



11701 FM 2244, Suite 215B
Bee Cave, TX 78738

April 17, 2026

Permit Programs Manager
NMED Air Quality Bureau
525 Camino de los Marquez Suite 1
Santa Fe, NM 87505-1816

RE: Application for Title V Renewal: Harvest Four Corners, LLC – Chaco Compressor Station
AI 1189, Permit P236-R3

Permit Programs Manager:

Harvest Four Corners, LLC is submitting this application for a Title V Renewal for its existing Chaco Compressor Station in San Juan County, New Mexico. This submittal meets the timeliness requirements of 20.2.70.300.B(2) which require that a Title V application be submitted at least twelve months prior to the expiration of the current permit. The facility's Title V Permit P236-R3 expires April 22, 2027. Please note that the application includes a request to remove the existing alternate operating scenario (AOS) listed in the current Title V permit. The removal has been indicated in Table 2-A of the application.

The format and content of this application are consistent with the Bureau's current policy regarding Title V applications. Enclosed is one hard copy and one working copy of the application, including the original certification page. Electronic files will be uploaded to the NMED ftp site once instructions are provided. Please feel free to contact me at (281) 217-8233 or by email at Kat@BrightSkyENV.com if you have any questions regarding this application.

Warm regards,

A handwritten signature in black ink, appearing to read "Kat", followed by a long horizontal flourish.

Kat Galloway

President, Bright Sky Environmental

Cc: Monica Smith, Harvest Four Corners, LLC.
 Michelle Roger, Harvest Four Corners, LLC.



Bright Sky Environmental

11701 FM 2244, Suite 215-B, Bee Cave, Texas 78738
BrightSkyENV.com

April 2026

NMED Air Quality Application for Title V Renewal

Harvest Four Corners, LLC
Chaco Compressor Station
San Juan County, New Mexico

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:
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Universal Air Quality Permit Application

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

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

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

Acknowledgements:

- ☒ I acknowledge that a pre-application meeting is available to me upon request. ☒ Title V Operating, Title IV Acid Rain, and NPR applications have no fees.
- ☐ \$500 NSR application Filing Fee enclosed **OR** ☐ The full permit fee associated with 10 fee points (required w/ streamline applications).
- ☐ Check No.: [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.
- ☒ I acknowledge there is an annual fee for permits in addition to the permit review fee: www.env.nm.gov/air-quality/permit-fees-2/.
- ☐ This facility qualifies for the small business fee reduction per 20.2.75.11.C. NMAC. The full \$500.00 filing fee is included with this application and I understand the fee reduction will be calculated in the balance due invoice. The Small Business Certification Form has been previously submitted or is included with this application. (Small Business Environmental Assistance Program Information: www.env.nm.gov/air-quality/small-biz-eap-2/.)

Citation: Please provide the **low level citation** under which this application is being submitted: **20.2.70.200.A and 20.7.70.300.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: 1189	Updating Permit/NOI #: P236-R3
1	Facility Name:	Plant primary SIC Code (4 digits): 1389	
	Chaco Compressor Station	Plant NAIC code (6 digits): 213112	
a	Facility Street Address (If no facility street address, provide directions from a prominent landmark): See directions in Section 1-D4		
2	Plant Operator Company Name: Harvest Four Corners, LLC	Phone/Fax: 505-632-4600	

