5)	1	4
Total sum of all Hazardous Air Pollutants (HAPs)	5.6	24.6
Green House Gas Emissions as Total CO2e	n/a	120,664

The standard and maximum operating schedules of the facility will be from midnight to midnight, 7 days a week, 52 weeks per year

The owner and/or operator of the Facility is:

Harvest Four Corners, LLC, 1755 Arroyo Drive, Bloomfield, NM 87413

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

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

General information about air quality and the permitting process can be found at the Air Quality Bureau's web site. The regulation dealing with public participation in the permit review process is 20.2.72.206 NMAC. This regulation can be found in the "Permits" section of this web site.

Attención

Este es un aviso de la oficina de Calidad del Aire del Departamento del Medio Ambiente de Nuevo México, acerca de las emisiones producidas por un establecimiento en esta área. Si usted desea información en español, por favor comuníquese con esa oficina al teléfono 505-476-5557.

Notice of Non-Discrimination

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

LOCAL NEWS

New COVID-19 cases declining in NM

Mike Stucka
USA TODAY NETWORK

New Mexico reported far fewer coronavirus cases in the week ending Sunday, adding 7,480 new cases. That's down 23.4% from the previous week's toll of 9,763 new cases of the virus that causes COVID-19.

New Mexico ranked No. 31 among the states where coronavirus was spreading the fastest on a per-person basis, a USA TODAY Network analysis of Johns Hopkins University data shows. In the latest week the United States added 1,523,301 reported cases of coronavirus, a decrease of -11.1% from the week before. Across the country, 9 states had more cases in the latest week than they did in the week before.

The share of New Mexico test results that came back positive was 11.7% in the latest week, compared with 11.2% in the week before, a USA TODAY Network analysis of COVID Tracking Project data shows.

Across New Mexico, cases fell in 27 counties, with the best declines in Bernalillo, San Juan and Lea counties.

The share of New Mexico test results that came back positive was 11.7% in the latest week, compared with 11.2% in the week before, a USA TODAY Network analysis of COVID Tracking Project data shows.

In the latest week, 63,943 tests were administered; a week earlier, that figure was 87,407. Experts say it is important to look at the share of tests that come back positive, not just case counts, to get a better idea of whether the rate of new infections is changing or if differences in testing are playing a role.

The World Health Organization says places should be conducting enough tests to have fewer than 5% coming back positive.

Places where the percentage is higher could struggle to complete contact tracing soon enough to prevent spread of the virus.

Within New Mexico, the worst weekly outbreaks on a per-person basis were in Rio Arriba, Luna and Eddy counties. Adding the most new cases overall were Bernalillo County, with 1,907 cases; Dona Ana County, with 960 cases; and San Juan County, with 644. Weekly case counts rose in four counties from the previous week.

The worst increases from the prior week's pace were in Luna, Lincoln and San Miguel counties.

In New Mexico, 183 people were reported dead of COVID-19 in the week ending Sunday. In the week before that, 198 people were reported dead.

A total of 163,637 people in New Mexico have tested positive for the coronavirus since the pandemic began, and 2,932 people have died from the disease, Johns Hopkins University data shows.

In the United States 23,933,368 people have tested positive and 397,574 people have died.

POLICE LOGS

Arrests

The following arrests were reported by the Farmington Police Department. Everyone who is arrested is considered innocent unless proven guilty.

• Marcus Anagal was arrested at 10:49 a.m. on Jan. 14 on the 3800 block of East Main Street due to an arrest warrant.

• Johnny Atcitty was arrested at 9:42 a.m. on Jan. 14 on the 500 block of East Broadway Avenue due to an arrest warrant along with alleged concealing identity and criminal trespass.

Calls for service

Below is a digest of service calls performed by the Farmington Police Department. Full printed records are available in the department's lobby at 900 N. Municipal Drive.

Jan. 14, 2021

• Police investigated a report of a burglary at 6:56 p.m. on the 600 block of East Main Street. A report was taken.

• Police investigated a report of a fraud/forgery at 8:07 p.m. on the 900 block of Farmington Avenue. A report was taken.

• Police conducted a welfare check at 1:06 p.m. on the 3500 block of East Main Street. A report was taken.

• Police responded to a report of a down subject at 1:23 p.m. on the 1600 block of Bloomfield Boulevard. A report was taken.

• Police responded to a report of breaking and entering at 2:32 p.m. on the 3900 block of Sierra Vista Drive. A report was taken.

• Police responded to a report of an accident with no injuries at 3:40 p.m. on the 800 block of West Maple Street. A report was taken.

• Police responded to a report of shoplifting at 5:12 p.m. on the 1400 block of West Main Street. A report was taken.

• Police responded to a report of an armed subject at 7:08 p.m. on the 3900 block of Sierra Vista Drive. A report was taken.

• Police responded to a report of narcotics at 7:52 p.m. at the intersection of North Behrend Avenue and West Apache Street. A report was taken.

• Police responded to a report of a domestic fight at 8:09 p.m. on the 2300 block of Loon Street. A report was taken.

• Police investigated a report of larceny at 8:11 p.m. on the 2300 block of East 20th Street. A report was taken.

• Police responded to a report of a battery at 8:20 p.m. on the 3000 block of East Main Street. A report was taken.

• Police responded to a report of abuse/neglect of a person at 10:54 p.m. on the 500 block of Scott Avenue. A report was taken.

• Police responded to a report of a battery at 11:51 p.m. on the 2300 block of East 14th Street. A report was taken.

