

Cirrus Consulting, LLC

November 20, 2020

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 Renew **Title V Operating Permit P031-R3**
 Harvest Four Corners, LLC – Middle Mesa Central Delivery Point (CDP), A.I. No. 1272

Dear Mr. Schooley,

On behalf of Harvest Four Corners LLC (Harvest), Cirrus Consulting is pleased to submit this application to renew Title V Operating Permit P031-R3 for the Middle Mesa Central Delivery Point (CDP).

With this application, the Potential To Emit (PTE) of hazardous air pollutants (HAP) from the three permitted triethylene glycol (TEG) dehydrators has significantly increased such that that the facility PTE is a major source of HAP under 40 CFR 63, subpart HH. The increase in HAP PTE is solely due to increases in HAP in the natural gas at the facility, and does not result from any changes in operation of the facility. Each of the three dehydrators continues to comply with the current permitted volatile organic compound (VOC) emission limits.

In accordance with the instructions in the NMAQB Universal Air Quality Permit Application, one hard copy original and one hard copy review copy are included. Two CDs containing the application electronic files are enclosed.

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
Sr. Environmental Scientist

Enclosures – One (1) hard copy Middle Mesa CDP Title V renewal application original
 One (1) hard copy application review copy
 Two (2) CDs, each containing the application electronic files

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

**NEW MEXICO 20.2.70.300.B(2) NMAC APPLICATION
TO RENEW TITLE V OPERATING PERMIT P031-R3**

MIDDLE MESA CENTRAL DELIVERY POINT (CDP)

Submitted By:



Harvest Four Corners, LLC

**1755 Arroyo Drive
Bloomfield, New Mexico 87413**

Prepared By:

Cirrus Consulting, LLC

**951 Diestel Road
Salt Lake City, Utah 84105
(801) 484-4412**

November 2020

Table of Contents

Section 1:	Facility Information
Section 2:	Tables
Section 3:	Application Summary
Section 4:	Process Flow Sheet
Section 5:	Plot Plan Drawn to Scale
Section 6:	All Calculations
	6.a: Green House Gas Emissions
Section 7:	Information Used to Determine Emissions
Section 8:	Map(s)
Section 9:	Proof of Public Notice
Section 10:	Written Description of the Routine Operations of the Facility
Section 11:	Source Determination
Section 12:	PSD Applicability Determination for All Sources
Section 13:	Discussion Demonstrating Compliance with Each Applicable State & Federal Regulation
Section 14:	Operational Plan to Mitigate Emissions
Section 15:	Alternative Operating Scenarios
Section 16:	Air Dispersion Modeling
Section 17:	Compliance Test History
Section 18:	Addendum for Streamline Applications
Section 19:	Requirements for the Title V Program
Section 20:	Other Relevant Information
Section 21:	Addendum for Landfill Applications
Section 22:	Certification

Mail Application To: 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		For Department use only: 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.: [redacted] in the amount of [redacted]
- ☒ I acknowledge the required submittal format for the hard copy application is printed double sided 'head-to-toe', 2-hole punched (except the Sect. 2 landscape tables is printed 'head-to-head'), numbered tab separators. Incl. a copy of the check on a separate page.
- ☐ This facility qualifies to receive assistance from the Small Business Environmental Assistance program (SBEAP) and qualifies for 50% of the normal application and permit fees. Enclosed is a check for 50% of the normal application fee which will be verified with the Small Business Certification Form for your company.
- ☐ This facility qualifies to receive assistance from the Small Business Environmental Assistance Program (SBEAP) but does not qualify for 50% of the normal application and permit fees. To see if you qualify for SBEAP assistance and for the small business certification form go to https://www.env.nm.gov/aqb/sbap/small_business_criteria.html).

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

Section 1 – Facility Information

Section 1-A: Company Information

		AI # if known (see 1 st 3 to 5 #s of permit IDEA ID No.): 1272	Updating Permit/NOI #: P031-R3
1	Facility Name: La Jara Compressor Station	Plant primary SIC Code (4 digits): 1389	
		Plant NAIC code (6 digits): 213112	
		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 "T" junction at Colorado 172 (approximately 15 miles). Turn left, and drive into Ignacio. Turn right on 151, and drive to mile marker 11.9. Turn right on 330, and drive 1.9 miles to the NM state line. Turn right on 4020, and drive 5.1 miles to "Y". Turn right, and drive 4.2 miles; turn left, and drive 1.3 miles to 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	<input type="checkbox"/> Preparer: <input checked="" type="checkbox"/> Consultant: Lisa Killion, Cirrus Consulting, LLC	Phone/Fax: 505-466-1790 / 505-466-4599
a	Mailing Address:	E-mail: killion@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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	1.b If yes to question 1.a, is it currently operating in New Mexico? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
3	Is the facility currently shut down? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
6	Does this facility have a Title V operating permit (20.2.70 NMAC)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, the permit No. is: P-031-R3
7	Has this facility been issued a No Permit Required (NPR)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, the NPR No. is:
8	Has this facility been issued a Notice of Intent (NOI)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, the NOI No. is:
9	Does this facility have a construction permit (20.2.72/20.2.74 NMAC)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, the permit No. is: 0870-M6-R6
10	Is this facility registered under a General permit (GCP-1, GCP-2, etc.)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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: 13,077 mmcfh ^(a)	Daily: 313,835 mmcf ^(a)	Annually: 114,549,775 mmcfy ^(a)
b	Proposed	Hourly: 13,077 mmcfh ^(a)	Daily: 313,835 mmcf ^(a)	Annually: 114,549,775 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: 13,077 mmcfh ^(a)	Daily: 313,835 mmcf ^(a)	Annually: 114,549,775 mmcfy ^(a)

b	Proposed	Hourly: 13,077 mmcfh ^(a)	Daily: 313,835 mmcf ^(a)	Annually: 114,549,775 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: 10	Range: 07W	Township: 31N	County: San Juan	Elevation (ft): 6,610
2	UTM Zone: <input type="checkbox"/> 12 or <input checked="" type="checkbox"/> 13			Datum: <input type="checkbox"/> NAD 27 <input type="checkbox"/> NAD 83 <input checked="" type="checkbox"/> WGS 84	
a	UTM E (in meters, to nearest 10 meters): 271,740 m			UTM N (in meters, to nearest 10 meters): 4,087,695 m	
b	AND Latitude (deg., min., sec.): 36° 54' 28"			Longitude (deg., min., sec.): -107° 33' 43"	
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 ~10.3 (distance) miles northeast (direction) of Navajo Dam, NM (nearest town).				
6	Status of land at facility (check one): <input type="checkbox"/> Private <input type="checkbox"/> Indian/Pueblo <input checked="" type="checkbox"/> Federal BLM <input type="checkbox"/> Federal Forest Service <input type="checkbox"/> 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; San Juan County, NM & Rio Arriba County, 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/classIareas.html)? <input type="checkbox"/> Yes <input type="checkbox"/> No (20.2.72.206.A.7 NMAC) If yes, list all with corresponding distances in kilometers: N/A				
9	Name nearest Class I area: Weminuche Wilderness				
10	Shortest distance (in km) from facility boundary to the boundary of the nearest Class I area (to the nearest 10 meters): 56.70 km				
11	Distance (meters) from the perimeter of the Area of Operations (AO is defined as the plant site inclusive of all disturbed lands, including mining overburden removal areas) to nearest residence, school or occupied structure: ~2,610 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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? <input checked="" type="checkbox"/> No <input type="checkbox"/> 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
4	Will this facility be a source of federal Hazardous Air Pollutants (HAP)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
a	If Yes, what type of source? <input checked="" type="checkbox"/> Major (<input checked="" type="checkbox"/> ≥10 tpy of any single HAP OR <input checked="" type="checkbox"/> ≥25 tpy of any combination of HAPS) OR <input type="checkbox"/> Minor (<input type="checkbox"/> <10 tpy of any single HAP AND <input type="checkbox"/> <25 tpy of any combination of HAPS)		
5	Is any unit exempt under 20.2.72.202.B.3 NMAC? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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	<input type="checkbox"/> I have filled out Section 18, "Addendum for Streamline Applications." <input checked="" type="checkbox"/> 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 (10.3 km), Southern Ute Tribe (10.3 km), Navajo Nation Tribal Lands (51.7 km); Navajo checkerboard lands (32.1 km), Jicarilla Apache Tribe (32.5 km), and Ute Mountain Tribe (61.4 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.

Table of Contents

Section 1:	General Facility Information
Section 2:	Tables
Section 3:	Application Summary
Section 4:	Process Flow Sheet
Section 5:	Plot Plan Drawn to Scale
Section 6:	All Calculations
Section 7:	Information Used to Determine Emissions
Section 8:	Map(s)
Section 9:	Proof of Public Notice
Section 10:	Written Description of the Routine Operations of the Facility
Section 11:	Source Determination
Section 12:	PSD Applicability Determination for All Sources & Special Requirements for a PSD Application
Section 13:	Discussion Demonstrating Compliance with Each Applicable State & Federal Regulation
Section 14:	Operational Plan to Mitigate Emissions
Section 15:	Alternative Operating Scenarios
Section 16:	Air Dispersion Modeling
Section 17:	Compliance Test History
Section 18:	Addendum for Streamline Applications (streamline applications only)
Section 19:	Requirements for the Title V (20.2.70 NMAC) Program (Title V applications only)
Section 20:	Other Relevant Information
Section 21:	Addendum for Landfill Applications
Section 22:	Certification Page

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 #	Manufact- urer's Rated Capacity ³ (Specify Units)	Requested Permitted Capacity ³ (Specify Units)	Date of Manufacture ²	Controlled by Unit #	Source Classi- fication Code (SCC)	For Each Piece of Equipment, Check One	RICE Ignition Type (CI, SI, 4SLB, 4SRB, 2SLB) ⁴	Replacing Unit No.	
							Date of Construction/ Reconstruction ²	Emissions vented to Stack #					
1	Compressor Engine	Waukesha	L7042GL	TBD	1,478 hp	1,362 hp	TBD	N/A	20200202	X Existing (unchanged) New/Additional To Be Modified	To be Removed Replacement Unit To be Replaced	4SLB	N/A
							TBD	1					
2	Compressor Engine	Waukesha	L7042GL	C-10430/1 (Pkg. X00041)	1,478 hp	1,362 hp	09/23/91	N/A	20200202	X Existing (unchanged) New/Additional To Be Modified	To be Removed Replacement Unit To be Replaced	4SLB	2
							09/23/91	2					
3	Compressor Engine	Waukesha	L7042GL	TBD	1,478 hp	1,362 hp	TBD	N/A	20200202	X Existing (unchanged) New/Additional To Be Modified	To be Removed Replacement Unit To be Replaced	4SLB	N/A
							TBD	3					
4	Compressor Engine	Waukesha	L7042GL	316994 (Pkg. X00043)	1,478 hp	1,362 hp	01/18/78	4	20200202	X Existing (unchanged) New/Additional To Be Modified	To be Removed Replacement Unit To be Replaced	4SLB	N/A
							01/18/78	4					
5	Compressor Engine	Waukesha	L7042GL	C-11888/1 (Pkg. X00059)	1,478 hp	1,362 hp	12/19/95	N/A	20200202	X Existing (unchanged) New/Additional To Be Modified	To be Removed Replacement Unit To be Replaced	4SLB	N/A
							12/19/95	5					
6	Compressor Engine	Waukesha	L7042GL	C-10985/5 (Pkg. 76365)	1,478 hp	1,362 hp	09/29/93	N/A	20200202	X Existing (unchanged) New/Additional To Be Modified	To be Removed Replacement Unit To be Replaced	4SLB	N/A
							09/29/93	6					
7	Compressor Engine	Waukesha	L7042GL	220939 (Pkg. X00132)	1,478 hp	1,362 hp	01/08/76	N/A	20200202	X Existing (unchanged) New/Additional To Be Modified	To be Removed Replacement Unit To be Replaced	4SLB	N/A
							01/08/76	7					
8	Compressor Engine	Waukesha	L7042GL	C-10413/3 (Pkg. X00056)	1,478 hp	1,362 hp	09/23/91	N/A	20200202	X Existing (unchanged) New/Additional To Be Modified	To be Removed Replacement Unit To be Replaced	4SLB	8
							09/23/91	8					
9	Compressor Engine	Waukesha	L7042GL	C-11448/2 (Pkg. X00242)	1,478 hp	1,362 hp	12/09/94	N/A	20200202	X Existing (unchanged) New/Additional To Be Modified	To be Removed Replacement Unit To be Replaced	4SLB	9
							12/09/94	9					
10	Compressor Engine	Waukesha	L7042GL	TBD	1,478 hp	1,362 hp	TBD	N/A	20200202	X Existing (unchanged) New/Additional To Be Modified	To be Removed Replacement Unit To be Replaced	4SLB	N/A
							TBD	10					
11	Compressor Engine	Waukesha	L7042GL	TBD	1,478 hp	1,362 hp	TBD	N/A	20200202	X Existing (unchanged) New/Additional To Be Modified	To be Removed Replacement Unit To be Replaced	4SLB	N/A
							TBD	11					
12	Compressor Engine	Waukesha	L7042GL	TBD	1,478 hp	1,362 hp	TBD	N/A	20200202	X Existing (unchanged) New/Additional To Be Modified	To be Removed Replacement Unit To be Replaced	4SLB	N/A
							TBD	12					
13	Compressor Engine	Waukesha	L7042GL	C-10607/4 (Pkg. 76757)	1,478 hp	1,362 hp	06/08/92	N/A	20200202	X Existing (unchanged) New/Additional To Be Modified	To be Removed Replacement Unit To be Replaced	4SLB	N/A
							06/08/92	13					
14	Compressor Engine	Waukesha	L7042GL	C-10413/2 (Pkg. 76758)	1,478 hp	1,362 hp	09/23/91	N/A	20200202	X Existing (unchanged) New/Additional To Be Modified	To be Removed Replacement Unit To be Replaced	4SLB	N/A
							09/23/91	14					
21	Compressor Engine	Waukesha	L7042GL	C-11907/1 (Pkg. 76759)	1,478 hp	1,362 hp	06/19/96	N/A	20200202	X Existing (unchanged) New/Additional To Be Modified	To be Removed Replacement Unit To be Replaced	4SLB	N/A
							06/19/96	21					
22	Compressor Engine	Waukesha	L7042GL	C-10887/2 (Pkg. 76760)	1,478 hp	1,362 hp	01/16/95	N/A	20200202	X Existing (unchanged) New/Additional To Be Modified	To be Removed Replacement Unit To be Replaced	4SLB	N/A
							01/16/95	22					
23	Compressor Engine	Waukesha	L7042GL	TBD	1,478 hp	1,362 hp	TBD	N/A	20200202	X Existing (unchanged) New/Additional To Be Modified	To be Removed Replacement Unit To be Replaced	4SLB	N/A
							TBD	23					

Unit Number ¹	Source Description	Make	Model #	Serial #	Manufact-urer's Rated Capacity ³ (Specify Units)	Requested Permitted Capacity ³ (Specify Units)	Date of Manufacture ²	Controlled by Unit #	Source Classi-fication Code (SCC)	For Each Piece of Equipment, Check One	RICE Ignition Type (CI, SI, 4SLB, 4SRB, 2SLB) ⁴	Replacing Unit No.	
							Date of Construction/ Reconstruction ²	Emissions vented to Stack #					
24	Compressor Engine	Waukesha	L7042GL	TBD	1,478 hp	1,362 hp	TBD	N/A	20200202	X Existing (unchanged) New/Additional To Be Modified	To be Removed Replacement Unit To be Replaced	4SLB	N/A
							TBD	24					
25	Compressor Engine	Waukesha	L7042GL	TBD	1,478 hp	1,362 hp	TBD	N/A	20200202	X Existing (unchanged) New/Additional To Be Modified	To be Removed Replacement Unit To be Replaced	4SLB	N/A
							TBD	25					
26	Compressor Engine	Waukesha	L7042GL	C-10987/3 (Pkg. X00175)	1,478 hp	1,362 hp	09/20/93	N/A	20200202	X Existing (unchanged) New/Additional To Be Modified	To be Removed Replacement Unit To be Replaced	4SLB	N/A
							09/20/93	26					
SSM	Compressor & Associated Piping	N/A	N/A	N/A	N/A	N/A	N/A	N/A	31000203	X Existing (unchanged) New/Additional To Be Modified	To be Removed Replacement Unit To be Replaced	N/A	N/A
							N/A	N/A					
15a	Dehydrator Still Vent	P&A Inc.	PA-10MM-1000-2P	4633	10 MMSCFD	10 MMSCFD	05/91	N/A	31000227	X Existing (unchanged) New/Additional To Be Modified	To be Removed Replacement Unit To be Replaced	N/A	N/A
							05/91	15a					
15b	Dehydrator Reboiler	P&A Inc.	PA-10MM-1000-2P	4633	0.6 MMBtu/hr	0.6 MMBtu/hr	05/91	N/A	31000228	X Existing (unchanged) New/Additional To Be Modified	To be Removed Replacement Unit To be Replaced	N/A	N/A
							05/91	15b					
16a	Dehydrator Still Vent	P&A Inc.	PA-10MM-1000-2P	4332	10 MMSCFD	10 MMSCFD	1991	N/A	31000227	X Existing (unchanged) New/Additional To Be Modified	To be Removed Replacement Unit To be Replaced	N/A	N/A
							1991	16a					
16b	Dehydrator Reboiler	P&A Inc.	PA-10MM-1000-2P	4332	0.6 MMBtu/hr	0.6 MMBtu/hr	1991	N/A	31000228	X Existing (unchanged) New/Additional To Be Modified	To be Removed Replacement Unit To be Replaced	N/A	N/A
							1991	16b					
17a	Dehydrator Still Vent	P&A Inc.	PA-10MM-1000-2P	5487	10 MMSCFD	10 MMSCFD	02/92	N/A	31000227	X Existing (unchanged) New/Additional To Be Modified	To be Removed Replacement Unit To be Replaced	N/A	N/A
							02/92	17a					
17b	Dehydrator Reboiler	P&A Inc.	PA-10MM-1000-2P	5487	0.6 MMBtu/hr	0.6 MMBtu/hr	02/92	N/A	31000228	X Existing (unchanged) New/Additional To Be Modified	To be Removed Replacement Unit To be Replaced	N/A	N/A
							02/92	17b					
F1	Equipment Leaks	NA	NA	NA	NA	NA	N/A	N/A	31000299	X Existing (unchanged) New/Additional To Be Modified	To be Removed Replacement Unit To be Replaced	N/A	N/A
							N/A	N/A					
M1	Malfunctions	N/A	N/A	N/A	N/A	N/A	N/A	N/A	31000299	X Existing (unchanged) New/Additional To Be Modified	To be Removed Replacement Unit To be Replaced	N/A	N/A
							N/A	N/A					
										Existing (unchanged) New/Additional To Be Modified	To be Removed Replacement Unit To be Replaced		
										Existing (unchanged) New/Additional To Be Modified	To be Removed Replacement Unit To be Replaced		
										Existing (unchanged) New/Additional To Be Modified	To be Removed Replacement Unit To be Replaced		
										Existing (unchanged) New/Additional To Be Modified	To be Removed Replacement Unit To be Replaced		

¹ Unit numbers must correspond to unit numbers in the previous permit unless a complete cross reference table of all units in both permits is provided.² Specify dates required to determine regulatory applicability.³ To properly account for power conversion efficiencies, generator set rated capacity shall be reported as the rated capacity of the engine in horsepower, not the kilowatt capacity of the generator set.⁴ "4SLB" means four stroke lean burn engine, "4SRB" means four stroke rich burn engine, "2SLB" means two stroke lean burn engine, "CI" means compression ignition, and "SI" means spark ignition

Table 2-B: Insignificant Activities¹ (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.	Max Capacity	List Specific 20.2.72.202 NMAC Exemption (e.g. 20.2.72.202.B.5)	Date of Manufacture /Reconstruction ²	For Each Piece of Equipment, Check One	
			Serial No.	Capacity Units	Insignificant Activity citation (e.g. IA List Item #1.a)	Date of Installation /Construction ²		
T1-T10	Lubrication Oil Storage Tank			500 gal			<input checked="" type="checkbox"/> Existing (unchanged)	To be Removed Replacement Unit
				500 gal	Insignificant Activity Item No. 5			
T11	Lubrication Oil Storage Tank			4,200 gal			<input checked="" type="checkbox"/> Existing (unchanged)	To be Removed Replacement Unit
				4,200 gal	Insignificant Activity Item No. 5			
T14	Used Oil Storage Tank			6,930 gal			<input checked="" type="checkbox"/> Existing (unchanged)	To be Removed Replacement Unit
				6,930 gal	Insignificant Activity Item No. 5			
T15	Waste Water Storage Tank			6,930 gal			<input checked="" type="checkbox"/> Existing (unchanged)	To be Removed Replacement Unit
				6,930 gal	Insignificant Activity Item No. 5			
T17	Produced Water Storage Tank			300 bbl			<input checked="" type="checkbox"/> Existing (unchanged)	To be Removed Replacement Unit
				300 bbl	Insignificant Activity Item No. 1.a			
T18-T21	Used Oil Storage Tank			500 gal			<input checked="" type="checkbox"/> Existing (unchanged)	To be Removed Replacement Unit
				500 gal	Insignificant Activity Item No. 5			
T22-T24	TEG Storage Tank			100 gal			<input checked="" type="checkbox"/> Existing (unchanged)	To be Removed Replacement Unit
				100 gal	Insignificant Activity Item No. 5			
T27	Produced Water Storage Tank			210 bbl			<input checked="" type="checkbox"/> Existing (unchanged)	To be Removed Replacement Unit
				210 bbl	Insignificant Activity Item No. 1.a			
T28	Waste Water Storage Tank			740 gal			<input checked="" type="checkbox"/> Existing (unchanged)	To be Removed Replacement Unit
				740 gal	Insignificant Activity Item No. 5			
T29-T37	Lubrication Oil Storage Tank			500 gal			<input checked="" type="checkbox"/> Existing (unchanged)	To be Removed Replacement Unit
				500 gal	Insignificant Activity Item No. 5			
T38-T42	Used Oil Storage Tank			500 gal			<input checked="" type="checkbox"/> Existing (unchanged)	To be Removed Replacement Unit
				500 gal	Insignificant Activity Item No. 5			
T43	Waste Water Storage Tank			1,260 gal			<input checked="" type="checkbox"/> Existing (unchanged)	To be Removed Replacement Unit
				1,260 gal	Insignificant Activity Item No. 5			
T44	Antifreeze Storage Tank			500 gal			<input checked="" type="checkbox"/> Existing (unchanged)	To be Removed Replacement Unit
				500 gal	Insignificant Activity Item No. 5			

Unit Number	Source Description	Manufacturer	Model No.	Max Capacity	List Specific 20.2.72.202 NMAC Exemption (e.g. 20.2.72.202.B.5)	Date of Manufacture /Reconstruction ²	For Each Piece of Equipment, Check One	
			Serial No.	Capacity Units	Insignificant Activity citation (e.g. IA List Item #1.a)	Date of Installation /Construction ²		
T47-T49	TEG Storage Tank			50 gal			X Existing (unchanged) New/Additional To Be Modified	To be Removed Replacement Unit To be Replaced
				50 gal	Insignificant Activity Item No. 5			
T53	Methanol Storage Tank			4,200 gal			X Existing (unchanged) New/Additional To Be Modified	To be Removed Replacement Unit To be Replaced
				4,200 gal	Insignificant Activity Item No. 1.a			
T54	Antifreeze Storage Tank			500 gal			X Existing (unchanged) New/Additional To Be Modified	To be Removed Replacement Unit To be Replaced
				500 gal	Insignificant Activity Item No. 5			
T55	TEG Storage Tank			500 gal			X Existing (unchanged) New/Additional To Be Modified	To be Removed Replacement Unit To be Replaced
				500 gal	Insignificant Activity Item No. 5			
T56	Produced Water Storage Tank	Permian Tank Mfg. Co.		400 bbl		Apr. 2000	X Existing (unchanged) New/Additional To Be Modified	To be Removed Replacement Unit To be Replaced
			29540	400 bbl	Insignificant Activity Item No. 1.a			
L1	Truck Loading - Produced Water			N/A			X Existing (unchanged) New/Additional To Be Modified	To be Removed Replacement Unit To be Replaced
				N/A	Insignificant Activity Item No. 5			
L2	Truck Loading - Methanol			N/A			X Existing (unchanged) New/Additional To Be Modified	To be Removed Replacement Unit To be Replaced
				N/A	Insignificant Activity Item No. 5			
							Existing (unchanged) New/Additional To Be Modified	To be Removed Replacement Unit To be Replaced

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

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

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.

[illegible]

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

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

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

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

Unit No.	NO _x		CO		VOC		SO _x		PM ¹		PM ₁₀ ¹		PM _{2.5} ¹		H ₂ S		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	4.50	19.73	7.96	34.86	3.00	13.15	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
2	4.50	19.73	7.96	34.86	3.00	13.15	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
3	4.50	19.73	7.96	34.86	3.00	13.15	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
4	4.50	19.73	7.96	34.86	3.00	13.15	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
5	4.50	19.73	7.96	34.86	3.00	13.15	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
6	4.50	19.73	7.96	34.86	3.00	13.15	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
7	4.50	19.73	7.96	34.86	3.00	13.15	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
8	4.50	19.73	7.96	34.86	3.00	13.15	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
9	4.50	19.73	7.96	34.86	3.00	13.15	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
10	4.50	19.73	7.96	34.86	3.00	13.15	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
11	4.50	19.73	7.96	34.86	3.00	13.15	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
12	4.50	19.73	7.96	34.86	3.00	13.15	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
13	4.50	19.73	7.96	34.86	3.00	13.15	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
14	4.50	19.73	7.96	34.86	3.00	13.15	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
21	4.50	19.73	7.96	34.86	3.00	13.15	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
22	4.50	19.73	7.96	34.86	3.00	13.15	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
23	4.50	19.73	7.96	34.86	3.00	13.15	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
24	4.50	19.73	7.96	34.86	3.00	13.15	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
25	4.50	19.73	7.96	34.86	3.00	13.15	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
26	4.50	19.73	7.96	34.86	3.00	13.15	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
SSM ²	-	-	-	-	Not specified	31.0	-	-	-	-	-	-	-	-	-	-	-	-

Unit No.	NOx		CO		VOC		SOx		PM ¹		PM10 ¹		PM2.5 ¹		H ₂ S		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
15a ²	-	-	-	-	3.9	17.1	-	-	-	-	-	-	-	-	-	-	-	-
15b	4.3E-02	0.19	1.8E-02	7.8E-02	2.7E-03	1.2E-02	4.2E-04	1.8E-03	5.0E-03	2.2E-02	5.0E-03	2.2E-02	5.0E-03	2.2E-02	-	-	-	-
16a ²	-	-	-	-	3.9	17.1	-	-	-	-	-	-	-	-	-	-	-	-
16b	4.3E-02	0.19	1.8E-02	7.8E-02	2.7E-03	1.2E-02	4.2E-04	1.8E-03	5.0E-03	2.2E-02	5.0E-03	2.2E-02	5.0E-03	2.2E-02	-	-	-	-
17a ²	-	-	-	-	3.9	17.1	-	-	-	-	-	-	-	-	-	-	-	-
17b	4.3E-02	0.19	1.8E-02	7.8E-02	2.7E-03	1.2E-02	4.2E-04	1.8E-03	5.0E-03	2.2E-02	5.0E-03	2.2E-02	5.0E-03	2.2E-02	-	-	-	-
F1 ²	-	-	-	-	1.2	5.2	-	-	-	-	-	-	-	-	-	-	-	-
M1 ²	-	-	-	-	Not specified	8.0	-	-	-	-	-	-	-	-	-	-	-	-
Totals	90.23	395.20	159.23	697.42	72.97	358.63	0.12	0.52	2.02	8.86	2.02	8.86	2.02	8.86	-	-	0	0

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).

² The VOC emission rates are carried forward from the current permit (P031-R3) and/or its associated application.

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 ₂ S		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	4.50	19.73	7.96	34.86	3.00	13.15	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
2	4.50	19.73	7.96	34.86	3.00	13.15	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
3	4.50	19.73	7.96	34.86	3.00	13.15	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
4	4.50	19.73	0.56	2.44	1.05	4.60	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
5	4.50	19.73	7.96	34.86	3.00	13.15	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
6	4.50	19.73	7.96	34.86	3.00	13.15	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
7	4.50	19.73	7.96	34.86	3.00	13.15	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
8	4.50	19.73	7.96	34.86	3.00	13.15	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
9	4.50	19.73	7.96	34.86	3.00	13.15	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
10	4.50	19.73	7.96	34.86	3.00	13.15	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
11	4.50	19.73	7.96	34.86	3.00	13.15	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
12	4.50	19.73	7.96	34.86	3.00	13.15	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
13	4.50	19.73	7.96	34.86	3.00	13.15	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
14	4.50	19.73	7.96	34.86	3.00	13.15	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
21	4.50	19.73	7.96	34.86	3.00	13.15	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
22	4.50	19.73	7.96	34.86	3.00	13.15	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
23	4.50	19.73	7.96	34.86	3.00	13.15	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
24	4.50	19.73	7.96	34.86	3.00	13.15	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
25	4.50	19.73	7.96	34.86	3.00	13.15	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
26	4.50	19.73	7.96	34.86	3.00	13.15	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
SSM ²	-	-	-	-	Not specified	31.0	-	-	-	-	-	-	-	-	-	-	-	-

Unit No.	NOx		CO		VOC		SOx		PM ¹		PM10 ¹		PM2.5 ¹		H ₂ S		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
15a ²	-	-	-	-	3.9	17.1	-	-	-	-	-	-	-	-	-	-	-	-
15b	4.3E-02	0.19	1.8E-02	7.8E-02	2.7E-03	1.2E-02	4.2E-04	1.8E-03	5.0E-03	2.2E-02	5.0E-03	2.2E-02	5.0E-03	2.2E-02	-	-	-	-
16a ²	-	-	-	-	3.9	17.1	-	-	-	-	-	-	-	-	-	-	-	-
16b	4.3E-02	0.19	1.8E-02	7.8E-02	2.7E-03	1.2E-02	4.2E-04	1.8E-03	5.0E-03	2.2E-02	5.0E-03	2.2E-02	5.0E-03	2.2E-02	-	-	-	-
17a ²	-	-	-	-	3.9	17.1	-	-	-	-	-	-	-	-	-	-	-	-
17b	4.3E-02	0.19	1.8E-02	7.8E-02	2.7E-03	1.2E-02	4.2E-04	1.8E-03	5.0E-03	2.2E-02	5.0E-03	2.2E-02	5.0E-03	2.2E-02	-	-	-	-
F1 ²	-	-	-	-	1.2	5.2	-	-	-	-	-	-	-	-	-	-	-	-
M1 ²	-	-	-	-	Not specified	8.0	-	-	-	-	-	-	-	-	-	-	-	-
Totals	90.23	395.20	151.83	665.01	71.02	350.08	0.12	0.52	2.02	8.86	2.02	8.86	2.02	8.86	-	-	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 requested allowable VOC emission rates are carried forward from the current permit (P031-R3) and/or its associated application.

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 scheduled 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 explanation of SSM emissions in Section 6 and 6a.

All applications for facilities that have emissions during routine or 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 ₂ S		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 ³	-	-	-	-	unspecified	31.0	-	-	-	-	-	-	-	-	-	-	-	-
M1 ³	-	-	-	-	unspecified	8.0	-	-	-	-	-	-	-	-	-	-	-	-
Totals	-	-	-	-	not specified	39.00	-	-	-	-	-	-	-	-	-	-	-	-

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

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

³ The VOC emission rate is carried forward from the current permit (P031-R3).