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: 505-619-0025/ 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: 505-632-4625/ 505-632-4782
a	Mailing Address: 1755 Arroyo Drive, Bloomfield, NM 87413	E-mail: msmith@harvestmidstream.com
5	☐ Preparer: ☒ Consultant: Bright Sky Environmental	Phone/Fax: 281-217-8233
a	Mailing Address: 11701 FM 2244, Suite 215-B, Bee Cave, TX 78738	E-mail: Kat@BrightSkyENV.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? ☒ Yes ☐ No	1.b If yes to question 1.a, is it currently operating in New Mexico? ☒ Yes ☐ No
2	If yes to question 1.a, was the existing facility subject to a Notice of Intent (NOI) (20.2.73 NMAC) before submittal of this application? ☐ Yes ☒ No	If yes to question 1.a, was the existing facility subject to a construction permit (20.2.72 NMAC) before submittal of this application? ☒ Yes ☐ No
3	Is the facility currently shut down? ☐ Yes ☒ No	If yes, give month and year of shut down (MM/YY):
4	Was this facility constructed before 8/31/1972 and continuously operated since 1972? ☒ Yes ☐ No	
5	If Yes to question 3, has this facility been modified (see 20.2.72.7.P NMAC) or the capacity increased since 8/31/1972? ☒ Yes ☐ No ☐ N/A	
6	Does this facility have a Title V operating permit (20.2.70 NMAC)? ☒ Yes ☐ No	If yes, the permit No. is: P236-R3
7	Has this facility been issued a No Permit Required (NPR)? ☐ Yes ☒ No	If yes, the NPR No. is: N/A
8	Has this facility been issued a Notice of Intent (NOI)? ☐ Yes ☒ No	If yes, the NOI No. is: N/A
9	Does this facility have a construction permit (20.2.72/20.2.74 NMAC)? ☒ Yes ☐ No	If yes, the permit No. is: 0759-M6
10	Is this facility registered under a General permit (GCP-1, GCP-2, etc.)? ☐ Yes ☒ No	If yes, the register No. is: N/A

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: 5.4 MMCF^(a)	Daily: 130 MMCF^(a)	Annually: 47,450 MMCF^(a)
b	Proposed	Hourly: 5.4 MMCF^(a)	Daily: 130 MMCF^(a)	Annually: 47,450 MMCF^(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: N/A	Daily: N/A	Annually: N/A
b	Proposed	Hourly: N/A	Daily: N/A	Annually: N/A

^(a)The station capacity is a direct function of available horsepower. The throughput is therefore dependent on atmospheric temperature and pressure, gas temperature and pressure, relative humidity and gas quality, as well as other factors. The "throughput" expressed above is a nominal quantity (with a 15 percent safety factor), neither an absolute maximum, nor an average. Actual throughput will vary from the nominal amount.

Section 1-D: Facility Location Information

1	Latitude (decimal degrees): 36° 41' 26"	Longitude (decimal degrees): -107° 58' 43"	County: San Juan	Elevation (ft): 5,575
2	UTM Zone: ☐ 12 or ☒ 13		Datum: ☐ NAD 83 ☒ WGS 84	
a	UTM E (in meters, to nearest 10 meters): 233,880		UTM N (in meters, to nearest 10 meters): 4,064,690	
3	Name and zip code of nearest New Mexico town: Bloomfield, New Mexico 87413			
4	Detailed Driving Instructions from nearest NM town (attach a road map if necessary): From Bloomfield drive south on Hwy 550, turn left at Industrial Blvd and drive 0.5 miles to the white propane tank (Mid-American Pipeline System), turn left and drive 0.4 miles (0.2 miles past the La Cosa Station).			
5	The facility is approximately 1 (distance) miles south (direction) of Bloomfield, New Mexico 87413 (nearest town).			
6	Land Status of facility (check one): ☐ Private ☐ Indian/Pueblo ☐ Government ☒ BLM ☐ Forest Service ☐ Military			
7	List all municipalities, Indian tribes, and counties within a ten (10) mile radius (20.2.72.203.B.2 NMAC) of the property on which the facility is proposed to be constructed or operated: Bloomfield, Navajo Indian Tribe, San Juan County			
8	20.2.72 NMAC applications only: Will the property on which the facility is proposed to be constructed or operated be closer than 50 km (31 miles) to other states, Bernalillo County, or a Class I area (see www.env.nm.gov/air-quality/modeling-publications/)? ☐ Yes ☐ No (20.2.72.206.A.7 NMAC) If yes, list all with corresponding distances in kilometers: N/A			
9	Name nearest Class I area: Mesa Verde National Park			
10	Shortest distance (in km) from facility boundary to the boundary of the nearest Class I area (to the nearest 10 meters): 66.25 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: 3,220 m			
12	Method(s) used to delineate the Restricted Area: Fence "Restricted Area" is an area to which public entry is effectively precluded. Effective barriers include continuous fencing, continuous walls, or other continuous barriers approved by the Department, such as rugged physical terrain with steep grade that would require special equipment to traverse. If a large property is completely enclosed by fencing, a restricted area within the property may be identified with signage only. Public roads cannot be part of a Restricted Area.			
13	Does the owner/operator intend to operate this source as a portable stationary source as defined in 20.2.72.7.X NMAC? ☐ Yes ☒ No A portable stationary source is not a mobile source, such as an automobile, but a source that can be installed permanently at one location or that can be re-installed at various locations, such as a hot mix asphalt plant that is moved to different job sites.			
14	Will this facility operate in conjunction with other air regulated parties on the same property? ☒ No ☐ Yes If yes, what is the name and permit number (if known) of the other facility?			