Obituaries

Joyce Butts

FRUITLAND - Joyce Alene Butts, formerly of Craig, Colorado, died January 15, 2021 in Farmington, New Mexico. She was 89 years old. A viewing was held at the Farmington Funeral Home on January 18. She is to be buried in the family plot in Iowa Park, Texas, on Saturday, January 23.

Joyce was born on May 10, 1931, in Iowa Park, Texas. She was the second child of Guthrie Brannon "Gus" Young and Minta Lou "Billie" Kight Young. She had an older brother, James Kenneth Young. Gus worked in the oil fields, so the family moved often and lived in many towns throughout Texas, Oklahoma, and New Mexico. They were living in Norman, Oklahoma in 1945 when the war ended. Joyce remembers the crowds of people celebrating in the streets, with the sailors and WACs from the Naval base located there. An exciting day for a teenaged girl.

Joyce was baptized into Christ at an early age and remained a faithful member of the church of Christ wherever she lived. She taught Sunday School for many years and always attended Ladies Bible Class. She had a beautiful soprano voice. When living in Monahans, Texas, she sang with a group on the radio during the church's weekly broadcast. At the Northside Church of Christ in Farmington, she helped work with the World Bible School, sending out bible lessons all over the world.

Joyce graduated from Monahans High School in 1948. Her yearbook says she was active in the Homemakers Club, Chorus, and Pep Club. It was there that she met and married Oliver Wayne Butts on December 24, 1948, in Hobbs, New Mexico. They had two daughters, Joyce J'Lea in 1950 and Kala Lawayne in 1952. They lived in Monahans until 1965 where Wayne worked for Texas Electric and Joyce was a homemaker. They then moved to Hayden, Colorado. They were divorced in 1982. Joyce would later move to Craig, Colorado. It was there that she went back to school and finished a Secretarial program at Colorado Northwest Community College. She then got a job as a bookkeeper and the Shadow Mountain Trailer Park owned and managed by Colorado Ute Electric. When her daughter moved to Denver in 2005, and later Fruitland, New Mexico in 2010, Joyce packed up and moved, too.

Joyce was a devoted mother and accomplished seamstress and cook. She sewed many ruffled dresses for her little girls, using whatever scraps she could find, often making up patterns to match the dresses sold in the local Jack and Jill Shop. She would later make J'Lea's cheerleading uniforms and wedding dress. She later took up quilting and made quilts for great grandbabies and other family members. She could feed more people from a pound of hamburger than anyone. She cooked for family, friends, and the sick. The family still prefers her meatloaf and vegetable soups over any other. Always involved in her daughters' lives, she served as Brownie and Girl Scout Leader.

Joyce was a master gardener with two green thumbs. Her house was always filled with plants and rooting cuttings. She raised a garden wherever she lived, even in cold Colorado. When she lived in apartments, she raised vegetables in pots on her balcony. At her last home, in Fruitland, she had a real yard with beautiful roses and a vegetable garden. She raised tomatoes, green chilies, and watermelon. As long as she was able to get outside with a walker or on her motorized cart, she would spend hours picking weeds. Whenever she was temporarily in a nursing home to recover from illnesses or surgeries, she would go around pruning their plants and pulling weeds in their yard.

Joyce loved animals, especially her two dogs, Coal and Daisy. Living next door to J'Lea and Tim, she was able to hold many brand-new baby goats. She could also look out to the fields around her and see the neighbors' cattle, sheep, and horses. And of course, the beautiful New Mexico sunsets.

Joyce started fishing at an early age with a cane pole. She fished the Brazos River and many stock tanks in east Texas. Fishing was her passion. She spent many hours wading in the Yampa River in Hayden and camping and fishing at Pearl Lake and Bear Lake near Oak Creek, pulling out one rainbow trout after another. After moving to New Mexico, she fished in the San Juan River. In later years she couldn't cast very well because of her arthritis. J'Lea or Tim would have to cast for her and they never did it right!

Joyce loved her grandchildren and great grandchildren very much. Her house was full of pictures of them. She took pride in all of their accomplishments.

Joyce was preceded in death by her parents and brother. She is survived by her daughters J'Lea (Tim) Driver of Fruitland, New Mexico, their children, Harmony Driver of Aztec, New Mexico , Heather (Phill) Gisel of Springhill, Kansas and Joshua Driver of Farmington. Her daughter Kala (Dennis) Bugay and their children Jennifer Bugay, Jason Bugay, Sadie (Jr.) Herndon, and Jonathan Bugay, all of Craig, Colorado. She is also survived by her Great Grandchildren, Kaleb, Caden, and Madilyn Bugay, and MaKala, Brenna, and Jarek Herndon, all of Craig, and Alex and Jack Gisel, of Spring Hill, Kansas. She is also survived by her sisters in law , Joyce Young, of Rockwall, Texas, Opal Butts of Roswell New Mexico, and brother in law John (Jean) McInturff of San, Angelo, Texas, numerous nieces and nephews, church friends, and her special caregiver, Crystal Yazzie and her girls, Anastasia, Saniya, and Cadence, who made it possible for her to continue to live in her own house until the end.