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

Printed 11/4/2020 3:55 PM

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	701	126.5			160.8	1.0
2	2	V	No	22	701	126.5			160.8	1.0
3	3	V	No	22	701	126.5			160.8	1.0
4	4	V	No	22	701	126.5			160.8	1.0
5	5	V	No	22	701	126.5			160.8	1.0
6	6	V	No	22	701	126.5			160.8	1.0
7	7	V	No	22	701	126.5			160.8	1.0
8	8	V	No	22	701	126.5			160.8	1.0
9	9	V	No	22	701	126.5			160.8	1.0
10	10	V	No	22	701	126.5			160.8	1.0
11	11	V	No	22	701	126.5			160.8	1.0
12	12	V	No	22	701	126.5			160.8	1.0
13	13	V	No	22	701	126.5			160.8	1.0
14	14	V	No	22	701	126.5			160.8	1.0
21	21	V	No	22	701	126.5			160.8	1.0
22	22	V	No	22	701	126.5			160.8	1.0
23	23	V	No	22	701	126.5			160.8	1.0
24	24	V	No	22	701	126.5			160.8	1.0
25	25	V	No	22	701	126.5			160.8	1.0
26	26	V	No	22	701	126.5			160.8	1.0
15b	15b	V	No	10	600	2.7			6.1	0.8
16b	16b	V	No	10	600	2.7			6.1	0.8
17b	17b	V	No	10	600	2.7			6.1	0.8

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 ¹		Benzene X HAP or TAP		Formaldehyde X HAP or TAP		n-Hexane X HAP or TAP		Toluene X HAP or TAP		Xylene 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	
		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	0.5	2.3	0.0	0.1	0.5	2.2	-	-	-	-	-	-						
2	2	0.5	2.3	0.0	0.1	0.5	2.2	-	-	-	-	-	-						
3	3	0.5	2.3	0.0	0.1	0.5	2.2	-	-	-	-	-	-						
4	4	0.2	0.8	-	-	0.4	1.8	-	-	-	-	-	-						
5	5	0.5	2.3	0.0	0.1	0.5	2.2	-	-	-	-	-	-						
6	6	0.5	2.3	0.0	0.1	0.5	2.2	-	-	-	-	-	-						
7	7	0.5	2.3	0.0	0.1	0.5	2.2	-	-	-	-	-	-						
8	8	0.5	2.3	0.0	0.1	0.5	2.2	-	-	-	-	-	-						
9	9	0.5	2.3	0.0	0.1	0.5	2.2	-	-	-	-	-	-						
10	10	0.5	2.3	0.0	0.1	0.5	2.2	-	-	-	-	-	-						
11	11	0.5	2.3	0.0	0.1	0.5	2.2	-	-	-	-	-	-						
12	12	0.5	2.3	0.0	0.1	0.5	2.2	-	-	-	-	-	-						
13	13	0.5	2.3	0.0	0.1	0.5	2.2	-	-	-	-	-	-						
14	14	0.5	2.3	0.0	0.1	0.5	2.2	-	-	-	-	-	-						
21	21	0.5	2.3	0.0	0.1	0.5	2.2	-	-	-	-	-	-						
22	22	0.5	2.3	0.0	0.1	0.5	2.2	-	-	-	-	-	-						
23	23	0.5	2.3	0.0	0.1	0.5	2.2	-	-	-	-	-	-						
24	24	0.5	2.3	0.0	0.1	0.5	2.2	-	-	-	-	-	-						
25	25	0.5	2.3	0.0	0.1	0.5	2.2	-	-	-	-	-	-						
26	26	0.5	2.3	0.0	0.1	0.5	2.2	-	-	-	-	-	-						

Stack No.	Unit No.(s)	Total HAPs ¹		Benzene X HAP or TAP		Formaldehyde X HAP or TAP		n-Hexane X HAP or TAP		Toluene X HAP or TAP		Xylene 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	
		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	SSM	-	0.7	-	-	-	-	-	0.2	-	0.2	-	0.2						
15a	15a	3.0	13.2	0.1	0.6	-	-	-	-	1.0	4.5	1.8	8.0						
15b	15b	-	-	-	-	-	-	-	-	-	-	-	-						
16a	16a	3.0	13.2	0.1	0.6	-	-	-	-	1.0	4.5	1.8	8.0						
16b	16b	-	-	-	-	-	-	-	-	-	-	-	-						
17a	17a	3.0	13.2	0.1	0.6	-	-	-	-	1.0	4.5	1.8	8.0						
17b	17b	-	-	-	-	-	-	-	-	-	-	-	-						
F1	F1	-	0.1	-	-	-	-	-	0.1	-	-	-	-						
M1	M1	-	0.2	-	-	-	-	-	0.2	-	-	-	-						
Totals		74.5	86.8	0.5	2.1	10.0	43.8	1.1	0.4	3.2	14.4	5.5	24.6						

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	11.16 Mscf	97.79 MMscf	--	--
2	Natural Gas	Raw/Field Natural Gas	900 Btu/scf	11.16 Mscf	97.79 MMscf	--	--
3	Natural Gas	Raw/Field Natural Gas	900 Btu/scf	11.16 Mscf	97.79 MMscf	--	--
4	Natural Gas	Raw/Field Natural Gas	900 Btu/scf	11.16 Mscf	97.79 MMscf	--	--
5	Natural Gas	Raw/Field Natural Gas	900 Btu/scf	11.16 Mscf	97.79 MMscf	--	--
6	Natural Gas	Raw/Field Natural Gas	900 Btu/scf	11.16 Mscf	97.79 MMscf	--	--
7	Natural Gas	Raw/Field Natural Gas	900 Btu/scf	11.16 Mscf	97.79 MMscf	--	--
8	Natural Gas	Raw/Field Natural Gas	900 Btu/scf	11.16 Mscf	97.79 MMscf	--	--
9	Natural Gas	Raw/Field Natural Gas	900 Btu/scf	11.16 Mscf	97.79 MMscf	--	--
10	Natural Gas	Raw/Field Natural Gas	900 Btu/scf	11.16 Mscf	97.79 MMscf	--	--
11	Natural Gas	Raw/Field Natural Gas	900 Btu/scf	11.16 Mscf	97.79 MMscf	--	--
12	Natural Gas	Raw/Field Natural Gas	900 Btu/scf	11.16 Mscf	97.79 MMscf	--	--
13	Natural Gas	Raw/Field Natural Gas	900 Btu/scf	11.16 Mscf	97.79 MMscf	--	--
14	Natural Gas	Raw/Field Natural Gas	900 Btu/scf	11.16 Mscf	97.79 MMscf	--	--
21	Natural Gas	Raw/Field Natural Gas	900 Btu/scf	11.16 Mscf	97.79 MMscf	--	--
22	Natural Gas	Raw/Field Natural Gas	900 Btu/scf	11.16 Mscf	97.79 MMscf	--	--
23	Natural Gas	Raw/Field Natural Gas	900 Btu/scf	11.16 Mscf	97.79 MMscf	--	--
24	Natural Gas	Raw/Field Natural Gas	900 Btu/scf	11.16 Mscf	97.79 MMscf	--	--
25	Natural Gas	Raw/Field Natural Gas	900 Btu/scf	11.16 Mscf	97.79 MMscf	--	--
26	Natural Gas	Raw/Field Natural Gas	900 Btu/scf	11.16 Mscf	97.79 MMscf	--	--
15b	Natural Gas	Raw/Field Natural Gas	900 Btu/scf	659 scf	5.77 MMscf	--	--
16b	Natural Gas	Raw/Field Natural Gas	900 Btu/scf	659 scf	5.77 MMscf	--	--
17b	Natural Gas	Raw/Field Natural Gas	900 Btu/scf	659 scf	5.77 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)
T1-T10	40400313	Lubrication Oil	Lubrication Oil	Insignificant source under Insignificant Activites List, Item No. 5 (Vapor pressure < 10 mm Hg)					
T11	40400313	Lubrication Oil	Lubrication Oil	Insignificant source under Insignificant Activites List, Item No. 5 (Vapor pressure < 10 mm Hg)					
T14	40400313	Used Oil	Used Oil	Insignificant source under Insignificant Activites List, Item No. 5 (Vapor pressure < 10 mm Hg)					
T15	40400313	Waste Water	99% H2O & 1% Hydrocarbon	Insignificant source under Insignificant Activites List, Item No. 5 (Vapor pressure < 10 mm Hg)					
T17 ²	40400315	Produced Water	99% water, 1% natural gasoline (HC liquid)	8.3	18.02	65	0.3045	77	0.4581
T18-T21	40400313	Used Oil	Used Oil	Insignificant source under Insignificant Activites List, Item No. 5 (Vapor pressure < 10 mm Hg)					
T22-T24	40705218	TEG	TEG	Insignificant source under Insignificant Activites List, Item No. 5 (Vapor pressure < 10 mm Hg)					
T27 ²	40400315	Produced Water	99% water, 1% natural gasoline (HC liquid)	8.3	18.02	65	0.3045	77	0.4581
T28	40400313	Waste Water	99% water & 1% heavy hydrocarbons	Insignificant source under Insignificant Activites List, Item No. 5 (Vapor pressure < 10 mm Hg)					
T29-T37	40400313	Lubrication Oil	Lubrication Oil	Insignificant source under Insignificant Activites List, Item No. 5 (Vapor pressure < 10 mm Hg)					
T38-T42	40400313	Used Oil	Used Oil	Insignificant source under Insignificant Activites List, Item No. 5 (Vapor pressure < 10 mm Hg)					
T43	40400313	Waste Water	99% H2O & 1% Heavy hydrocarbons	Insignificant source under Insignificant Activites List, Item No. 5 (Vapor pressure < 10 mm Hg)					
T44	31000299	Antifreeze	Antifreeze	Insignificant source under Insignificant Activites List, Item No. 5 (Vapor pressure < 10 mm Hg)					
T47-T49	40705218	TEG	TEG	Insignificant source under Insignificant Activites List, Item No. 5 (Vapor pressure < 10 mm Hg)					
T53	40700816	Methanol	Methanol	6.6	32.0400	64.94	1.682	76.64	2.3895
T54	31000299	Antifreeze	Antifreeze	Insignificant source under Insignificant Activites List, Item No. 5 (Vapor pressure < 10 mm Hg)					
T55	40705218	TEG	TEG	Insignificant source under Insignificant Activites List, Item No. 5 (Vapor pressure < 10 mm Hg)					
T56 ²	40400315	Produced Water	99% water, 1% natural gasoline (HC liquid)	8.3	18.02	65	0.3045	77	0.4581
				* N/A: The emission calculations do not yield this data.					

¹ Except for the storage tanks with tank data filled in, all of the storage tanks at the Middle Mesa CDP are insignificant based on vapor pressure the stored contents.

² Tank data are provided for storage tanks T17, T27 and T53 as they are insignificant based on emission calculations demonstrating that regulated emissions are less than 1 tpy.

The produced water tank units T17, T27 and T56 are each assumed to have the same temperature and pressure conditions.

Table 2-L: Tank Data

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

Tank No.	Date Installed	Materials Stored	Seal Type (refer to Table 2-LR below)	Roof Type (refer to Table 2-LR below)	Capacity		Diameter (M)	Vapor Space (M)	Color (from Table VI-C)		Paint Condition (from Table VI-C)	Annual Throughput (gal/yr)	Turn-overs (per year)
					(bbl)	(M ³)			Roof	Shell			
T1-T10		Lubrication Oil	N/A	FX	12	1.9	Insignificant source under Insignificant Activites List, Item No. 5 (Vapor pressure < 10 mm Hg)						
T11		Lubrication Oil	N/A	FX	100	15.9	Insignificant source under Insignificant Activites List, Item No. 5 (Vapor pressure < 10 mm Hg)						
T14		Used Oil	N/A	FX	165	26.2	Insignificant source under Insignificant Activites List, Item No. 5 (Vapor pressure < 10 mm Hg)						
T15		Waste Water	N/A	FX	165	26.2	Insignificant source under Insignificant Activites List, Item No. 5 (Vapor pressure < 10 mm Hg)						
T17 ²		Produced Water	N/A	FX	300	47.7	N/A*	N/A*	N/A*	N/A*	N/A*	138,462	11.0
T18-T21		Used Oil	N/A	FX	12	1.9	Insignificant source under Insignificant Activites List, Item No. 5 (Vapor pressure < 10 mm Hg)						
T22-T24		TEG	N/A	FX	2	0.3	Insignificant source under Insignificant Activites List, Item No. 5 (Vapor pressure < 10 mm Hg)						
T27 ²		Produced Water	N/A	FX	210	33.4	N/A*	N/A*	N/A*	N/A*	N/A*	96,923	11.0
T28		Waste Water	N/A	FX	18	2.9	Insignificant source under Insignificant Activites List, Item No. 5 (Vapor pressure < 10 mm Hg)						
T29-T37		Lubrication Oil	N/A	FX	12	1.9	Insignificant source under Insignificant Activites List, Item No. 5 (Vapor pressure < 10 mm Hg)						
T38-T42		Used Oil	N/A	FX	12	1.9	Insignificant source under Insignificant Activites List, Item No. 5 (Vapor pressure < 10 mm Hg)						
T43		Waste Water	N/A	FX	30	4.8	Insignificant source under Insignificant Activites List, Item No. 5 (Vapor pressure < 10 mm Hg)						
T44		Antifreeze	N/A	FX	12	1.9	Insignificant source under Insignificant Activites List, Item No. 5 (Vapor pressure < 10 mm Hg)						
T47-T49		TEG	N/A	FX	1	0.2	Insignificant source under Insignificant Activites List, Item No. 5 (Vapor pressure < 10 mm Hg)						
T53 ³		Methanol	N/A	FX	100	15.9	2.134	2.280	LG	LG	Good	50,400	12
T54		Antifreeze	N/A	FX	12	1.9	Insignificant source under Insignificant Activites List, Item No. 5 (Vapor pressure < 10 mm Hg)						
T55		TEG	N/A	FX	12	1.9	Insignificant source under Insignificant Activites List, Item No. 5 (Vapor pressure < 10 mm Hg)						
T56 ²		Produced Water	N/A	FX	400	63.6	N/A*	N/A*	N/A*	N/A*	N/A*	184,615	11.0
							* N/A: The emission calculations do not yield this data.						

¹ Except for the storage tanks with tank data filled in, all of the storage tanks at the Middle Mesa CDP are insignificant based on vapor pressure the stored contents.

Tank data are provided for storage tanks T17, T27 and T53 as they are insignificant based on emission calculations demonstrating that regulated emissions are less than 1 tpy.

² The total facility produced water throughput is divided proportionally between the units T17, T27 and T56 produced water storage tanks (210 bbl, 300 bbl, and 400 bbl, respectively) according to tank size.

³ Tank throughput volume is based on tank volume x number of turnovers.

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	
Note: $1.00 \text{ bbl} = 0.159 \text{ M}^3 = 42.0 \text{ gal}$					MG: Medium Gray	
					BL: Black	
					OT: Other (specify)	

Note: $1.00 \text{ bbl} = 0.159 \text{ M}^3 = 42.0 \text{ gal}$

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

[illegible]

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.

[illegible]

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

[illegible]

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 ₂ O ton/yr	CH ₄ ton/yr	SF ₆ ton/yr	PFC/HFC ton/yr ²						Total GHG Mass Basis ton/yr ⁴	Total CO ₂ e 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 ₂ e	6,010.5	3.4	2.8								-	6016.66
2	mass GHG	6,010.5	0.0113	0.1133								6010.6	-
	CO ₂ e	6,010.5	3.4	2.8								-	6016.7
3	mass GHG	6,010.5	0.0113	0.1133								6010.6	-
	CO ₂ e	6,010.5	3.4	2.8								-	6016.66
4	mass GHG	6,010.5	0.0113	0.1133								6010.58	-
	CO ₂ e	6,010.5	3.4	2.8								-	6016.7
5	mass GHG	6,010.5	0.0113	0.1133								6010.58	-
	CO ₂ e	6,010.5	3.4	2.8								-	6016.7
6	mass GHG	6,010.5	0.0113	0.1133								6010.58	-
	CO ₂ e	6,010.5	3.4	2.8								-	6016.7
7	mass GHG	6,010.5	0.0113	0.1133								6010.58	-
	CO ₂ e	6,010.5	3.4	2.8								-	6016.7
8	mass GHG	6,010.5	0.0113	0.1133								6010.6	-
	CO ₂ e	6,010.5	3.4	2.8								-	6016.7
9	mass GHG	6,010.5	0.0113	0.1133								6010.6	-
	CO ₂ e	6,010.5	3.4	2.8								-	6016.7
10	mass GHG	6,010.5	0.0113	0.1133								6010.6	-
	CO ₂ e	6,010.5	3.4	2.8								-	6016.7

Unit No.		CO ₂ ton/yr	N ₂ O ton/yr	CH ₄ ton/yr	SF ₆ ton/yr	PFC/HFC ton/yr ²						Total GHG Mass Basis ton/yr ⁴	Total CO ₂ e ton/yr ⁵
Unit No.	GWPs ¹	1	298	25	22,800	footnote 3							
11	mass GHG	6,010.5	0.0113	0.1133								6010.6	-
	CO ₂ e	6,010.5	3.4	2.8								-	6016.7
12	mass GHG	6,010.5	0.0113	0.1133								6010.6	-
	CO ₂ e	6,010.5	3.4	2.8								-	6016.7
13	mass GHG	6,010.5	0.0113	0.1133								6010.6	-
	CO ₂ e	6,010.5	3.4	2.8								-	6016.7
14	mass GHG	6,010.5	0.0113	0.1133								6010.6	-
	CO ₂ e	6,010.5	3.4	2.8								-	6016.7
21	mass GHG	6,010.5	0.0113	0.1133								6010.6	-
	CO ₂ e	6,010.5	3.4	2.8								-	6016.7
22	mass GHG	6,010.5	0.0113	0.1133								6010.6	-
	CO ₂ e	6,010.5	3.4	2.8								-	6016.7
23	mass GHG	6,010.5	0.0113	0.1133								6010.6	-
	CO ₂ e	6,010.5	3.4	2.8								-	6016.7
24	mass GHG	6,010.5	0.0113	0.1133								6010.6	-
	CO ₂ e	6,010.5	3.4	2.8								-	6016.7
25	mass GHG	6,010.5	0.0113	0.1133								6010.6	-
	CO ₂ e	6,010.5	3.4	2.8								-	6016.7
26	mass GHG	6,010.5	0.0113	0.1133								6010.6	-
	CO ₂ e	6,010.5	3.4	2.8								-	6016.7

Unit No.		CO ₂ ton/yr	N ₂ O ton/yr	CH ₄ ton/yr	SF ₆ ton/yr	PFC/HFC ton/yr ²						Total GHG Mass Basis ton/yr ⁴	Total CO ₂ e ton/yr ⁵
Unit No.	GWPs ¹	1	298	25	22,800	footnote 3							
SSM	mass GHG	167.9	-	540.7								708.6	-
	CO ₂ e	167.9	-	13,518.4								-	13686.3
15a	mass GHG	7.45	--	0.65								8.1	-
	CO ₂ e	7.45	-	16.18								-	23.6
15b	mass GHG	336.9	0.0	0.0								336.9	-
	CO ₂ e	336.9	0.2	0.2								-	337.3
16a	mass GHG	7.45	--	0.65								8.1	-
	CO ₂ e	7.45	-	16.18								-	23.6
16b	mass GHG	336.9	0.0	0.0								336.9	-
	CO ₂ e	336.9	0.2	0.2								-	337.3
17a	mass GHG	7.45	--	0.65								8.1	-
	CO ₂ e	7.45	-	16.18								-	23.6
17b	mass GHG	336.9	0.0	0.0								336.9	-
	CO ₂ e	336.9	0.2	0.2								-	337.3
Insig Tanks & Truck Loading	mass GHG	0.0	-	0.0								0.00	-
	CO ₂ e	0.0	-	0.0								-	0.0
L1	mass GHG	0.0	-	0.0								0.0	-
	CO ₂ e	0.0	-	0.0								-	0.0
F1	mass GHG	12.3	-	39.60								51.88	-
	CO ₂ e	12.3	-	990.1								-	1002.4
M1	mass GHG	43.4	-	139.68								183.06	-
	CO ₂ e	43.4	-	3,492.12								-	3535.5

Unit No.		CO ₂ ton/yr	N ₂ O ton/yr	CH ₄ ton/yr	SF ₆ ton/yr	PFC/HFC ton/yr ²						Total GHG Mass Basis ton/yr ⁴	Total CO ₂ e ton/yr ⁵
Unit No.	GWPs ¹	1	298	25	22,800	footnote 3							
Reciprocating Compressors	mass GHG	346.2	-	1,116.5								1462.7	-
	CO ₂ e	346.2	-	27,913.5								-	28259.7
Pneumatic Devices	mass GHG	13.7	-	44.1								57.8	-
	CO ₂ e	13.7	-	1,102.7								-	1116.4
Pneumatic Pumps	mass GHG	0.7	-	2.1								2.8	-
	CO ₂ e	0.7	-	52.8								-	53.5
	mass GHG											0.0	-
	CO ₂ e											-	0.0
	mass GHG											0.0	-
	CO ₂ e											-	0.0
Total ⁶	mass GHG	121,826.3	0.2	1,887.0								123,713.52	-
	CO ₂ e	121,826.3	68.1	47,175.3								-	169,069.65

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 value

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 **CO₂e** means Carbon Dioxide Equivalent and is calculated by multiplying the TPY mass emissions of the green house gas by its GWP.

Section 3

Application Summary

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

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

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

The Harvest Four Corners, LLC (Harvest) is submitting this Title V Operating Permit renewal application for its Middle Mesa Central Delivery Point (CDP), Title V Operating Permit P031-R3, issued November 29, 2016, as administratively revised in P023-R3-M1 for a change in ownership. This permit renewal application is submitted under section 20.2.70.300.B(2) of the New Mexico Administrative Code (NMAC).

The facility is a production gathering field compressor station that pressurizes and dehydrates natural gas for transport through natural gas pipelines. Based on facility-wide Potential To Emit (PTE) emissions of nitrogen oxides (NO_x), carbon monoxide (CO) and volatile organic compounds (VOC) exceeding 250 tons per year (tpy) each, the facility is considered a Major Source under the New Source Review (NSR) - Prevention of Significant Deterioration (PSD) program. In addition to its Operating Permit, the facility is authorized under of Construction Permit PSD-0870-M6 issued on February 11, 2011, as revised through – R6 (June 21, 2018).

The Middle Mesa CDP includes the following emission sources:

- Nineteen natural gas-fired, uncontrolled, 1,362 site-rated horsepower (hp) Waukesha 7042GL spark ignition (SI), reciprocating internal combustion engines (RICE) (units 1-3, 5-14, and 21-26);
- One natural gas-fired 1,362 site-rated hp Waukesha 7042GL SI-RICE, equipped with an emission control catalyst for the reduction of CO and VOC emissions (unit 4);
- Three 10 million cubic feet per day (mmcf/d) triethylene glycol (TEG) dehydrators (units 15a/b, 16a/b and 17a/b);

- Startup, shutdown and routine maintenance (SSM) emissions of volatile organic compounds (VOC) from the turbines, compressors and piping associated with the station;
- Fugitive emissions of VOC from process piping leaks (valves, flanges, seals, etc.) (unit F1); and
- Up to 8 tons per year (tpy) of VOC emissions from malfunctions (unit M1);

Unregulated emission sources at the facility include insignificant storage tanks, gas transmission equipment, and produced water truck loading activities. The regulatory justification for their insignificance is noted in Table 2-B of the application. Emission calculations are provided in section 6 for those units with insignificance based on emissions less than 1 ton per year (NMAQB *Operating Permit Program List of Insignificant Activities* (Title V Insignificant Activities List), March 24, 2005: Item No. 1.)

The facility is authorized to operate continuously.

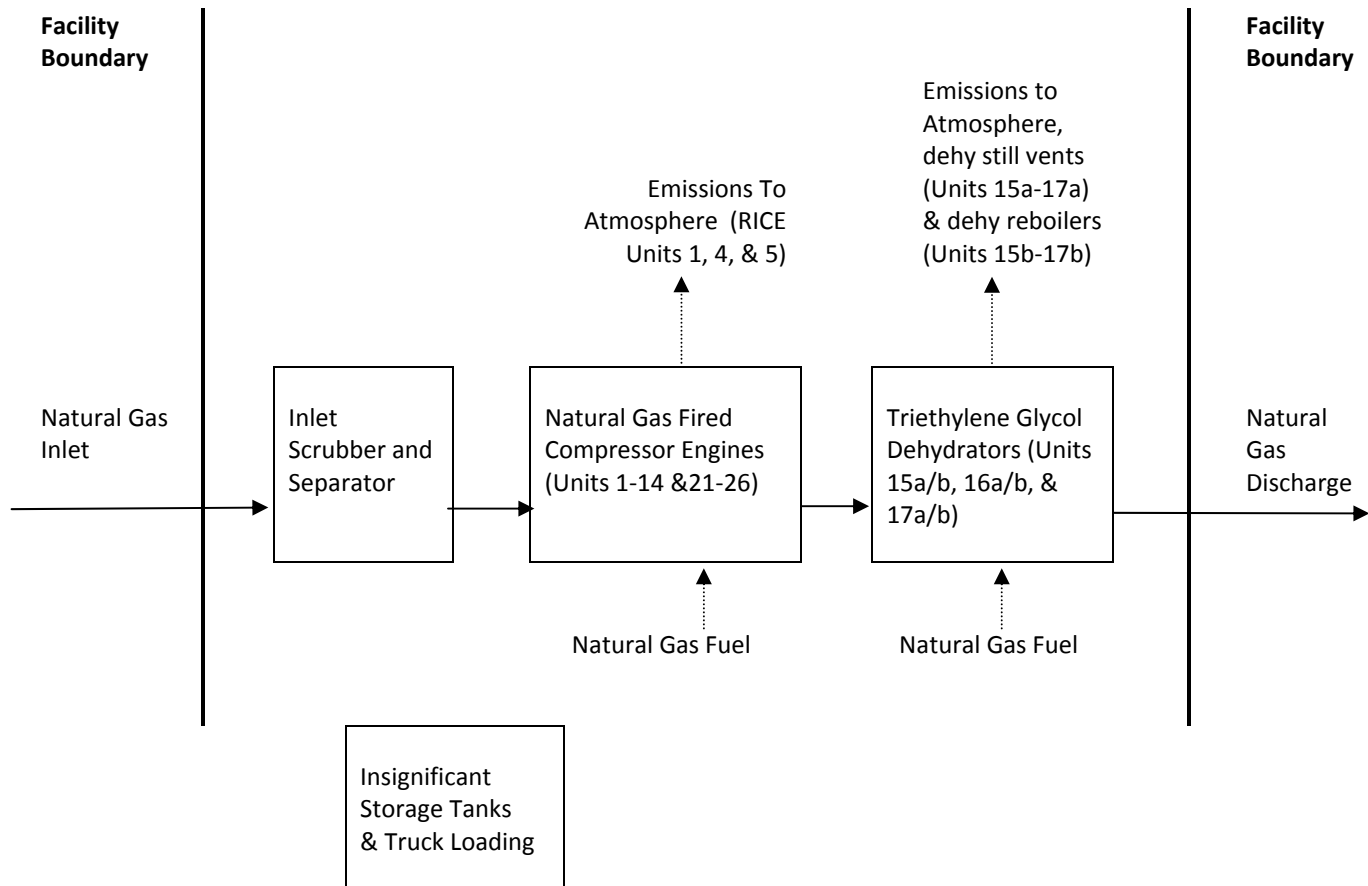
Updated PTE calculations for the three natural gas TEG dehydration units using the GRI-GLYCalc emission estimation software and a recent natural gas extended gas sample are provided in section 6 (“All Calculations”). The results of the updated PTE calculations show that the PTE for VOC is in compliance with the current permitted VOC emission limits. However, the PTE for both the individual and aggregated emissions of hazardous air pollutants (HAP) are significantly increased such that the facility has become a major source of HAP based on its PTE. There have been no operational changes to the facility; the increase in HAP is due solely to an increase of HAP in the composition of the field natural gas transferred to the facility via gathering pipelines from the various independent producers. The resulting change in the facility HAP status is addressed in the section 13 “Determination of State & Federal Air Quality Regulations” regulatory and compliance discussion.

The change to major HAP source status does not result in any de-bottlenecking of facility processes, nor does it change the facility’s major/minor status under the Title V and Prevention of Significant Deterioration [PSD] programs.

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).

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.

Unless otherwise indicated, all emission sources are assumed to operate 8760 hours per year.

Reciprocating Engines

The nitrogen oxides (NO_x), and uncontrolled carbon monoxide (CO) and volatile organic compound (VOC) emissions for each of the reciprocating internal combustion engines (RICE), units 1 through 14 and 21 through 26, are calculated from engine manufacturer's data. The unit 4 RICE controlled CO and VOC emissions also include the appropriate catalyst manufacturer control efficiency applied to the emissions. (NO_x emissions are not controlled by catalytic converters on 4-stroke, lean burn engines.) Sulfur dioxide (SO₂) and particulate emissions are calculated from AP-42, Table 3.2-2 emission factors and the maximum fuel use of the engines. Uncontrolled hazardous air pollutants (HAP) from the RICE are calculated using GRI-HAPCalc 3.0 and the site-rated engine horsepower. For the controlled engine (unit 4), the catalyst control efficiencies for formaldehyde and VOC are applied to the uncontrolled HAP emissions.

Each of the engines starts up with no load and a rich fuel mixture. As a result, emissions are minimized. Because an engine takes only minutes to reach the operating temperature of the engine and effective temperature of the catalytic converter, 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 calculation output file are provided in this section.

Harvest is not seeking any changes to the currently permitted emission limits associated with the engines. The requested allowable emissions in Table 2-E are carried forward from the existing permit.

Startup, Shutdown & Routine Maintenance (SSM) Emissions

Emissions associated with startups, shutdowns and routine maintenance from the compressors and piping (SSM) 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 startup or shutdown 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 extended natural gas analysis, the quantity of gas vented during each event, and the estimated number of annual events. The composition of the natural gas is based on the extended gas analysis described above. The quantity of gas vented during each event is determined by Harvest engineering. The annual number of blowdown events for the compressors are estimated from historical data. A safety factor is included 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. The emission calculations using the updated extended gas analysis are below the current permitted emission limits, and demonstrate that the facility is compliance with the current permitted SSM emission limits. Harvest does not seek any changes to the currently permitted SSM emissions, and 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 units 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 15a, 16a, and

17a) from the dehydrator reboilers (units 15b, 16b, and 17b). 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 natural gas analysis, the maximum daily dehydrator gas throughput, and the maximum permitted glycol pump rate as input. The emission calculations assume operation at full capacity for 8,760 hours per year.

The results of the GLYCalc analysis show that the calculated VOC emissions are below the current permitted levels for VOC. Harvest does not seek any changes to the currently permitted VOC emissions to the units 15a, 16a, or 17a dehydrator still vent emissions. Accordingly, the requested allowable emissions in Table 2-E are carried forward from the existing permit.

Emissions of NO_x, CO, VOC and SO₂ from the reboilers (units 15b, 16b, and 17b) are calculated using Enertek and Infab manufacturer emission factors. Particulate emissions are calculated using AP-42 emission factors from Table 1.4-2. HAP emissions from the reboilers are calculated using GRI-HAPCalc 3.0 and the rated heat capacities of the reboilers.

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

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

Fugitive Emissions

Fugitive emissions of VOC and HAP (unit F1) from equipment leaks (valves, flanges, seals, etc.) 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. Emission calculations are provided in this section.

Storage Tanks (Insignificant)

All of the storage tanks at the Middle Mesa CDP are insignificant sources under the NMAQB's Title V Insignificant Activities List. Where required, VOC and HAP emissions (working/breathing losses) from the storage tanks are calculated using TANKS 4.0.9d:

- VOC and HAP emissions for the produced water storage tanks (units T17, T27 and T56) are calculated by selecting emission factors from the TCEQ Project 2010-29 (Emission Factor Determination for Produced Water Storage Tanks) report (Recommended Emission Factors), and the Colorado Department of Public Health and Environment (CDPHE) February 8, 2010 PS Memo 09-02 "Oil and Gas Produced Water Tank Batteries Regulatory Definitions and Guidance", and applying the maximum annual facility-wide produced water throughput. Based on an aggregated PTE of less than 1 tpy for any regulated air pollutant, the produced water storage tanks are each an insignificant source under the NMED-AQB *Operating Permit Program List of Insignificant Activities* (March 24, 2005) (Insignificant Activities List), Item No. 1.
- VOC and HAP emissions from the methanol storage tank (Unit T53) are calculated using the TANKS program and the speciation profile of methanol. The resulting emissions of 185.8 pounds per year ($\approx 9.29\text{E-}02$ tpy) of VOC is well below the 1 tpy and HAP de minimus levels; therefore, the tank is also insignificant under Item No. 1 of the Insignificant Activities List.
- Residual Oil #6 is used to approximate the stored contents of the lubrication oil tanks (Units T1 - T10, T11, T29 - T37, and T38 - T42), used oil tanks (Units T14 and T18 - T21), and the wastewater tank (hydrocarbon component) for wastewater tank Units T15 and T28. The liquids have vapor pressures less than 10 mm Hg (≈ 0.2 psia); therefore, they are insignificant under the Insignificant Activities List, Item No. 5.
- The antifreeze storage tank (Unit T54) is assumed to contain ethylene glycol. The vapor pressure of the ethylene glycol is less than 10 mm Hg; therefore, the Unit T54 antifreeze storage tank is insignificant under Item No. 5 of the Insignificant Activities List.
- Similarly, the triethylene glycol (TEG) storage tanks (Units T22 - 24, T47 - 49, and T56) contain TEG. The vapor pressure of TEG is less than 10 mm Hg; therefore, these storage tanks are also insignificant under Item No. 5 of the Insignificant Activities List.

There are no flash emissions associated with any of the storage tanks.

Due to the nature of the operations, startup and shutdown emissions from the storage tanks are assumed to be accounted for in the storage tank emission estimates. Emissions due to maintenance will be negligible as the units will not be in operation.

Copies of the TANKS 4.0.9d emission calculations for the produced water and methanol storage tanks are provided.

Produced Water Truck Loading Emissions (Insignificant)

Emissions of VOC and HAP from the produced water truck loading (unit L1) and methanol truck loading (unit L2) activities are estimated using emission factors from AP-42 Section 5.2, *Truck Loading*, and the estimated maximum annual facility throughputs. The produced water total truck loading throughput is equivalent to sum of the individual produced water tank throughputs. The emission calculations assume submerged loading during transfer operations for both the produced water and methanol transfers.

The HAP emissions from produced water truck loading are calculated from the weight ratios of the CDPHE/TCEQ produced water emission factors of HAP to VOC (lb/bbl HAP / lb/bbl VOC), and applied to the truck loading pph and tpy VOC emission rates.

The methanol truck loading emission calculation assumes that the VOC emissions are 100 percent (%) methanol (HAP).

VOC and HAP emissions from the produced water loading and the methanol truck loading activities are each well below 1 tpy and HAP de minimus levels. Therefore, each of the unit L1 and L2 truck loading activities are insignificant under Item No. 1 of the Insignificant Activities List.

The emission calculations are provided in this section.

Malfunctions

Malfunction (unit M1) emissions are set at 8.0 tons of VOC per year. Based on the gas release rate associated with the set emission rate, HAP emissions are estimated using the natural gas extended analysis described above. The HAP emission calculations are provided in this section. Harvest does not seek any changes to the currently permitted VOC emissions from malfunctions. The requested allowable emissions in Table 2-E are carried forward from the existing permit.

Engine Exhaust Emissions Calculations

Unit Number: 1-3, 4, 5-14 & 21-26

Description: Waukesha L7042GL - uncontrolled and controlled 4SLB RICE

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

Horsepower Calculations

6,610 ft above MSL

1,478 hp

1,362 hp

1,327 hp

Elevation

Nameplate hp

NMAQB Site-rated hp

Mfg. Site-rated hp

Mfg. data

NMAQB Procedure # 02.002-00

(loss of 3% for every 1,000 ft over 4,000 ft)

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

7042 cu in

127.68 psi

Engine rpm

Engine displacement

BMEP

Mfg. data

Mfg. data

Mfg. data $\left(+ \left[\frac{792,000 \times \text{NMAQB Site-rated hp}}{(\text{rpm} \times \text{in}^3)} \right] \right)$

Fuel Consumption

7375 Btu/hp-hr

10.05 MMBtu/hr

11,163 scf/hr

8,760 hr/yr

88,008 MMBtu/yr

97.79 MMscf/yr

900 Btu/scf

Brake specific fuel consumption

Hourly fuel consumption

Hourly fuel consumption

Annual operating time

Annual fuel consumption

Annual fuel consumption

Field gas heating value

Mfg. data

Btu/hp-hr x NMAQB site-rated hp / 1,000,000

MMBtu/hr x 1,000,000 / Btu/scf

Harvest

MMBtu/hr x hr/yr

scf/hr x hr/yr / 1,000,000

Nominal heat content

Steady-State Emission Rates

Pollutants	Emission Factors, g/hp-hr	Units 1-3, 5-14 & 21-26		Control Efficiencies, %	Unit 4	
		Uncontrolled Emission Rates, pph	tpy		Controlled Emission Rates, pph	tpy
NO _x	1.50	4.505	19.732	0	4.50	19.73
CO	3.00	9.010	39.464	93	6.31E-01	2.76
VOC	0.70	2.102	9.208	65	0.74	3.22

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

Control efficiencies taken from catalyst manufacturer's data.