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

1	Facility maximum operating ($\frac{\text{hours}}{\text{day}}$): 24	($\frac{\text{days}}{\text{week}}$): 7	($\frac{\text{weeks}}{\text{year}}$): 52	($\frac{\text{hours}}{\text{year}}$): 8760
2	Facility's maximum daily operating schedule (if less than 24 $\frac{\text{hours}}{\text{day}}$)? Start: N/A		☐ AM ☐ PM	End: N/A ☒ AM ☒ PM
3	Month and year of anticipated start of construction: N/A			
4	Month and year of anticipated construction completion: N/A			
5	Month and year of anticipated startup of new or modified facility: N/A			
6	Will this facility operate at this site for more than one year? ☒ Yes ☐ No			

Section 1-F: Other Facility Information

1	Are there any current Notice of Violations (NOV), compliance orders, or any other compliance or enforcement issues related to this facility? ☐ Yes ☒ No If yes, specify:		
a	If yes, NOV date or description of issue: N/A	NOV Tracking No: N/A	
b	Is this application in response to any issue listed in 1-F, 1 or 1a above? ☐ Yes ☒ No If Yes, provide the 1c & 1d info below:		
c	Document Title: N/A	Date: N/A	Requirement # (or page # and paragraph #): N/A
d	Provide the required text to be inserted in this permit: N/A		
2	Is air quality dispersion modeling or modeling waiver being submitted with this application? ☐ Yes ☒ No		
3	Does this facility require an "Air Toxics" permit under 20.2.72.400 NMAC & 20.2.72.502, Tables A and/or B? ☐ Yes ☒ No		
4	Will this facility be a source of federal Hazardous Air Pollutants (HAP)? ☒ Yes ☐ No		
a	If Yes, what type of source? ☒ Major (☒ ≥10 tpy of any single HAP OR ☐ ≥25 tpy of any combination of HAPS) OR ☐ Minor (☐ <10 tpy of any single HAP AND ☐ <25 tpy of any combination of HAPS)		
5	Is any unit exempt under 20.2.72.202.B.3 NMAC? ☒ Yes ☐ No		
a	If yes, include the name of company providing commercial electric power to the facility: Farmington Electric Utility Commercial power is purchased from a commercial utility company, which specifically does not include power generated on site for the sole purpose of the user.		