Memorial Contributions can be sent to:
New Mexico Children's Home
1356 NM-236, Portales, NM 88130

Farmington Funeral Home

NOTICE OF AIR QUALITY PERMIT APPLICATION

Harvest Four Corners, LLC announces its application to the New Mexico Environment Department (NMED) for an air quality permit modification for its natural gas pipeline gathering and compression station known as the Trunk N Compressor Station. The expected date of application submittal to the Air Quality Bureau is on or near January 25, 2021.
The exact location of the facility is latitude 36° 59' 00" and longitude -107° 35' 15", approximately 13.7 miles north-northeast of the U.S. Post Office in the town of Navajo Dam in San Juan County.
The following permit modifications are proposed:
• Implement various compressor engine location changes, including the onsite re-positioning of 3 units, the removal of 1 unit, the removal and replacement of 1 unit with an identical engine, and installation of 2 permitted engines in empty slots. No permit emission increases are proposed for the engines;
• Various permitted natural gas compressor installments and exchanges, resulting in an overall increase in installed compressor horsepower; and
• Increase the permitted volatile organic compound (VOC) emissions from five (5) natural gas triethylene glycol dehydration units, from 0.5 tons per year (tpy) each to 2.4 tpy each.
The estimated maximum quantities of any regulated air contaminant are presented below in pound per hour (pph) and tons per year (tpy), and may change slightly during the course of the Department's review:

Pollutant:	Pounds per hour	Tons per year
Nitrogen Oxides (NOX)	22	97
Carbon Monoxide (CO)	67	292
Volatile Organic Compounds (VOC)	29	129
Particulate Matter (PM)	1	4
Particulate Matter less than 10 um diameter (PM10)	1	4
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Green House Gas Emissions as Total CO2e	n/a	120,664

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The owner and/or operator of the Facility is: Harvest Four Corners, LLC, 1755 Arroyo Drive, Bloomfield, NM 87413
If you have any comments about the construction or operation of this facility, and you want your comments to be made as part of the permit review process, you must submit your comments in writing to this address: Permit Programs Manager; New Mexico Environment Department; Air Quality Bureau; 525 Camino de los Marquez, Suite 1; Santa Fe, New Mexico; 87505-1816; (505) 476-4300; 1 800 224-7009; https://www.env.nm.gov/aqb/permit/aqb_draft_permits.html. Other comments and questions may be submitted verbally.
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Notice of Non-Discrimination
NMED does not discriminate on the basis of race, color, national origin, disability, age or sex in the administration of its programs or activities, as required by applicable laws and regulations. NMED is responsible for coordination of compliance efforts and receipt of inquiries concerning non-discrimination requirements implemented by 40 C.F.R. Part 7, including Title VI of the Civil Rights Act of 1964, as amended; Section 504 of the Rehabilitation Act of 1973; the Age Discrimination Act of 1975, Title IX of the Education Amendments of 1972, and Section 13 of the Federal Water Pollution Control Act Amendments of 1972. If you have any questions about this notice or any of NMED's non-discrimination programs, policies or procedures, or if you believe that you have been discriminated against with respect to a NMED program or activity, you may contact: Kathryn Becker, Non-Discrimination Coordinator, NMED, 1190 St. Francis Dr., Suite N4050, P.O. Box 5469, Santa Fe, NM 87502, (505) 827-2855, nd.coordinator@state.nm.us. You may also visit our website at https://www.env.nm.gov/non-employee-discrimination-complaint-page/ to learn how and where to file a complaint of discrimination.
Legal No. 4557307 published in the Daily Times on Jan 20, 2021.

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Legal No. 4557307 published in the Daily Times on Jan 20, 2021.

Legal Notices

STATE OF NEW MEXICO
IN THE PROBATE COURT
SAN JUAN COUNTY

IN THE MATTER OF THE ESTATE OF EMILY G. LINDSLEY, Deceased.

No. 6620

NOTICE TO CREDITORS

NOTICE IS HEREBY GIVEN that the undersigned has been appointed Successor Personal Representative of the above-styled Estate. All persons having claims against this Estate are required to present their claims within four (4) months after the date of the first publication of this Notice or sixty (60) days after the date of mailing or other delivery of this Notice, whichever is later, or the claims will be forever barred. Claims must be presented either to the undersigned Personal Representative P. 0. Box 4140, Farmington, NM 87499-4140, or filed with the Probate Court of San Juan County, New Mexico at 100 South Oliver Drive, Aztec, NM 87410.
Dated: January 8, 2021.

Citizens Trust and Investment Corporation
/s/ Darrin Church, President
#4562577, Daily Times, Jan 20, 27, Feb 3, 2021

STATE OF NEW MEXICO
COUNTY OF SAN JUAN
ELEVENTH JUDICIAL
DISTRICT COURT

IN THE MATTER OF THE PETITION OF: JEREMY RAY BROWN OLGUIN FOR CHANGE OF NAME

No. D-1116-CV-2021-00011-3

NOTICE OF PETITION TO CHANGE NAME OF PERSON AGE 14 OR OLDER

NOTICE IS HEREBY GIVEN THAT Jeremy Ray Brown Olguin filed a Petition to Change Name in the Eleventh Judicial District Court in San Juan County, New Mexico at 103 So. Oliver Drive, Aztec, on the 6th day of January, 2021. The Petitioner seeks to change the Petitioner's name from Jeremy Ray Brown Olguin to the name of Jeremy Ray Olguin. Anyone who has an interest in this petition or has an objection must file a response to the petition within thirty (30) days of this newspaper notice. The response must state any objection and provide contact information including a mailing address. You will then be notified by mail when a hearing is scheduled.
#4549213 Daily Times 1/13/2021

General

Chimney Cleaning

Landscaping

Wanted to Buy

Landscaping

Lawn - Garden Care

Roofing - Siding

Tree Service

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German Shepherd AKC Puppies. www.wtxk9.com or (806)292-7445, (806)652-3458

German Shepherd AKC Puppies. www.wtxk9.com or (806)292-7445, (806)652-3458

Assorted Stuff

all kinds of things...