Controlled Emission Rates (pph) = Uncontrolled Emission Rates (pph) x (1 - (% / 100))

Controlled Emission Rates (tpy) = Uncontrolled Emission Rates (tpy) x (1 - (% / 100))

Pollutants	Emission Factors, lb/MMBtu	Uncontrolled Emission Rates,	
		pph	tpy
SO ₂	5.88E-04	5.91E-03	2.59E-02
PM	9.99E-03	1.00E-01	4.39E-01
PM ₁₀	9.99E-03	1.00E-01	4.39E-01
PM _{2.5}	9.99E-03	1.00E-01	4.39E-01

Emission factors taken from AP-42, Table 3.2-2

Particulate factors include both filterable and condensable emissions

Uncontrolled Emission Rates (pph) = lb/MMBtu x MMBtu/hr

Uncontrolled Emission Rates (tpy) = Uncontrolled Emission Rates (pph) x hr/yr / 2,000 lb/ton

Exhaust Parameters

701 °F

7579 acfm

1.00 ft

0.79 ft²

160.82 fps

22.00 ft

Stack exit temperature

Stack flowrate

Stack exit diameter

Stack exit area

Stack exit velocity

Stack height

Mfg. data

Mfg. data

Harvest

3.1416 x ((ft / 2) ^2)

acfm / ft² / 60 sec/min

Harvest

GRI-HAPCalc® 3.0
Engines Report

Facility ID: MIDDLE MESA
Operation Type: COMPRESSOR STATION
Facility Name: MIDDLE MESA
User Name:
Units of Measure: U.S. STANDARD

Notes:

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: L7042GL

Hours of Operation: 8,760 Yearly
Rate Power: 1,362 hp
Fuel Type: FIELD GAS
Engine Type: 4-Stroke, Lean Burn
Emission Factor Set: FIELD > EPA > LITERATURE
Additional EF Set: -NONE-

Calculated Emissions (ton/yr)

<u>Chemical Name</u>	<u>Emissions</u>	<u>Emission Factor</u>	<u>Emission Factor Set</u>
<u>HAPs</u>			
Formaldehyde	2.2115	0.16830000 g/bhp-hr	GRI Literature
Benzene	0.0683	0.00520000 g/bhp-hr	GRI Literature
Toluene	0.0276	0.00210000 g/bhp-hr	GRI Literature
Xylenes(m,p,o)	0.0184	0.00140000 g/bhp-hr	GRI Literature
Total	2.3258		

Compressor Blowdown Emissions Calculations

Unit Number: **SSM**

Description: Compressor & Piping Associated With Station

Throughput

20 # of units
 151 events/yr/unit
 9,865 scf/event
 29,792,300 scf/yr

Number of units
 Blowdowns per year per unit
 Gas loss per blowdown
 Annual gas loss

Harvest Four Corners
 Harvest Four Corners
 Harvest Four Corners
 # of units x events/yr/unit x scf/event

Emission Rates

Pollutants	Emission Factors, lb/scf	Uncontrolled, Emission Rates, tpy
VOC	2.080E-03	30.98
2,2,4-Trimethylpentane	1.321E-06	1.97E-02
Benzene	1.236E-06	1.84E-02
Ethylbenzene	1.120E-06	1.67E-02
n-Hexane	1.022E-05	1.52E-01
Toluene	1.530E-05	2.28E-01
Xylene	1.595E-05	2.38E-01

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	9.7167	44.01	1.127E-02
Hydrogen sulfide	0.0000	34.07	0.000E+00
Nitrogen	0.0939	28.01	6.934E-05
Methane	85.8626	16.04	3.631E-02
Ethane	2.7940	30.07	2.215E-03
Propane	0.9951	44.09	1.157E-03
Isobutane	0.1710	58.12	2.620E-04
n-Butane	0.2178	58.12	3.337E-04
Isopentane	0.0512	72.15	9.739E-05
n-Pentane	0.0323	72.15	6.144E-05
Cyclopentane	0.0007	70.14	1.294E-06
n-Hexane	0.0045	86.17	1.022E-05
Cyclohexane	0.0027	84.16	5.991E-06
Other hexanes	0.0113	86.18	2.567E-05
Heptanes	0.0057	100.20	1.506E-05
Methylcyclohexane	0.0104	98.19	2.692E-05
2,2,4-Trimethylpentane	0.0005	100.21	1.321E-06
Benzene	0.0006	78.11	1.236E-06
Toluene	0.0063	92.14	1.530E-05
Ethylbenzene	0.0004	106.17	1.120E-06
Xylenes	0.0057	106.17	1.595E-05
C8+ Heavies	0.0166	110.00	4.814E-05
Total	100.0000		
Total VOC			2.080E-03

Gas stream composition obtained from Middle Mesa CDP Dehy Discharge extended gas analysis sampled on August 17, 2020.

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

GRI-GLYCalc VERSION 4.0 - SUMMARY OF INPUT VALUES

Case Name: Middle Mesa 10 mmcf/d - PTE. Ext. gas analysis 08-17-2020

File Name: C:\Users\user\Documents\Cirrus\Permit applications\New Mexico\Harvest Four
Corners (formerly WFC)\0 0 Middle Mesa\TITLE V\2020-Sept Renewal\Analysis &
Info\GLYCalc\Middle Mesa 10 mmcf/d dehyS - PTE gas 08-17-2020.ddf

Date: August 28, 2020

DESCRIPTION:

Description: Middle Mesa 10 mmcf/d dehyS, Units 15a, 16a,
17a (ea)
PTE, 90 gph (1.5 gpm) each
GAS 08-17-2020 gas analysis
& operating temp/pressure

Annual Hours of Operation: 8760.0 hours/yr

WET GAS:

Temperature: 90.00 deg. F
Pressure: 912.00 psig
Wet Gas Water Content: Saturated

Component	Conc. (vol %)
Carbon Dioxide	9.7167
Nitrogen	0.0939
Methane	85.8626
Ethane	2.7940
Propane	0.9951
Isobutane	0.1710
n-Butane	0.2178
Isopentane	0.0512
n-Pentane	0.0323
Cyclopentane	0.0007
n-Hexane	0.0045
Cyclohexane	0.0027
Other Hexanes	0.0113
Heptanes	0.0057
Methylcyclohexane	0.0104
2,2,4-Trimethylpentane	0.0005
Benzene	0.0006
Toluene	0.0063
Ethylbenzene	0.0004
Xylenes	0.0057
C8+ Heavies	0.0166

DRY GAS:

Flow Rate: 10.0 MMSCF/day
Water Content: 7.0 lbs. H₂O/MMSCF

LEAN GLYCOL:

Glycol Type: TEG

Water Content: 1.5 wt% H2O
Flow Rate: 1.5 gpm

PUMP:

Glycol Pump Type: Gas Injection
Gas Injection Pump Volume Ratio: 0.080 acfm gas/gpm glycol

FLASH TANK:

Flash Control: Recycle/recompression
Temperature: 82.9 deg. F
Pressure: 47.5 psig

GRI-GLYCalc VERSION 4.0 - AGGREGATE CALCULATIONS REPORT

Case Name: Middle Mesa 10 mmcf/d - PTE. Ext. gas analysis 08-17-2020

File Name: C:\Users\user\Documents\Cirrus\Permit applications\New Mexico\Harvest Four
Corners (formerly WFC)\0 0 Middle Mesa\TITLE V\2020-Sept Renewal\Analysis &
Info\GLYCalc\Middle Mesa 10 mmcf/d dehys - PTE gas 08-17-2020.ddf

Date: August 28, 2020

DESCRIPTION:

Description: Middle Mesa 10 mmcf/d dehys, Units 15a, 16a,
17a (ea)
PTE, 90 gph (1.5 gpm) each
GAS 08-17-2020 gas analysis
& operating temp/pressure

Annual Hours of Operation: 8760.0 hours/yr

EMISSIONS REPORTS:

UNCONTROLLED REGENERATOR EMISSIONS

Component	lbs/hr	lbs/day	tons/yr
Methane	0.1477	3.545	0.6470
Ethane	0.0454	1.089	0.1988
Propane	0.0666	1.598	0.2917
Isobutane	0.0282	0.676	0.1234
n-Butane	0.0548	1.314	0.2399
Isopentane	0.0191	0.459	0.0838
n-Pentane	0.0173	0.415	0.0758
Cyclopentane	0.0026	0.063	0.0114
n-Hexane	0.0066	0.159	0.0290
Cyclohexane	0.0252	0.606	0.1106
Other Hexanes	0.0111	0.267	0.0487
Heptanes	0.0239	0.573	0.1045
Methylcyclohexane	0.1332	3.196	0.5833
2,2,4-Trimethylpentane	0.0008	0.020	0.0036
Benzene	0.0573	1.376	0.2510
Toluene	1.0336	24.807	4.5273
Ethylbenzene	0.0944	2.266	0.4135
Xylenes	1.8176	43.621	7.9609
C8+ Heavies	0.4455	10.693	1.9514
Total Emissions	4.0309	96.743	17.6555
Total Hydrocarbon Emissions	4.0309	96.743	17.6555
Total VOC Emissions	3.8378	92.108	16.8097
Total HAP Emissions	3.0104	72.249	13.1854
Total BTEX Emissions	3.0029	72.070	13.1527

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	20.1364	483.273	88.1974
Ethane	1.4933	35.840	6.5407
Propane	0.8808	21.138	3.8577
Isobutane	0.2187	5.248	0.9578
n-Butane	0.3071	7.371	1.3451
Isopentane	0.0859	2.062	0.3763
n-Pentane	0.0595	1.429	0.2608
Cyclopentane	0.0023	0.055	0.0100
n-Hexane	0.0110	0.265	0.0483
Cyclohexane	0.0106	0.254	0.0463
Other Hexanes	0.0257	0.617	0.1127
Heptanes	0.0170	0.408	0.0745
Methylcyclohexane	0.0392	0.942	0.1719
2,2,4-Trimethylpentane	0.0013	0.031	0.0056
Benzene	0.0026	0.062	0.0113
Toluene	0.0263	0.631	0.1151
Ethylbenzene	0.0012	0.030	0.0054
Xylenes	0.0156	0.374	0.0682
C8+ Heavies	0.0377	0.905	0.1651
Total Emissions	23.3722	560.933	102.3702
Total Hydrocarbon Emissions	23.3722	560.933	102.3702
Total VOC Emissions	1.7425	41.820	7.6321
Total HAP Emissions	0.0580	1.391	0.2539
Total BTEX Emissions	0.0457	1.096	0.2000

COMBINED REGENERATOR VENT/FLASH GAS EMISSIONS

Component	lbs/hr	lbs/day	tons/yr
Methane	0.1477	3.545	0.6470
Ethane	0.0454	1.089	0.1988
Propane	0.0666	1.598	0.2917
Isobutane	0.0282	0.676	0.1234
n-Butane	0.0548	1.314	0.2399
Isopentane	0.0191	0.459	0.0838
n-Pentane	0.0173	0.415	0.0758
Cyclopentane	0.0026	0.063	0.0114
n-Hexane	0.0066	0.159	0.0290
Cyclohexane	0.0252	0.606	0.1106
Other Hexanes	0.0111	0.267	0.0487
Heptanes	0.0239	0.573	0.1045
Methylcyclohexane	0.1332	3.196	0.5833
2,2,4-Trimethylpentane	0.0008	0.020	0.0036
Benzene	0.0573	1.376	0.2510
Toluene	1.0336	24.807	4.5273
Ethylbenzene	0.0944	2.266	0.4135
Xylenes	1.8176	43.621	7.9609
C8+ Heavies	0.4455	10.693	1.9514
Total Emissions	4.0309	96.743	17.6555
Total Hydrocarbon Emissions	4.0309	96.743	17.6555
Total VOC Emissions	3.8378	92.108	16.8097
Total HAP Emissions	3.0104	72.249	13.1854
Total BTEX Emissions	3.0029	72.070	13.1527

COMBINED REGENERATOR VENT/FLASH GAS EMISSION CONTROL REPORT:

Component	Uncontrolled tons/yr	Controlled tons/yr	% Reduction
Methane	88.8444	0.6470	99.27
Ethane	6.7395	0.1988	97.05
Propane	4.1494	0.2917	92.97
Isobutane	1.0812	0.1234	88.59
n-Butane	1.5850	0.2399	84.87
Isopentane	0.4601	0.0838	81.80
n-Pentane	0.3365	0.0758	77.49
Cyclopentane	0.0214	0.0114	46.62
n-Hexane	0.0773	0.0290	62.50
Cyclohexane	0.1569	0.1106	29.53
Other Hexanes	0.1614	0.0487	69.82
Heptanes	0.1790	0.1045	41.61
Methylcyclohexane	0.7552	0.5833	22.76
2,2,4-Trimethylpentane	0.0092	0.0036	60.53
Benzene	0.2623	0.2510	4.31
Toluene	4.6424	4.5273	2.48
Ethylbenzene	0.4188	0.4135	1.29
Xylenes	8.0291	7.9609	0.85
C8+ Heavies	2.1166	1.9514	7.80
Total Emissions	120.0258	17.6555	85.29
Total Hydrocarbon Emissions	120.0258	17.6555	85.29
Total VOC Emissions	24.4419	16.8097	31.23
Total HAP Emissions	13.4393	13.1854	1.89
Total BTEX Emissions	13.3528	13.1527	1.50

EQUIPMENT REPORTS:

ABSORBER

NOTE: Because the Calculated Absorber Stages was below the minimum allowed, GRI-GLYCalc has set the number of Absorber Stages to 1.25 and has calculated a revised Dry Gas Dew Point.

Calculated Absorber Stages:	1.25
Calculated Dry Gas Dew Point:	2.58 lbs. H2O/MMSCF
Temperature:	90.0 deg. F
Pressure:	912.0 psig
Dry Gas Flow Rate:	10.0000 MMSCF/day
Glycol Losses with Dry Gas:	0.0916 lb/hr
Wet Gas Water Content:	Saturated
Calculated Wet Gas Water Content:	47.54 lbs. H2O/MMSCF
Calculated Lean Glycol Recirc. Ratio:	4.80 gal/lb H2O

Component	Remaining in Dry Gas	Absorbed in Glycol
Water	5.42%	94.58%

Carbon Dioxide	99.79%	0.21%
Nitrogen	99.98%	0.02%
Methane	99.98%	0.02%
Ethane	99.95%	0.05%
Propane	99.92%	0.08%
Isobutane	99.89%	0.11%
n-Butane	99.86%	0.14%
Isopentane	99.86%	0.14%
n-Pentane	99.82%	0.18%
Cyclopentane	99.21%	0.79%
n-Hexane	99.70%	0.30%
Cyclohexane	98.68%	1.32%
Other Hexanes	99.77%	0.23%
Heptanes	99.47%	0.53%
Methylcyclohexane	98.58%	1.42%
2,2,4-Trimethylpentane	99.78%	0.22%
Benzene	88.49%	11.51%
Toluene	83.50%	16.50%
Ethylbenzene	79.62%	20.38%
Xylenes	72.54%	27.46%
C8+ Heavies	98.56%	1.44%

FLASH TANK

Flash Control: Recycle/recompression
Flash Temperature: 82.9 deg. F
Flash Pressure: 47.5 psig

Component	Left in Glycol	Removed in Flash Gas
Water	99.93%	0.07%
Carbon Dioxide	11.05%	88.95%
Nitrogen	0.70%	99.30%
Methane	0.73%	99.27%
Ethane	2.95%	97.05%
Propane	7.03%	92.97%
Isobutane	11.41%	88.59%
n-Butane	15.13%	84.87%
Isopentane	18.43%	81.57%
n-Pentane	22.75%	77.25%
Cyclopentane	53.58%	46.42%
n-Hexane	37.72%	62.28%
Cyclohexane	71.34%	28.66%
Other Hexanes	30.64%	69.36%
Heptanes	58.56%	41.44%
Methylcyclohexane	78.08%	21.92%
2,2,4-Trimethylpentane	40.06%	59.94%
Benzene	95.91%	4.09%
Toluene	97.72%	2.28%
Ethylbenzene	98.85%	1.15%
Xylenes	99.26%	0.74%
C8+ Heavies	93.07%	6.93%

REGENERATOR

No Stripping Gas used in regenerator.

Component	Remaining in Glycol	Distilled Overhead
Water	40.29%	59.71%
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	1.47%	98.53%
n-Pentane	1.33%	98.67%
Cyclopentane	0.81%	99.19%
n-Hexane	0.95%	99.05%
Cyclohexane	4.12%	95.88%
Other Hexanes	2.14%	97.86%
Heptanes	0.70%	99.30%
Methylcyclohexane	4.74%	95.26%
2,2,4-Trimethylpentane	2.43%	97.57%
Benzene	5.16%	94.84%
Toluene	8.03%	91.97%
Ethylbenzene	10.48%	89.52%
Xylenes	12.97%	87.03%
C8+ Heavies	12.03%	87.97%

STREAM REPORTS:

WET GAS STREAM

Temperature: 90.00 deg. F
 Pressure: 926.70 psia
 Flow Rate: 4.17e+005 scfh

Component	Conc. (vol%)	Loading (lb/hr)
Water	1.00e-001	1.98e+001
Carbon Dioxide	9.71e+000	4.70e+003
Nitrogen	9.38e-002	2.89e+001
Methane	8.58e+001	1.51e+004
Ethane	2.79e+000	9.23e+002
Propane	9.94e-001	4.82e+002
Isobutane	1.71e-001	1.09e+002
n-Butane	2.18e-001	1.39e+002
Isopentane	5.11e-002	4.06e+001
n-Pentane	3.23e-002	2.56e+001
Cyclopentane	6.99e-004	5.39e-001
n-Hexane	4.50e-003	4.26e+000
Cyclohexane	2.70e-003	2.50e+000
Other Hexanes	1.13e-002	1.07e+001
Heptanes	5.69e-003	6.27e+000
Methylcyclohexane	1.04e-002	1.12e+001
2,2,4-Trimethylpentane	4.99e-004	6.27e-001
Benzene	5.99e-004	5.15e-001

Toluene	6.29e-003	6.38e+000
Ethylbenzene	4.00e-004	4.67e-001
Xylenes	5.69e-003	6.65e+000
C8+ Heavies	1.66e-002	3.11e+001

Total Components	100.00	2.17e+004

DRY GAS STREAM

Temperature: 90.00 deg. F
Pressure: 926.70 psia
Flow Rate: 4.17e+005 scfh

Component	Conc. (vol%)	Loading (lb/hr)

Water	5.44e-003	1.08e+000
Carbon Dioxide	9.70e+000	4.69e+003
Nitrogen	9.39e-002	2.89e+001
Methane	8.59e+001	1.51e+004
Ethane	2.79e+000	9.23e+002
Propane	9.95e-001	4.82e+002
Isobutane	1.71e-001	1.09e+002
n-Butane	2.18e-001	1.39e+002
Isopentane	5.11e-002	4.05e+001
n-Pentane	3.23e-002	2.56e+001
Cyclopentane	6.95e-004	5.35e-001
n-Hexane	4.49e-003	4.25e+000
Cyclohexane	2.67e-003	2.46e+000
Other Hexanes	1.13e-002	1.07e+001
Heptanes	5.67e-003	6.24e+000
Methylcyclohexane	1.03e-002	1.11e+001
2,2,4-Trimethylpentane	4.99e-004	6.26e-001
Benzene	5.31e-004	4.56e-001
Toluene	5.26e-003	5.32e+000
Ethylbenzene	3.19e-004	3.71e-001
Xylenes	4.14e-003	4.82e+000
C8+ Heavies	1.64e-002	3.06e+001

Total Components	100.00	2.16e+004

LEAN GLYCOL STREAM

Temperature: 90.00 deg. F
Flow Rate: 1.50e+000 gpm

Component	Conc. (wt%)	Loading (lb/hr)

TEG	9.84e+001	8.31e+002
Water	1.50e+000	1.27e+001
Carbon Dioxide	1.16e-010	9.82e-010
Nitrogen	5.81e-014	4.90e-013
Methane	9.04e-018	7.63e-017
Ethane	2.46e-008	2.08e-007
Propane	1.80e-009	1.52e-008
Isobutane	4.16e-010	3.51e-009
n-Butane	5.77e-010	4.87e-009
Isopentane	3.38e-005	2.85e-004

n-Pentane	2.76e-005	2.33e-004
Cyclopentane	2.52e-006	2.13e-005
n-Hexane	7.49e-006	6.32e-005
Cyclohexane	1.29e-004	1.09e-003
Other Hexanes	2.89e-005	2.44e-004
Heptanes	1.99e-005	1.68e-004
Methylcyclohexane	7.85e-004	6.63e-003
2,2,4-Trimethylpentane	2.46e-006	2.07e-005
Benzene	3.70e-004	3.12e-003
Toluene	1.07e-002	9.03e-002
Ethylbenzene	1.31e-003	1.10e-002
Xylenes	3.21e-002	2.71e-001
C8+ Heavies	7.22e-003	6.10e-002

Total Components	100.00	8.44e+002

RICH GLYCOL AND PUMP GAS STREAM

Temperature: 90.00 deg. F
 Pressure: 926.70 psia
 Flow Rate: 1.63e+000 gpm
 NOTE: Stream has more than one phase.

Component	Conc. (wt%)	Loading (lb/hr)

TEG	9.17e+001	8.31e+002
Water	3.47e+000	3.14e+001
Carbon Dioxide	1.70e+000	1.54e+001
Nitrogen	4.34e-003	3.93e-002
Methane	2.24e+000	2.03e+001
Ethane	1.70e-001	1.54e+000
Propane	1.05e-001	9.47e-001
Isobutane	2.73e-002	2.47e-001
n-Butane	4.00e-002	3.62e-001
Isopentane	1.16e-002	1.05e-001
n-Pentane	8.51e-003	7.71e-002
Cyclopentane	5.41e-004	4.90e-003
n-Hexane	1.96e-003	1.77e-002
Cyclohexane	4.08e-003	3.69e-002
Other Hexanes	4.10e-003	3.71e-002
Heptanes	4.53e-003	4.10e-002
Methylcyclohexane	1.98e-002	1.79e-001
2,2,4-Trimethylpentane	2.35e-004	2.13e-003
Benzene	6.96e-003	6.30e-002
Toluene	1.27e-001	1.15e+000
Ethylbenzene	1.18e-002	1.07e-001
Xylenes	2.32e-001	2.10e+000
C8+ Heavies	6.01e-002	5.44e-001

Total Components	100.00	9.05e+002

FLASH TANK OFF GAS STREAM

Temperature: 82.87 deg. F
 Pressure: 62.17 psia
 Flow Rate: 6.27e+002 scfh

Component	Conc. (vol%)	Loading (lb/hr)
-----------	-----------------	--------------------

Water	7.31e-002	2.17e-002
Carbon Dioxide	1.89e+001	1.37e+001
Nitrogen	8.43e-002	3.90e-002
Methane	7.60e+001	2.01e+001
Ethane	3.01e+000	1.49e+000
Propane	1.21e+000	8.81e-001
Isobutane	2.28e-001	2.19e-001
n-Butane	3.20e-001	3.07e-001
Isopentane	7.21e-002	8.59e-002
n-Pentane	4.99e-002	5.95e-002
Cyclopentane	1.96e-003	2.27e-003
n-Hexane	7.75e-003	1.10e-002
Cyclohexane	7.61e-003	1.06e-002
Other Hexanes	1.81e-002	2.57e-002
Heptanes	1.03e-002	1.70e-002
Methylcyclohexane	2.42e-002	3.92e-002
2,2,4-Trimethylpentane	6.76e-004	1.28e-003
Benzene	2.00e-003	2.58e-003
Toluene	1.73e-002	2.63e-002
Ethylbenzene	7.01e-004	1.23e-003
Xylenes	8.88e-003	1.56e-002
C8+ Heavies	1.34e-002	3.77e-002
Total Components	100.00	3.71e+001

FLASH TANK GLYCOL STREAM

Temperature: 82.87 deg. F
Flow Rate: 1.55e+000 gpm

Component	Conc. (wt%)	Loading (lb/hr)
TEG	9.57e+001	8.31e+002
Water	3.62e+000	3.14e+001
Carbon Dioxide	1.96e-001	1.70e+000
Nitrogen	3.17e-005	2.75e-004
Methane	1.70e-002	1.48e-001
Ethane	5.23e-003	4.54e-002
Propane	7.67e-003	6.66e-002
Isobutane	3.24e-003	2.82e-002
n-Butane	6.31e-003	5.48e-002
Isopentane	2.24e-003	1.94e-002
n-Pentane	2.02e-003	1.75e-002
Cyclopentane	3.02e-004	2.63e-003
n-Hexane	7.69e-004	6.68e-003
Cyclohexane	3.03e-003	2.63e-002
Other Hexanes	1.31e-003	1.14e-002
Heptanes	2.77e-003	2.40e-002
Methylcyclohexane	1.61e-002	1.40e-001
2,2,4-Trimethylpentane	9.82e-005	8.53e-004
Benzene	6.96e-003	6.04e-002
Toluene	1.29e-001	1.12e+000
Ethylbenzene	1.21e-002	1.05e-001
Xylenes	2.41e-001	2.09e+000
C8+ Heavies	5.83e-002	5.06e-001
Total Components	100.00	8.68e+002

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: 4.29e+002 scfh

Component	Conc. (vol%)	Loading (lb/hr)
Water	9.22e+001	1.88e+001
Carbon Dioxide	3.43e+000	1.70e+000
Nitrogen	8.70e-004	2.75e-004
Methane	8.16e-001	1.48e-001
Ethane	1.34e-001	4.54e-002
Propane	1.34e-001	6.66e-002
Isobutane	4.29e-002	2.82e-002
n-Butane	8.34e-002	5.48e-002
Isopentane	2.35e-002	1.91e-002
n-Pentane	2.12e-002	1.73e-002
Cyclopentane	3.29e-003	2.60e-003
n-Hexane	6.80e-003	6.62e-003
Cyclohexane	2.66e-002	2.52e-002
Other Hexanes	1.14e-002	1.11e-002
Heptanes	2.11e-002	2.39e-002
Methylcyclohexane	1.20e-001	1.33e-001
2,2,4-Trimethylpentane	6.45e-004	8.32e-004
Benzene	6.50e-002	5.73e-002
Toluene	9.93e-001	1.03e+000
Ethylbenzene	7.87e-002	9.44e-002
Xylenes	1.52e+000	1.82e+000
C8+ Heavies	2.32e-001	4.46e-001
Total Components	100.00	2.45e+001

Dehydrator Reboiler Exhaust Emissions Calculations

Unit Number: 15b, 16b, 17b

Description: Dehydrator Reboiler (10 MMSCFD each)

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

Fuel Consumption

659 scf/hr	Hourly fuel consumption	Mfg. data (InFab)
900 Btu/scf	Field gas heating value	Nominal heat content
0.59 MMBtu/hr	Capacity	scf/hr x Btu/scf / 1,000,000
8,760 hr/yr	Annual operating time	Harvest Four Corners, LLC
5,196 MMBtu/yr	Annual fuel consumption	MMBtu/hr x hr/yr
5.77 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	0.43	1.79E-02	7.85E-02
VOC	0.13	2.71E-03	1.19E-02
SO2	0.01	4.17E-04	1.83E-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	5.01E-03	2.19E-02
PM10	7.60	5.01E-03	2.19E-02
PM2.5	7.60	5.01E-03	2.19E-02
Lead	5.00E-04	3.30E-07	1.44E-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)
287.46 cfm	Stack flowrate	fps x ft^2 x 60 sec/min
1.00 ft	Stack diameter	Mfg. data (InFab)
0.79 ft^2	Stack exit area	3.1416 x ((ft / 2) ^2)
6.1 fps	Stack velocity	Mfg. data (Enertek & InFab)
10.0 ft	Stack height	Mfg. data (InFab)

GRI-HAPCalc® 3.0
External Combustion Devices Report

Facility ID: MIDDLE MESA
Operation Type: COMPRESSOR STATION
Facility Name: MIDDLE MESA
User Name:
Units of Measure: U.S. STANDARD

Notes:

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: REBOILER

Hours of Operation: 8,760 Yearly
Heat Input: 0.59 MMBtu/hr
Fuel Type: NATURAL GAS
Device Type: HEATER
Emission Factor Set: FIELD > EPA > LITERATURE
Additional EF Set: -NONE-

Calculated Emissions (ton/yr)

<u>Chemical Name</u>	<u>Emissions</u>	<u>Emission Factor</u>	<u>Emission Factor Set</u>
HAPs			
7,12-Dimethylbenz(a)anthracene	0.0000	0.0000000157 lb/MMBtu	EPA
Formaldehyde	0.0022	0.0008440090 lb/MMBtu	GRI Field
Methanol	0.0025	0.0009636360 lb/MMBtu	GRI Field
Acetaldehyde	0.0019	0.0007375920 lb/MMBtu	GRI Field
1,3-Butadiene	0.0009	0.0003423350 lb/MMBtu	GRI Field
Benzene	0.0019	0.0007480470 lb/MMBtu	GRI Field
Toluene	0.0026	0.0010163310 lb/MMBtu	GRI Field
Ethylbenzene	0.0055	0.0021128220 lb/MMBtu	GRI Field
Xylenes(m,p,o)	0.0034	0.0013205140 lb/MMBtu	GRI Field
2,2,4-Trimethylpentane	0.0073	0.0028417580 lb/MMBtu	GRI Field
n-Hexane	0.0036	0.0014070660 lb/MMBtu	GRI Field
Phenol	0.0000	0.0000001070 lb/MMBtu	GRI Field
Styrene	0.0054	0.0020788960 lb/MMBtu	GRI Field
Naphthalene	0.0000	0.0000005100 lb/MMBtu	GRI Field
2-Methylnaphthalene	0.0000	0.0000001470 lb/MMBtu	GRI Field
Acenaphthylene	0.0000	0.0000000670 lb/MMBtu	GRI Field
Biphenyl	0.0000	0.0000004730 lb/MMBtu	GRI Field
Acenaphthene	0.0000	0.0000000900 lb/MMBtu	GRI Field
Fluorene	0.0000	0.0000000800 lb/MMBtu	GRI Field
Anthracene	0.0000	0.0000000870 lb/MMBtu	GRI Field
Phenanthrene	0.0000	0.0000000600 lb/MMBtu	GRI Field
Fluoranthene	0.0000	0.0000000900 lb/MMBtu	GRI Field
Pyrene	0.0000	0.0000000830 lb/MMBtu	GRI Field
Benz(a)anthracene	0.0000	0.0000000870 lb/MMBtu	GRI Field

Chrysene	0.0000	0.0000001170 lb/MMBtu	GRI Field
Benzo(a)pyrene	0.0000	0.0000000700 lb/MMBtu	GRI Field
Benzo(b)fluoranthene	0.0000	0.0000001500 lb/MMBtu	GRI Field
Benzo(k)fluoranthene	0.0000	0.0000007600 lb/MMBtu	GRI Field
Benzo(g,h,i)perylene	0.0000	0.0000002600 lb/MMBtu	GRI Field
Indeno(1,2,3-c,d)pyrene	0.0000	0.0000001200 lb/MMBtu	GRI Field
Dibenz(a,h)anthracene	0.0000	0.0000001030 lb/MMBtu	GRI Field
Lead	0.0000	0.0000004902 lb/MMBtu	EPA

Total 0.0372

Criteria Pollutants

VOC	0.0139	0.0053921569 lb/MMBtu	EPA
PM	0.0193	0.0074509804 lb/MMBtu	EPA
PM, Condensable	0.0144	0.0055882353 lb/MMBtu	EPA
PM, Filterable	0.0048	0.0018627451 lb/MMBtu	EPA
CO	0.0836	0.0323636360 lb/MMBtu	GRI Field
NMHC	0.0220	0.0085294118 lb/MMBtu	EPA
NOx	0.2507	0.0970167730 lb/MMBtu	GRI Field
SO2	0.0015	0.0005880000 lb/MMBtu	EPA

Other Pollutants

Dichlorobenzene	0.0000	0.0000011765 lb/MMBtu	EPA
Methane	0.0272	0.0105212610 lb/MMBtu	GRI Field
Acetylene	0.0362	0.0140000000 lb/MMBtu	GRI Field
Ethylene	0.0024	0.0009476310 lb/MMBtu	GRI Field
Ethane	0.0068	0.0026312210 lb/MMBtu	GRI Field
Propylene	0.0061	0.0023454550 lb/MMBtu	GRI Field
Propane	0.0028	0.0010686280 lb/MMBtu	GRI Field
Isobutane	0.0038	0.0014640770 lb/MMBtu	GRI Field
Butane	0.0036	0.0013766990 lb/MMBtu	GRI Field
Cyclopentane	0.0029	0.0011304940 lb/MMBtu	GRI Field
Pentane	0.0090	0.0034671850 lb/MMBtu	GRI Field
n-Pentane	0.0037	0.0014221310 lb/MMBtu	GRI Field
Cyclohexane	0.0024	0.0009183830 lb/MMBtu	GRI Field
Methylcyclohexane	0.0057	0.0022011420 lb/MMBtu	GRI Field
n-Octane	0.0074	0.0028538830 lb/MMBtu	GRI Field
1,2,3-Trimethylbenzene	0.0088	0.0034224540 lb/MMBtu	GRI Field
1,2,4-Trimethylbenzene	0.0088	0.0034224540 lb/MMBtu	GRI Field
1,3,5-Trimethylbenzene	0.0088	0.0034224540 lb/MMBtu	GRI Field
n-Nonane	0.0095	0.0036604170 lb/MMBtu	GRI Field
CO2	304.0235	117.6470588235 lb/MMBtu	EPA

Equipment Leaks Emissions Calculations

Unit Number: **F1**

Description: Valves, Connectors, Seals & Open-Ended Lines

Steady-State Emission Rates

Equipment	Number of Components, # of sources	Emission Factors, kg/hr/source	Emission Factors, lb/hr/source	Uncontrolled TOC Emission Rates,	
				pph	tpy
Valves	1503	0.0045	0.0099	14.88	65.17
Connectors	1691	0.0002	0.0004	0.74	3.26
Pump Seals	6	0.0024	0.0053	0.03	0.14
Compressor Seals	104	0.0088	0.0194	2.01	8.82
Pressure Relief Valves	136	0.0088	0.0194	2.63	11.53
Open-Ended Lines	385	0.0020	0.0044	1.69	7.42
Total				22.00	96.34