Section 1-G: Streamline Application (This section applies to 20.2.72.300 NMAC Streamline applications only)

1	☐ I have filled out Section 18, "Addendum for Streamline Applications." ☒ N/A (This is not a Streamline application.)
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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): Michelle Roger		Phone: 713-515-3924
a	R.O. Title: EH&S Director	R.O. e-mail: Michelle.McCracken@harvestmidstream.com	
b	R. O. Address: 1111 Travis Street, Houston TX 77002		
2	Alternate Responsible Official (20.2.70.300.D.2 NMAC): Austin Harrison		Phone: 318-230-1395
a	A. R.O. Title: Sr. Area Operations Manager	A. R.O. e-mail: AHarrison@harvestmidstream.com	
b	A. R. O. Address: 1111 Travis Street, Houston TX 77002		
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.): Harvest Midstream 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 (33.8 km), Navajo Reservation (1.6 km), Southern Ute Reservation (33.8 km), Jicarilla Apache Reservation (57.9 km), Ute Mountain Reservation (19.3 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 Kat Galloway,
Email Kat@BrightSkyENV.com, Phone number 281-217-8233.

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

- 4) Optionally, the applicant may submit the files with the application on compact disk (CD) or digital versatile disc (DVD) following the instructions above and the instructions in 5 for applications subject to PSD review.
- 5) If **air dispersion modeling** is required by the application type, include the **NMED Modeling Waiver** and/or electronic air dispersion modeling report, input, and output files. The dispersion modeling **summary report only** should be submitted as hard copy(ies) unless otherwise indicated by the Bureau.
- 6) If the applicant submits the electronic files on CD and the application is subject to PSD review under 20.2.74 NMAC (PSD) or NNSR under 20.2.79 NMC include,
 - a. one additional CD copy for US EPA,
 - b. one additional CD copy for each federal land manager affected (NPS, USFS, FWS, USDI) and,
 - c. one additional CD copy for each affected regulatory agency other than the Air Quality Bureau.

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

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

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

- 2) The documents should also be submitted in Microsoft Office compatible file format (Word, Excel, etc.) allowing us to access the text and formulas in the documents (copy & paste). Any documents that cannot be submitted in a Microsoft Office compatible format shall be saved as a PDF file from within the electronic document that created the file. If you are unable to provide Microsoft office compatible electronic files or internally generated PDF files of files (items that were not created electronically: i.e. brochures, maps, graphics, etc.), submit these items in hard copy format. We must be able to review the formulas and inputs that calculated the emissions.
- 3) It is preferred that this application form be submitted as 4 electronic files (**3 MSWord docs**: Universal Application section 1 [UA1], Universal Application section 3-19 [UA3], and Universal Application 4, the modeling report [UA4]) and **1 Excel file** of the tables (Universal Application section 2 [UA2]). Please include as many of the 3-19 Sections as practical in a single MS Word electronic document. Create separate electronic file(s) if a single file becomes too large or if portions must be saved in a file format other than MS Word.
- 4) The **electronic file names** shall be a maximum of 25 characters long (including spaces, if any). The format of the electronic Universal Application shall be in the format: "A-3423-FacilityName". The "A" distinguishes the file as an application submittal, as opposed to other documents the Department itself puts into the database. Thus, all electronic application submittals should begin with "A-". Modifications to existing facilities should use the **core permit number** (i.e. '3423') the Department assigned to the facility as the next 4 digits. Use 'XXXX' for new facility applications. The format of any separate electronic submittals (additional submittals such as non-Word attachments, re-submittals, application updates) and Section document shall be in the format: "A-3423-9-description", where "9" stands for the **section #** (in this case Section 9-Public Notice). Please refrain, as much as possible, from submitting any scanned documents as this file format is extremely large, which uses up too much storage capacity in our database. Please take the time to fill out the **header information** throughout all submittals as this will identify any loose pages, including the Application Date (date submitted) & Revision number (0 for original, 1, 2, etc.; which will help keep track of subsequent partial update(s) to the original submittal. Do not use special symbols (#, @, etc.) in file names. The footer information should not be modified by the applicant.