Miscellaneous

SUNSHINE CLEANING COMPANY
House Cleaning 505-947-3476
Background Check Upon Request

January 20 - Prime Time

1 Comcast Farmington **2** Shiprock **3** Charter Durango/ Dolores **4** DISH **5** DirectTV

		1	2	3	4	5	6PM	6:30	7PM	7:30	8PM	8:30	9PM	9:30	10PM	10:30	11PM	11:30
CW	KWGN 2	-	-	20	-	-	**Bang** (TVPG)	**Bang** (TV14)	(:59) **Channel 2 News at 7** (N)		**Riverdale** A boxing match. (N)		**Nancy Drew** (TVPG) (N)		**Men** (TV14)	**Men** (TV14)	**News** (N)	(:35) **Family**
CW	KCNC 4	-	-	-	-	-	**News** (N)	**News** (N)	**One Nation**	**Celebrating America** Artists perform. (N)			**S.W.A.T.:** 3 Seventeen.		**News** (N)	**Late Show** Jon Lovett. (N)		**Corden** (N)
PBS	KRMA 6	-	-	9	-	-	**The PBS NewsHour** (N)		**The PBS NewsHour:** Celebrating. Musicians celebrate.				**When Disaster Strikes** (N)		**Nazi Mega Weapons** (TVPG)		**Amanpour and Company** (N)	
NBC	KUSA 9	-	-	15	-	-	**9NWS6P-NX**	**ET** (N)	**Inauguration**	**Celebrating America** Artists perform.			**Chicago P.D.:** Silence of the.		**News** (N)	(:35) **Tonight Show** (TV14) (N)		**Late Night**
NBC	KOB 4	4	12	-	4	4	**Eyewitness News 4 at 6**	**News 4 at 6:30** (N)	**The Inaugura-tion of**	**Celebrating America** Artists comment and perform.			**Chicago P.D.:** Silence of the. Gun-trafficking. (TV14)		**Eyewitness News 4 at 10**	(:35) **The Tonight Show Starring Jimmy Fallon** (TV14) (N)		**Late Night Seth Meyers** (N)
PBS	KNME 5	5	5	-	5	5	**The PBS NewsHour** (N)		**The PBS NewsHour:** Celebrating. Famous musicians celebrate the rich diversity and talent of America.				**When Disaster Strikes:** Paradise Lost. (TVPG) (N)		**Forces of Nature:** Motion. Movement of Earth. (TVPG)		**Amanpour and Company** (N)	
ABC	KOAT 7	7	7	7	7	7	**Action 7 News Live** (N)	**Entertainment Tonight** (N)	**The Inauguration of** (N)	**Celebrating America** (N)			**The Conners** (TVPG) (N)	**Call Your Mother** (N)	**News** (N)	(:35) **Jimmy Kimmel Live** John Oliver. (TV14) (N)		(:37) **Nightline** (N)
CBS	KRQE 13	13	-	13	13	13	**Jeopardy!** (TV G) (N)	**Wheel of Fortune** (N)	**One Nation: Indivisible** (N)	**Celebrating America** Artists comment and perform. (N)			**S.W.A.T.:** 3 Seventeen. Racial tension. (TV14)		**KRQE News 13 at 10 PM**	**The Late Show with Stephen Colbert** Jon Lovett. (TV14) (N)		**The Late Late Show** (N)
FOX	KRQE2 13.2	2	-	-	2	16	**News** (N)	**News** (N)	**The Masked Dancer:** Group A. Group A finals. (N)		(:02) **Name That Tune:** Episode 3. (N)		**KRQE News 13 at 9 PM**	**News** (N)	**Jeopardy!** (TV G)	(:35) **News** (N)	(:05) **DailyMailTV** (N)	(:35) **DailyMailTV** (N)
CW	KWBQ 19	12	-	-	19	19	**The Big Bang Theory**	**The Big Bang Theory**	**Riverdale:** Seventy-Seven. A boxing match. (TV14) (N)		**Nancy Drew:** Midnight Wraith. Comatose girl. (TVPG) (N)		**Mom:** Sick Popes, Red.	**Mom:** Eight Cats Hat.	**Two and a Half Men**	**Two and a Half Men**	**Seinfeld:** The Outing.	**Seinfeld:** Comeback.
MNT	KASY 50	6	-	-	50	50	**Family Feud**	**Family Feud**	**Dateline:** Deep in the. (TV14)		**Dateline:** The Other Side.		**News** (N)	**News** (N)	**Schitt's**	**Schitt's**	**Pawn Stars**	**Pawn Stars**
A&E		52	-	30	118	265	**Court Cam**	**Court Cam**	**Court Cam**	**Court Cam**	**Nature** (N)	**Nature** (N)	**Court Cam**	**Court Cam**	**Court Cam**	**Court Cam**	**Court Cam**	**Court Cam**
AMC		37	-	47	131	254	**Twister** ★★½ (1996, Drama) Helen Hunt. Storm chasers. 'PG-13'					**The Intern** ★★★ (2015, Comedy) Robert De Niro. Older intern. 'PG-13'					**Sixteen Candles** (1984) 'PG'	
CNN		323	3	29	200	202	**Joe Biden**	**Celebrating America** Artists perform.			**Inauguration of Joe Biden**				**Inauguration of Joe Biden**			
COM		47	-	60	107	249	**South Park**	**South Park**	**South Park**	**South Park**	**South Park**	**South Park**	**South Park:** Movie Trailer.		**South Park**	**South Park**	**South Park**	**South Park**
DISC		16	6	66	182	278	**Undercover Billionaire:** Three Million. Build business.				**Undercover Billionaire:** Hustle Up. Concept test. (TVPG)				**Undercover Billionaire:** Three Million. Build business.			
DISN		31	18	38	173	291	**BUNK'D**	**BUNK'D**	**Jessie** (TV G)	**Jessie** (TV G)	**Raven** (TV G)	**Raven** (TV G)	**Liv Maddie**	**Liv Maddie**	**Raven** (TV G)	**Raven** (TV G)	**Big City**	**BUNK'D**