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	9.7167	44.010	427.632			
Hydrogen sulfide	0.0000	34.070	0.000			
Nitrogen	0.0939	28.013	2.630			
Methane	85.8626	16.043	1377.494	69.897		
Ethane	2.7940	30.070	84.016	4.263		
Propane	0.9951	44.097	43.881	2.227	4.90E-01	2.15
Isobutane	0.1710	58.123	9.939	0.504	1.11E-01	4.86E-01
n-Butane	0.2178	58.123	12.659	0.642	1.41E-01	6.19E-01
Isopentane	0.0512	72.150	3.694	0.187	4.12E-02	1.81E-01
n-Pentane	0.0323	72.150	2.330	0.118	2.60E-02	1.14E-01
Cyclopentane	0.0007	70.134	0.049	0.002	5.48E-04	2.40E-03
n-Hexane	0.0045	86.177	0.388	0.020	4.33E-03	1.90E-02
Cyclohexane	0.0027	84.161	0.227	0.012	2.54E-03	1.11E-02
Other hexanes	0.0113	86.177	0.974	0.049	1.09E-02	4.76E-02
Heptanes	0.0057	100.204	0.571	0.029	6.37E-03	2.79E-02
Methylcyclohexane	0.0104	98.188	1.021	0.052	1.14E-02	4.99E-02
2,2,4-Trimethylpentane	0.0005	114.231	0.057	0.003	6.37E-04	2.79E-03
Benzene	0.0006	78.114	0.047	0.002	5.23E-04	2.29E-03
Toluene	0.0063	92.141	0.580	0.029	6.48E-03	2.84E-02
Ethylbenzene	0.0004	106.167	0.042	0.002	4.74E-04	2.08E-03
Xylenes	0.0057	106.167	0.605	0.031	6.75E-03	2.96E-02
C8+ Heavies	0.0166	114.231	1.896	0.096	2.12E-02	9.27E-02
Total	100.0000		1970.734			
Total VOC				4.007	0.881	3.860

Gas stream composition obtained from Middle Mesa CDP Dehy Discharge extended gas analysis sampled on August 17, 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: **20**Number of Dehydrators at the Facility: **3**

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	880	1180	0	80	120	220	0	80	180
Components from dehydrators	18	30	6	0	9	18	0	9	12
Total	1019	1283	6	104	136	286	3	99	204
Adjusted Total	1503	1691	6	104	136	385			

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)

Malfunction Emissions Data and Calculations

Unit Number: **M1**
 Description: **Malfunctions**

Emission Rates

Pollutants	Weight Percents, %	Uncontrolled Emission Rates, tpy
VOC		8.00
2,2,4-Trimethylpentane	6.352E-02	5.08E-03
Benzene	5.942E-02	4.75E-03
Ethylbenzene	5.384E-02	4.31E-03
n-Hexane	4.916E-01	3.93E-02
Toluene	7.359E-01	5.89E-02
Xylene	7.672E-01	6.14E-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	9.7167	44.01		
Hydrogen sulfide	0.0000	34.07		
Nitrogen	0.0939	28.01		
Methane	85.8626	16.04		
Ethane	2.7940	30.07		
Propane	0.9951	44.09	0.4387	5.562E+01
Isobutane	0.1710	58.12	0.0994	1.260E+01
n-Butane	0.2178	58.12	0.1266	1.605E+01
Isopentane	0.0512	72.15	0.0369	4.683E+00
n-Pentane	0.0323	72.15	0.0233	2.955E+00
Cyclopentane	0.0007	70.14	0.0005	6.225E-02
n-Hexane	0.0045	86.17	0.0039	4.916E-01
Cyclohexane	0.0027	84.16	0.0023	2.881E-01
Other hexanes	0.0113	86.18	0.0097	1.235E+00
Heptanes	0.0057	100.20	0.0057	7.241E-01
Methylcyclohexane	0.0104	98.19	0.0102	1.295E+00
2,2,4-Trimethylpentane	0.0005	100.21	0.0005	6.352E-02
Benzene	0.0006	78.11	0.0005	5.942E-02
Toluene	0.0063	92.14	0.0058	7.359E-01
Ethylbenzene	0.0004	106.17	0.0004	5.384E-02
Xylenes	0.0057	106.17	0.0061	7.672E-01
C8+ Heavies	0.0166	110.00	0.0183	2.315E+00
Total	100.0000			
Total VOC			0.7888	

Gas stream composition obtained from Middle Mesa CDP Dehy Discharge extended gas analysis sampled on August 17, 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)

Storage Tank Emissions Data and Calculations

Unit Number: **Insignificant storage tanks under Title V Insignificant Activity Item No. 1 (insignificant source demonstration)**
 Description: **Storage tanks emissions summaries**

Source	Description	Uncontrolled Working / Breathing (W/B) Losses (TANKS)		Working / Breathing (W/B) Losses with Safety Factor Applied	Calculated Raw Flash Emissions	Flash Emissions with Safety Factor Applied	Total Uncontrolled Emissions (including Safety Factor)
		(lb/yr)	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)
Tank T17, T27, T56	Produced water storage tanks, aggregated						
VOC	(insignificant emissions < 1 tpy)	Not specified	0.05	0.05	N/A	N/A	0.05
Benzene		Not specified	0.00	5.00E-04	N/A	N/A	5.00E-04
Ethylbenzene		Not specified	0.00	3.00E-05	N/A	N/A	3.00E-05
n-Hexane		Not specified	0.11	1.10E-01	N/A	N/A	1.10E-01
Toluene		Not specified	0.00	1.50E-03	N/A	N/A	1.50E-03
Xylenes		Not specified	0.00	3.00E-04	N/A	N/A	3.00E-04
Tank T53	Methanol storage tank (100 bbl)						
VOC	(insignificant emissions < 1 tpy)	185.81	9.29E-02	0.09	N/A	N/A	9.29E-02
Methanol		185.81	9.29E-02	0.09	N/A	N/A	9.29E-02

Working/breathing losses are calculated using TANKS 4.0.9d.

Safety Factor Applied = 1 (Applied to VOC and HAPs only)

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

Storage Tank Emissions Calculations

Unit Number: **T17, T27, T56 (in aggregate) - Insignificant source demonstration**

Description: Produced Water Tanks

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

Throughput

420,000	gallons per year (gpy)	Annual liquid throughput	Estimated
10,000	barrels per year (bpy)	Annual liquid throughput	barrel capacity x turnovers/yr

Emission Rates

Pollutant	Emission Factor, lb/bbl	Uncontrolled Emission Rate, tpy
VOC	0.01	0.05
Benzene	0.0001	5.00E-04
Ethylbenzene	0.000006	3.00E-05
n-Hexane	0.022	1.10E-01
Toluene	0.0003	1.50E-03
Xylene	0.00006	3.00E-04

VOC, Benzene, Ethylbenzene, Toluene & Xylene emission factors are from the TCEQ Project 2010-29 (Emission Factor Determination for Produced Water Storage Tanks) report, Recommended Emission Factors

The n-Hexane emission factor is from CDPHE PS Memo 09-02 (Oil & Gas Produced Water Tank Batteries - Regulatory Definitions & Permitting Guidance)

Emission Rate (tpy) = lb/bbl x bbl/yr / 2,000 lb/ton

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

User Identification:	Middle Mesa Methanol (100 bbl) 1200 bpy
City:	San Juan Co., T31N, R07W, Sec. 10
State:	New Mexico
Company:	Williams Four Corners LLC
Type of Tank:	Vertical Fixed Roof Tank
Description:	Methanol storage tank 100 bbl 1200 bpy (5040 gal) throughput

Tank Dimensions

Shell Height (ft):	14.00
Diameter (ft):	7.00
Liquid Height (ft) :	14.00
Avg. Liquid Height (ft):	7.00
Volume (gallons):	4,200.00
Turnovers:	12.00
Net Throughput(gal/yr):	50,400.00
Is Tank Heated (y/n):	N

Paint Characteristics

Shell Color/Shade:	Gray/Light
Shell Condition	Good
Roof Color/Shade:	Gray/Light
Roof Condition:	Good

Roof Characteristics

Type:	Dome
Height (ft)	0.00
Radius (ft) (Dome Roof)	7.00

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meterological Data used in Emissions Calculations: Albuquerque, New Mexico (Avg Atmospheric Pressure = 12.15 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Middle Mesa Methanol (100 bbl) 1200 bpy - Vertical Fixed Roof Tank
San Juan Co., T31N, R07W, Sec. 10, New Mexico

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure (psia)			Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
		Avg.	Min.	Max.		Avg.	Min.	Max.					
Methyl alcohol	All	64.94	53.24	76.64	58.39	1.6820	1.1617	2.3895	32.0400			32.04	Option 2: A=7.897, B=1474.08, C=229.13

TANKS 4.0.9d

Emissions Report - Detail Format

Detail Calculations (AP-42)

Middle Mesa Methanol (100 bbl) 1200 bpy - Vertical Fixed Roof Tank San Juan Co., T31N, R07W, Sec. 10, New Mexico

Annual Emission Calculations

Standing Losses (lb):	121.1416
Vapor Space Volume (cu ft):	287.8693
Vapor Density (lb/cu ft):	0.0096
Vapor Space Expansion Factor:	0.2008
Vented Vapor Saturation Factor:	0.6000
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	287.8693
Tank Diameter (ft):	7.0000
Vapor Space Outage (ft):	7.4801
Tank Shell Height (ft):	14.0000
Average Liquid Height (ft):	7.0000
Roof Outage (ft):	0.4801
Roof Outage (Dome Roof)	
Roof Outage (ft):	0.4801
Dome Radius (ft):	7.0000
Shell Radius (ft):	3.5000
Vapor Density	
Vapor Density (lb/cu ft):	0.0096
Vapor Molecular Weight (lb/lb-mole):	32.0400
Vapor Pressure at Daily Average Liquid	
Surface Temperature (psia):	1.6820
Daily Avg. Liquid Surface Temp. (deg. R):	524.6094
Daily Average Ambient Temp. (deg. F):	56.1542
Ideal Gas Constant R	
(psia cuft / (lb-mol-deg R)):	10.731
Liquid Bulk Temperature (deg. R):	518.0642
Tank Paint Solar Absorptance (Shell):	0.5400
Tank Paint Solar Absorptance (Roof):	0.5400
Daily Total Solar Insulation	
Factor (Btu/sqft day):	1,765.3167
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.2008
Daily Vapor Temperature Range (deg. R):	46.7976
Daily Vapor Pressure Range (psia):	1.2278
Breather Vent Press. Setting Range(psia):	0.0600
Vapor Pressure at Daily Average Liquid	
Surface Temperature (psia):	1.6820
Vapor Pressure at Daily Minimum Liquid	
Surface Temperature (psia):	1.1617
Vapor Pressure at Daily Maximum Liquid	
Surface Temperature (psia):	2.3895
Daily Avg. Liquid Surface Temp. (deg R):	524.6094
Daily Min. Liquid Surface Temp. (deg R):	512.9100
Daily Max. Liquid Surface Temp. (deg R):	536.3088
Daily Ambient Temp. Range (deg. R):	27.9250
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	0.6000
Vapor Pressure at Daily Average Liquid:	
Surface Temperature (psia):	1.6820
Vapor Space Outage (ft):	7.4801
Working Losses (lb):	64.6677

Vapor Molecular Weight (lb/lb-mole):	32.0400
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	1.6820
Annual Net Throughput (gal/yr.):	50,400.0000
Annual Turnovers:	12.0000
Turnover Factor:	1.0000
Maximum Liquid Volume (gal):	4,200.0000
Maximum Liquid Height (ft):	14.0000
Tank Diameter (ft):	7.0000
Working Loss Product Factor:	1.0000
 Total Losses (lb):	 185.8093

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

Middle Mesa Methanol (100 bbl) 1200 bpy - Vertical Fixed Roof Tank
San Juan Co., T31N, R07W, Sec. 10, New Mexico

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Methyl alcohol	64.67	121.14	185.81

Truck Loading Emissions Calculations

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

Emission Factor

0.6		Saturation factor, S	AP-42, Table 5.2-1 (submerged loading& dedicated service)
0.4581	psia (maximum)	True vapor pressure of liquid, P	Estimated using Antoine's Equation (see calculations below)
0.3045	psia (average)	True vapor pressure of liquid, P	Estimated using Antoine's Equation (see calculations below)
18.02	lb/lb-mole	Molecular weight of vapors, M	TANKS 4.0 Database
77	°F (maximum)	Temperature of liquid	Estimated (see calculations below)
65	°F (average)	Temperature of liquid	Estimated (see calculations below)
536.67	°R (maximum)	Temperature of liquid, T	°F + 459.67
524.67	°R (average)	Temperature of liquid, T	°F + 459.67
0.11	lb/10 ³ gal (maximum)	Emission factor, L	AP-42, Section 5.2, Equation 1
0.08	lb/10 ³ gal (average)	Emission factor, L	AP-42, Section 5.2, Equation 1
		$L = 12.46 \frac{SPM}{T}$	L= lbs /10 ³ gal loaded

Production Rate

8.40	10 ³ gal/hr	Maximum hourly production rate	Harvest
420.0	10 ³ gal/yr	Maximum annual production rate	Harvest

Steady-State Emission Rates

Pollutant	Uncontrolled Emission Rates,	
	pph	tpy
VOC	48.30	0.016

Uncontrolled Emission Rate (pph) = 'L' (lb/10³ gal) x 10³ gal/hrUncontrolled Emission Rate (tpy) = 'L' (lb/10³ gal) x 10³ gal/yr / 2,000 lb/ton

Pollutants	Percent of VOC, %	Uncontrolled Emission Rates	
		pph	tpy
Benzene	1.00E-02	4.83E-03	1.64E-06
Ethylbenzene	6.00E-04	2.90E-04	9.85E-08
n-Hexane	2.20E+00	1.06E+00	3.61E-04
Toluene	3.00E-02	1.45E-02	4.93E-06
m-Xylene	6.00E-03	2.90E-03	9.85E-07

Wt. Fraction of VOC = Produced Water tank emission rate of pollutant (tpy) / tpy VOC.

Emission rate, pph = Wt. Fraction of VOC x VOC Emission rate (pph)

Emission rate, tpy = Wt. Fraction of VOC x VOC Emission rate (tpy)

Truck Loading Emissions Calculations

Unit Number: L1 - Insignificant source demonstration

Description: Truck Loading - Produced Water

Vapor Pressure of Produced Water:

It is estimated that the true vapor pressure of produced water is approximately equal to the true vapor pressure of pure water.
An estimate of the true vapor pressure for water is calculated using Antoine's equation (see AP-42, Section 7.1, Equation 1-25).

Maximum:

Temperature = 77 °F

$$\log P = A - (B / (C + T))$$

$$A = 8.07131$$

$$B = 1730.63$$

$$C = 233.426$$

$$T = 25.00 \text{ }^{\circ}\text{C}$$

$$P = \text{mmHg}$$

$$P = 10^{(A - (B / (C + T)))}$$

$$P = 23.69 \text{ mmHg}$$

$$P = 0.4581 \text{ psi}$$

Note: 760 mmHg = 14.7 psia

Average:

Temperature = 65 °F

$$\log P = A - (B / (C + T))$$

$$A = 8.07131$$

$$B = 1730.63$$

$$C = 233.426$$

$$T = 18.33 \text{ }^{\circ}\text{C}$$

$$P = \text{mmHg}$$

$$P = 10^{(A - (B / (C + T)))}$$

$$P = 15.75 \text{ mmHg}$$

$$P = 0.3045 \text{ psi}$$

Truck Loading Emissions Calculations

Unit Number: **L2 - Insignificant source demonstration**
 Description: Truck Loading - **Methanol**

Emission Factor Calculation

0.6		Saturation factor, S	AP-42, Table 5.2-1 (submerged loading& dedicated service)
2.3900	psia (maximum)	True vapor pressure of liquid, P	Estimated using Antoine's Equation (see calculations below)
1.6823	psia (average)	True vapor pressure of liquid, P	Estimated using Antoine's Equation (see calculations below)
32.04	lb/lb-mole	Molecular weight of vapors, M	TANKS 4.09d output
76.64	°F (maximum)	Temperature of liquid	TANKS 4.09d output
64.94	°F (average)	Temperature of liquid	TANKS 4.09d output
536.31	°R (maximum)	Temperature of liquid, T	°F + 459.67
524.61	°R (average)	Temperature of liquid, T	°F + 459.67
AP-42, Section 5.2, Equation 1:		$L = 12.46 \frac{SPM}{T}$	$L = \text{lbs} / 10^3 \text{ gal loaded}$
1.07	lb/10 ³ gal (maximum)	Hourly Emission factor (max), L (lbs /10 ³ gal loaded)	AP-42, Section 5.2, Equation 1
0.77	lb/10 ³ gal (average)	Annual Emission factor (avg), L (lbs /10 ³ gal loaded)	AP-42, Section 5.2, Equation 1

Production Rate

8.40	10 ³ gal/hr	Maximum hourly production rate	Harvest
50.4	10 ³ gal/yr	Maximum annual production rate	Harvest

Steady-State Emission Rates

Pollutant	Uncontrolled VOC Emission Rate,	
	pph	tpy
VOC	53.80	1.94E-02

Uncontrolled Emission Rate (pph) = [Emission factor (**max**) L, (lb/10³ gal)] x 10³ gal/hr

Uncontrolled Emission Rate (tpy) = [Emission Factor (**avg**) L, (lb/10³ gal)] x 10³ gal/yr / 2,000 lb/ton

Pollutants	Wt. Fraction of Total, Emissions	Uncontrolled Emission Rates	
		pph	tpy
Methanol	1.00	53.80	1.94E-02

Wt. Fraction of **Methanol** = **Methanol** (lb/yr) (TANKS 4.0.9d output file) / VOC emission rate (lb/yr) (TANKS 4.0.9d output file)

Emission rate, pph = Wt. Fraction of **Methanol** x Uncontrolled VOC Emission Rate (pph)

Emission rate, tpy = Wt. Fraction of **Methanol** x Uncontrolled VOC Emission Rate (tpy)

Truck Loading Emissions Calculations

Unit Number: **L2 - Insignificant source demonstration**

Description: Truck Loading - **Methanol**

Vapor Pressure of **Methanol** (for truck loading hourly (max) and annual (avg) calculations)

It is assumed that the hourly and annual temperatures during truck loading activities equal the maximum and average storage tank temperatures in the TANKS 4.09d output file.

The true vapor pressures during truck loading are calculated using Antoine's equation (see AP-42, Section 7.1, Equation 1-25):

Hourly:

Maximum Temperature = **76.64** °F (TANKS 4.0.9d output)

$$\log P = A - (B / (C + T))$$

A = 7.897
 B = 1474.08
 C = 229.13
 T = 24.80 °C
 P = mmHg*

$$*P = 10^{(A - (B / (C + T)))}$$

P = 123.58 mmHg
 P = 2.3900 psi

Note: 760 mmHg = 14.7 psia
 1 mmHg = 0.01934 psia

Annual:

Average Temperature = **64.94** °F (TANKS 4.0.9d output)

$$\log P = A - (B / (C + T))$$

A = 7.897
 B = 1474.08
 C = 229.13
 T = 18.30 °C
 P = mmHg*

$$*P = 10^{(A - (B / (C + T)))}$$

P = 86.98 mmHg
 P = 1.6823 psi

Note: 760 mmHg = 14.7 psia
 1 mmHg = 0.01934 psia

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 (CO₂), nitrous oxide (N₂O), methane (CH₄), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆).

Calculating GHG Emissions:

1. Calculate the ton per year (tpy) GHG mass emissions and GHG CO₂e 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 CO₂e 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 CO₂e 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 CO₂ 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) emissions are provided. Carbon dioxide (CO₂), methane (CH₄) emissions, nitrous oxide (N₂O) (combustion sources only), and total GHG are reported in tons per year (tpy). Carbon dioxide equivalent (CO₂e) emissions (including CO₂, N₂O and CH₄) are reported in metric tonnes per year. The CO₂e is calculated by summing the estimated CO₂ emissions with the CH₄ emissions (adjusted for the Global Warming Potential (GWP) of the CH₄) and the N₂O emissions (adjusted for the GWP of the N₂O). 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 CH₄ and N₂O 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 (CO₂), methane (CH₄), and nitrous oxide (N₂O) exhaust emissions from the combustion equipment (including the natural gas fired reciprocating internal combustion engines and the TEG dehydrator reboilers) are calculated from emission factors from 40 CFR 98, Part C, Tables C-1 & C-2, and the equipment 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.

Dehydrator Still Vent GHG. Emissions of GHG from the dehydrator still vents are calculated in accordance with the methods of 40 CFR 98, subpart W, *Petroleum and Natural Gas Systems*, §98.233(e),

including GRI-GLYCalc 4.0 emissions estimation software, the natural gas stream composition, and dehydrator operating parameters corresponding to the Potential To Emit emission calculations.

SSM Compressor Blowdown GHG. Compressor blowdown emissions (SSM), including emissions from SSM and compressor venting and associated piping, are calculated from the estimated total annual gas losses (scf/yr) and the molar fraction of CO₂ and CH₄ 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 type of VOC emissions and the molar fractions of CO₂ and CH₄ 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 CO₂ and CH₄ 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 greater than the combined blowdown valve leakage and rod packing emissions that occur when compressor(s) are in operation. Therefore, the PTE is calculated assuming 0 hours per year of compressor operation (corresponding with isolation valve leakage occurring 8,760 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 CO₂ and CH₄ 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 CO₂ and CH₄, 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 the working and breathing losses from the produced water, waste water, lube oil and waste lube oil storage tanks are considered to be zero, based on the stored contents are either non-flashing liquids or post-flashed liquid. The other stored liquids (antifreeze, methanol) do not contain appreciable amounts of GHG. Similarly, any transferred liquid (truck loading) does not contain appreciable amounts of any gases, including GHG.

Green House Gas Emissions Data and Calculations

Sources	Facility Total Emissions				
	CO ₂ , tpy	N ₂ O, tpy	CH ₄ , tpy	GHG, tpy	CO ₂ e, tpy
Engine & Turbine Exhaust	120,209.06	0.227	2.27	120,211.55	120333.21
SSM Blowdowns	167.8985	-	540.7358	708.63	13686.29
Reciprocating Compressor Venting	346.16	-	1,116.54	1,462.70	28259.70
Dehydrators	22.34	--	1.94	24.28	70.86
Reboiler Exhaust	1,010.81	1.91E-03	1.91E-02	1,010.83	1011.86
Equipment Leaks	12.28	-	39.60	51.88	1002.40
Natural Gas Pneumatic Device Venting	13.71	-	44.11	57.81	1116.37
Natural Gas Driven Pneumatic Pump Venting	0.66	-	2.11	2.77	53.48
Malfunctions	43.37	-	139.68	183.06	3535.49
Separators & Storage Tanks (Flash Emissions)	0.00	-	0.00	0.00	0.00
Total	121,826.28	2.28E-01	1,887.01	123,713.52	169,069.65

Engine & Turbine Exhaust Emissions

Unit Numbers	Description	Emission Factors			Emission Rates			
		CO ₂ , kg/MMBtu	N ₂ O, kg/MMBtu	CH ₄ , kg/MMBtu	CO ₂ , tpy	N ₂ O, tpy	CH ₄ , tpy	CO ₂ e, tpy
1	Waukesha L7042GL	53.06	1.00E-04	1.00E-03	6,010.45	0.0113	0.1133	6,016.66
2	Waukesha L7042GL	53.06	1.00E-04	1.00E-03	6,010.45	0.0113	0.1133	6,016.66
3	Waukesha L7042GL	53.06	1.00E-04	1.00E-03	6,010.45	0.0113	0.1133	6,016.66
4	Waukesha L7042GL	53.06	1.00E-04	1.00E-03	6,010.45	0.0113	0.1133	6,016.66
5	Waukesha L7042GL	53.06	1.00E-04	1.00E-03	6,010.45	0.0113	0.1133	6,016.66
6	Waukesha L7042GL	53.06	1.00E-04	1.00E-03	6,010.45	0.0113	0.1133	6,016.66
7	Waukesha L7042GL	53.06	1.00E-04	1.00E-03	6,010.45	0.0113	0.1133	6,016.66
8	Waukesha L7042GL	53.06	1.00E-04	1.00E-03	6,010.45	0.0113	0.1133	6,016.66
9	Waukesha L7042GL	53.06	1.00E-04	1.00E-03	6,010.45	0.0113	0.1133	6,016.66
10	Waukesha L7042GL	53.06	1.00E-04	1.00E-03	6,010.45	0.0113	0.1133	6,016.66
11	Waukesha L7042GL	53.06	1.00E-04	1.00E-03	6,010.45	0.0113	0.1133	6,016.66
12	Waukesha L7042GL	53.06	1.00E-04	1.00E-03	6,010.45	0.0113	0.1133	6,016.66
13	Waukesha L7042GL	53.06	1.00E-04	1.00E-03	6,010.45	0.0113	0.1133	6,016.66
14	Waukesha L7042GL	53.06	1.00E-04	1.00E-03	6,010.45	0.0113	0.1133	6,016.66
21	Waukesha L7042GL	53.06	1.00E-04	1.00E-03	6,010.45	0.0113	0.1133	6,016.66
22	Waukesha L7042GL	53.06	1.00E-04	1.00E-03	6,010.45	0.0113	0.1133	6,016.66
23	Waukesha L7042GL	53.06	1.00E-04	1.00E-03	6,010.45	0.0113	0.1133	6,016.66
24	Waukesha L7042GL	53.06	1.00E-04	1.00E-03	6,010.45	0.0113	0.1133	6,016.66
25	Waukesha L7042GL	53.06	1.00E-04	1.00E-03	6,010.45	0.0113	0.1133	6,016.66
26	Waukesha L7042GL	53.06	1.00E-04	1.00E-03	6,010.45	0.0113	0.1133	6,016.66
Total		53.06	1.00E-04	1.00E-03	120,209.06	0.227	2.27	120,333.21

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
9	Waukesha L7042GL	Nat. Gas	8,760	10.58	11.76	102,979
10	Waukesha L7042GL	Nat. Gas	8,760	10.58	11.76	102,979
11	Waukesha L7042GL	Nat. Gas	8,760	10.58	11.76	102,979
12	Waukesha L7042GL	Nat. Gas	8,760	10.58	11.76	102,979
13	Waukesha L7042GL	Nat. Gas	8,760	10.58	11.76	102,979
14	Waukesha L7042GL	Nat. Gas	8,760	10.58	11.76	102,979
21	Waukesha L7042GL	Nat. Gas	8,760	10.58	11.76	102,979
22	Waukesha L7042GL	Nat. Gas	8,760	10.58	11.76	102,979
23	Waukesha L7042GL	Nat. Gas	8,760	10.58	11.76	102,979
24	Waukesha L7042GL	Nat. Gas	8,760	10.58	11.76	102,979
25	Waukesha L7042GL	Nat. Gas	8,760	10.58	11.76	102,979
26	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

Green House Gas Emissions Data and Calculations

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	29,792,300	0.0113	--	0.0363	167.90	-	540.74	13,686.29

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

Reciprocating Compressor Venting Emissions

Unit Numbers	Description	Emission Rates			
		CO2, tpy	N2O, tpy	CH4, tpy	CO2e, tpy
NA	Blowdown Valve Leakage	33.07	-	106.66	2,699.46
NA	Rod Packing Emissions	313.09	-	1009.89	25,560.24
NA	Isolation Valve Leakage	0.00	-	0.00	-
	Total	346.16	-	1116.54	28,259.70

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	20	33.5	8,760	9.72	85.86	0.0526	0.0192
NA	Rod Packing Emissions	20	317.2	8,760	9.72	85.86	0.0526	0.0192
NA	Isolation Valve Leakage	20	10.5	0	9.72	85.86	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)

Green House Gas Emissions Data and Calculations

Dehydrator Emissions

Unit Numbers	Description	Emission Rates			
		CO ₂ , tpy	N ₂ O, tpy	CH ₄ , tpy	CO ₂ e, tpy
15a	Dehydrator (10 MMSCFD)	7.45	--	0.65	23.62
16a	Dehydrator (10 MMSCFD)	7.45	--	0.65	23.62
17a	Dehydrator (10 MMSCFD)	7.45	--	0.65	23.62
Total		22.34	--	1.94	70.86

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

Reboiler Exhaust Emissions

Unit Numbers	Description	Emission Factors			Emission Rates			
		CO ₂ , kg/MMBtu	N ₂ O, kg/MMBtu	CH ₄ , kg/MMBtu	CO ₂ , tpy	N ₂ O, tpy	CH ₄ , tpy	CO ₂ e, tpy
15b	Reboiler (10 MMSCFD)	53.06	1.00E-04	1.00E-03	336.94	6.35E-04	6.35E-03	337.29
16b	Reboiler (12 MMSCFD)	53.06	1.00E-04	1.00E-03	336.94	6.35E-04	6.35E-03	337.29
17b	Reboiler (15 MMSCFD)	53.06	1.00E-04	1.00E-03	336.94	6.35E-04	6.35E-03	337.29
Total					1,010.81	1.91E-03	1.91E-02	1,011.86

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
15b	Reboiler (10 MMSCFD)	Nat. Gas	8,760	659	900	0.59	0.66	5,773
16b	Reboiler (12 MMSCFD)	Nat. Gas	8,760	659	900	0.59	0.66	5,773
17b	Reboiler (15 MMSCFD)	Nat. Gas	8,760	659	900	0.59	0.66	5,773

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

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

Equipment Leaks Emissions

Unit Numbers	Description	Emission Rates			
		CO ₂ , tpy	N ₂ O, tpy	CH ₄ , tpy	CO ₂ e, tpy
NA	Valves	9.0	-	29.0	732.73
NA	Connectors	1.4	-	4.6	115.82
NA	Open-Ended Lines	0.6	-	1.9	48.09
NA	Pressure Relief Valves	1.3	-	4.2	105.75
Total		12.28	-	39.60	1,002.40

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	CO ₂ Contents, mole %	CH ₄ Contents, mole %	Operating Times, hr/yr	CO ₂ Density, kg/scf	CH ₄ Density, kg/scf
NA	Valves	1503	0.121	9.72	85.86	8,760	0.0526	0.0192
NA	Connectors	1691	0.017	9.72	85.86	8,760	0.0526	0.0192
NA	Open-Ended Lines	385	0.031	9.72	85.86	8,760	0.0526	0.0192
NA	Pressure Relief Valves	136	0.193	9.72	85.86	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	7.37	-	23.70	599.90
NA	Intermittent Bleed Pneumatic Devices	9	13.5	8,760	6.00	-	19.30	488.52
NA	Continuous Low Bleed Pneumatic Devices	5	1.39	8,760	0.34	-	1.10	27.94
Total					13.71	-	44.11	1,116.37

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	9.72	85.86	5.262E-05	4.790E-04	1	25
NA	Continuous Low Bleed Pneumatic Devices	9.72	85.86	5.262E-05	4.790E-04	1	25
NA	Intermittent Bleed Pneumatic Devices	9.72	85.86	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	1	13.3	8,760	0.66	-	2.11	53.48

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	9.72	85.86	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	19.70	0.79	21.70	69.90	8.00	43.37	-	139.68	3,535.49

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
T17, T27, T56	Produced Water Tanks, Loading	--	--	--	0.00E+00	-	0.00E+00	-
					0.00E+00	-	0.00	-
					0.00E+00	-	0.00	-
					0.0000	-	0.0000	-
	Total							

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).

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	9.7167	44.01	4.28	21.7029	0.0113
Hydrogen Sulfide	0.0000	34.07	0.00	0.0000	0.0000
Nitrogen	0.0939	28.01	0.03	0.1335	0.0001
Methane	85.8626	16.04	13.77	69.8966	0.0363
Ethane	2.7940	30.07	0.84	4.2639	0.0022
Propane	0.9951	44.09	0.44	2.2267	0.0012
IsoButane	0.1710	58.12	0.10	0.5044	0.0003
Normal Butane	0.2178	58.12	0.13	0.6424	0.0003
IsoPentane	0.0512	72.15	0.04	0.1875	0.0001
Normal Pentane	0.0323	72.15	0.02	0.1183	0.0001
Cyclopentane	0.0007	70.14	0.00	0.0025	0.0000
n-Hexane	0.0045	86.17	0.00	0.0197	0.0000
Cyclohexane	0.0027	84.16	0.00	0.0115	0.0000
Other Hexanes	0.0113	86.18	0.01	0.0494	0.0000
Heptanes	0.0057	100.20	0.01	0.0290	0.0000
Methylcyclohexane	0.0104	98.19	0.01	0.0518	0.0000
2,2,4-Trimethylpentane	0.0005	100.21	0.00	0.0025	0.0000
Benzene	0.0006	78.11	0.00	0.0024	0.0000
Toluene	0.0063	92.14	0.01	0.0295	0.0000
Ethylbenzene	0.0004	106.17	0.00	0.0022	0.0000
Xylenes	0.0057	106.17	0.01	0.0307	0.0000
C8+ heavies	0.0166	110.00	0.02	0.0927	0.0000
Total	100.0000		19.70	100.0000	0.0519
VOC			0.79	--	0.0021

Gas stream composition obtained from Middle Mesa CDP Dehy Discharge extended gas analysis sampled on August 17, 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:

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

Please see the following pages.

STANDARD EQUIPMENT

AIR CLEANER – Two, 3" dry type filter with hinged rain shield and service indicator.

BARRING DEVICE – Manual.

BATTERY BOX – Ship loose battery box designed to accommodate two series 31 12 VDC batteries. Includes power disconnect switch and 20 foot (6.1 m) cable for connection to ESM Power Distribution Box.

BEARINGS – Heavy duty, replaceable, precision type.

BREATHER – Self regulating, closed system.

CONNECTING RODS – Drop forged steel, rifle drilled.

CONTROL SYSTEM – Waukesha Engine System Manager (ESM) integrates spark timing control, speed governing, detonation detection, start-stop control, diagnostic tools, fault logging and engine safeties. Engine Control Unit (ECU) is central brain of the control system and main customer interface. Interface with ESM is through 25 foot (7.6 m) harness to local panel, through MODBUS RTU slave connection RS-485 multidrop hardware, and through the Electronic Service Program (ESP). Customer connections are only required to the local panel, fuel valve, and 24V DC power supply. Compatible with Woodward load sharing module. ESM meets Canadian Standards Association Class I, Division 2, Group D, hazardous location requirements. ESM controlled prechamber logic.

CRANKCASE – Integral crankcase and cylinder frame. Main bearing caps drilled and tapped for temperature sensors. Does not include sensors.

CRANKSHAFT – Counterweighted, forged steel, seven main bearings, and dynamically balanced.

CYLINDERS – Removable bainitic cast iron wet type cylinder liners, chrome plated on outer diameter.

CYLINDER HEADS – Twelve interchangeable. Two hard faced intake and two hard faced exhaust valves per cylinder. Hard faced intake and exhaust valve seat inserts. Roller valve lifters and hydraulic push rods. Includes prechamber and related fuel control valves.

ENGINE ROTATION – Counterclockwise when facing flywheel.

ENGINE MONITORING DEVICES – Factory mounted and wired sensors for lube oil pressure and temperature; intake manifold temperature and pressure; overspeed; and jacket water temperature; all accessible through ESM®. ESM continually monitors combustion performance through accelerometers to provide detonation protection. Dual magnetic pick-ups are used for accurate engine speed monitoring. ESM provides predictive spark plug diagnostics as well as advanced diagnostics of engine and all ESM sensors and logs any faults into non-volatile flash memory.