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Section 8:	Map(s)
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Table 2-A: Regulated Emission Sources

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

Unit Number ¹	Source Description	Make	Model #	Serial #	Manufacturer's Rated Capacity ³ (Specify Units)	Requested Permitted Capacity ³ (Specify Units)	Date of Manufacture ²	Controlled by Unit #	Source Classification 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	Turbine	Solar	Saturn 10-1001	OHA08-S0299 (Skid Package # S401983)	1,200 hp	976 hp	06/08/1971	N/A	2E+07	☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
							06/08/1971	1				
2	Turbine	Solar	Saturn 10-1001	OHA10-S1717 (Skid Package # S401984)	1,200 hp	976 hp	06/08/1971	N/A	2E+07	☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
							06/08/1971	2				
3	Turbine	Solar	Saturn 10-1202	OHE19-S7309 (Skid Package # S428315)	1,200 hp	976 hp	07/19/1973	N/A	2E+07	☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
							07/19/1973	3				
4	Turbine	Solar	Centaur 40-4002	OHG22-C1274 (Skid Package # S3020212)	3,961 hp	3,222 hp	1994	N/A	2E+07	☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
							05/10/1974	4				
5	Generator Engine	Detriot Diesel		4A0210278	200 hp	200 hp	11/1980	N/A	2E+07	☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	CI	N/A
							11/1980	N/A				
SSM	SSM Blowdowns							N/A	3.1E+07	☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
								N/A				
F1	Equipment Leaks							N/A	3.1E+07	☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
								N/A				
L1	Truck Loading (Condensate)							N/A	3.1E+07	☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
								N/A				
M1	Malfunctions							N/A	3.1E+07	☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
								N/A				
T4	Condensate Storage Tank				21,000 gal	21,000 gal	05/19/1995	N/A	3.1E+07	☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
							05/19/1995	N/A				
T5	Condensate Storage Tank				18,900 gal	18,900 gal	01/08/2001	N/A	3.1E+07	☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
							01/08/2001	N/A				
T6	Produced Water Storage Tank				1,890 gal	1,890 gal		N/A	3.1E+07	☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
								N/A				
T12	Produced Water Storage Tank				2,940 gal	2,940 gal		N/A	3.1E+07	☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
								N/A				
VRU-AOS ⁵	Vapor Recovery System	N/A	N/A	N/A	N/A	N/A	N/A	N/A		☐ Existing (unchanged) ☒ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
							N/A	N/A				

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

² Specify dates required to determine regulatory applicability.

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

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

Table 2-B: Insignificant 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 20.2.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	
6	EVRU Separator Heater		SB20-14	0.51	20.2.72.202.B.5		☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			1110-67 A	MMBtu/hr	#1a & #1b		
7	Fuel Gas Heater			0.005	20.2.72.202.B.5		☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
				MMBtu/hr	#1a & #1b		
L2	Truck Loading (Produced Water)				20.2.72.202.B.5		☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
					#1a & #1b		
PR	Pig Receiver				20.2.72.202.B.5		☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
					#1a & #1b		
T1	Lubrication Oil Storage Tank			1000	20.2.72.202.B.2		☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
				gal	#1a, #1b & #5		
T2	Used Oil Storage Tank			840	20.2.72.202.B.2		☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
				gal	#1a, #1b & #5		
T3	Diesel Storage Tank			160	20.2.72.202.B.2		☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
				gal	#1a, #1b & #5		
T7	Methanol Storage Tank			500	20.2.72.202.B.5		☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
				gal	#1a & #1b		
T8	Methanol Storage Tank			300	20.2.72.202.B.5		☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
				gal	#1a, #1b & #5		
T10	Methanol Storage Tank			125	20.2.72.202.B.5		☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
				gal	#1a, #1b & #5		
T11	Methanol Storage Tank			65	20.2.72.202.B.5		☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
				gal	#1a, #1b & #5		
							☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced

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

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

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		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	3.30	14.30	3.50	15.10	1.00E-01	4.00E-01	3.67E-02	1.61E-01	7.12E-02	3.12E-01	7.12E-02	3.12E-01	7.12E-02	3.12E-01	-	-	-	-
2	3.30	14.30	3.50	15.10	1.00E-01	4.00E-01	3.67E-02	1.61E-01	7.12E-02	3.12E-01	7.12E-02	3.12E-01	7.12E-02	3.12E-01	-	-	-	-
3	3.30	14.30	3.50	15.10	1.00E-01	4.00E-01	3.67E-02	1.61E-01	7.12E-02	3.12E-01	7.12E-02	3.12E-01	7.12E-02	3.12E-01	-	-	-	-
4	16.70	73.00	4.20	18.60	5.30E-01	2.30	1.75E-01	7.65E-01	3.39E-01	1.49	3.39E-01	1.49	3.39E-01	1.49	-	-	2.3E-05	1.0E-04
SSM	-	-	-	-	unspecified	24.48	-	-	-	-	-	-	-	-	-	-	-	-
F1	-	-	-	-	1.14	5.00	-	-	-	-	-	-	-	-	-	-	-	-
L1	-	-	-	-	37.12	3.90	-	-	-	-	-	-	-	-	-	-	-	-
M1	-	-	-	-	unspecified	10.00	-	-	-	-	-	-	-	-	-	-	-	-
T4	-	-	-	-	unspecified	258.11	-	-	-	-	-	-	-	-	-	-	-	-
T5	-	-	-	-	unspecified	w/T4	-	-	-	-	-	-	-	-	-	-	-	-
T6	-	-	-	-	unspecified	2.00	-	-	-	-	-	-	-	-	-	-	-	-
T12	-	-	-	-	unspecified	w/T6	-	-	-	-	-	-	-	-	-	-	-	-
Totals	26.60	115.90	14.70	63.90	39.09	306.99	2.85E-01	1.25	5.53E-01	2.43	5.53E-01	2.43	5.53E-01	2.43	-	-	2.3E-05	1.0E-04

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

Table 2-E: Requested Allowable Emissions

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

Unit No.	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	3.30	14.30	3.50	15.10	1.00E-01	4.00E-01	3.67E-02	1.61E-01	7.12E-02	3.12E-01	7.12E-02	3.12E-01	7.12E-02	3.12E-01	-	-	-	-
2	3.30	14.30	3.50	15.10	1.00E-01	4.00E-01	3.67E-02	1.61E-01	7.12E-02	3.12E-01	7.12E-02	3.12E-01	7.12E-02	3.12E-01	-	-	-	-
3	3.30	14.30	3.50	15.10	1.00E-01	4.00E-01	3.67E-02	1.61E-01	7.12E-02	3.12E-01	7.12E-02	3.12E-01	7.12E-02	3.12E-01	-	-	-	-
4	16.70	73.00	4.20	18.60	5.30E-01	2.30	1.75E-01	7.65E-01	3.39E-01	1.49	3.39E-01	1.49	3.39E-01	1.49	-	-	2.3E-05	1.0E-04
SSM	-	-	-	-	unspecified	24.48	-	-	-	-	-	-	-	-	-	-	-	-
F1	-	-	-	-	1.14	5.00	-	-	-	-	-	-	-	-	-	-	-	-
L1	-	-	-	-	37.12	3.90	-	-	-	-	-	-	-	-	-	-	-	-
M1	-	-	-	-	unspecified	10.00	-	-	-	-	-	-	-	-	-	-	-	-
T4	-	-	-	-	unspecified	193.60	-	-	-	-	-	-	-	-	-	-	-	-
T5	-	-	-	-	unspecified	w/T4	-	-	-	-	-	-	-	-	-	-	-	-
T6	-	-	-	-	unspecified	2.00	-	-	-	-	-	-	-	-	-	-	-	-
T12	-	-	-	-	unspecified	w/T6	-	-	-	-	-	-	-	-	-	-	-	-
Totals	26.60	115.90	14.70	63.90	39.09	242.48	2.85E-01	1.25	5.53E-01	2.43	5.53E-01	2.43	5.53E-01	2.43	-	-	2.28E-05	1.00E-04

¹ **Condensable Particulate Matter:** Include condensable particulate matter emissions for PM₁₀ and PM_{2.5} if the source is a combustion source. Do not include condensable particulate matter for PM unless PM is set equal to PM₁₀ and PM_{2.5}. Particulate matter (PM) is not subject to an ambient air quality standard, but it is a regulated air pollutant under PSD (20.2.74 NMAC) and Title V (20.2.70 NMAC).