ESPN		30	10	27	140	206	(5:15) **NBA Basketball** (Live) (HD)			(:35) **NBA Basketball:** Phoenix Suns at Houston Rockets (Live) (HD)					(:05) **SportsCenter** (HD)		(:05) **SportsCenter** (HD)	
FNC		18	-	49	205	360	**Tucker Carlson Tonight** (N)		**Hannity** (N)		**The Ingraham Angle** (N)		**News @ Night** (N)		**Tucker Carlson Tonight**		**Hannity** Conservative news.	
FREE		36	4	34	180	311	**Bride Wars**	**27 Dresses** (2008, Comedy) Katherine Heigl. Always a bridesmaid. 'PG-13'					**The 700 Club** (TV G)		**Simpsons**	**Simpsons**	**Simpsons**	**Simpsons**
FSN		38	-	-	415	686	**Football** (HD)	**Football** (HD)	**Pregame**	**NBA Basketball:** Phoenix Suns at Houston Rockets (Live) (HD)					**Postgame**	**Postgame**	**World Poker Tour:** Baccarat.	
FX		41	-	523	136	248	**Skyscraper** ★★ (2018, Action) Dwayne Johnson. 'PG-13'				**Jurassic World: Fallen Kingdom** (2018, Adventure) Chris Pratt. Saving dinosaurs. 'PG-13'						**Jurassic World** (2018) 'PG-13'	
HALL		17	-	56	185	312	**A Country Wedding** (2015, Romance) Jesse Metcalfe. 'NR'				**Golden**	**Golden**	**Golden**	**Golden**	**Golden**	**Golden**	**Frasier**	**Frasier**
LIFE		23	-	32	108	252	**Married at First Sight:** Hello Stranger. (TV14) (N)				**Marrying Millions** (TV14) (N)		**Married at First Sight** (TV14)		**Married at First Sight:** Hello Stranger. Disappointed groom.			
NICK		34	8	35	170	299	**Side Hustle**	**Danger**	**Young**	**Young**	**Friends**	**Friends**	**Friends**	**Friends**	**Friends**	**Friends**	**Friends**	**Friends**
PARMT		22	17	43	241	241	**The Italian Job** (2003) 'PG-13'		(:15) **Mr. & Mrs. Smith** ★★★ (2005, Action) Brad Pitt. Married assassins. 'PG-13'						**The Day After Tomorrow** ★★½ (2004) Dennis Quaid. 'PG-13'			
TBS		15	11	17	139	247	**Bang** (TVPG)	**Bang** (TVPG)	**Bang** (TVPG)	**Bang** (TVPG)	**Bang** (TVPG)	**Frontal** (N)	**Conan** (N)	**Frontal**	**Seinfeld**	**Conan**	**Wipeout** Extreme obstacles.	
TCM		501	-	62	132	256	**Murder She Said** (1962) Crime estate. 'NR'			(:45) **Murder at the Gallop** ★★★ (1963) 'NR'			**Murder Most Foul** (1964, Mystery) Margaret Rutherford. 'NR'				**Murder Ahoy** ★★★ (1964) 'NR'	
TLC		20	-	25	183	280	**My 600-lb Life:** Cindy's Story. Declining health. (TVPG) (N)				**1000-lb Sisters** Sisters clash.		**My Feet Are Killing Me**		**My 600-lb Life:** Cindy's Story. Declining health. (TVPG)			
TNT		43	20	26	138	245	**All Elite Wrestling: Dynamite** (HD)				**Go-Big Show** Rampjump.		**Evan Almighty** ★★ (2007, Comedy) Steve Carell. 'PG'				**Tag** (2018) Ed Helms. 'R'	
UNI		26	-	5	41	41	**Vencer el desamor**		**Imperio de mentiras**		**Dulce ambición**		**Noticiero** (N)	**Noticiero** (N)	**Contacto deportivo**		**Un gancho al corazón** (TV14)	
USA		40	22	45	105	242	**WWE NXT** (Live) (HD)				(:08) **Hancock** ★★½ (2008, Action) Will Smith. 'PG-13'				**Steve:** Ice-T.	(:37) **Family**	(:07) **Family**	(:37) **Family**
WGN-A		64	9	-	239	307	**NewsNation**		**NewsNation**		**NewsNation**		**NewsNation**		**NewsNation**		**NewsNation**	
ENCORE		518	21	444	341	536	(5:42) **In the Line of Fire** (1993, Thriller) Clint Eastwood. 'R'				**Glory** (1990, Drama) Matthew Broderick. Race and war. 'R'				**Godzilla** (1998, Science Fiction) Matthew Broderick. 'PG-13'			
HBO		551	-	318	303	504	(:20) **The High Note** (2020, Drama) Dakota Johnson. 'PG-13'				**30 Coins:** Memories. (TVMA)		**Wrath of the Titans** (2012, Action) Sam Worthington. 'PG-13'				**C.B. Strike:** Lethal White. (N)	
MAX		561	-	349	311	516	**Good Lie** ★★★	(:47) **John Wick: Chapter 3 - Parabellum** (2019, Action) Keanu Reeves. 'R'					**Human Capital** (2020, Crime) Liev Schreiber.			(:40) **Munich** (2005, Drama) Eric Bana. 'R'		
SHO		576	2	378	319	546	**First Blood** 'R'	(:35) **Rambo: First Blood Part II** ★★½ (1985) 'R'			(:15) **Rambo III** ★★ (1988, Action) Sylvester Stallone. 'R'				**ShoBox: The New Generation** (Live) (HD)			
STARZ		534	-	421	351	526	(:57) **Bridget Jones's Diary** ★★★ (2001) 'R'			(:38) **Public Enemies** ★★★ (2009, Drama) Johnny Depp. Tracking Dillinger. 'R'					**Dawn of the Dead** ★★★ (2004) Sarah Polley. 'R'		(:45) **Charlie's**	