EXHAUST THERMOCOUPLES – 14 K-type thermocouples. One for each individual cylinder and one pre-turbine for each bank and 25 foot (7.6 m) harness.

EXHAUST OUTLET – Single vertical at rear. Flexible stainless steel connection with 8" (203 mm) pipe flange.

FLYWHEEL – Approx. WR2 = 155000 lb-in²; with ring gear (208 teeth), machined to accept two drive adapters: 31.88" (810 mm) pilot bore, 30.25" (768 mm) bolt circle, (12) 0.75"-10 tapped holes; or 28.88" (734 mm) pilot bore, 27.25" (692 mm) bolt circle, (12) 0.625"-11 tapped holes and (12) 0.75"-10 tapped holes.

FLYWHEEL HOUSING – No. 00 SAE.

FUEL SYSTEM – Single 3" ANSI flange fuel inlet connection. Dual natural gas, 4" (102 mm) duplex updraft carburetors. Two mounted Mooney Flowgrid 250, 2" (51 mm) gas regulators, 43 – 60 psi (296 – 414 kPa) gas inlet pressure required. Prechamber fuel system and control logic. 10 foot (3 m) harness provided for ESM control of customer supplied fuel shutoff valve.

GOVERNOR – Electric throttle actuator controlled by ESM with throttle position feedback. Governor tuning is performed using ESP. ESM includes option of a load-coming feature to improve engine response to step loads.

IGNITION SYSTEM – Ignition Power Module (IPM) controlled by ESM, with spark timing optimized for any speed-load condition. Dual voltage energy levels automatically controlled by ESM to maximize spark plug life.

INTERCOOLER – Air-to-water.

LEVELING BOLTS

LIFTING EYES – Requires 9.5 ton Working Load Limit (W.L.L.) anchor shackles.

LUBRICATION – Full pressure, gear type pump. Engine mounted full flow lube oil micro-fiberglass filters with mounted differential pressure gauge. MICROSPIN® bypass filter, engine mounted. Lube oil strainer, mounted. Air/gas motor driven prelube pump, requires final piping.

MANIFOLDS – Exhaust, (2) water cooled.

OIL COOLER – Shell and tube type, with thermostatic temperature controller and pressure regulating valve. Factory mounted.

OIL PAN – Deep sump type. 190 gallon (719 L) capacity including filter and cooler.

PAINT – Oilfield orange primer.

PISTONS – Aluminum with floating pin. Oil cooled.

SHIPPING SKID – For domestic truck or rail.

TURBOCHARGERS – Two, dry type. Wastegate controlled.

VIBRATION DAMPER – Two, viscous type. Guard included with remote mounted radiator or no radiator.

WATER CIRCULATING SYSTEM, AUXILIARY CIRCUIT – Belt driven water circulating high capacity pump for intercooler and lube oil cooler. See S6543-38 performance curve for use with standard 10" diameter crankshaft pulley. Includes thermostatic valve.

WATER CIRCULATING SYSTEM, ENGINE JACKET – Belt driven water circulating pump, cluster type thermostatic temperature regulating valve, full flow bypass type. Flange connections and mating flanges for (2) 4" (102 mm) inlets and (1) 5" (127 mm) outlet.

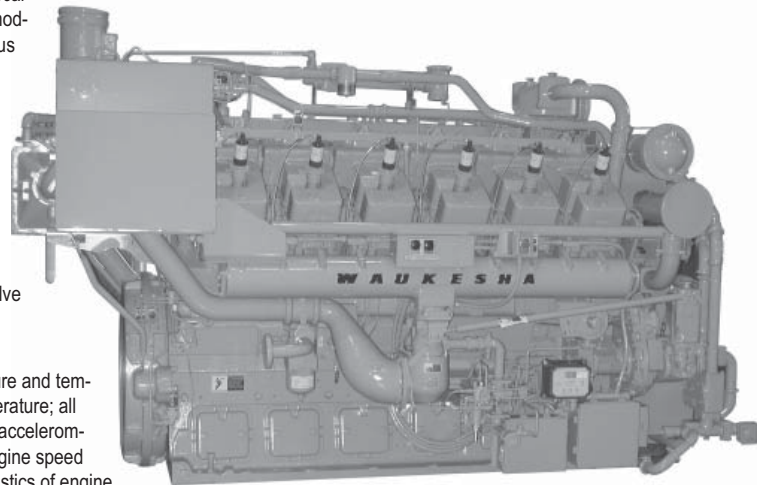


Waukesha

POWERING PERFORMANCE

L7042GL

VHP® Gas Engine
886 - 1547 BHP



Engine shown without Extender Series Features.

Model L7042GL with ESM®

Turbocharged and Intercooled, Twelve Cylinder,
Lean Combustion, Four-Cycle Gas Engine

SPECIFICATIONS

Cylinders V 12	Lube Oil Capacity 190 gal. (719 L)
Piston Displacement 7040 cu. in. (115 L)	Starting System 125 - 150 psi air/gas 24/32V electric
Bore & Stroke 9.375" x 8.5" (238 x 216 mm)	Dry Weight 21,000 lb. (9525 kg)
Compression Ratio 10.5:1	
Jacket Water System Capacity 107 gal. (405 L)	



POWER RATINGS: L7042GL VHP® GAS ENGINES

Model	I.C. Water Inlet Temp. °F (°C) (T _{cra})	C.R.	Brake Horsepower (kWb Output)				
			800 rpm	900 rpm	1000 rpm	1100 rpm	1200 rpm
L7042GL	85° (29°)	10.5:1	928 (692)	1160 (865)	1289 (961)	1418 (1057)	1547 (1154)
L7042GL	130° (54°)	10.5:1	886 (661)	1110 (828)	1233 (919)	1357 (1012)	1480 (1104)

Rating Standard: All models: Ratings are based on ISO 3046/1-1995 with mechanical efficiency of 90% and auxiliary water temperature T_{cra} (clause 10.1) as specified above limited to ± 10° F (± 5° C). Ratings are also valid for SAE J1349, BS5514, DIN6271 and AP17B-11C standard atmospheric conditions.

ISO Standard Power/Continuous Power Rating: The highest load and speed which can be applied 24 hours a day, seven days a week, 365 days per year except for normal maintenance. It is permissible to operate the engine at up to 10% overload, or maximum load indicated by the intermittent rating, whichever is lower, for two hours in each 24 hour period.

All natural gas engine ratings are based on a fuel of 900 Btu/ft³ (35.3 MJ/nm³) SLHV value, with a 91 Waukesha Knock Index®.

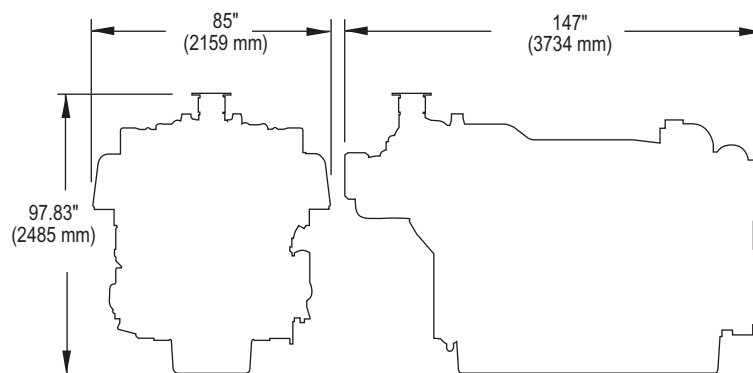
For conditions or fuels other than standard, contact the Waukesha Engine Sales Engineering Department.

PERFORMANCE: L7042GL VHP® GAS ENGINES

NO _x Settings	English	130° F ICW		85° F ICW		NO _x Settings	Metric	54° C ICW		29° C ICW	
	RPM	1200	1000	1200	1000		RPM	1200	1000	1200	1000
1.5 g NO _x	Power (Bhp)	1480	1233	1547	1289	1.5 g NO _x	Power (kWb)	1104	919	1154	962
	BSFC (Btu/bhp-hr)	7135	6850	7160	6865		BSFC (kJ/kW-hr)	10089	9686	10124	9707
	NO _x (grams/bhp-hr)	1.50	1.50	1.50	1.50		NO _x (g/nm ³)	0.62	0.62	0.62	0.62
	CO (grams/bhp-hr)	2.65	2.65	2.65	2.65		CO (g/nm ³)	1.09	1.09	1.09	1.09
	NMHC (grams/bhp-hr)	0.70	0.80	0.80	0.90		NMHC (g/nm ³)	0.29	0.41	0.33	0.37

NOTES:

- Fuel consumption and exhaust emissions are based on ISO 3046/1-1995 standard reference conditions and commercial quality natural gas of 900 Btu/ft³ (35.38 MJ/m³ [25, V(0; 101.325)]) saturated lower heat value, Waukesha Knock Index® of 91 and 93% methane content by volume. ISO 3046/1-1995 standard reference conditions are 77°F (25°C) ambient temperature, 29.54 inches Hg (100 kPa) barometric pressure, 30% relative humidity (1kPa/0.3 inches Hg water vapor pressure).
- S.I. exhaust emissions are corrected to 5% O₂ (0°C and 101.325 kPa).
- Data will vary due to variations in site conditions. For conditions and/or fuels other than standard, consult the Waukesha Engine Sales Engineering Department.
- Fuel consumption based on ISO 3046/1-1995 with a +5% tolerance for commercial quality natural gas having a 900 Btu/ft³ saturated low heat valve



Waukesha

**WAUKESHA ENGINE
DRESSER, INC.**

1101 West St. Paul Avenue
Waukesha, WI 53188-4999
Phone: (262) 547-3311 Fax: (262) 549-2795
waukeshaengine.dresser.com
Bulletin 7005 0107

Consult your local Waukesha Distributor for system application assistance. The manufacturer reserves the right to change or modify without notice, the design or equipment specifications as herein set forth without incurring any obligation either with respect to equipment previously sold or in the process of construction except where otherwise specifically guaranteed by the manufacturer.



DCL International Inc.

Mailing address: P.O. Box 90, Concord, Ontario, Canada, L4K 1B2
Toll free: 1-800-872-1968 Phone: 905-660-6450 Fax: 905-660-6435 E-mail: info@dcl-inc.com

Quotation

To:	Preston Batula
	Hanover Compression LP
Date:	April 18, 2005

Phone:	281-854-3183
Fax:	281-854-3180
E-mail:	Pbatula@hanover-co.com
No. Pages:	2 (incl.)

RE: CATALYTIC SILENCERS

Quote No.: 6-717-R2

Preston,

The quote you requested is as follows:

Engine model	Waukesha 7042GL
Power	1478 bhp @ 1200 rpm
Fuel	Good Quality Coal Bed Methane (Fuel Analysis Provided)

Required Emissions Reduction Efficiency	CO – 93% VOC – 65% Formaldehyde – 80%
---	---

Solution:

QUICK-LID™ Model DC68-14 hospital grade catalytic silencer equipped with one (1) catalyst element, provision for future upgrade, carbon steel construction, ASA flanges, and standard monitoring ports.

- Estimated Pressure Drop: 10" w.c.
- Average Sound Attenuation: 35-40 dBA
- Approx. Diameter: 40"
- Approx. Length: 160"
- Pipe Connection: 14"
- Approx. Weight: 2075 lbs.

Unit Price: \$15,845 USD, exWorks DCL
Quantity: 4-6
Availability: Ship all units 3-4 weeks after receipt of order

This quotation is subject to DCL's standard terms and conditions of sale and limited warranty statement(s). Copies of such terms and conditions of sale and limited warranty statement(s) are available from DCL upon request. This quote is valid for a period of 90 days.

Please note: Our prices are based on today's precious metal prices. DCL reserves the right to revise this quote should changes occur in the spot prices of the precious metals used in the above product(s).

Thank you for the opportunity to quote on your emission control equipment. Please contact me if you have any questions or concerns.

Best Regards,
DCL International Inc.



Paul Cook

ISO 9001 Registered • Manufacturer of MINE-X® & QUICK-LID™ Catalytic Converters

Confidential Communication

This message is intended only for the use of the individual or entity to which it is addressed and may contain information that is privileged or confidential. If the reader of this message is not the intended recipient or agent responsible for delivering the message to the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this communication is strictly prohibited. If you have received this communication in error, Please notify us immediately, and return the original message to us at the above address. Thank you.

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	9.7167	44.01	4.2763	21.7029	1.127E-02
Hydrogen sulfide	0.0000	34.07	0.0000	0.0000	0.000E+00
Nitrogen	0.0939	28.01	0.0263	0.1335	6.932E-05
Methane	85.8626	16.04	13.7724	69.8966	3.630E-02
Ethane	2.7940	30.07	0.8402	4.2639	2.214E-03
Propane	0.9951	44.09	0.4387	2.2267	1.156E-03
Isobutane	0.1710	58.12	0.0994	0.5044	2.620E-04
n-Butane	0.2178	58.12	0.1266	0.6424	3.336E-04
Isopentane	0.0512	72.15	0.0369	0.1875	9.737E-05
n-Pentane	0.0323	72.15	0.0233	0.1183	6.142E-05
Cyclopentane	0.0007	70.14	0.0005	0.0025	1.294E-06
n-Hexane	0.0045	86.17	0.0039	0.0197	1.022E-05
Cyclohexane	0.0027	84.16	0.0023	0.0115	5.989E-06
Other hexanes	0.0113	86.18	0.0097	0.0494	2.567E-05
Heptanes	0.0057	100.20	0.0057	0.0290	1.505E-05
Methylcyclohexane	0.0104	98.19	0.0102	0.0518	2.692E-05
2,2,4-Trimethylpentane	0.0005	100.21	0.0005	0.0025	1.321E-06
Benzene	0.0006	78.11	0.0005	0.0024	1.235E-06
Toluene	0.0063	92.14	0.0058	0.0295	1.530E-05
Ethylbenzene	0.0004	106.17	0.0004	0.0022	1.119E-06
Xylenes	0.0057	106.17	0.0061	0.0307	1.595E-05
C8+ Heavies	0.0166	110.00	0.0183	0.0927	4.813E-05
Total Gas	100.0000		19.7039		5.193E-02
Total VOC			0.7888		2.079E-03

Gas stream composition obtained from **Middle Mesa CDP Dehy Discharge** extended gas analysis
sampled on **August 17, 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: HM200074
Cust No: 33700-10325

Well/Lease Information

Customer Name: HARVEST MIDSTREAM
Well Name: Middle Mesa CDP
County/State: San Juan NM
Location:
Lease/PA/CA:
Formation:
Cust. Stn. No.:

Source: Dehy Discharge
Well Flowing:
Pressure: 912 PSIG
Flow Temp: 90 DEG. F
Ambient Temp: 68 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 08/17/2020
Sample Time: 11.31 AM
Sampled By: Travis M.
Sampled by (CO): Harvest

Heat Trace:

Remarks: Calculated Molecular Weight = 19.7091

Analysis

Component:	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.0939	0.0939	0.0100	0.00	0.0009
CO2	9.7167	9.7202	1.6620	0.00	0.1476
Methane	85.8626	85.8937	14.5900	867.21	0.4756
Ethane	2.7940	2.7950	0.7490	49.45	0.0290
Propane	0.9951	0.9955	0.2750	25.04	0.0152
Iso-Butane	0.1710	0.1711	0.0560	5.56	0.0034
N-Butane	0.2161	0.2162	0.0680	7.05	0.0043
Neopentane 2,2 dmc3	0.0017	0.0017	0.0010	0.07	0.0000
I-Pentane	0.0512	0.0512	0.0190	2.05	0.0013
N-Pentane	0.0323	0.0323	0.0120	1.29	0.0008
Neohexane	0.0010	N/R	0.0000	0.05	0.0000
2-3-Dimethylbutane	0.0007	N/R	0.0000	0.03	0.0000
Cyclopentane	0.0007	N/R	0.0000	0.03	0.0000
2-Methylpentane	0.0046	N/R	0.0020	0.22	0.0001
3-Methylpentane	0.0016	N/R	0.0010	0.08	0.0000
C6	0.0045	0.0654	0.0020	0.21	0.0001
Methylcyclopentane	0.0034	N/R	0.0010	0.15	0.0001
Benzene	0.0006	N/R	0.0000	0.02	0.0000
Cyclohexane	0.0027	N/R	0.0010	0.12	0.0001
2-Methylhexane	0.0007	N/R	0.0000	0.04	0.0000
3-Methylhexane	0.0011	N/R	0.0010	0.06	0.0000
2-2-4-Trimethylpentane	0.0005	N/R	0.0000	0.03	0.0000
i-heptanes	0.0005	N/R	0.0000	0.03	0.0000
Heptane	0.0034	N/R	0.0020	0.19	0.0001

Methylcyclohexane	0.0104	N/R	0.0040	0.54	0.0004
Toluene	0.0063	N/R	0.0020	0.28	0.0002
2-Methylheptane	0.0034	N/R	0.0020	0.21	0.0001
4-Methylheptane	0.0012	N/R	0.0010	0.07	0.0000
i-Octanes	0.0032	N/R	0.0020	0.19	0.0001
Octane	0.0054	N/R	0.0030	0.34	0.0002
Ethylbenzene	0.0004	N/R	0.0000	0.02	0.0000
m, p Xylene	0.0052	N/R	0.0020	0.27	0.0002
o Xylene (& 2,2,4 tmc7)	0.0005	N/R	0.0000	0.03	0.0000
i-C9	0.0009	N/R	0.0000	0.06	0.0000
C9	0.0022	N/R	0.0010	0.15	0.0001
i-C10	0.0002	N/R	0.0000	0.01	0.0000
C10	0.0001	N/R	0.0000	0.01	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	100.036	17.469	961.16	0.6804

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z):	1.0026
BTU/CU.FT IDEAL:	963.4
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	965.8
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	949.0
DRY BTU @ 15.025:	985.1
REAL SPECIFIC GRAVITY:	0.6819

CYLINDER #:	02
CYLINDER PRESSURE:	1016 PSIG
ANALYSIS DATE:	08/20/2020
ANALYSIS TIME:	01:49:53 AM
ANALYSIS RUN BY:	PATRICIA KING

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: 08/21/2020

GC Method: C12+BTEX Gas



HARVEST MIDSTREAM
WELL ANALYSIS COMPARISON

Lease: Middle Mesa CDP

Dehy Discharge

08/21/2020

Stn. No.:

33700-10325

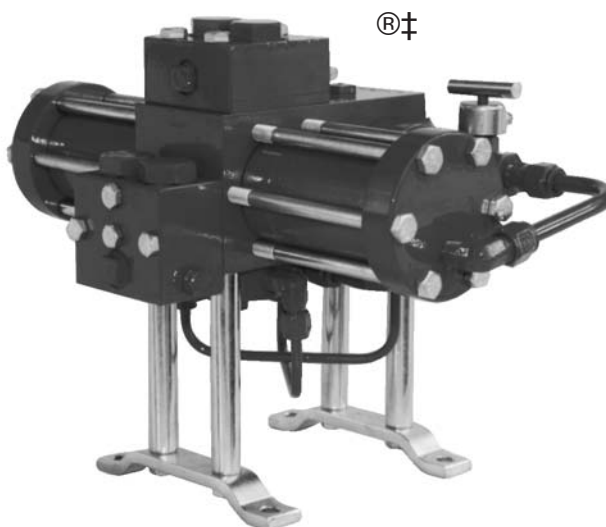
Mtr. No.:

Smpl Date:	08/17/2020	09/19/2019
Test Date:	08/20/2020	09/23/2019
Run No:	HM200074	HM190060
Nitrogen:	0.0939	0.1029
CO2:	9.7167	9.5490
Methane:	85.8626	86.4319
Ethane:	2.7940	2.3942
Propane:	0.9951	1.0394
I-Butane:	0.1710	0.1328
N-Butane:	0.2161	0.1748
2,2 dmc3:	0.0017	0.0000
I-Pentane:	0.0512	0.0591
N-Pentane:	0.0323	0.0422
Neohexane:	0.0010	0.0002
2-3-	0.0007	0.0017
Cyclopentane:	0.0007	0.0018
2-Methylpentane:	0.0046	0.0117
3-Methylpentane:	0.0016	0.0041
C6:	0.0045	0.0124
Methylcyclopentane:	0.0034	0.0087
Benzene:	0.0006	0.0011
Cyclohexane:	0.0027	0.0058
2-Methylhexane:	0.0007	0.0014
3-Methylhexane:	0.0000	0.0000
2-2-4-	0.0005	0.0004
i-heptanes:	0.0005	0.0009
Heptane:	0.0034	0.0044
Methylcyclohexane:	0.0104	0.0097
Toluene:	0.0063	0.0024
2-Methylheptane:	0.0034	0.0014
4-Methylheptane:	0.0012	0.0006
i-Octanes:	0.0032	0.0006
Octane:	0.0054	0.0016
Ethylbenzene:	0.0004	0.0001
m, p Xylene:	0.0052	0.0007
o Xylene (& 2,2,4	0.0005	0.0001
i-C9:	0.0009	0.0001
C9:	0.0022	0.0002
i-C10:	0.0002	0.0000
C10:	0.0001	0.0000
i-C11:	0.0000	0.0000
C11:	0.0000	0.0000
C12P:	0.0000	0.0000
BTU:	965.8	963.8
GPM:	17.4700	17.4280
SPG:	0.6819	0.6780

Description:	Middle Mesa CDP	Company:	HARVEST MIDSTREAM
Field:		WorkOrder:	
Meter Number:		GPA Method:	GPA 2286
Analysis Date/Time:	8/20/2020 1:49:53	Sampled By:	Travis M.
Date Sampled:	8/17/2020	Analyst Initials:	PK
Sample Temperature:	90	Instrument:	SRI 8610
Sample Pressure:	1016		

GRI GlyCalc Information

Component	Mol%	Normalized Weight %
Carbon Dioxide	9.7167	21.6972
Hydrogen Sulfide	N/R	0
Nitrogen	0.0939	0.1335
Methane	85.8626	69.8912
Ethane	2.794	4.2628
Propane	0.9951	2.2264
Iso-Butane	0.171	0.5043
n-Butane	0.2178	0.6423
Iso-Pentane	0.0512	0.1874
n-Pentane	0.0323	0.1182
Cyclopentane	0.0007	0.0025
n-Hexane	0.0045	0.0206
Cyclohexane	0.0027	0.0115
Other Hexanes	0.0113	0.0574
Heptanes	0.0057	0.029
Methylcyclohexane	0.0104	0.0518
2 2 4 Trimethylpentane	0.0005	0.0029
Benzene	0.0006	0.0024
Toluene	0.0063	0.0295
Ethylbenzene	0.0004	0.0022
Xylenes	0.0057	0.0307
C8+ Heavies	0.0166	0.0962
Subtotal	100	
Oxygen	N/R	
Subtotal	100	100
Calculated Molecular Weight		19.7091



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

“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

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

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.

‡Configuration of Glycol Pump is a trademark of Kimray, Inc.

Oil and Gas
 Production Equipment
 J. Envertek, Inc.
 4401 East Main Street
 Farmington, NM 87401
 505/326-1151
 FAX 505/325-0317



VIA FACSIMILE
 Fax No. (801) 534-7760
 Page: 1

August 19, 1994

Mr. Lee Bauerle
 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 \$/CEH	Total Stack Gas \$/CEH	Stack Ht. Ft	Stack Dia Inches	Stack Temp. F	Stack Velocity FPM
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

5928 U.S. Highway 64
Farmington, NM 87401

InFab

INDUSTRIAL FABRICATION

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

July 22, 1998

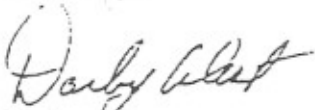
Mr. Bobby Myers
Williams Field Services
Environmental Affairs
295 Chipeta Way
P O Box 58900
Salt Lake City, UT 84158-0900

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	.25	10'	8	600	5.1
12 MM HP	.02	.49	.78	1208	.25	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

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

^aWater/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.

^bThese 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.

^cThe "other" equipment type was derived from compressors, diaphragms, 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 ($\text{lb}/10^3 \text{ gal}$) 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 ($\text{lb}/\text{lb-mole}$) (see Table 7.1-2)

T = temperature of bulk liquid loaded, $^{\circ}\text{R}$ ($^{\circ}\text{F} + 460$)

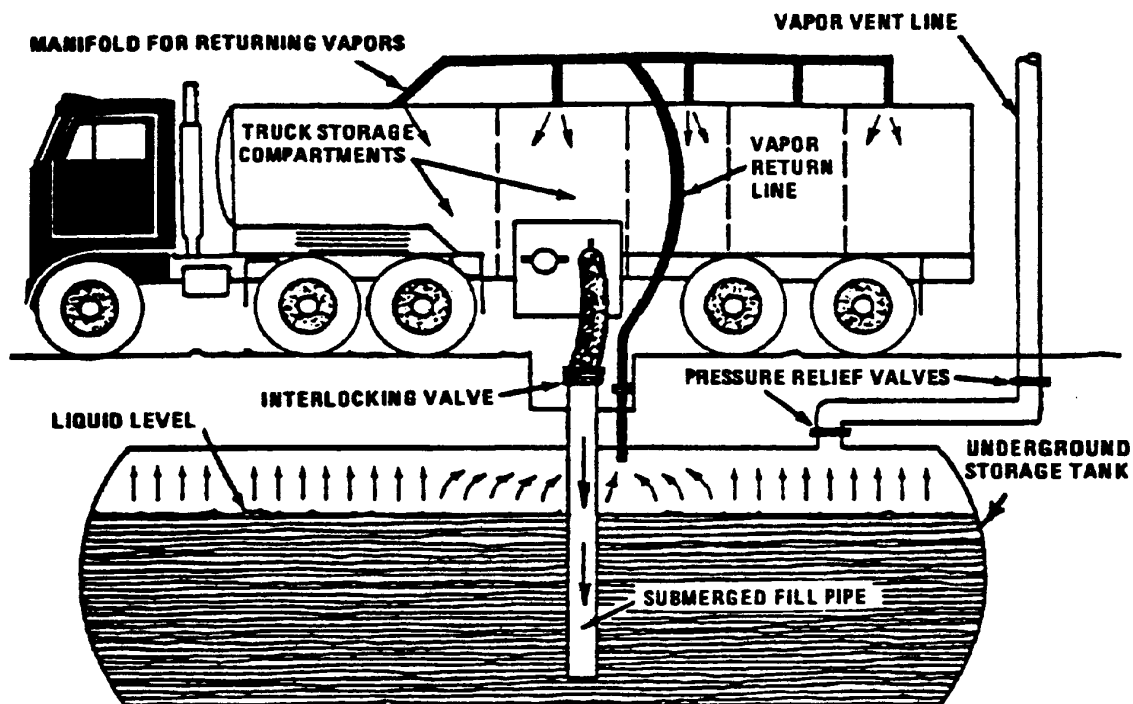


Figure 5.2-5. Tank truck unloading into a service station underground storage tank and practicing "vapor balance" form of emission control.

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.

PS Memo 09-02

To: Stationary Sources Program, Local Agencies, and Regulated Community
From: Chris Laplante and Roland C. Hea, Colorado Air Pollution Control Division
Date: February 8, 2010
Subject: Oil & Gas Produced Water Tank Batteries
Regulatory Definitions and Permitting Guidance

This guidance document is intended to answer frequently asked questions concerning oil and gas industry produced water tank batteries. This document does not address any other equipment types that may be part of a common facility with a tank battery. Nothing in this guidance should be construed regarding Air Pollution Control Division (Division) permitting of evaporation ponds or water treatment facilities. Please consult with the Division for information regarding the permitting of evaporation ponds or water treatment facilities.

Revision History

October 1, 2009	Initial issuance.
February 8, 2010	First revision. This guidance document replaces the October 1, 2009 version. Revised language to clarify APEN fee structure, definition of modification, APEN submittals, and produced water exemption.

Topic	Page
1. DEFINITIONS.....	2
2. AIR POLLUTANT EMISSION NOTICE Q&A.....	4
3. EMISSION FACTORS AND SITE SPECIFIC SAMPLING Q&A	7
4. EMISSION CALCULATIONS Q&A	8
5. CONSTRUCTION PERMIT Q&A	9
6. OIL AND GAS INDUSTRY PRODUCED WATER TANK GP Q & A	10
7. HOUSE BILL 07-1341	12

Document source:

https://www.colorado.gov/pacific/sites/default/files/AP_Memo-09-02-Oil-_-Gas-Produced-Water-Tank-Batteries-Regulatory-Definitions-and-Permitting-Guidance.pdf

3. EMISSION FACTORS AND SITE SPECIFIC SAMPLING Q&A

3.1. *What are the State approved default emission factors for produced water tanks?*

County	Produced Water Tank Default Emission Factors ¹ (lb/bbl) ²		
	VOC	Benzene	n-Hexane
Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, Jefferson, Larimer, & Weld	0.262	0.007	0.022
Garfield, Mesa, Rio Blanco, & Moffat	0.178	0.004	0.010
Remainder of Colorado ³	0.262	0.007	0.022

¹ Testing may be performed at any site to determine site-specific emissions factors. These default emission factors may be revised by the Division in the future, pending approved data and testing results.

² Units of lb/bbl means pounds of emissions per barrel of produced water throughput

³ For counties not listed in this table, use the emissions factors listed as a conservative measure or perform testing to determine a site-specific emission factor

3.2. *What type of emissions are included in the produced water tank state default emission factors?*

State default emission factors for produced water tanks include flash, working, and breathing losses.

3.3. *Are there limits as to when produced water tank state default emission factors may be used?*

State default emission factors may be used at all oil and gas industry tank batteries. The Division intends to work with industry to refine emission factors and may develop separate emission factors for E&P and non-E&P sites.

3.4. *When are site-specific emission factors required for tank batteries?*

Site-specific emission factors may be developed and used on a voluntary basis for any tank battery. The Division reserves the authority to require site-specific emission factors at any time. Site-specific emission factors may only be applied at the tank battery for which they were developed, unless otherwise approved by the Division.

3.5. *How is a site-specific emission factor developed?*

A site-specific emission factor for tank batteries is developed by performing a Division approved stack test. A test protocol must be submitted and approved by the Division prior to performing the test. Once a test protocol has been approved by the Division, subsequent testing may be performed following the approved protocol without submittal to the Division.

The Division must be notified of the site specific testing at least 30-days prior to the actual test date.



Emission Factor
Determination for Produced
Water Storage Tanks

TCEQ Project 2010-29

Prepared for:
Texas Commission on Environmental Quality
Austin, Texas

Prepared by:
ENVIRON International Corporation
Novato, California

Date:
August 2010

ENVIRON Project Number:
06-17477T

Document source:

<https://www.tceq.texas.gov/assets/public/implementation/air/am/contracts/reports/ei/5820784005FY1024-20100830-environ-%20EmissionFactorDeterminationForProducedWaterStorageTanks.pdf>

Executive Summary

The overall purpose of this Study is to evaluate volatile organic compounds (VOC), speciated VOC and hazardous air pollutant (HAP) emissions from produced water and/or saltwater storage tanks servicing oil and gas wells and to develop appropriate VOC and HAP emission factors. The emission factors are to be used for emission inventory development purposes.

The primary source of information for this study was testing conducted by the Texas Commission on Environmental Quality (TCEQ) under Work Order 522-7-84005-FY10-25, *Upstream Oil & Gas Tank Measurements*, TCEQ Project 2010-39. As part of this referenced testing project, pressurized produced water samples were taken at seven different tank batteries located in Johnson, Wise and Tarrant Counties, Texas (all part of the Eastern Barnett Shale region) and analyzed for flash gas volume and composition. The sample collection and analysis conducted as part of TCEQ Project 2010-39 was done according to strict sampling and quality assurance procedures. In addition to TCEQ Project 2010-39 data, a thorough review of publically-available information sources identified a limited amount of data on produced water emissions. This was supplemented by data provided by two natural gas producers and one petroleum engineering services company. Other than TCEQ Project 2010-39 data, however, it could not be confirmed that any of the data had undergone a rigorous quality assurance process and therefore is considered secondary data, used to support conclusions drawn using the primary data but not used directly in deriving the produced water emission factors.

Emissions from produced water storage tanks consist of flash emissions, working losses and breathing losses. Flash emissions are determined using flash gas analysis. Working and breathing losses are estimated using EPA TANKS 4.09d software. Using this approach and the assumptions detailed within this report, it is determined that working and breathing losses associated with primary data source sites are very small compared to flash emissions and can be ignored without affecting the overall emission factor determination.

Table ES-1 presents the recommended emission factors for VOC and four HAPs – benzene, toluene, ethylbenzene and xylenes – derived from the primary data source sites. For comparative purposes, average emissions from Texas and non-Texas secondary sites are also presented in Table ES-1.