Table 2-F: Additional Emissions during Startup, Shutdown, and Routine Maintenance (SSM)

□ This table is intentionally left blank since all emissions at this facility due to routine or predictable startup, shutdown, or 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 explanations 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).

[illegible]

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).

☒ 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.

[illegible]

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:

[illegible]

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.

[illegible]

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

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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.

[illegible]

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

[illegible]

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

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

Note: 1.00 bbl = 0.159 M³ = 42.0 gal

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]

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.

Table 2-P: Greenhouse Gas Emissions

Applications submitted under 20.2.70, 20.2.72, & 20.2.74 NMAC are required to complete this Table. Power plants, Title V major sources, and PSD major sources must report and calculate all GHG emissions for each unit. Applicants must report potential emission rates in short tons per year (see Section 6.a for assistance). Include GHG emissions during Startup, Shutdown, and Scheduled Maintenance in this table. For minor source facilities that are not power plants, are not Title V, or are not PSD, there are three options for reporting GHGs 1) report GHGs for each individual piece of equipment; 2) report all GHGs from a group of unit types, for example report all combustion source GHGs as a single unit and all venting GHG as a second separate unit; OR 3) check the following box ☐ By checking this box, the applicant acknowledges the total CO₂e emissions are less than 75,000 tons per year.

		CO ₂ ton/yr	N 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.	GWP _s ¹	1	298	25	22,800	footnote 3										
1	mass GHG	7,555.67	1.42E-02	1.43E-01											7,555.83	-
	CO ₂ e	7,555.67	4.23	3.56											-	7,563.46
2	mass GHG	7,555.67	1.42E-02	1.43E-01											7555.8267	-
	CO ₂ e	7,555.67	4.23	3.56											-	7563.4641
3	mass GHG	7,555.67	1.42E-02	1.43E-01											7555.8267	-
	CO ₂ e	7,555.67	4.23	3.56											-	7563.4641
4	mass GHG	20,508.26	3.87E-02	3.87E-01											20508.686	-
	CO ₂ e	20,508.26	11.53	9.68											-	20529.468
5	mass GHG	63.73	5.17E-04	2.59E-03											63.733107	-
	CO ₂ e	63.73	1.54E-01	6.48E-02											-	63.948816
6	mass GHG	289.73	5.46E-04	5.46E-03											289.73601	-
	CO ₂ e	289.73	1.63E-01	1.37E-01											-	290.02921
7	mass GHG	2.84	5.35E-06	5.35E-05											2.8400589	-
	CO ₂ e	2.84	1.59E-03	1.34E-03											-	2.8429318
SSM	mass GHG	44.26	-	703.55											747.81	-
	CO ₂ e	44.26	-	17,588.75											-	17633.01
PR	mass GHG	1.39E-01	-	2.21											2.349	-
	CO ₂ e	1.39E-01	-	55.25											-	55.389
F1	mass GHG	1.38	-	21.84											23.215	-
	CO ₂ e	1.38	-	546.00											-	547.375
L1	mass GHG	-	-	-											-	-
	CO ₂ e	-	-	-											-	-
M1	mass GHG	3.14	-	49.81											52.95	-
	CO ₂ e	3.14	-	1,245.25											-	1248.39
T4	mass GHG	2.65	-	10.26											12.91	-
	CO ₂ e	2.65	-	256.50											-	259.15