NOTICE

Harvest Corners LLC announces its intent to apply to the New Mexico Environment Department (NMED) an air quality permit modification for its natural gas pipeline gathering and compression facility known as the **Trunk N Compressor Station**. The expected date of application submittal to the Air Quality Bureau is on or near December 15, 2020.

The exact location of the facility is latitude 36° 59' 00" latitude and -107° 35' 15" longitude, approximately 13.7 miles north-northeast of the US Post Office in the town of Navajo Dam in San Juan County.

The following permit modifications are proposed:

- Implement various compressor engine location changes, including repositionings (3 units), removal (1 unit), removal with identical engine replacement (1 unit), and installation in empty slots of 2 permitted engines. No permit emission increases are proposed for the engines;
- Various permitted natural gas compressor installments and exchanges, resulting in an overall increase in installed compressor horsepower; and
- Increase the permitted volatile organic compound (VOC) emissions from five (5) natural gas triethylene glycol dehydration units, from 0.5 tons per year (tpy) each to 2.4 tpy each.

The estimated maximum quantities of any regulated air contaminant are presented below in pound per hour (pph) and tons per year (tpy), and may change slightly during the course of the Department's review:

Pollutant:	Pounds per hour	Tons per year
Nitrogen Oxides (NO_X)	22	97
Carbon Monoxide (CO)	67	292
Volatile Organic Compounds (VOC)	29	129
Sulfur Dioxide (SO_2)	0.05	0.23
Particulate Matter (PM)	1	4
Particulate Matter less than 10 um diameter (PM_{10})	1	4
Particulate Matter less than 10 um diameter ($PM_{2.5}$)	1	4
Total sum of all Hazardous Air Pollutants (HAPs)	5.6	24.6
Green House Gas Emissions as Total CO_2e	n/a	120,664

The standard and maximum operating schedule of the facility will continue to be midnight to midnight (24 hours a day), seven days a week, 52 weeks a year.

The owner and/or operator of the facility is: Harvest Four Corners, LLC, 1755 Arroyo Drive, Bloomfield, NM 87413

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

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

General information about air quality and the permitting process can be found at the Air Quality Bureau's web site. The regulation dealing with public participation in the permit review process is 20.2.72.206 NMAC. This regulation can be found in the "Permits" section of this web site.

Attención

Este es un aviso de la oficina de Calidad del Aire del Departamento del Medio Ambiente de Nuevo México, acerca de las emisiones producidas por un establecimiento en esta área. Si usted desea información en español, por favor comuníquese con esa oficina al teléfono 505-476-5557.

Notice of Non-Discrimination

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


NOTICE

General Posting of Notices – Certification

I, Kayleigh Ruybalid , the undersigned, certify that on **December 10, 2020,** I posted a true and correct copy of the attached Public Notice in the following publicly accessible and conspicuous places in **San Juan** County, State of New Mexico on the following dates:

1. Trunk N Facility Entrance 12/10/2020
2. Aztec Post Office, Aztec NM 87410 12/10/2020
3. Navajo Dam Post Office, Navajo Dam NM 87419 12/10/2020
4. San Juan County Clerk's Office, Aztec NM 87410 12/10/2020

Signed this 10th day of December , 2020 .

Kayleigh Ruybalid 12/10/2020

Signature Date

Kayleigh Ruybalid

Printed Name

EHS Compliance Administrator –Harvest Four Corners, LLC

Title

PSA submitted in online form 1/15/2021 to https://radiodurango.com/public-service-announcements/

FOUR CORNERS BROADCASTING LLC
KIQX • KIUP • KKDC • KRSJ
101.3FM 930AM 93.3 FM 100.5FM

Send a Public Service Announcement

Name	submitted by L Killion, Cirrus Consulting, 505-466-1790
Organization	on behalf of Harvest Four Corners
Date and day (Example: Tuesday, April 25th, 2018)	Application to NMED Jan. 25
Time	Business hours M-F, 8 AM - 5 PM
Location	See PSA below
Event contact person	See PSA below
Phone number	See PSA below

Untitled

Harvest Four Corners, LLC, located at 1755 Arroyo Drive in Bloomfield, New Mexico (87413), announces its intent to apply to the New Mexico Environment Department for a modification to its air quality permit for the Trunk N Compressor Station, a natural gas pipeline compressor facility, located at latitude 36° 59' 00" and longitude -107° 35' 15" in San Juan County, about 13.7 miles north-northeast of the U.S. Post Office in the town of Navajo Dam.