Table ES-1. Recommended Emission Factors and Comparative Data

Pollutant	Average Produced Water Emission Factor by Data Set (lb/bbl)		
	Recommended Emission Factor	Secondary Data – Texas	Secondary Data – Non-Texas
VOC	0.01	0.012	0.18
Benzene	0.0001	0.0012	0.004
Toluene	0.0003	0.0012	0.009
Ethylbenzene	0.000006	0.0001	0.0007
Xylenes	0.00006	0.0003	0.006

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 ₂ O	^a 298
HFC–23	75–46–7	CHF ₃	^a 14,800
HFC–32	75–10–5	CH ₂ F ₂	^a 675
HFC–41	593–53–3	CH ₃ F	^a 92
HFC–125	354–33–6	C ₂ HF ₅	^a 3,500
HFC–134	359–35–3	C ₂ H ₂ F ₄	^a 1,100
HFC–134a	811–97–2	CH ₂ FCF ₃	^a 1,430
HFC–143	430–66–0	C ₂ H ₃ F ₃	^a 353
HFC–143a	420–46–2	C ₂ H ₃ F ₃	^a 4,470
HFC–152	624–72–6	CH ₂ FCH ₂ F	53
HFC–152a	75–37–6	CH ₃ CHF ₂	^a 124
HFC–161	353–36–6	CH ₃ CH ₂ F	12
HFC–227ea	431–89–0	C ₃ HF ₇	^a 3,220
HFC–236cb	677–56–5	CH ₂ FCF ₂ CF ₃	1,340
HFC–236ea	431–63–0	CHF ₂ CHFCF ₃	1,370
HFC–236fa	690–39–1	C ₃ H ₂ F ₆	^a 9,810
HFC–245ca	679–86–7	C ₃ H ₃ F ₅	^a 693
HFC–245fa	460–73–1	CHF ₂ CH ₂ CF ₃	1,030
HFC–365mfc	406–58–6	CH ₃ CF ₂ CH ₂ CF ₃	794
HFC–43–10mee	138495–42–8	CF ₃ CFHCFHCF ₂ CF ₃	^a 1,640
Sulfur hexafluoride	2551–62–4	SF ₆	^a 22,800
Trifluoromethyl sulphur pentafluoride	373–80–8	SF ₅ CF 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 ₂ F ₆	^a 12,200
PFC–218 (Perfluoropropane)	76–19–7	C ₃ F ₈	^a 8,830

Name	CAS No.	Chemical formula	Global warming potential (100 yr.)
Perfluorocyclopropane	931-91-9	C-C ₃ F ₆	17,340
PFC-3-1-10 (Perfluorobutane)	355-25-9	C ₄ F ₁₀	^a 8,860
Perfluorocyclobutane	115-25-3	C-C ₄ F ₈	^a 10,300
PFC-4-1-12 (Perfluoropentane)	678-26-2	C ₅ F ₁₂	^a 9,160
PFC-5-1-14 (Perfluorohexane)	355-42-0	C ₆ F ₁₄	^a 9,300
PFC-9-1-18	306-94-5	C ₁₀ F ₁₈	7,500
HCFE-235da2 (Isoflurane)	26675-46-7	CHF ₂ OCHClCF ₃	350
HFE-43-10pccc (H-Galden 1040x)	E1730133	CHF ₂ OCF ₂ OC ₂ F ₄ OCHF ₂	1,870
HFE-125	3822-68-2	CHF ₂ OCF ₃	14,900
HFE-134	1691-17-4	CHF ₂ OCHF ₂	6,320
HFE-143a	421-14-7	CH ₃ OCF ₃	756
HFE-227ea	2356-62-9	CF ₃ CHFOCF ₃	1,540
HFE-236ca12 (HG-10)	78522-47-1	CHF ₂ OCF ₂ OCHF ₂	2,800
HFE-236ea2 (Desflurane)	57041-67-5	CHF ₂ OCHF ₂ CF ₃	989
HFE-236fa	20193-67-3	CF ₃ CH ₂ OCF ₃	487
HFE-245cb2	22410-44-2	CH ₃ OCF ₂ CF ₃	708
HFE-245fa1	84011-15-4	CHF ₂ CH ₂ OCF ₃	286
HFE-245fa2	1885-48-9	CHF ₂ OCH ₂ CF ₃	659
HFE-254cb2	425-88-7	CH ₃ OCF ₂ CHF ₂	359
HFE-263fb2	460-43-5	CF ₃ CH ₂ OCH ₃	11
HFE-329mcc2	67490-36-2	CF ₃ CF ₂ OCF ₂ CHF ₂	919
HFE-338mcf2	156053-88-2	CF ₃ CF ₂ OCH ₂ CF ₃	552
HFE-338pcc13 (HG-01)	188690-78-0	CHF ₂ OCF ₂ CF ₂ OCHF ₂	1,500
HFE-347mcc3	28523-86-6	CH ₃ OCF ₂ CF ₂ CF ₃	575
HFE-347mcf2	E1730135	CF ₃ CF ₂ OCH ₂ CHF ₂	374
HFE-347pcf2	406-78-0	CHF ₂ CF ₂ OCH ₂ CF ₃	580
HFE-356mec3	382-34-3	CH ₃ OCF ₂ CHFCF ₃	101
HFE-356pcc3	160620-20-2	CH ₃ OCF ₂ CF ₂ CHF ₂	110
HFE-356pcf2	E1730137	CHF ₂ CH ₂ OCF ₂ CHF ₂	265
HFE-356pcf3	35042-99-0	CHF ₂ OCH ₂ CF ₂ CHF ₂	502

Name	CAS No.	Chemical formula	Global warming potential (100 yr.)
HFE-365mcf3	378-16-5	$\text{CF}_3\text{CF}_2\text{CH}_2\text{OCH}_3$	11
HFE-374pc2	512-51-6	$\text{CH}_3\text{CH}_2\text{OCF}_2\text{CHF}_2$	557
HFE-449sl (HFE-7100) Chemical blend	163702-07-6 163702-08-7	$\text{C}_4\text{F}_9\text{OCH}_3$ $(\text{CF}_3)_2\text{CFCF}_2\text{OCH}_3$	297
HFE-569sf2 (HFE-7200) Chemical blend	163702-05-4 163702-06-5	$\text{C}_4\text{F}_9\text{OC}_2\text{H}_5$ $(\text{CF}_3)_2\text{CFCF}_2\text{OC}_2\text{H}_5$	59
Sevoflurane	28523-86-6	$\text{CH}_2\text{FOCH}(\text{CF}_3)_2$	345
HFE-356mm1	13171-18-1	$(\text{CF}_3)_2\text{CHOCH}_3$	27
HFE-338mmz1	26103-08-2	$\text{CHF}_2\text{OCH}(\text{CF}_3)_2$	380
(Octafluorotetramethylene)hydroxymethyl group	NA	$\text{X}-(\text{CF}_2)_4\text{CH}(\text{OH})-\text{X}$	73
HFE-347mmy1	22052-84-2	$\text{CH}_3\text{OCF}(\text{CF}_3)_2$	343
Bis(trifluoromethyl)-methanol	920-66-1	$(\text{CF}_3)_2\text{CHOH}$	195
2,2,3,3,3-pentafluoropropanol	422-05-9	$\text{CF}_3\text{CF}_2\text{CH}_2\text{OH}$	42
PFPME	NA	$\text{CF}_3\text{OCF}(\text{CF}_3)\text{CF}_2\text{OCF}_2\text{O}$ CF_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 CO₂ Emission Factors and High Heat Values for Various Types of Fuel

Table C–1 to Subpart C—Default CO₂ 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 CO₂/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 CO₂/mmBtu
(Weighted U.S. Average)	1.026×10^{-3}	53.06
Petroleum products	mmBtu/gallon	kg CO₂/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 CO₂/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 CO₂/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 CO₂/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 CO₂/mmBtu
Landfill Gas	0.485×10^{-3}	52.07
Other Biomass Gases	0.655×10^{-3}	52.07
Biomass Fuels—Liquid	mmBtu/gallon	kg CO₂/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

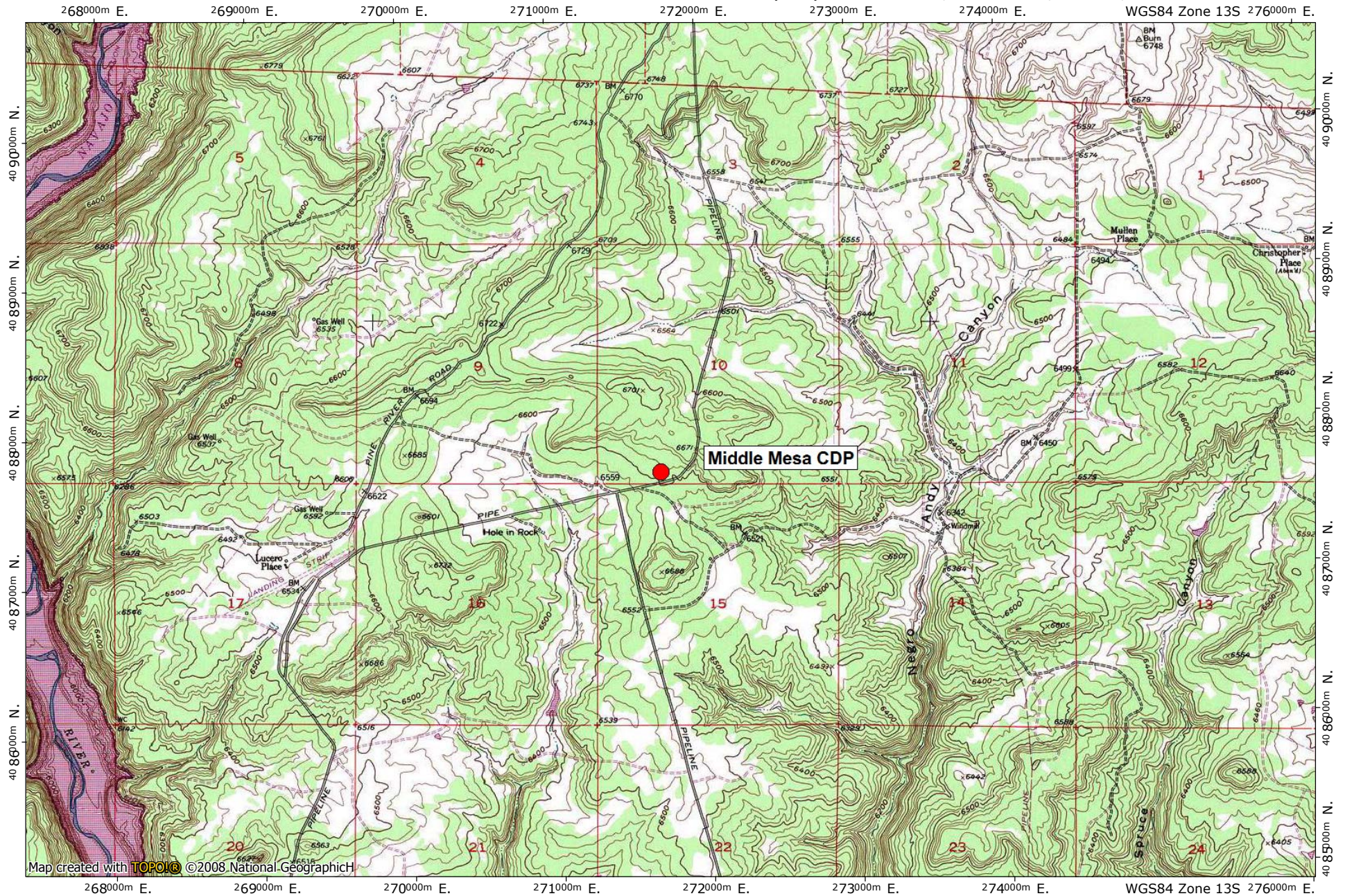
Map(s)

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

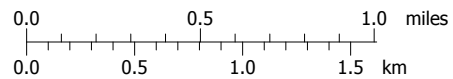
The UTM or Longitudinal coordinate system on both axes	An indicator showing which direction is north
A minimum radius around the plant of 0.8km (0.5 miles)	Access and haul roads
Topographic features of the area	Facility property boundaries
The name of the map	The area which will be restricted to public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

Please see the following page(s).

HARVEST FOUR CORNERS LLC - MIDDLE MESA CENTRAL DELIVERY POINT (CDP) San Juan Co., NM T 31 N, R 07 W, Sec. 10



Map created with **Topo** ©2008 National Geographic



TN
MN
9 1/2°
03/08/15

Section 9

Proof of Public Notice

(for NSR applications submitting under 20.2.72 or 20.2.74 NMAC)

(This proof is required by: 20.2.72.203.A.14 NMAC “Documentary Proof of applicant’s public notice”)

☒ **I have read the AQB “Guidelines for Public Notification for Air Quality Permit Applications”**

This document provides detailed instructions about public notice requirements for various permitting actions. It also provides public notice examples and certification forms. Material mistakes in the public notice will require a re-notice before issuance of the permit.

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

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

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

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

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

Not applicable for this Title V Operating Permit renewal application submitted under 20.2.70 NMAC.

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 Middle Mesa CDP compresses production field natural gas for pipeline transportation. Natural gas received from independent producers via gathering pipelines is metered as it enters the facility. The natural gas stream typically contains produced water, which is separated from the gas stream via an inlet separator. The separated produced water is piped to above ground fixed roof produced water storage tanks where it is stored until offsite transport via tank truck.

The natural gas is compressed by for pipeline transmission using compressors driven by the natural gas-fired reciprocating internal combustion engines. The natural gas stream is then routed to the triethylene glycol (TEG) dehydrators to further dehydrate the gas stream. The TEG solution comes into contact with the natural gas and removes the water and some hydrocarbons. The rich TEG solution is regenerated by boiling off the water and hydrocarbons and reclaiming the glycol.

Above ground storage tanks are used to store the produced water, lubrication oil, used oil, glycol, antifreeze, methanol, and waste water. Waste products are hauled off-site as required.

There are no process bottlenecks that limit production.

Other emission sources include: startups, shutdowns and routine maintenance (SSM) emissions of VOC from the compressors and piping, and fugitive emissions of VOC from process piping (valves, flanges, seals, etc.).

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):

Middle Mesa Central Delivery Point (CDO)

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

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

☒ **Yes** ☐ **No**

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

☒ **Yes** ☐ **No**

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

☒ **Yes** ☐ **No**

C. Make a determination:

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

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

Section 12

Section 12.A

PSD Applicability Determination for All Sources

(Submitting under 20.2.72, 20.2.74 NMAC)

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

Not applicable for applications submitted under 20.2.70 NMAC.

Section 13

Determination of State & Federal Air Quality Regulations

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

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

Required Information for Specific Equipment:

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

Required Information for Regulations that Apply to the Entire Facility:

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

Regulatory Citations for Regulations That Do Not, but Could Apply:

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

Regulatory Citations for Emission Standards:

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

Federally Enforceable Conditions:

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

INCLUDE ANY OTHER INFORMATION NEEDED TO COMPLETE AN APPLICABILITY DETERMINATION OR THAT IS RELEVANT 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, <i>Prevention of Significant Deterioration of Air Quality</i> is applicable to the facility, as it is a Prevention of Significant Deterioration (PSD) major source. The remainder of the subpart is also 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	No		Applies if any other NSPS subpart applies. NSPS does not apply to any of the equipment onsite.
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 facility 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 facility 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		<p>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).</p> <p>The facility does not have any affected sources under the regulation; therefore, the subpart does not apply.</p>
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		<p>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.</p> <p>The facility does not have equipment defined as an affected facility as defined in the regulation; therefore, the subpart does not apply.</p>
NSPS 40 CFR 60, Subpart Kb	Standards of Performance for Volatil Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984	No		<p>The affected facility to which this subpart applies is any storage vessel with a capacity greater than or equal to 75 cubic meters (m³) used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification is commenced after July 23, 1984.</p> <p>All of the storage tanks at the facility are below 75 m³ capacity. Therefore, the regulation does not apply.</p>
NSPS 40 CFR 60 Subpart GG	Standards of Performance for Stationary Gas Turbines	No		<p>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</p> <p>There are no turbines at the facility. The subpart is not applicable.</p>
NSPS 40 CFR 60, Subpart KKK	Standards of Performance for Leaks of VOC from Onshore Gas Plants	No		<p>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.</p> <p>The facility is not an onshore gas plant and the subpart does not apply.</p>
NSPS 40 CFR 60, Subpart LLL	Standards of Performance for Onshore Natural Gas Processing: SO₂ Emissions	No		<p>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.</p> <p>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.</p>

FEDERAL REGU- LATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
NSPS 40 CFR 60, Subpart JJJ	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines	No		<p>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.</p> <p>Each of the Waukesha L7042GL compressor RICE (units 2, 4 through 9, 13 through 22, and 26) are existing RICE under the regulation, constructed prior to the June 12, 2006 regulatory applicability date. Therefore, the regulation is not applicable to these RICE.</p> <p>Units 1, 3, 10, 11, 12, 23, 24, and 25 are not installed. The Waukesha L7042GL engines deployed at Harvest field facilities (including the Middle Mesa CDP) are part of an existing fleet of existing Waukesha L7042GL engines that pre-date the applicability date of the regulation. The engines have not undergone “modification” or “reconstruction” under the NSPS. Therefore, the regulation is not applicable to the yet-to-be installed (‘TBD’) Waukesha L7042GL engines.</p> <p>Should any of the engines be modified or reconstructed under the part, the regulatory applicability for that engine will be evaluated. Harvest will comply with all requirements under the subpart.</p>
NSPS 40 CFR 60, Subpart KKKK	Standards of Performance for Stationary Combustion Turbines	No		<p>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.</p> <p>There are no stationary gas turbines at the facility. The subpart does not apply.</p>
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		<p>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.</p> <p>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:</p> <ul style="list-style-type: none"> - 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. <p>The equipment at the facility were constructed prior to the applicability date; therefore, the regulation is not applicable to the existing equipment.</p>
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	No		<p>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.</p> <p>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):</p> <ul style="list-style-type: none"> - Each single reciprocating compressor (§60.5365a(c));

FEDERAL REGU-LATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
				<p>- 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));</p> <p>- Each single storage vessel with the potential for VOC emissions equal to or greater than 6 tpy (§60.5365a(e)); and</p> <p>- The collection of fugitive emissions components at a compressor station, as defined in §60.5430a (§60.5365a(j)).</p> <p>The reciprocating compressors, pneumatic controllers, and collection of fugitive emissions components equipment at the facility, were each constructed prior to the applicability date or do not otherwise trigger the applicability of the regulation.</p> <p>Should a new affected source be installed at the facility, the applicability of the subpart to that source shall be evaluated upon installation. Harvest will comply with the applicable requirements in the subpart for any future devices installed.</p>
NESHAP 40 CFR 61, Subpart A	General Provisions	No		<p>40 CFR 61 National Emission Standards for Hazardous Air Pollutants (NESHAP) provides standards for equipment that emits hazardous air pollutants by specific source types.</p> <p>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.</p>
NESHAP 40 CFR 61, Subpart V	National Emission Standard for Equipment Leaks (Fugitive Emission Sources)	No		<p>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.</p> <p>Subpart V is not applicable because none of the potentially affected sources are in VHAP service.</p>
MACT 40 CFR 63, Subpart A	General Provisions	Yes	Dehydrator units 15a/b, 16a/b, and 17a/b	<p>Applies if any other 40 CFR 63 (NESHAP/MACT) subpart applies. Subparts A and HH are applicable to the dehydrators.</p>
MACT 40 CFR 63, Subpart M	National Emission Standard for Asbestos	No		<p>The subpart includes standards for minimizing asbestos emissions from several operations, including demolition and renovation activities.</p> <p>No existing or planned operation or activity at this facility triggers the applicability of this requirement. Therefore, the regulation does not apply.</p>
MACT 40 CFR 63, Subpart HH	National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities	Yes	Dehydrator units 15a/b, 16a/b, and 17a/b	<p>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).</p> <p>Under the definitions provided in §63.761, the Middle Mesa CDP facility is a natural gas production field facility. Historically, the dehydrators have been permitted and operated as a HAP area source, located in an area that is not within an UA plus offset and UC boundary (as defined in §63.761). The dehydrators are each an “existing” source.</p> <p>The definition of “major source” in §63.762 provides that only HAP emissions from glycol dehydration units and storage vessels are aggregated for a major source determination. With this application for a Title V permit renewal, the aggregated HAP emissions from the facility (dehydrators and storage vessels) are above the major HAP source thresholds; therefore, the facility PTE has become a major source of HAP under Subpart HH.</p> <p>Under §63.760(f)(1): “. . . The owner or operator of an area source, the construction or reconstruction of which commenced before February 6, 1998,</p>

FEDERAL REGU- LATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
				<p>that increases its emissions of (or its potential to emit) HAP such that the source becomes a major source that is subject to this subpart shall comply with this subpart 3 years after becoming a major source.”</p> <p>§ 63.764 (c)(1)(i) requires the dehydrator(s) must comply with the control requirements in §63.765; and goes on to broadly cite monitoring, recordkeeping and reporting (MRR) requirements in accordance with §63.763, §63.764, and §63.765, respectively. Although the natural gas handled by the facility has increased in HAP (including BTEX) content that results in major source PTE, the <i>actual</i> benzene emissions <u>and</u> PTE for benzene for each dehydrator are less than 0.90 Mg/yr (<1 tpy) (GLYCalc). Therefore, the dehydrators are each an existing “Small Glycol Dehydration Unit” under §63.761. §63.765 (b)(1)(iii), Equation 1 establishes the applicable BTEX emission limit (EL_{BTEX}) for existing small dehydrators. Harvest will comply with the §63.765 (b)(1)(iii), Equation 1 BTEX emission limit within the time allowed under the regulation.</p> <p>Harvest is in compliance with the VOC emission limits of the Title V Operating Permit (as well as the construction permit), which are unchanged. Harvest will continue to comply with the requirements of 40 CFR 63, subpart HH as they apply to the TEG dehydrators at the facility, including new requirements as triggered by this change in source status.</p>
MACT 40 CFR 63 Subpart HHH	National Emission Standards for Hazardous Air Pollutants From Natural Gas Transmission and Storage Facilities	No		<p>§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.</p> <p>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.</p>
MACT 40 CFR 63 Subpart YYYY	National Emission Standards for Hazardous Air Pollutants From Stationary Combustion Turbines	No		<p>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, “<i>Major source</i>,” 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 . . . “</p> <p>The facility does not have any affected units as defined in the regulation. Therefore, the subpart does not apply.</p>
MACT 40 CFR 63, Subpart ZZZZ	National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines	No		<p>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.</p> <p>As defined at §63.6585(c), the station is a major source of HAP.</p> <p>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 construction or reconstruction commenced before December 19, 2002. Each of the permitted Waukesha L7042GL engines deployed by Harvest in the Four Corners Area field production region (including the Middle Mesa CDP) are from an existing fleet of Waukesha L7042GL engines with manufacture and construction dates that pre-date the December 19, 2002 regulatory definition of “existing” engine. The current installed engines (units 2, 4 through 9, 13, 14, 21 through 22, and 26) were constructed in 1995 and earlier. The exact construction dates of units 1, 3, 10, 11, 12, 23, 24, and 25</p>

FEDERAL REGU-LATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
				<p>are yet To Be Determined (“TBD”), but will each be from the fleet of existing engines. Thus, each of the currently permitted RICE (units 1 through 14 and 21 through 26) are an “existing” RICE under the subpart. None of the engines have undergone a “modification” or “reconstruction”.</p> <p>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.</p> <p>Therefore, the subpart <i>is not applicable</i> to RICE units 1 through 14 and 21 through 26.</p>
MACT 40 CFR 63 Subpart DDDDD	National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters	No		<p>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.</p> <p>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.</p>
MACT 40 CFR 63 Subpart JJJJJ	National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources	No		<p>40 CFR 63, Subpart JJJJJ 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.</p> <p>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.</p>
40 CFR 64	Compliance Assurance Monitoring	No		<p>40 CFR 64, <i>Compliance Assurance Monitoring</i> (CAM) monitoring requirements are applicable to sources that are located 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.</p> <p>There are no emission units at the facility with uncontrolled emissions that are a standalone major source. Therefore, the regulation is not applicable under §64.2(a).</p>
40 CFR 68	Chemical Accident Prevention Provisions	No		<p>40 CFR 68, <i>Chemical Accident Prevention Provisions</i>, is not applicable because the facility does not store any of the identified toxic and flammable substances in quantities exceeding the applicability thresholds.</p>
40 CFR 70	State Operating Permit Programs	No		<p>40 CFR 70, <i>State Operating Permit Programs</i>, 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 Plan (SIP) and 20.2.70 NMAC.</p> <p>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.</p>

FEDERAL REGU-LATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
40 CFR 71	Federal Operating Permit Programs	No		<p>40 CFR 71, <i>Federal Operating Permit Programs</i> 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.</p> <p>The NMED has received delegated authority by the EPA 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.</p>
40 CFR 72	Permits Regulation	No		40 CFR 72, <i>Permits Regulation</i> , 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, <i>Sulfur Dioxide Allowance System</i> , 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, <i>Continuous Emission Monitoring</i> , 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, <i>Acid Rain Nitrogen Dioxide Emission Reduction Program</i> , 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, <i>Excess Emissions</i> , 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, <i>Appeal Procedures for Acid Rain Program</i> , 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		<p>The purpose of 40 CFR 82, <i>Protection of Stratospheric Ozone</i> is to implement the <i>Montreal Protocol on Substances that Deplete the Ozone Layer</i>. 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.</p> <p>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.</p>
40 CFR 98	Mandatory Greenhouse Gas Reporting	Yes		<p>40 CFR 98, <i>Mandatory Greenhouse Gas Reporting</i>, 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 CO₂ equivalent (CO₂e) 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.</p> <p>The regulation applies to the facility insofar as it is part of a basin-wide oil and natural gas Gathering and Boosting Facility under 40 CFR 98, subpart W, <i>Petroleum Oil and Natural Gas Systems</i>, whose actual annual CO₂e emissions exceed the reporting thresholds defined in subpart A, <i>General Provision</i>, subpart C, <i>General Stationary Fuel Combustion Sources</i>, and subpart W.</p> <p>The GHG emissions including CO₂e are calculated and reported annually to the EPA.</p>

FEDERAL REGU- LATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
CAA Section 112(r)	Chemical Accident Prevention Provisions	No		CAA Section 112(r), <i>Chemical Accident Prevention Provisions</i> . 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

<u>STATE REGU- LATIONS CITATION</u>	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
20.2.1 NMAC	General Provisions *	Yes	Facility	20.2.1 NMAC, <i>General Provisions</i> , 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, <i>Definitions</i> , 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, <i>Ambient Air Quality Standards</i> , 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 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, <i>Source Surveillance</i> , 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.

STATE REGU- LATIONS CITATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
20.2.7 NMAC	Excess Emissions	Yes	Facility	20.2.7 NMAC, <i>Excess Emissions</i> , 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, <i>Emissions Leaving New Mexico</i> , 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, <i>Gas Burning Equipment - Nitrogen Dioxide</i> , 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: NO₂	No		20.2.34 NMAC, <i>Oil Burning Equipment: NO₂</i> , 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, <i>Natural Gas Processing Plant – Sulfur</i> , 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, <i>Hydrocarbon Storage Facilities</i> , 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 1-14 & 21-26; Dehydrator reboiler units 15b, 16b and 17b	20.2.61 NMAC, <i>Smoke and Visible Emissions</i> , limits visible emissions from stationary combustion equipment to less than 20 percent opacity. The station compressor engines and dehydrator reboilers are subject to the regulation as they are each a stationary combustion source.
20.2.70 NMAC	Operating Permits	Yes		20.2.70 NMAC, <i>Operating Permits</i> , contains permitting requirements for major sources of criteria and hazardous air pollutants subject to Part 70 (Title V) permitting requirements. The facility Potential To Emit for criteria pollutants and HAP exceed the major source Title V permitting thresholds. Therefore, the regulation is applicable. The facility is currently permitted under Title V Operating Permit P031-R3 .
20.2.71 NMAC	Operating Permit Fees	Yes		20.2.71 NMAC, <i>Operating Permit Emission Fees</i> , 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.

STATE REGU- LATIONS CITATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
20.2.72 NMAC	Construction Permits	Yes		<p>20.2.72 NMAC, <i>Construction Permits</i>, requires a construction [NSR] permit for stationary source with emissions greater than 10 pounds per hour or 25 tons per year of criteria pollutants.</p> <p>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. 0870-M6, as revised.</p> <p>Harvest is in compliance with the VOC emission limits of the construction permit, which are unchanged. Harvest will comply with the requirements of 40 CFR 63, subpart HH as they apply to the TEG dehydrators at the facility.</p>
20.2.73 NMAC	NOI & Emissions Inventory Requirements	Yes		<p>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.</p> <p>The station emits regulated air pollutants in amounts greater than 10 tons per year. Therefore, the facility is subject to the regulation.</p> <p>The requirement to file an NOI with the Department is fulfilled with the application for a construction permit under 20.2.72 NMAC.</p>
20.2.74 NMAC	Permits – PSD	Yes		<p>20.2.74 NMAC, <i>Permits, Prevention of Significant Deterioration (PSD)</i>, provides requirements for sources subject to permit requirements for PSD facilities.</p> <p>The facility emissions exceed the PSD permit threshold levels. Therefore, the regulation is applicable.</p>
20.2.75 NMAC	Construction Permit Fees	Yes		<p>20.2.75 NMAC, <i>Construction Permit Fees</i>, establishes the fee schedule associated with the filing of permits and permit revisions.</p> <p>The regulation is applicable to the facility for construction permit applications submitted under 20.2.72 NMAC.</p>
20.2.77 NMAC	New Source Performance Standards	No		<p>20.2.77 NMAC, <i>New Source Performance Standards</i>, incorporates by reference specific Standards of Performance for New Stationary Sources (NSPS) codified under 40 CFR 60, as amended through January 15, 2017.</p> <p>None of the facility equipment are subject to an NSPS.</p>
20.2.78 NMAC	Emission Standards for HAPS	Yes		<p>20.2.78 NMAC, <i>Emission Standards for Hazardous Air Pollutants</i>, incorporates by reference specific National Emission Standards for Hazardous Air Pollutants (NESHAPs) codified under 40 CFR 61, as amended through January 15, 2017.</p> <p>The regulation is not applicable as none of the emission units at the facility are subject to any NESHAP under 40 CFR 61.</p>
20.2.79 NMAC	Permits – Nonattainment Areas	No		<p>20.2.79 NMAC, <i>Permits - Nonattainment Areas</i>, is not applicable to the station because the compressor station is not located within a non-attainment area.</p>
20.2.80 NMAC	Stack Heights	No		<p>20.2.80 NMAC, <i>Stack Heights</i>, establishes guidelines for the selection of an appropriate stack height for the purposes of atmospheric dispersion modeling.</p> <p>As noted in section 16 of the application, atmospheric dispersion modeling was previously provided in support of the facility's construction permit NSR 870-M3. No changes to the permitted emissions have been proposed since the issuance of the current NSR</p>

STATE REGU- LATIONS CITATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
				permit. Based on the NMAQB dispersion modeling guidance document, air quality dispersion modeling is not required for this Title V Operating Permit renewal application submitted under 20.2.70 NMAC.
20.2.82 NMAC	MACT Standards for source categories of HAPS	No		20.2.82 NMAC, <i>Maximum Achievable Control Technology Standards for Source Categories of Hazardous Air Pollutants</i> , incorporates by reference specified federal Maximum Available Control Technology (MACT) Standards codified in 40 CFR 63, as amended through January 15, 2017. The facility is a major HAP facility. Accordingly, the existing 4SLB SI-RICE are not subject to MACT subpart ZZZZ.
20.2.84 NMAC	Acid Rain Permits	No		20.2.84 NMAC, <i>Acid Rain Permits</i> , 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)

- ☒ **Title V Sources** (20.2.70 NMAC): By checking this box and certifying this application the permittee certifies that it has developed an **Operational Plan to Mitigate Emissions During Startups, Shutdowns, and Emergencies** defining the measures to be taken to mitigate source emissions during startups, shutdowns, and emergencies as required by 20.2.70.300.D.5(f) and (g) NMAC. This plan shall be kept on site to be made available to the Department upon request. This plan should not be submitted with this application.
- ☒ **NSR** (20.2.72 NMAC), **PSD** (20.2.74 NMAC) **& Nonattainment** (20.2.79 NMAC) **Sources:** By checking this box and certifying this application the permittee certifies that it has developed an **Operational Plan to Mitigate Source Emissions During Malfunction, Startup, or Shutdown** defining the measures to be taken to mitigate source emissions during malfunction, startup, or shutdown as required by 20.2.72.203.A.5 NMAC. This plan shall be kept on site to be made available to the Department upon request. This plan should not be submitted with this application.
- ☒ **Title V** (20.2.70 NMAC), **NSR** (20.2.72 NMAC), **PSD** (20.2.74 NMAC) **& Nonattainment** (20.2.79 NMAC) **Sources:** By checking this box and certifying this application the permittee certifies that it has established and implemented a Plan to Minimize Emissions During Routine or Predictable Startup, Shutdown, and Scheduled Maintenance through work practice standards and good air pollution control practices as required by 20.2.7.14.A and B NMAC. This plan shall be kept on site or at the nearest field office to be made available to the Department upon request. This plan should not be submitted with this application.
-

Section 15

Alternative Operating Scenarios

(Submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

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

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

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

Not applicable.

Section 16

Air Dispersion Modeling

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

What is the purpose of this application?	Enter an X for each purpose that applies
New PSD major source or PSD major modification (20.2.74 NMAC). See #1 above.	
New Minor Source or significant permit revision under 20.2.72 NMAC (20.2.72.219.D NMAC). See #1 above. Note: Neither modeling nor a modeling waiver is required for VOC emissions.	
Reporting existing pollutants that were not previously reported.	
Reporting existing pollutants where the ambient impact is being addressed for the first time.	
Title V application (new, renewal, significant, or minor modification. 20.2.70 NMAC). See #3 above.	X
Relocation (20.2.72.202.B.4 or 72.202.D.3.c NMAC)	
Minor Source Technical Permit Revision 20.2.72.219.B.1.d.vi NMAC for like-kind unit replacements.	
Other: i.e. SSM modeling. See #2 above.	
This application does not require modeling since this is a No Permit Required (NPR) application.	
This application does not require modeling since this is a Notice of Intent (NOI) application (20.2.73 NMAC).	
This application does not require modeling according to 20.2.70.7.E(11), 20.2.72.203.A(4), 20.2.74.303, 20.2.79.109.D NMAC and in accordance with the Air Quality Bureau's Modeling Guidelines.	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 0870-M3. The dispersion modeling demonstrated compliance with the National Ambient Air Quality Standards and applicable PSD increments.

Dispersion modeling was not required for subsequent NSR permit revisions.

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
2	Compliance test for NO _x and CO, in accordance with Operating Permit P031-R3, Condition A201.A	March 24, 2020
4	Compliance test for NO _x and CO, in accordance with Operating Permit P031-R3, Condition A201.A	May 11, 2020
5	Compliance test for NO _x and CO, in accordance with Operating Permit P031-R3, Condition A201.A	June 23, 2020
6	Not tested; non-operating unit since 2013	N/A
7	Compliance test for NO _x and CO, in accordance with Operating Permit P031-R3, Condition A201.A	June 18, 2019
8	Compliance test for NO _x and CO, in accordance with Operating Permit P031-R3, Condition A201.A	March 24, 2020
9	Compliance test for NO _x and CO, in accordance with Operating Permit P031-R3, Condition A201.A	March 30, 2020
13	Compliance test for NO _x and CO, in accordance with Operating Permit P031-R3, Condition A201.A	November 1, 2018
14	Compliance test for NO _x and CO, in accordance with Operating Permit P031-R3, Condition A201.A	June 19, 2019
21	Compliance test for NO _x and CO, in accordance with Operating Permit P031-R3, Condition A201.A	March 25, 2020
22	Compliance test for NO _x and CO, in accordance with Operating Permit P031-R3, Condition A201.A	March 25, 2020
26	Compliance test for NO _x and CO, in accordance with Operating Permit P031-R3, Condition A201.A	June 19, 2019

Section 18

Addendum for Streamline Applications

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

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

Not applicable.

Section 19

Requirements for Title V Program

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

Who Must Use this Attachment:

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

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

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

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

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

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

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

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

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

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

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

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

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

19.5 - Stratospheric Ozone and Climate Protection

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

1. Does your facility have any air conditioners or refrigeration equipment that uses CFCs, HCFCs or other ozone-depleting substances?