Harvest proposes the following permit modifications:

- Implement various compressor engine location changes, including the onsite re-positioning of 3 units, the removal of 1 unit, the removal and replacement of 1 unit with an identical engine, and installation of 2 permitted engines in empty slots. No permit emission increases are proposed for the engines;
- Various natural gas compressor exchanges, resulting in increases in available compression horsepower; and
- Increase the permitted volatile organic compound (VOC) emissions from five (5) natural gas triethylene glycol dehydration units, from 0.5 tons per year (tpy) each to 2.4 tpy each.

Public notices have been posted at the following locations:

Posting Location, Date of Posting

* Trunk N Compressor Station Entrance, 12/10/2021
* Aztec Post Office, Aztec, NM 87410, 12/10/2020
* Navajo Dam Post Office, Aztec, NM 87419, 12/10/2020
* San Juan County Clerk's Office, Aztec, NM 87410, 12/10/2020

Questions and comments regarding this notice may be directed to the

Program Manager, New Source Review section of the New Mexico Environment Department Air Quality Bureau,

525 Camino de los Marquez, Suite 1

Santa Fe, New Mexico, 87505-1816

Phone: (505) 476-4300 /

Fax: (505) 476-4375

Submittal of Public Service Announcement – Certification

I, Lisa Killion, the undersigned, certify that on **January 15, 2021,** I submitted a public service announcement to **Four Corners Broadcasting (KIQX 101.3 FM, KIUP 930 AM, KKDC 93.3 FM, KRSJ 100.5 FM)** that serves **San Juan and Rio Arriba Counties** in the State of New Mexico, in which the source is or is proposed to be located; and that **Four Corners Broadcasting DID NOT RESPOND.**

Signed this 20th day of January , 2021 .

Lisa Killion
Signature

1/20/2021
Date

Lisa Killion
Printed Name

Cirrus Consulting, LLC (Consultant)
Title {APPLICANT OR RELATIONSHIP TO APPLICANT}

Section 10

Written Description of the Routine Operations of the Facility

---

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

The Trunk N Compressor Station facility compresses production field natural gas received from independent producers via gathering pipelines. The field natural gas is compressed for pipeline transmission using compressors driven by natural gas-fired, spark-ignition, 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 it is transported offsite 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.

A. This facility is:

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

B. **This facility is not one of the listed 20.2.74.501 Table I – PSD Source Categories. The "project" emissions for this modification are not significant under Step 1 as they are below the significant emission rates in Table 2 of 20.2.74.502 NMAC. The "project" emissions listed below result only from changes described in this permit application, and do not result from any other permit revisions or modifications, past or future to this facility. The proposed project does not result in "de-bottlenecking", or other associated emissions resulting in higher emissions. The project emissions for this project are as follows [see Table 2 in 20.2.74.502 NMAC for a complete list of significance levels]:**

a.	**NOx:**	**11.89 TPY**
b.	**CO:**	**36.32 TPY**
c.	**VOC:**	**25.13 TPY**
d.	**SOx:**	**0.03 TPY**
e.	**PM:**	**0.44 TPY**
f.	**PM10:**	**0.44 TPY**
g.	**PM2.5:**	**0.44 TPY**
h.	**Fluorides:**	**0 TPY**
i.	**Lead:**	**0 TPY**
j.	**Sulfur compounds (listed in Table 2):**	**0 TPY**
k.	**GHG:**	**6,636 TPY**

C. **Netting analysis is NOT required.**

D. **BACT** is **not required for this modification, as this application is a minor modification.**

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

No permit modifications have occurred during the contemporaneous period that should be combined with this project to be considered as permitting action.

PSD Project Determination Analysis

Project Description:

- *Two (2) engines repositioned within facility (updated units 1 & 2) - engines not included in analysis*
- *One (1) engine slot with no changes (unit 3) - engine not included in analysis*
- *One (1) Engine Swing engine replacement (unit 5);*
- *Two (2) initial engine installations (placements) (units 6, & 7);*
- *One (1) engine repositioned within facility after maintenance (unit 8);*
- *Increase VOC emission rates for TEG Dehydrators (units 9a, 10a, 11a, 12a & 13a)*

Unit Number	Description	NO_X, tpy	CO, tpy	VOC, tpy	SO_2, tpy	PM/TSP, tpy	PM_{10}, tpy	$PM_{2.5}$, tpy	H_2S, tpy	Lead, tpy	CO_2e tpy
1	Engine (repositioned within facility)	-	-	-	-	-	-	-	-	-	-
2	Engine (repositioned within facility)	-	-	-	-	-	-	-	-	-	-
3	Engine (no changes)	-	-	-	-	-	-	-	-	-	-
4	Engine (removed from slot)	-	-	-	-	-	-	-	-	-	-
5	Engine - *Transfer from another facility*	11.9	36.3	13.2	0.03	0.44	0.44	0.44	-	-	6016.7
6	Engine - previously TBD; install permitted unit	-	-	-	-	-	-	-	-	-	-
7	Engine - previously TBD; install permitted unit	-	-	-	-	-	-	-	-	-	-
8	Engine - Returned (& repositioned within facility)	-	-	-	-	-	-	-	-	-	-
9a	TEG Dehy Still Vent (12 mmcfd) - *increase emissions*	-	-	2.36	-	-	-	-	-	-	125.4
10a	TEG Dehy Still Vent (12 mmcfd) - *increase emissions*	-	-	2.36	-	-	-	-	-	-	125.4
11a	TEG Dehy Still Vent (12 mmcfd) - *increase emissions*	-	-	2.36	-	-	-	-	-	-	125.4
12a	TEG Dehy Still Vent (20 mmcfd) - *increase emissions*	-	-	2.42	-	-	-	-	-	-	121.6
13a	TEG Dehy Still Vent (20 mmcfd) - *increase emissions*	-	-	2.42	-	-	-	-	-	-	121.6
	Project Total Emissions	11.89	36.32	25.13	0.03	0.44	0.44	0.44	-	-	6,636
	Project Significant Emission Rates	40	100	40	40	25	15	10	10	0.6	75,000
	Below Project Significant Emission Rate?	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	-	-	**Yes**

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. ("Construction" does not include the reinstallation of an existing engine at another location.) 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 August 23, 2011 regulatory 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 a **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. ("Construction" does not include the reinstallation of an existing engine at another location.) 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.
20.2.61.109 NMAC	**Smoke & Visible Emissions**	Yes	RICE units 1-8; Small 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.
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**.

STATE REGU-LATIONS CITATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
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 PTE for CO exceeds 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.
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

STATE REGU-LATIONS CITATION	**Title**	**Applies? Enter Yes or No**	**Unit(s) or Facility**	**JUSTIFICATION:**
				guidance document, air quality dispersion modeling is not required for this application to revise the facility's construction permit.
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**.	X
Reporting existing pollutants that were not previously reported.	
Reporting existing pollutants where the ambient impact is being addressed for the first time.	
Title V application (new, renewal, significant, or minor modification. 20.2.70 NMAC). See #3 above.	
Relocation (20.2.72.202.B.4 or 72.202.D.3.c NMAC)	
Minor Source Technical Permit Revision 20.2.72.219.B.1.d.vi NMAC for like-kind unit replacements.	
Other: i.e. SSM modeling. See #2 above.	
This application does not require modeling since this is a No Permit Required (NPR) application.	
This application does not require modeling since this is a Notice of Intent (NOI) application (20.2.73 NMAC).	
This application does not require modeling according to 20.2.70.7.E(11), **20.2.72.203.A(4)**, 20.2.74.303, 20.2.79.109.D NMAC and in accordance with the Air Quality Bureau's Modeling Guidelines.	X

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 (NAAQS) and applicable PSD increments. The changes requested in this application do not constitute a modification as identified/defined by the NMAQB Air Dispersion Modeling Guidelines.

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.

Not applicable.

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.

Not applicable.

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 11th day of JANUARY, 2021, upon my oath or affirmation, before a notary of the State of New Mexico.

*Signature — Date: 1/11/2021

TRAVIS JONES — Printed Name

EHS MANAGER — Title

Scribed and sworn before me on this 11th day of January, 2021.

My authorization as a notary of the State of New Mexico expires on the 4th day of April, 2022.

Rebecca L. Beard — Notary's Signature — Date: 1/11/21

Rebecca L. Beard — Notary's Printed Name

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

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	2.71	11.89	8.29	36.32	3.02	13.21	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
2	2.71	11.89	8.29	36.32	3.02	13.21	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
3	2.71	11.89	8.29	36.32	3.02	13.21	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
4	2.71	11.89	8.29	36.32	3.02	13.21	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
5	2.71	11.89	8.29	36.32	3.02	13.21	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
6	2.71	11.89	8.29	36.32	3.02	13.21	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
7	2.71	11.89	8.29	36.32	3.02	13.21	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
8	2.71	11.89	8.29	36.32	3.02	13.21	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	1.4E-01	4.8E-03	2.1E-02	8.3E-04	3.7E-03	9.2E-03	4.0E-02	9.2E-03	4.0E-02	9.2E-03	4.0E-02	-	-	6.0E-07	2.6E-06
10a[2]	-	-	-	-	0.54	2.36	-	-	-	-	-	-	-	-	-	-	-	-
10b	4.29E-02	0.19	3.3E-02	1.4E-01	4.8E-03	2.1E-02	8.3E-04	3.7E-03	9.2E-03	4.0E-02	9.2E-03	4.0E-02	9.2E-03	4.0E-02	-	-	6.0E-07	2.6E-06
11a[2]	-	-	-	-	0.54	2.36	-	-	-	-	-	-	-	-	-	-	-	-
11b	4.29E-02	0.19	3.3E-02	1.4E-01	4.8E-03	2.1E-02	8.3E-04	3.7E-03	9.2E-03	4.0E-02	9.2E-03	4.0E-02	9.2E-03	4.0E-02	-	-	6.0E-07	2.6E-06
12a[2]	-	-	-	-	0.55	2.42	-	-	-	-	-	-	-	-	-	-	-	-
12b	4.29E-02	0.19	4.5E-02	2.0E-01	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	2.0E-01	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	26.87	128.49	0.05	0.23	0.86	3.76	0.86	3.76	0.86	3.76	-	-	3.46E-06	1.52E-05

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