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

Yes **No**

(If the answer is yes, describe the type of equipment and how many units are at the facility.)
 3. Do your facility personnel maintain, service, repair, or dispose of any motor vehicle air conditioners (MVACs) or appliances ("appliance" and "MVAC" as defined at 82. 152)?

Yes **No**
 4. Cite and describe which Title VI requirements are applicable to your facility (i.e. 40 CFR Part 82, Subpart A through G.)
-

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

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

19.6 - Compliance Plan and Schedule

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

A. Description of Compliance Status: (20.2.70.300.D.11.a NMAC)

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

B. Compliance plan: (20.2.70.300.D.11.B NMAC)

A narrative description of the means by which your facility will achieve compliance with applicable requirements with which it is not in compliance at the time you submit your permit application package.

C. Compliance schedule: (20.2.70.300D.11.c NMAC)

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

D. Schedule of Certified Progress Reports: (20.2.70.300.D.11.d NMAC)

A proposed schedule for submission to the department of certified progress reports must also be included in the compliance schedule. The proposed schedule must call for these reports to be submitted at least every six (6) months.

E. Acid Rain Sources: (20.2.70.300.D.11.e NMAC)

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

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

The Middle Mesa CDP is in compliance with all applicable requirements; consequently, a compliance plan, a compliance schedule, and a schedule of certified progress reports is not required.

The Middle Mesa CDP is not equipped with any acid rain sources; consequently, compliance with the acid rain provisions is not required as a part of this permit application.

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

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

The Middle Mesa CDP is not subject to 40 CFR 68, Chemical Accident Prevention Provisions; consequently, a Risk Management Plan is not required.

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

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

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

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

Neighboring States, Class I Areas, and Indian Lands

	Approximate Distance to Facility (kilometers)
Neighboring States	
Colorado	10.3
Indian Lands	
Southern Ute Tribe	10.3
Jicarilla Apache Tribe	32.5
Navajo Nation	51.7
Ute Mountain Ute Tribe	61.4

19.9 - Responsible Official

The responsible official for the Middle Mesa CDP is Travis Jones, EH&S Manager.

Section 20

Other Relevant Information

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

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

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

Harvest is in compliance with the VOC emission limits of the Title V Operating Permit and the construction permit, which are unchanged. Harvest will continue to comply with the requirements of 40 CFR 63, subpart HH as they apply to the triethylene glycol (TEG) dehydrators at the facility, including new requirements as triggered by the change in HAP source status.



Version 07.20.18

**New Mexico Environment Department
Air Quality Bureau
Compliance and Enforcement Section
525 Camino de los Marquez, Suite 1
Santa Fe, NM 87505
Phone (505) 476-4300**



NMED USE ONLY	
TEMPO	

REPORTING SUBMITTAL FORM

NMED USE ONLY	
Staff	
Admin	

PLEASE NOTE: ® - Indicates required field

SECTION I - GENERAL COMPANY AND FACILITY INFORMATION					
A. ® Company Name: Harvest Four Corners, LLC			D. ® Facility Name: Middle Mesa CDP		
B.1 ® Company Address: 1755 Arroyo Drive			E.1 ® Facility Address: 1755 Arroyo Drive		
B.2 ® City: Bloomfield	B.3 ® State: NM	B.4 ® Zip: 87413	E.2 ® City: Bloomfield	E.3 ® State: NM	E.4 ® Zip: 87413
C.1 ® Company Environmental Contact: Monica Smith		C.2 ® Title: Environmental Specialist		F.1 ® Facility Contact: Monica Smith	
C.3 ® Phone Number: 505-632-4625		C.4 ® Fax Number: 505-632-4782		F.3 ® Phone Number: 505-632-4625	
C.5 ® Email Address: msmith@harvestmidstream.com		F.5 ® Email Address: msmith@harvestmidstream.com			
G. Responsible Official: (Title V only): Travis Jones		H. Title: EH&S Manager		I. Phone Number: 713-289-2630	
J. Fax Number: 505-632-4782					
K. ® AI Number: 1272	L. Title V Permit Number: P031-R3M1	M. Title V Permit Issue Date: 12/19/18	N. NSR Permit Number:	O. NSR Permit Issue Date:	
P. Reporting Period: From: 2/1/19 To: 1/31/20					

Do NOT submit NSPS OOOO or OOOOa well completion or flowback notifications to the Air Quality Bureau. See <https://www.env.nm.gov/air-quality/notices-and-faqs-for-compliance-and-enforcement/> for explanation.

SECTION II - TYPE OF SUBMITTAL (check one that applies)				
A. <input checked="" type="checkbox"/>	Title V Annual Compliance Certification	Permit Condition(s): A109.B	Description: submittal of ACC	
B. <input type="checkbox"/>	Title V Semi-Annual Monitoring Report	Permit Condition(s):	Description:	
C. <input type="checkbox"/>	NSPS Requirement (40CFR60)	Regulation:	Section(s):	Description:
D. <input type="checkbox"/>	MACT Requirement (40CFR63)	Regulation:	Section(s):	Description:
E. <input type="checkbox"/>	NMAC Requirement (20.2.xx) or NESHAP Requirement (40CFR61)	Regulation:	Section(s):	Description:
F. <input type="checkbox"/>	Permit or Notice of Intent (NOI) Requirement	Permit No. <input type="checkbox"/>: or NOI No. <input type="checkbox"/>:	Condition(s):	Description:
G. <input type="checkbox"/>	Requirement of an Enforcement Action	NOV No. <input type="checkbox"/>: or SFO No. <input type="checkbox"/>: or CD No. <input type="checkbox"/>: or Other <input type="checkbox"/>:	Section(s):	Description:

SECTION III - CERTIFICATION			
After reasonable inquiry, I <u>Monica Smith</u> certify that the information in this submittal is true, accurate and complete. (Name of Certifier)			
® Signature of Certifier:	® Title: Environmental Specialist	® Date	® Responsible Official for Title V? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Reviewed By: _____

Date Reviewed: _____

Title V Report Certification Form

I. Report Type

☒ **Annual Compliance Certification**

☐ **Semi-Annual Monitoring Report**

☐ **Other Specify:**

II. Identifying Information

Facility Name: Middle Mesa CDP

Facility Address: 1755 Arroyo Drive

State: NM

Zip: 87413

Responsible Official (RO): Travis Jones

Phone: 713-289-2630

Fax: 505-632-4782

RO Title: EH&S Manager

RO e-mail: trjones@harvestmidstream.

Permit No.: P031-R3M1

Date Permit Issued: 12/19/2018

Report Due Date (as required by the permit): 3/1/2020

Permit AI number: 1272

Time period covered by this Report: From: 2/1/2019

To: 1/31/2020

III. Certification of Truth, Accuracy, and Completeness

I am the Responsible Official indicated above. I, (Travis Jones) certify that I meet the requirements of 20.2.70.7.AD NMAC. I certify that, based on information and belief formed after reasonable inquiry, the statements and information contained in the attached Title V report are true, accurate, and complete.

Signature _____ Date: _____.

Title V Annual Compliance Certification for Permits **P031-R3 & **P031-R3M1****

Title (TV) Permit Administration Amendment

On **December 19, 2018** NMED AQB issued an Administrative Amendment to Operating Permit **P031-R3**.

The Administrative Amendment **P031-R3M1** corrected the following:

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

For this Administrative Amendment (**P031-R3M1**), the facility can use one Annual Compliance Certification (ACC) Form which will cover both TV Permits.

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

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

This form can also be used for future submittals that cover only the **P031-R3M1** permit.

Part 1 - Permit Requirements Certification Table

Annual Compliance Certification Data for Title V Permit No. P031-R3 & P031-R3M1				
1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
FACILITY SPECIFIC REQUIREMENTS				
A101 Permit Duration (expiration) A. The term of this permit is five (5) years. It will expire five years from the date of issuance. Application for renewal of this permit is due twelve (12) months prior to the date of expiration. (20.2.70.300.B.2 and 302.B NMAC)	Submittal of a renewal application at least 12 months prior to expiration of permit P031-R3, November 29, 2021, will demonstrate compliance with this condition.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
A101 Permit Duration (expiration) B. If a timely and complete application for a permit renewal is submitted, consistent with 20.2.70.300 NMAC, but the Department has failed to issue or disapprove the renewal permit before the end of the term of the previous permit, then the permit shall not expire and all the terms and conditions of the permit shall remain in effect until the renewal permit has been issued or disapproved. (20.2.70.400.D NMAC)	Submittal of a renewal application at least 12 months prior to expiration of permit P031-R3, November 29, 2021, will demonstrate compliance with this condition.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
A102 Facility: Description B. This facility is located approximately 11 miles North of Navajo City, New Mexico in San Juan County. (20.2.70.302.A(7) NMAC)	Semi-annual reports and this ACC are used to determine that the source continues to comply with this condition.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
A103 Facility: Applicable Regulations A. The permittee shall comply with all applicable sections of the requirements listed in Table 103.A	Semi-annual reports and the annual emissions inventory are used to demonstrate compliance with the identified applicable requirements of Table 103-A.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

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

Table 103.A: Applicable Requirements

Applicable Requirements	Federally Enforceable	Unit No.
NSR Permit No: PSD-NM-870M6, M6-R1, -R2, -R3, and -R4, 870M5, and 870M3 (Per 20.2.72 NMAC)	X	Entire Facility
20.2.1 NMAC General Provisions	X	Entire Facility
20.2.7 NMAC Excess Emissions	X	Entire Facility
20.2.61 NMAC Smoke and Visible Emissions	X	1 to 14, 15b, 16b, 17b, 7, 21 to 26
20.2.70 NMAC Operating Permits	X	Entire Facility
20.2.71 NMAC Operating Permit Emission Fees	X	Entire Facility
20.2.72 NMAC Construction Permit	X	Entire Facility
20.2.73 NMAC Notice of Intent and Emissions Inventory Requirements	X	Entire Facility
20.2.74 NMAC Permits – Prevention of Significant Deterioration (PSD)	X	Entire Facility
20.2.77 NMAC New Source Performance	X	Units subject to 40 CFR 60
20.2.82 NMAC MACT Standards for Source Categories of HAPS	X	Units subject to 40 CFR 63
40 CFR 50 National Ambient Air Quality Standards	X	Entire Facility
40 CFR 60, Subpart A, General Provisions	X	Potentially to 1, 3, 10, 12, 23, 24, and 25
40 CFR 60, Subpart JJJJ, NSPS for Stationary Spark Ignition Internal Combustion Engines	X	Potentially to 1, 3, 10, 12, 23, 24, and 25
40 CFR 63, Subpart A, General Provisions	X	15a, 16a, 17a, and potentially to 1, 3, 10, 12, 23, 24, and 25
40 CFR 63, Subpart HH, MACT for Oil and Natural Gas Production Facilities	X	15 to 17
40 CFR 63, Subpart ZZZZ, RICE MACT	X	Potentially to 1, 3, 10, 12, 23, 24, and 25

A103 Facility: Applicable Regulations		<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
C. Compliance with the terms and conditions of this permit regarding source emissions and operation demonstrate compliance with national ambient air quality standards specified at 40 CFR 50, which were applicable at the time air dispersion modeling was performed for the facility's NSR Permit 870-M3.	Semi-annual reports and the annual emissions inventory are used to demonstrate compliance with the terms and conditions of this permit.			

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
A104 Facility: Regulated Sources A. Table 104.A lists the emission units authorized for this facility. Emission units identified as insignificant or trivial activities (as defined in 20.2.70.7 NMAC) and/or equipment not regulated pursuant to the Act are not included.	Semi-annual reports and the annual emissions inventory, along with the Management of Change Request (MOCR) procedures, are used to determine that no unauthorized equipment has been added or operated during the applicable period.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Table 104.A: Regulated Equipment List

Unit No.	Source Description	Make Model	Serial No.	Skid Package Serial No.	Permitted Capacity	Manufacture and Construction Date
1	RICE	Waukesha L7042GL	TBD ¹	TBD	1362 HP	TBD
2	RICE	Waukesha L7042GL	C-12588/2	X00041	1362 HP	07/17/98
3	RICE	Waukesha L7042GL	TBD	TBD	1362 HP	TBD
4	RICE	Waukesha L7042GL	316994	X00043	1362 HP	1/18/78
5	RICE	Waukesha L7042GL	C-11888/1	X00059	1362 HP	12/19/95
6	RICE	Waukesha L7042GL	C-10985/5	76365	1362 HP	09/29/93
7	RICE	Waukesha L7042GL	220939	X00132	1362 HP	1/08/76
8	RICE	Waukesha L7042GL	C-11661/2	X00056	1362 HP	6/20/95
9	RICE	Waukesha L7042GL	C-11448/2	X00242	1362 HP	12/9/94
10	RICE	Waukesha L7042GL	TBD	TBD	1362 HP	TBD
11	RICE	Waukesha L7042GL	C-10664/3	804343	1362 HP	9/29/92
12	RICE	Waukesha L7042GL	TBD	TBD	1362 HP	TBD
13	RICE	Waukesha L7042GL	C-10607/4	76757	1362 HP	6/8/92
14	RICE	Waukesha L7042GL	C-10413/2	76758	1362 HP	9/23/91
15a	TEG-Still Vent	P&A Inc. PA-10MM-1000-2P	4633	NA	10MMSCF/D	05/91
15b	TEG-Reboiler	P&A Inc. PA-10MM-1000-2P	4633	NA	0.6 MMBtu/hr	05/91

1. Permit Condition # and Permit Condition:			2. Method(s) or other information or other facts used to determine the compliance status:			3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?	
16a	TEG-Still Vent	P&A Inc. PA-10MM-1000-2P	4332	NA	10MMSCF/D	1991			
16b	TEG-Reboiler	P&A Inc. PA-10MM-1000-2P	4332	NA	0.6 MMBtu/hr	1991			
17a	TEG-Still Vent	P&A Inc. PA-10MM-1000-2P	5487	NA	10MMSCF/D	02/92			
17b	TEG-Reboiler	P&A Inc. PA-10MM-1000-2P	5487	NA	0.6 MMBtu/hr	02/92			
21	RICE	Waukesha L7042GL	C-11134/1	76759	1362 HP	3/11/94			
22	RICE	Waukesha L7042GL	C-11493/1	76760	1362 HP	1/16/95			
23	RICE	Waukesha L7042GL	TBD	TBD	1362 HP	TBD			
24	RICE	Waukesha L7042GL	TBD	TBD	1362 HP	TBD			
25	RICE	Waukesha L7042GL	TBD	TBD	1362 HP	TBD			
26	RICE	Waukesha L7042GL	C-10987/3	X00175	1362 HP	9/20/93			
1. All TBD (to be determined) units and like-kind engine replacements must be evaluated for applicability to NSPS and MACT requirements.									
A104 Facility: Regulated Sources			Semi-annual reports, periodic emissions tests and the annual emissions inventory, along with the Management of Change Request (MOCR) procedures, are used to determine that equipment is used as required.			<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
B. Units 1 to 14 and 21 to 26 may be equipped and operated with high speed turbochargers. (NSR Permit PSD 870M5, Condition 1.c)									
A105 Facility: Control Equipment			Semi-annual reports, periodic emissions tests and the annual emissions inventory, along with the Management of Change Request (MOCR) procedures, are used to determine that control equipment is used as required.			<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
A. Table 105.A lists all the pollution control equipment required for this facility. Each emission point is identified by the same number that was assigned to it in the permit application.									

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

Table 105.A: Control Requirements:

Control Unit No.	Control Description	Pollutant being controlled	BACT	Control for Unit No. ¹
4	Catalytic Converter DCL International Inc.	CO, VOC, and HAPs	No	4
N/A	Lean Burn Design	NOx	Yes	1-14, 21-26

¹ Control for unit number refers to a unit number from the Regulated Equipment List

A106 Facility: Allowable Emissions

A. The following Section lists the emission units, and their allowable emission limits.
(40 CFR 50, Paragraphs 1, 7, and 8 of 20.2.70.302.A NMAC and NSR Permit PSD 870M5).

Semi-annual reports, periodic monitoring, the annual emissions inventory and this ACC are used to determine that the source continues to comply with allowable emissions.

☐ Continuous
☒ Intermittent

☒ Yes
☐ No

☐ Yes
☒ No

Table 106.A: Allowable Emissions

Unit No.	¹ NO _x pph	NO _x tpy	CO pph	CO tpy	VOC pph	VOC tpy
1	4.5	19.7	7.9	34.8	3.0	13.2
2	4.5	19.7	7.9	34.8	3.0	13.2
3	4.5	19.7	7.9	34.8	3.0	13.2
4	4.5	19.7	0.6	2.4	1.1	4.6
5	4.5	19.7	7.9	34.8	3.0	13.2
6	4.5	19.7	7.9	34.8	3.0	13.2
7	4.5	19.7	7.9	34.8	3.0	13.2
8	4.5	19.7	7.9	34.8	3.0	13.2
9	4.5	19.7	7.9	34.8	3.0	13.2
10	4.5	19.7	7.9	34.8	3.0	13.2
11	4.5	19.7	7.9	34.8	3.0	13.2
12	4.5	19.7	7.9	34.8	3.0	13.2

1. Permit Condition # and Permit Condition:			2. Method(s) or other information or other facts used to determine the compliance status:				3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
	13	4.5	19.7	7.9	34.8	3.0	13.2		
	14	4.5	19.7	7.9	34.8	3.0	13.2		
	15a	< ²	<	<	<	3.9	17.1		
	15b	<	<	<	<	<	<		
	16a	<	<	<	<	3.9	17.1		
	16b	<	<	<	<	<	<		
	17a	<	<	<	<	3.9	17.1		
	17b	<	<	<	<	<	<		
	21	4.5	19.7	7.9	34.8	3.0	13.2		
	22	4.5	19.7	7.9	34.8	3.0	13.2		
	23	4.5	19.7	7.9	34.8	3.0	13.2		
	24	4.5	19.7	7.9	34.8	3.0	13.2		
	25	4.5	19.7	7.9	34.8	3.0	13.2		
	26	4.5	19.7	7.9	34.8	3.0	13.2		

1 Nitrogen dioxide emissions include all oxides of nitrogen expressed as NO₂.

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

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

A106 Facility: Allowable Emissions B. The NOx emissions from each Waukesha L7042GL compressor engines (Units 1 to 14 and 21 to 26) shall not exceed 1.5 gram per horsepower-hour at 1362 hp (BACT requirements). (NSR Permit PSD 870M3, Condition 2.a). Lean Burn design has been accepted as BACT for the Waukesha engines. (NSR Permit PSD 870M5, Condition 1.g)	Periodic testing is used to determine compliance with this requirment.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
A106 Facility: Allowable Emissions C. The CO emissions from each Waukesha L7042GL compressor engines	Periodic testing is used to determine compliance with this requirment.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?												
(Units 1 to 14 and 21 to 26) shall not exceed 2.65 gram per horsepower-hour at 1362 hp (BACT requirements). (NSR Permit PSD 870M3, Condition 2.b)																
A106 Facility: Allowable Emissions D. The VOC emissions from each Waukesha L7042GL compressor engines (Units 1 to 14 and 21 to 26) shall not exceed 1.0 gram per horsepower-hour at 1362 hp (BACT requirements). (NSR Permit PSD 870M3, Condition 2.c)	Periodic testing results that demonstrate compliance with the NOx and CO emission limits are considered to demonstrate compliance with these VOC limits.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No												
A107 Facility: Allowable Startup, Shutdown, & Maintenance (SSM) and Malfunction Emissions A. The maximum allowable SSM and Malfunction emissions limits for this facility are listed in Table 107.A and were relied upon by the Department to determine compliance with applicable regulations.	Records of SSM and malfunction emissions are maintained to ensure compliance.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No												
A107 Facility: Allowable SSM and Malfunction Units, Activities, and Emission Limits¹ <table border="1"> <thead> <tr> <th>Unit No.</th><th>Description</th><th>VOC tpy</th></tr> </thead> <tbody> <tr> <td>SSM</td><td>Compressor & Associated Piping Blowdowns</td><td>31.0</td></tr> <tr> <td>M1</td><td>Facility Wide Malfunctions</td><td>8.0</td></tr> <tr> <td></td><td>Total</td><td>39.0</td></tr> </tbody> </table> <p>1. This authorization does not include VOC combustion emissions.</p>					Unit No.	Description	VOC tpy	SSM	Compressor & Associated Piping Blowdowns	31.0	M1	Facility Wide Malfunctions	8.0		Total	39.0
Unit No.	Description	VOC tpy														
SSM	Compressor & Associated Piping Blowdowns	31.0														
M1	Facility Wide Malfunctions	8.0														
	Total	39.0														

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
A107 Facility: Allowable Startup, Shutdown, & Maintenance (SSM) and Malfunction Emissions B. The authorization of emission limits for startup, shutdown, maintenance, and malfunction does not supersede the requirements to minimize emissions according to Conditions B101.C and B107.A.	Semi-annual reports, SSM tracking, and the annual emissions inventory are used to demonstrate compliance with the requirement.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
A107 Facility: Allowable Startup, Shutdown, & Maintenance (SSM) and Malfunction Emissions C. SSM (Units 1a-14a & 21a-26a) Requirement: The permittee shall perform a facility inlet gas analysis once every calendar year and complete the following recordkeeping to demonstrate compliance with routine and predictable startup, shutdown, and maintenance (SSM) VOC emission limits in Table 107.A.(NSR 876-M6, Condition B).	Records of SSM and malfunction emissions are maintained to ensure compliance.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Monitoring: The permittee shall monitor the permitted routine and predictable startups and shutdowns and scheduled maintenance events.	Records of SSM and malfunction emissions are maintained to ensure compliance.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Recordkeeping: To demonstrate compliance, the permittee shall calculate the total VOC emissions on a monthly rolling 12 month basis, including the number of blowdown events and associated volume of each event and the percent VOC of the gas based on the most recent gas analysis. The permittee shall record the calculated emissions and parameters used in calculations in accordance with Section	Records of SSM events and associated volumes, along with extended gas analyses, are maintained to ensure compliance.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
B109, except the requirement in B109.E to record the start and end times of SSM events shall not apply.				
Reporting: The permittee shall report in accordance with Section B110.	SSM records are included in the applicable semi-annual reports.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
A107 Facility: Allowable Startup, Shutdown, & Maintenance (SSM) and Malfunction Emissions D. Facility Wide Malfunctions Requirement: The permittee shall perform a facility inlet gas analysis once every calendar year and complete the following recordkeeping to demonstrate compliance with Malfunction (M1) VOC tpy emission limits in Table 107.A. (NSR 870-M6, Condition C)	Malfunctions that occurred during the applicable monitoring periods are recorded as required and documented as to whether emissions resulting from recorded malfunction events are being used toward the permitted tpy value.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Monitoring: The permittee shall monitor all malfunction events that result in VOC emissions including identification of the equipment or activity that is the source of emissions.	Malfunctions that occurred during the applicable monitoring periods are recorded as required and documented as to whether emissions resulting from recorded malfunction events are being used toward the permitted tpy value.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Recordkeeping: To demonstrate compliance, each month records shall be kept of the cumulative total VOC emissions due to malfunction events during the first 12 months and, thereafter of the monthly rolling 12 month total of VOC emissions due to malfunction events. Records shall also be kept of the inlet gas analysis, the percent VOC of the gas based on	Malfunctions that occurred during the applicable monitoring periods are recorded as required and documented as to whether emissions resulting from recorded malfunction events are being used toward the permitted tpy value.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
the most recent gas analysis, of the volume of total gas vented in MMscf used to calculate the VOC emissions, a description of the event, and whether the emissions resulting from the event will be used toward the permitted malfunction emission limit or whether the event is reported under 20.2.7 NMAC. The permittee shall record the calculated emissions and parameters used in calculations in accordance with Condition B109, except the requirement in B109.E to record the start and end times of malfunction events shall not apply to the venting of known quantities of VOC.				
Reporting: The permittee shall report in accordance with Section B110.	Malfunction records, should malfunctions have occurred, are included in the applicable semi-annual reports.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
A108 Facility: Hours of Operation A.This facility is authorized for continuous operation. Monitoring, recordkeeping, and reporting are not required to demonstrate compliance with continuous hours of operation. (870-M5, Condition 1.b)				
A109 Facility: Reporting Schedules (20.2.70.302.E NMAC) A. A Semi-Annual Report of monitoring activities is due within 45 days following the end of every 6-month reporting period. The six month reporting periods start on February 1st and August 1st of each year.	The first semi-annual report for this compliance period was submitted September 13, within 45 days of July 31. Submittal of the semi-annual report associated with this ACC within 45 days of January 31 will demonstrate compliance with this requirement.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
A109 Facility: Reporting Schedules (20.2.70.302.E NMAC) B. The Annual Compliance Certification Report is due within 30 days of the end of	This ACC will be submitted within 30 days of January 31.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
every 12-month reporting period. The 12-month reporting period starts on February 1st of each year.				
A110 Facility: Fuel and Fuel Sulfur Requirements (as required) A. Fuel and Fuel Sulfur Requirements (Units 1 to 17 and 21 to 26) Requirement: All combustion emission units shall only combust natural gas containing no more than 0.2 grains of total sulfur per 100 dry standard cubic feet. (870-M5, condition 1.d revised)	Only natural gas is used for fuel.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Monitoring: None. Recordkeeping: The permittee shall demonstrate compliance with the natural gas limit on total sulfur content by maintaining records of a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, specifying the allowable limit or less. Alternatively, compliance may be demonstrated by keeping a receipt or invoice from a commercial fuel supplier, with each fuel delivery, which shall include the delivery date, the fuel type delivered, the amount of fuel delivered, and the maximum sulfur content of the fuel. If fuel gas analysis is used, the analysis shall not be older than one year.	Test results are included with the applicable semi-annual report.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Reporting: The permittee shall report in accordance with Section B110.	Test results are included with the applicable semi-annual report.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
<p>A111 Facility: 20.2.61 NMAC Opacity (as required)</p> <p>A. 20.2.61 NMAC Opacity Requirements (Units 1 to 14, 15b, 16b, 17b and 21 to 26)</p> <p>Requirement: Visible emissions from all stationary combustion emission stacks shall not equal or exceed an opacity of 20 percent in accordance with the requirements at 20.2.61.109 NMAC.</p>	<p>Only natural gas is used for fuel. No visible emissions were observed during the applicable monitoring periods.</p>	<p><input type="checkbox"/> Continuous</p> <p><input checked="" type="checkbox"/> Intermittent</p>	<p><input checked="" type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>	<p><input type="checkbox"/> Yes</p> <p><input checked="" type="checkbox"/> No</p>
<p>Monitoring: Use of natural gas fuel constitutes compliance with 20.2.61 NMAC unless opacity exceeds 20% averaged over a 10-minute period. When any visible emissions are observed during operation other than during startup mode, opacity shall be measured over a 10-minute period, in accordance with the procedures at 40 CFR 60, Appendix A, Method 9 as required by 20.2.61.114 NMAC, or the operator will be allowed to shut down the equipment to perform maintenance/repair to eliminate the visible emissions. Following completion of equipment maintenance/repair, the operator shall conduct visible emission observations following startup in accordance with the following procedures:</p> <ul style="list-style-type: none"> Visible emissions observations shall be conducted over a 10-minute period during operation after completion of startup mode in accordance with the procedures at 40 CFR 60, Appendix A, Reference Method 22 (EPA Method 22). If no visible emissions are observed, no further action is required. If any visible emissions are observed 	<p>Only natural gas is used for fuel. No visible emissions were observed during the applicable monitoring periods.</p>	<p><input type="checkbox"/> Continuous</p> <p><input checked="" type="checkbox"/> Intermittent</p>	<p><input checked="" type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>	<p><input type="checkbox"/> Yes</p> <p><input checked="" type="checkbox"/> No</p>

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
<p>during completion of the EPA Method 22 observation, subsequent opacity observations shall be conducted over a 10-minute period, in accordance with the procedures at EPA Method 9 as required by 20.2.61.114 NMAC.</p> <p>For the purposes of this condition, Startup mode is defined as the startup period that is described in the facility's startup plan.</p>				
<p>Recordkeeping: If no visible emissions were observed, none. If any visible emissions observations were conducted, the permittee shall keep records in accordance with the requirements of Section B109 and as follows:</p> <ul style="list-style-type: none"> For any visible emissions observations conducted in accordance with EPA Method 22, record the information on the form referenced in EPA Method 22, Section 11.2. <p>For any opacity observations conducted in accordance with the requirements of EPA Method 9, record the information on the form referenced in EPA Method 9, Sections 2.2 and 2.4.</p>	<p>Only natural gas is used for fuel. No visible emissions were observed during the applicable monitoring periods.</p>	<p><input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
<p>Reporting: The permittee shall report in accordance with Section B110.</p>	<p>Only natural gas is used for fuel. No visible emissions were observed during the applicable monitoring periods.</p>	<p><input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
EQUIPMENT SPECIFIC REQUIREMENTS A201 Engines A. Periodic Testing (For Units 1 to 14 and 21 to 26) Requirement: Compliance with the allowable emission limits in Table 106.A, Condition A106. B, and Condition A106.C shall be demonstrated by completing periodic emission tests during the monitoring period. [20.2.70.302.C(1) NMAC]	The periodic test reports included in the applicable semi-annual reports demonstrate compliance with emissions limits.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Monitoring: The permittee shall test using a portable analyzer subject to the requirements and limitations of Section B108, General Monitoring Requirements. Emission testing is required for NOx and CO and shall be carried out as described below. Test results that demonstrate compliance with the NOx and CO emission limits shall also be considered to demonstrate compliance with the VOC emission limits. For units with g/hp-hr emission limits, in addition to the requirements stated in Section B108, the engine load shall be calculated by using the following equation: Load(Hp) = $\frac{\text{Fuel consumption (scfh)} \times \text{Measured fuel heating value (LHV)}}{\text{Manufacturer's rated BSFC (btu/bhp-hr) at 100\% load}}$	Test results are included with the applicable semi-annual reports.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
(1) The testing shall be conducted as follows: a. Testing frequency shall be once per quarter for unit 4 and once per year for units 1-3, 5-14, 21-26 b. The monitoring period is defined as a calendar quarter for unit 4 and a calendar year for units 1-3, 5-14, 21-26. .. (2) The tests shall continue based on the existing testing schedule. (3) All subsequent monitoring shall occur in each succeeding monitoring period. No two monitoring events shall occur closer together in time than 25% of a monitoring period. (4) The permittee shall follow the General Testing Procedures of Section B111.				
Recordkeeping: The permittee shall maintain records in accordance with Sections B109, B110, and B111.	Test result records are maintained as required.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Reporting: The permittee shall report in accordance with Sections B109, B110, and B111.	Test results are included with the applicable semi-annual reports.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
A201 Engines B. Catalytic Converter Operation (For Unit 4) Requirement: The unit shall be equipped and operated with a catalytic converter to control CO, VOC, and HAP emissions. Engines equipped with oxidation catalysts are not required to operate with an AFR.	Semi-annual reports, periodic emissions tests and the annual emissions inventory, along with the Management of Change Request (MOCR) procedures, are used to determine that control equipment is used as required.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
Monitoring: The unit shall be operated with the catalytic converter, which includes catalyst maintenance periods. During periods of catalyst maintenance, the permittee shall either (1) shut down the engine; or (2) replace the catalyst with a functionally equivalent spare to allow the engine to remain in operation.	Semi-annual reports, periodic emissions tests and the annual emissions inventory, along with the Management of Change Request (MOCR) procedures, are used to determine that control equipment is used as required.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Recordkeeping: The permittee shall maintain records in accordance with Section B109.	Semi-annual reports, periodic emissions tests and the annual emissions inventory, along with the Management of Change Request (MOCR) procedures, are used to determine that control equipment is used as required.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Reporting: The permittee shall report in accordance with Section B110.	Semi-annual reports, periodic emissions tests and the annual emissions inventory, along with the Management of Change Request (MOCR) procedures, are used to determine that control equipment is used as required.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
A201 Engines C. NSPS JJJJ (For Units 1, 3, 10, 12, 23, 24, and 25) Requirement: The unit(s) will be subject to 40 CFR 60, Subparts A and JJJJ if the source is manufactured on or after January 1, 2007 per 40 CFR 60.4230(a)(4)(i) and shall comply with the notification requirements in Subpart A and the specific requirements of Subpart JJJJ.	Units 1, 3, 10, 12, 23, 24 and 25 were not installed during this compliance period. Regulatory applicability will be determined prior to installation.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Monitoring: If applicable, the permittee shall comply with all applicable monitoring requirements in 40 CFR 60 Subpart A and Subpart JJJJ, including but not limited to 60.4243.	Units 1, 3, 10, 12, 23, 24 and 25 were not installed during this compliance period. Regulatory applicability will be determined prior to installation.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
Recordkeeping: If applicable, the permittee shall comply with all applicable recordkeeping requirements in 40 CFR 60 Subpart A and Subpart JJJJ, including but not limited to 60.4245.	Units 1, 3, 10, 12, 23, 24 and 25 were not installed during this compliance period. Regulatory applicability will be determined prior to installation.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Reporting: If applicable, the permittee shall comply with all applicable reporting requirements in 40 CFR 60 Subpart A and Subpart JJJJ, including but not limited to 60.4245.	Units 1, 3, 10, 12, 23, 24 and 25 were not installed during this compliance period. Regulatory applicability will be determined prior to installation.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
A201 Engines D. NESHAP ZZZZ (For Units 1, 3, 10, 12, 23, 24, and 25) Requirement: The unit(s) will be subject to 40 CFR 63, Subparts A and ZZZZ if the source is constructed on or after December 19, 2002 per 40 CFR 63.6590(a)(2) and shall comply with the notification requirements in Subpart A and the specific requirements of Subpart ZZZZ.	Units 1, 3, 10, 12, 23, 24 and 25 were not installed during this compliance period. Regulatory applicability will be determined prior to installation.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Monitoring: If applicable, the permittee shall comply with all applicable monitoring requirements in 40 CFR 63 Subpart A and Subpart ZZZZ.	Units 1, 3, 10, 12, 23, 24 and 25 were not installed during this compliance period. Regulatory applicability will be determined prior to installation.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Recordkeeping: If applicable, the permittee shall comply with all applicable recordkeeping requirements in 40 CFR 63 Subpart A and Subpart ZZZZ.	Units 1, 3, 10, 12, 23, 24 and 25 were not installed during this compliance period. Regulatory applicability will be determined prior to installation.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
Reporting: If applicable, the permittee shall comply with all applicable reporting requirements in 40 CFR 63 Subpart A and Subpart ZZZZ.	Units 1, 3, 10, 12, 23, 24 and 25 were not installed during this compliance period. Regulatory applicability will be determined prior to installation.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
A201 Engines E. Maintenance and Repair Monitoring (Units 1 to 14 and 21 to 26) Requirement: Compliance with the allowable emission limits in Table 106.A shall be demonstrated by properly maintaining and repairing the units.	Records of engine maintenance and repair included in the applicable semi-annual reports demonstrate compliance with emissions limits.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Monitoring: Maintenance and repair shall meet the minimum manufacturer's or permittee's recommended maintenance schedule. Activities that involve maintenance, adjustment, replacement, or repair of functional components with the potential to affect the operation of an emission unit shall be documented as they occur for the following events: (1) Routine maintenance that takes a unit out of service for more than two hours during any twenty-four hour period. (2) Unscheduled repairs that require a unit to be taken out of service for more than two hours in any twenty-four hour period.	Records of engine maintenance and repair are included with the applicable semi-annual reports.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Recordkeeping: The permittee shall maintain records in accordance with Section B109, including records of maintenance and repairs activities and a copy of the manufacturer's or permittee's recommended maintenance schedule.	Records of engine maintenance and repair are maintained as required and included with the applicable semi-annual reports.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
Reporting: The permittee shall report in accordance with Section B110.	Records of engine maintenance and repair are included with the applicable semi-annual reports.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
A202 Glycol Dehydrators A. Dehydrator Inspection (Units 15 to 17) Requirement: To demonstrate compliance with the allowable emission limits in Table 106.A, the flash tank vent shall be routed at all times to a process point that allows the off-gas to be recycled and recompressed, and not vented to the atmosphere. (NSR Permit PSD 870M5, Condition 1.e)	Dehydrator semi-annual flash tank inspection records are included with the applicable semi-annual monitoring reports.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Monitoring: The permittee shall inspect the glycol dehydrator semi-annually to ensure it is operating in accordance with the manufacturer's recommended procedures.	Dehydrator semi-annual flash tank inspection records are included with the applicable semi-annual monitoring reports.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Recordkeeping: The permittee shall record the inspection and the results of all equipment and control device inspections chronologically, noting any maintenance or repairs needed to bring the dehydrator into compliance. The permittee shall maintain a copy of the manufacturer's maintenance recommendations.	Dehydrator semi-annual flash tank inspection records are maintained as required and are included with the applicable semi-annual monitoring reports.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Reporting: The permittee shall report in accordance with Section B110.	Dehydrator semi-annual flash tank inspection records are included with the applicable semi-annual monitoring reports.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
A202 Glycol Dehydrators B. Extended Gas Analysis and GRI-	Dehydrator annual GLYCalc analysis records, including gas analysis, are included with the applicable semi-annual monitoring reports.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
<p>GLYCalc calculation (For Units 15a, 16a, and 17a)</p> <p>Requirement: Compliance with the allowable VOC emission limits in Table 106.A shall be demonstrated by conducting an annual extended gas analysis on the dehydrator inlet gas and calculate emissions using GRI-GLYCalc. ‘Annual’ is defined as calendar year (January 1st to December 31st).</p>				
<p>Monitoring: The permittee shall conduct an annual GRI-GlyCalc analysis using the most recent extended gas analysis, and verify the input data. The permittee may use a method of calculating dehydrator emissions other than the most current version of GRI-GlyCalc if approved by the Department. Changes in the calculated emissions due solely to a change in the calculation methodology shall not be deemed an exceedance of an emission limit.</p>	<p>Dehydrator annual GLYCalc analysis records, including gas analysis, are included with the applicable semi-annual monitoring reports.</p>	<p><input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
<p>Recordkeeping: The permittee shall identify in a summary table all parameters that were used as inputs in the GRI-GLYcalc model. The permittee shall keep a record of the results, noting the VOC and HAP emission rates for the dehydrator obtained from estimates using GRI-GLYcalc.</p>	<p>Dehydrator annual GLYCalc analysis records, including gas analysis, are maintained as required and are included with the applicable semi-annual monitoring reports.</p>	<p><input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
<p>Reporting: The permittee shall report in accordance with Section B110.</p>	<p>Dehydrator annual GLYCalc analysis records, including gas analysis, are included with the applicable semi-annual monitoring reports.</p>	<p><input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
A202 Glycol Dehydrators C. Glycol pump flow rate (For Units 15 to 17) Requirement: Compliance with the allowable VOC emission limits in Table 106.A shall be demonstrated by monitoring the glycol pump circulation rate for each unit shall each not exceed 90 gallons per hour (1.5 gallons per minute). (NSR Permit PSD 870M5, Condition 1.h)	Dehydrator glycol pump recirculation rate records are included with the applicable semi-annual monitoring reports	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Monitoring: The permittee shall monitor the lean glycol flow rate quarterly based on a calendar quarter (January 1st through March 31st, April 1 through June 30th, July 1st through September 30th, and October 1st through December 31st and shall note the maximum capacity of the replacement glycol circulation pumps. Monitoring shall include a visual inspection of pump rate setting or other method previously approved by the Department.	Dehydrator glycol pump recirculation rate records are included with the applicable semi-annual monitoring reports	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Recordkeeping: The permittee shall maintain records of the quarterly dehydrator inspections, glycol pump capacities and the corresponding measured or estimated glycol flow rate for each unit and shall maintain records in accordance with Section B109.	Dehydrator glycol pump recirculation rate records are maintained as required and are included with the applicable semi-annual monitoring reports	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Reporting: The permittee shall report in accordance with Section B110 of this permit.	Dehydrator glycol pump recirculation rate records are included with the applicable semi-annual monitoring reports	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
A202 Glycol Dehydrators D. 40 CFR 63, Subpart HH (For Units 15a, 16a, and 17a) Requirement: The units are subject to 40 CFR 63, Subpart HH and the permittee shall comply with all applicable requirements.	Dehydrator annual GLYCalc analysis records, including gas analysis, demonstrating dehydrator exemption status, are included with the applicable semi-annual monitoring reports.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Monitoring: The permittee shall monitor as required by 40 CFR 63.772(b)(2) to demonstrate facility is exempt from general standards.	Dehydrator annual GLYCalc analysis records, including gas analysis, demonstrating dehydrator exemption status, are included with the applicable semi-annual monitoring reports.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Recordkeeping: The permittee shall generate and maintain the records required by 40 CFR 63.774(d)(1)(ii) for the TEG dehydrators to demonstrate compliance with the general standard exemptions found in 40 CFR 63.764(e).	Dehydrator annual GLYCalc analysis records, including gas analysis, demonstrating dehydrator exemption status, are maintained as required and are included with the applicable semi-annual monitoring reports.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Reporting: The permittee shall meet all applicable reporting in 40 CFR 63, Subparts A and HH and in Section B110.	Dehydrator annual GLYCalc analysis records, including gas analysis, demonstrating dehydrator exemption status, are included with the applicable semi-annual monitoring reports.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

PART 1 B General Conditions

1. Have these General Conditions been met during this reporting period? <u><i>If the section Heading is marked as N/A no remarks are required.</i></u> <u><i>Check only one box per subject heading.</i></u> <u><i>Explain answers in remarks row under subject heading.</i></u>	2. Was this facility in compliance with this requirement during the reporting period?	3. Does not apply
B100 <u>Introduction</u> A. N/A	<input type="checkbox"/> Yes Explain Below	<input type="checkbox"/> No Explain Below
REMARKS:		
B101 <u>Legal</u> A. Permit Terms and Conditions (20.2.70 sections 7, 201.B, 300, 301.B, 302, 405 NMAC) <ul style="list-style-type: none"> (1) The permittee shall abide by all terms and conditions of this permit, except as allowed under Section 502(b)(10) of the Federal Act, and 20.2.70.302.H.1 NMAC. Any permit noncompliance is grounds for enforcement action, and significant or repetitious noncompliance may result in termination of this permit. Additionally, noncompliance with federally enforceable conditions of this permit constitutes a violation of the Federal Act. (20.2.70.302.A.2.a NMAC) (2) Emissions trading within a facility (20.2.70.302.H.2 NMAC) <ul style="list-style-type: none"> (a) The Department shall, if an applicant requests it, issue permits that contain terms and conditions allowing for the trading of emissions increases and decreases in the permitted facility solely for the purpose of complying with a federally enforceable emissions cap that is established in the permit in addition to any applicable requirements. Such terms and conditions shall include all terms and conditions required under 20.2.70.302 NMAC to determine compliance. If applicable requirements apply to the requested emissions trading, permit conditions shall be issued only to the extent that the applicable requirements provide for trading such increases and decreases without a case-by-case approval. (b) The applicant shall include in the application proposed replicable procedures and permit terms that ensure the emissions trades are quantifiable and enforceable. The Department shall not include in the emissions trading provisions any emissions units for which emissions are not quantifiable or for which there are no replicable procedures to enforce the emissions trades. The permit shall require compliance with all applicable requirements. (3) It shall not be a defense for the permittee in an enforcement action to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. (20.2.70.302.A.2.b NMAC) 	<input checked="" type="checkbox"/> Yes Explain Below	<input type="checkbox"/> No Explain Below

PART 1 B General Conditions

<p>(4) If the Department determines that cause exists to modify, reopen and revise, revoke and reissue, or terminate this permit, this shall be done in accordance with 20.2.70.405 NMAC. (20.2.70.302.A.2.c NMAC)</p> <p>(5) The permittee shall furnish any information the Department requests in writing to determine if cause exists for reopening and revising, revoking and reissuing, or terminating the permit, or to determine compliance with the permit. This information shall be furnished within the time period specified by the Department. Additionally, the permittee shall furnish, upon request by the Department, copies of records required by the permit to be maintained by the permittee. (20.2.70.302.A.2.f NMAC)</p> <p>(6) A request by the permittee that this permit be modified, revoked and reissued, or terminated, or a notification by the permittee of planned changes or anticipated noncompliance, shall not stay any conditions of this permit. (20.2.70.302.A.2.d NMAC)</p> <p>(7) This permit does not convey property rights of any sort, or any exclusive privilege. (20.2.70.302.A.2.e NMAC)</p> <p>(8) In the case where an applicant or permittee has submitted information to the Department under a claim of confidentiality, the Department may also require the applicant or permittee to submit a copy of such information directly to the Administrator of the EPA. (20.2.70.301.B NMAC)</p> <p>(9) The issuance of this permit, or the filing or approval of a compliance plan, does not relieve the permittee from civil or criminal liability for failure to comply with the state or Federal Acts, or any applicable state or federal regulation or law. (20.2.70.302.A.6 NMAC and the New Mexico Air Quality Control Act NMSA 1978, Chapter 74, Article 2)</p> <p>(10) If any part of this permit is challenged or held invalid, the remainder of the permit terms and conditions are not affected and the permittee shall continue to abide by them. (20.2.70.302.A.1.d NMAC)</p> <p>(11) A responsible official (as defined in 20.2.70.7.AE NMAC) shall certify the accuracy, truth and completeness of every report and compliance certification submitted to the Department as required by this permit. These certifications shall be part of each document. (20.2.70.300.E NMAC)</p> <p>(12) Revocation or termination of this permit by the Department terminates the permittee's right to operate this facility. (20.2.70.201.B NMAC)</p> <p>(13) The permittee shall continue to comply with all applicable requirements. For applicable requirements that will become effective during the term of the permit, the permittee shall meet such requirements on a timely basis. (Sections 300.D.10.c and 302.G.3 of 20.2.70 NMAC)</p> <p>B. Permit Shield (20.2.70.302.J NMAC)</p> <p>(1) Compliance with the conditions of this permit shall be deemed to be compliance with any applicable requirements existing as of the date of permit issuance and identified in Table 103.A. The requirements in Table 103.A are applicable to this facility with specific requirements identified for individual emission units.</p>			
---	--	--	--

PART 1 B General Conditions

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

PART 1 B General Conditions

<p>Department. All terms and conditions are enforceable by the Administrator of the United States Environmental Protection Agency ("EPA") and citizens under the Federal Act, unless the term or condition is specifically designated in this permit as not being enforceable under the Federal Act. (20.2.70.302.A.5 NMAC)</p> <p>E. The Department is the Administrator for 40 CFR Parts 60, 61, and 63 pursuant to the Modification and Exceptions of Section 10 of 20.2.77 NMAC (NSPS), 20.2.78 NMAC (NESHAP), and 20.2.82 NMAC (MACT).</p>			
REMARKS: Only the permitted owner operated the facility during the applicable period.			
B103 <u>Annual Fee</u> A. The permittee shall pay Title V fees to the Department consistent with the fee schedule in 20.2.71 NMAC - Operating Permit Emission Fees. The fees will be assessed and invoiced separately from this permit. (20.2.70.302.A.1.e NMAC)	<input checked="" type="checkbox"/> Yes Explain Below	<input type="checkbox"/> No Explain Below	<input type="checkbox"/> N/A Explain Below
REMARKS: 2018 operating permit emission fees were submitted on May 30, 2019.			
B104 <u>Appeal Procedures</u> (20.2.70.403.A NMAC) A. Any person who participated in a permitting action before the Department and who is adversely affected by such permitting action, may file a petition for a hearing before the Environmental Improvement Board ("board"). The petition shall be made in writing to the board within thirty (30) days from the date notice is given of the Department's action and shall specify the portions of the permitting action to which the petitioner objects, certify that a copy of the petition has been mailed or hand-delivered, and attach a copy of the permitting action for which review is sought. Unless a timely request for a hearing is made, the decision of the Department shall be final. The petition shall be copied simultaneously to the Department upon receipt of the appeal notice. If the petitioner is not the applicant or permittee, the petitioner shall mail or hand-deliver a copy of the petition to the applicant or permittee. The Department shall certify the administrative record to the board. Petitions for a hearing shall be sent to: <div style="text-align: center; margin-top: 20px;"> Secretary, New Mexico Environmental Improvement Board 1190 St. Francis Drive, Runnels Bldg. Rm N2153 Santa Fe, New Mexico 87502 </div>	<input type="checkbox"/> Yes Explain Below	<input type="checkbox"/> No Explain Below	<input checked="" type="checkbox"/> N/A Explain Below

PART 1 B General Conditions

REMARKS: Department action.			
B105 <u>Submittal of Reports and Certifications</u> <p>A. Stack Test Protocols and Stack Test Reports shall be submitted electronically to Stacktest.AQB@state.nm.us or as directed by the Department.</p> <p>B. Excess Emission Reports shall be submitted as directed by the Department. (20.2.7.110 NMAC)</p> <p>C. Compliance Certification Reports, Semi-Annual monitoring reports, compliance schedule progress reports, and any other compliance status information required by this permit shall be certified by the responsible official and submitted to the mailing address below, or as directed by the Department:</p> <p style="margin-left: 40px;">Manager, Compliance and Enforcement Section New Mexico Environment Department Air Quality Bureau 525 Camino de los Marquez, Suite 1 Santa Fe, NM 87505-1816</p> <p>D. Compliance Certification Reports shall also be submitted to the Administrator at the address below (20.2.70.302.E.3 NMAC):</p> <p style="margin-left: 40px;">Chief, Air Enforcement Section US EPA Region-6, 6EN-AA 1445 Ross Avenue, Suite 1200 Dallas, TX 75202-2733</p>	<input checked="" type="checkbox"/> Yes Explain Below	<input type="checkbox"/> No Explain Below	<input type="checkbox"/> N/A Explain Below
REMARKS: Stack test reports, semi-annual reports and ACCs are submitted to the appropriate regulatory personnel			

PART 1 B General Conditions

B106 <u>NSPS and/or MACT Startup, Shutdown, and Malfunction Operations</u>	<input checked="" type="checkbox"/> Yes Explain Below	<input type="checkbox"/> No Explain Below	<input type="checkbox"/> N/A Explain Below
<p>A. If a facility is subject to a NSPS standard in 40 CFR 60, each owner or operator that installs and operates a continuous monitoring device required by a NSPS regulation shall comply with the excess emissions reporting requirements in accordance with 40 CFR 60.7(c).</p> <p>B. If a facility is subject to a NSPS standard in 40 CFR 60, then in accordance with 40 CFR 60.8(c), operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test nor shall emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard.</p> <p>C. If a facility is subject to a MACT standard in 40 CFR 63, then the facility is subject to the requirement for a Startup, Shutdown and Malfunction Plan (SSM) under 40 CFR 63.6(e)(3), unless specifically exempted in the applicable subpart. (20.2.70.302.A.1 and A.4 NMAC)</p>			
REMARKS: Although NSPS and/or NESHAP standards apply to this facility, no units currently operating are subject to their requirements other than documentation of regulatory applicability.			
B107 <u>Startup, Shutdown, and Maintenance Operations</u>	<input checked="" type="checkbox"/> Yes Explain Below	<input type="checkbox"/> No Explain Below	<input type="checkbox"/> N/A Explain Below
<p>A. The establishment of permitted startup, shutdown, and maintenance (SSM) emission limits does not supersede the requirements of 20.2.7.14.A NMAC. Except for operations or equipment subject to Condition B106, the permittee shall establish and implement a plan to minimize emissions during routine or predictable start up, shut down, and scheduled maintenance (SSM work practice plan) and shall operate in accordance with the procedures set forth in the plan. (20.2.7.14.A NMAC)</p>			
REMARKS: The facility is operated in accordance with the permittee's SSM work practice plan.			

PART 1 B General Conditions

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

PART 1 B General Conditions

monitoring period is annual, the operating hours of the unit shall not exceed 8760 hours before monitoring is conducted. Regardless of the time that a unit actually operates, a minimum of one of each type of monitoring activity shall be conducted during the five year term of this permit.

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

REMARKS:

Periodic monitoring reports will included in the applicable semi-annual reports

PART 1 B General Conditions

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

PART 1 B General Conditions

<p>adjustment to bring the equipment back into compliance and a description of the required adjustments</p> <p>B. The permittee shall keep records of all monitoring data, equipment calibration, maintenance, and inspections, Data Acquisition and Handling System (DAHS) if used, reports, and other supporting information required by this permit for at least five (5) years from the time the data was gathered or the reports written. Each record shall clearly identify the emissions unit and/or monitoring equipment, and the date the data was gathered. (20.2.70.302.D.2 NMAC)</p> <p>C. If the permittee has applied and received approval for an alternative operating scenario, then the permittee shall maintain a log at the facility, which documents, contemporaneously with any change from one operating scenario to another, the scenario under which the facility is operating. (20.2.70.302.A.3 NMAC)</p> <p>D. The permittee shall keep a record describing off permit changes made at this source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under this permit, and the emissions resulting from those changes. (20.2.70.302.I.2 NMAC)</p> <p>E. Unless otherwise indicated by Specific Conditions, the permittee shall keep the following records for malfunction emissions and routine and predictable emissions during startup, shutdown, and scheduled maintenance (SSM):</p> <p>(1) The owner or operator of a source subject to a permit, shall establish and implement a plan to minimize emissions during routine or predictable startup, shutdown, and scheduled maintenance through work practice standards and good air pollution control practices. This requirement shall not apply to any affected facility defined in and subject to an emissions standard and an equivalent plan under 40 CFR Part 60 (NSPS), 40 CFR Part 63 (MACT), or an equivalent plan under 20.2.72 NMAC - Construction Permits, 20.2.70 NMAC - Operating Permits, 20.2.74 NMAC - Permits - Prevention of Significant Deterioration (PSD), or 20.2.79 NMAC - Permits - Nonattainment Areas. (20.2.7.14.A NMAC) The permittee shall keep records of all sources subject to the plan to minimize emissions during routine or predictable SSM and shall record if the source is subject to an alternative plan and therefore, not subject to the plan requirements under 20.2.7.14.A NMAC.</p> <p>(2) If the facility has allowable SSM emission limits in this permit, the permittee shall record all SSM events, including the date, the start time, the end time, a description of the event, and a description of the cause of the event. This record also shall include a copy of the manufacturer's, or equivalent, documentation showing that any maintenance qualified as scheduled. Scheduled maintenance is an activity that occurs at an established frequency pursuant to a written protocol published by the manufacturer or other reliable source. The authorization of allowable SSM emissions does not supersede any applicable federal or state standard. The most stringent requirement applies.</p> <p>(3) If the facility has allowable malfunction emission limits in this permit, the permittee shall record all malfunction</p>			
---	--	--	--

PART 1 B General Conditions

<p>events to be applied against these limits. The permittee shall also include the date, the start time, the end time, and a description of the event. Malfunction means any sudden and unavoidable failure of air pollution control equipment or process equipment beyond the control of the owner or operator, including malfunction during startup or shutdown. A failure that is caused entirely or in part by poor maintenance, careless operation, or any other preventable equipment breakdown shall not be considered a malfunction. (20.2.7.7.E NMAC) The authorization of allowable malfunction emissions does not supersede any applicable federal or state standard. The most stringent requirement applies. This authorization only allows the permittee to avoid submitting reports under 20.2.7 NMAC for total annual emissions that are below the authorized malfunction emission limit.</p> <p>(4) The owner or operator of a source shall meet the operational plan defining the measures to be taken to mitigate source emissions during malfunction, startup or shutdown. (20.2.72.203.A(5) NMAC)</p>			
<p>REMARKS: Records are maintained in accordance with recordkeeping requirements.</p>			
<p>B110 <u>General Reporting Requirements</u> (20.2.70.302.E NMAC)</p> <p>A. Reports of required monitoring activities for this facility shall be submitted to the Department on the schedule in section A109. Monitoring and recordkeeping requirements that are not required by a NSPS or MACT shall be maintained on-site or (for unmanned sites) at the nearest company office, and summarized in the semi-annual reports, unless alternative reporting requirements are specified in the equipment specific requirements section of this permit.</p> <p>B. Reports shall clearly identify the subject equipment showing the emission unit ID number according to this operating permit. In addition, all instances of deviations from permit requirements, including those that occur during emergencies, shall be clearly identified in the reports required by section A109. (20.2.70.302.E.1 NMAC)</p> <p>C. The permittee shall submit reports of all deviations from permit requirements, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken. These reports shall be submitted as follows:</p> <p style="margin-left: 40px;">(1) Deviations resulting in excess emissions as defined in 20.2.7.7 NMAC (including those classified as emergencies as defined in section B114.A) shall be reported in accordance with the timelines specified by 20.2.7.110 NMAC and in the semi-annual reports required in section A109. (20.2.70.302.E.2 NMAC)</p> <p style="margin-left: 40px;">(2) All other deviations shall be reported in the semi-annual reports required in section A109. (20.2.70.302.E.2</p>	<input checked="" type="checkbox"/> Yes Explain Below	<input type="checkbox"/> No Explain Below	<input type="checkbox"/> N/A Explain Below

PART 1 B General Conditions

<p>NMAC).</p> <p>D. The permittee shall submit reports of excess emissions in accordance with 20.2.7.110.A NMAC.</p> <p>E. Results of emission tests and monitoring for each pollutant (except opacity) shall be reported in pounds per hour (unless otherwise specified) and tons per year. Opacity shall be reported in percent. The number of significant figures corresponding to the full accuracy inherent in the testing instrument or Method test used to obtain the data shall be used to calculate and report test results in accordance with 20.2.1.116.B and C NMAC. Upon request by the Department, CEMS and other tabular data shall be submitted in editable, MS Excel format.</p> <p>F. At such time as new units are installed as authorized by the applicable NSR Permit, the permittee shall fulfill the notification requirements in the NSR permit.</p> <p>G. Periodic Emissions Test Reporting: The permittee shall report semi-annually a summary of the test results.</p> <p>H. The permittee shall submit an emissions inventory for this facility annually. The emissions inventory shall be submitted by the later of April 1 or within 90 days after the Department makes such request. (20.2.73 NMAC and 20.2.70.302.A.1 NMAC)</p> <ol style="list-style-type: none"> (1) The facility emits, or has the potential to emit, 5 tons per year or more of lead or lead compounds, or 100 tons per year or more of PM10, PM2.5, sulfur oxides, nitrogen oxides, carbon monoxide, or volatile organic compounds. (2) The facility is defined as a major source of hazardous air pollutants under 20.2.70 NMAC (Operating Permits). (3) The facility is located in an ozone nonattainment area and which emits, or has the potential to emit, 25 tons per year or more of nitrogen oxides or volatile organic compounds. (4) Upon request by the department. (5) The permittee shall submit the emissions inventory report by April 1 of each year, unless a different deadline is specified by the current operating permit. <p>I. Emissions trading within a facility (20.2.70.302.H.2 NMAC)</p> <ol style="list-style-type: none"> (1) For each such change, the permittee shall provide written notification to the department and the administrator at least seven (7) days in advance of the proposed changes. Such notification shall state when the change will occur and shall describe the changes in emissions that will result and how these increases and decreases in emissions will comply with the terms and conditions of the permit. (2) The permittee and department shall attach each such notice to their copy of the relevant permit. 			
---	--	--	--

PART 1 B General Conditions

REMARKS:

Reports are submitted in accordance with reporting requirements.

B111 General Testing Requirements

A. Compliance Tests

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

B. EPA Reference Method Tests

<input checked="" type="checkbox"/> Yes Explain Below	<input type="checkbox"/> No Explain Below	<input type="checkbox"/> N/A Explain Below

PART 1 B General Conditions

<p>(1) All compliance tests required by this permit, unless otherwise specified by Specific Conditions of this permit, shall be conducted in accordance with the requirements of 40 CFR 60, Subpart A, General Provisions, and the following EPA Reference Methods as specified by 40 CFR 60, Appendix A:</p> <ul style="list-style-type: none"> (a) Methods 1 through 4 for stack gas flowrate (b) Method 5 for TSP (c) Method 6C and 19 for SO₂ (d) Method 7E for NO_x (test results shall be expressed as nitrogen dioxide (NO₂) using a molecular weight of 46 lb/lb-mol in all calculations (each ppm of NO/NO₂ is equivalent to 1.194 x 10⁻⁷ lb/SCF) (e) Method 9 for opacity (f) Method 10 for CO (g) Method 19 may be used in lieu of Methods 1-4 for stack gas flowrate upon approval of the Department. A justification for this proposal must be provided along with a contemporaneous fuel gas analysis (preferably on the day of the test) and a recent fuel flow meter calibration certificate (within the most recent quarter). (h) Method 7E or 20 for Turbines per 60.335 or 60.4400 (i) Method 29 for Metals (j) Method 201A for filterable PM₁₀ and PM_{2.5} (k) Method 202 for condensable PM (l) Method 320 for organic Hazardous Air Pollutants (HAPs) (m) Method 25A for VOC reduction efficiency (n) Method 30B for Mercury <p>(2) Alternative test method(s) may be used if the Department approves the change.</p> <p>C. Periodic Monitoring and Portable Analyzer Requirements</p> <p>(1) Periodic emissions tests (periodic monitoring) may be conducted in accordance with EPA Reference Methods or by utilizing a portable analyzer. Periodic monitoring utilizing a portable analyzer shall be conducted in accordance with the requirements of the current version of ASTM D 6522. However, if a facility has met a previously approved Department criterion for portable analyzers, the analyzer may be operated in accordance with that criterion until it is replaced.</p>			
--	--	--	--

PART 1 B General Conditions

<p>(2) Unless otherwise indicated by Specific Conditions or regulatory requirements, the default time period for each test run shall be at least 20 minutes.</p> <p>Each performance test shall consist of three separate runs. The arithmetic mean of results of the three runs shall be used to determine compliance with the applicable emission limit.</p> <p>(3) Testing of emissions shall be conducted in accordance with the requirements at Section B108.F.</p> <p>(4) During emissions tests, pollutant and diluent concentration shall be monitored and recorded. Fuel flow rate shall be monitored and recorded if stack gas flow rate is determined utilizing Method 19. This information shall be included with the test report furnished to the Department.</p> <p>(5) Stack gas flow rate shall be calculated in accordance with 40 CFR 60, Appendix A, Method 19 utilizing fuel flow rate (scf) determined by a dedicated fuel flow meter and fuel heating value (Btu/scf) determined from a fuel sample obtained preferably during the day of the test, but no earlier than three months prior to the test date. Alternatively, stack gas flow rate may be determined by using EPA Methods 1-4.</p> <p>D. Test Procedures:</p> <p>(1) The permittee shall notify the Department's Program Manager, Compliance and Enforcement Section at least thirty (30) days before the test to afford a representative of the Department an opportunity to be present at the test. (40CFR 60.8(d))</p> <p>(2) Equipment shall be tested in the "as found" condition. Equipment may not be adjusted or tuned prior to any test for the purpose of lowering emissions, and then returned to previous settings or operating conditions after the test is complete.</p> <p>(3) Contents of test notifications, protocols and test reports shall conform to the format specified by the Department's Universal Test Notification, Protocol and Report Form and Instructions. Current forms and instructions are posted to NMED's Air Quality web site under Compliance and Enforcement Testing.</p> <p>(4) The permittee shall provide (a) sampling ports adequate for the test methods applicable to the facility, (b) safe sampling platforms, (c) safe access to sampling platforms and (d) utilities for sampling and testing equipment.</p> <p>(5) The stack shall be of sufficient height and diameter and the sample ports shall be located so that a representative test of the emissions can be performed in accordance with the requirements of EPA Method 1 or ASTM D 6522-00 as applicable.</p> <p>(6) Where necessary to prevent cyclonic flow in the stack, flow straighteners shall be installed</p> <p>(7) Unless otherwise indicated by Specific Conditions or regulatory requirements, test reports shall be submitted to the Department no later than 30 days after completion of the test.</p>			
REMARKS:			

PART 1 B General Conditions

Testing that occurred during the applicable period was completed in accordance with the appropriate procedures

B112 Compliance

<input checked="" type="checkbox"/> Yes Explain Below	<input type="checkbox"/> No Explain Below	<input type="checkbox"/> N/A Explain Below
--	--	---

- | | |
|---|--|
| <p>A. The Department shall be given the right to enter the facility at all reasonable times to verify the terms and conditions of this permit. Required records shall be organized by date and subject matter and shall at all times be readily available for inspection. The permittee, upon verbal or written request from an authorized representative of the Department who appears at the facility, shall immediately produce for inspection or copying any records required to be maintained at the facility. Upon written request at other times, the permittee shall deliver to the Department paper or electronic copies of any and all required records maintained on site or at an off-site location. Requested records shall be copied and delivered at the permittee's expense within three business days from receipt of request unless the Department allows additional time. Required records may include records required by permit and other information necessary to demonstrate compliance with terms and conditions of this permit. (NMSA 1978, Section 74-2-13)</p> | |
| <p>B. A copy of the most recent permit(s) issued by the Department shall be kept at the permitted facility or (for unmanned sites) at the nearest company office and shall be made available to Department personnel for inspection upon request. (20.2.70.302.G.3 NMAC)</p> | |
| <p>C. Emissions limits associated with the energy input of a Unit, i.e. lb/MMBtu, shall apply at all times unless stated otherwise in a Specific Condition of this permit. The averaging time for each emissions limit, including those based on energy input of a Unit (i.e. lb/MMBtu) is one (1) hour unless stated otherwise in a Specific Condition of this permit or in the applicable requirement that establishes the limit. (20.2.70.302.A.1 and G.3 NMAC)</p> | |
| <p>D. The permittee shall submit compliance certification reports certifying the compliance status of this facility with respect to all permit terms and conditions, including applicable requirements. These reports shall be made on the pre-populated Compliance Certification Report Form that is provided to the permittee by the Department, and shall be submitted to the Department and to EPA at least every 12 months. For the most current form, please contact the Compliance Reports Group at email:reportsgroup.aqb@state.nm.us. For additional reporting guidance see http://www.nmenv.state.nm.us/aqb/enforce_compliance/TitleVReporting.htm. (20.2.70.302.E.3 NMAC)</p> | |
| <p>E. The permittee shall allow representatives of the Department, upon presentation of credentials and other documents as may be required by law, to do the following (20.2.70.302.G.1 NMAC):</p> | |

PART 1 B General Conditions

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

PART 1 B General Conditions

revoke exists. Emissions units for which permit conditions have been revoked shall not be operated until new permit conditions have been issued for them. (20.2.70.405.A.2 NMAC)			
REMARKS: No communication has been received from the regulating agency to indicate that the permit has been reopened, revoked or revised.			
B114 <u>Emergencies</u> (20.2.70.304 NMAC)	<input checked="" type="checkbox"/> Yes Explain Below	<input type="checkbox"/> No Explain Below	<input type="checkbox"/> N/A Explain Below
<p>A. An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the permittee, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, or careless or improper operation.</p> <p>B. An emergency constitutes an affirmative defense to an action brought for noncompliance with technology-based emission limitations contained in this permit if the permittee has demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:</p> <ul style="list-style-type: none"> (1) An emergency occurred and that the permittee can identify the cause(s) of the emergency; (2) This facility was at the time being properly operated; (3) During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit; and (4) The permittee submitted notice of the emergency to the Department within 2 working days of the time when emission limitations were exceeded due to the emergency. This notice fulfills the requirement of 20.2.70.302.E.2 NMAC. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken. <p>C. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.</p> <p>D. This provision is in addition to any emergency or upset provision contained in any applicable requirement.</p>			

PART 1 B General Conditions

REMARKS: No emergencies occurred during this period.			
B115 <u>Stratospheric Ozone</u> (20.2.70.302.A.1 NMAC)	<input type="checkbox"/> Yes Explain Below	<input type="checkbox"/> No Explain Below	<input checked="" type="checkbox"/> N/A Explain Below
A. If this facility is subject to 40 CFR 82, Subpart F, the permittee shall comply with the following standards for recycling and emissions reductions: <ul style="list-style-type: none"> (1) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices, except for motor vehicle air conditioners (MVAC) and MVAC-like appliances. (40 CFR 82.156) (2) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment. (40 CFR 82.158) (3) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program. (40 CFR 82.161) 			
REMARKS: The facility is not subject to 40CFR 82 subpart F			
B116 <u>Acid Rain Sources</u> (20.2.70.302.A.9 NMAC)	<input type="checkbox"/> Yes Explain Below	<input type="checkbox"/> No Explain Below	<input checked="" type="checkbox"/> N/A Explain Below
A. If this facility is subject to the federal acid rain program under 40 CFR 72, this section applies. B. Where an applicable requirement of the Federal Act is more stringent than an applicable requirement of regulations promulgated under Title IV of the Federal Act, both provisions are incorporated into this permit and are federally enforceable. C. Emissions exceeding any allowances held by the permittee under Title IV of the Federal Act or the regulations promulgated thereunder are prohibited. D. No modification of this permit is required for increases in emissions that are authorized by allowances acquired			

PART 1 B General Conditions

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

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 Four Corners, LLC

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 3 day of NOVEMBER, 2020, upon my oath or affirmation, before a notary of the State ofNew Mexico

*Signature

Date

Printed Name

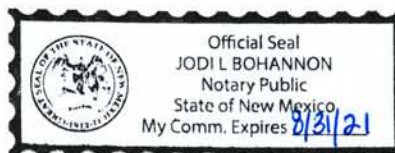
Title

Scribed and sworn before me on this 3rd day of November, 2020.My authorization as a notary of the State of New Mexico expires on the31st day of August, 2021.

Notary's Signature

Date

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.