Table 2-P: Greenhouse Gas Emissions

Applications submitted under 20.2.70, 20.2.72, & 20.2.74 NMAC are required to complete this Table. Power plants, Title V major sources, and PSD major sources must report and calculate all GHG emissions for each unit. Applicants must report potential emission rates in short tons per year (see Section 6.a for assistance). Include GHG emissions during Startup, Shutdown, and Scheduled Maintenance in this table. For minor source facilities that are not power plants, are not Title V, or are not PSD, there are three options for reporting GHGs 1) report GHGs for each individual piece of equipment; 2) report all GHGs from a group of unit types, for example report all combustion source GHGs as a single unit and all venting GHG as a second separate unit; OR 3) check the following box ☐ By checking this box, the applicant acknowledges the total CO₂e emissions are less than 75,000 tons per year.

		CO ₂ ton/yr	N 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										
T5	mass GHG	2.38	-	9.23											11.61	-
	CO ₂ e	2.38	-	230.75											-	233.13
T6	mass GHG	-	-	-											-	-
	CO ₂ e	-	-	-											-	-
T12	mass GHG	-	-	-											-	-
	CO ₂ e	-	-	-											-	-
Totals	mass GHG	43,585.51	8.24E-02	797.72											44,383.32	-
	CO ₂ e	43,585.51	24.55	19,943.07											-	63,553.12

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

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

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

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

⁵ 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 ("HFC") Chaco Compressor Station currently operates under a construction permit issued by the NMAQB, 0759-M6, dated October 12, 2018 and a Title V operating permit, P236-R3, dated April 22, 2026.

The facility is currently approved by the Title V operating permit to operate the following equipment/sources:

- Two Solar Saturn 10-1001 natural gas-fired turbines (Units 1 & 2);
- One Solar Saturn 10-1202 natural gas-fired turbine (Unit 3);
- One Solar Centaur 40-4002 natural gas-fired turbine (Unit 4);
- One Detroit Diesel standby generator (Unit 5), an exempt source;
- Truck loading emissions (Unit L1);
- SSM emissions from the turbines, compressors and piping associated with the station (Units 1a-4a);
- Malfunction emissions (Unit M1);
- One 500 bbl condensate storage tank (Unit T4);
- One 450 bbl condensate storage tank (Unit T5);
- One 45 bbl produced water storage tank (Unit T6);
- One 70 bbl produced water storage tank (Unit T12); and
- One pig receiver (Unit PR), an exempt source.

The station is also equipped with two heaters (Units 6 & 7) and miscellaneous liquid storage tanks (Units T1-T3, T7, T8, & T11). The heaters and miscellaneous storage tanks are exempt sources. The truck loading of produced water is also an exempt activity.

Note that though the standby generator (Unit 5) is an exempt source for the purpose of the construction permit (it operates less than 500 hours per year and only during the loss of commercial utility power), it is a significant source for the purpose of the Title V permit (there are applicable NMAC and Subpart ZZZZ requirements). Therefore, in this Title V application, Unit 5 is included in Table 2-A, rather than Table 2-B. As there are no emission limits for the generator in the construction permit, Unit 5 is not included in any of the other tables, except Table 2-I. The generator is included in Table 2-I, because the instructions above that table specifically state all sources listed in Table 2-A must be included.

This application is being submitted to renew the Title V operating permit. The applicable regulation is 20.2.70 NMAC. The lowest level regulatory citation is 20.2.70.300.B(2) NMAC.

Startup, Shutdown and Maintenance Emissions

For the turbine combustion emissions, equipment leaks (valves, connectors, seals, etc.), truck loading, malfunctions, and storage tanks, it is concluded there are no SSM emissions in excess of those identified for steadystate operation as seen in Section 2, Table 2-E. Discussions justifying this conclusion are provided in Section 6. Blowdown SSM emissions from turbines, compressors and piping associated with the plant are calculated from the quantity of gas vented during each event, the composition of the gas, and the number of events.

Alternate Operating Scenarios

This current permit includes an alternate operating scenario (AOS) with increased tank throughput and VRU. This AOS has not been implemented and a request to remove the AOS from the permit is included in this application.

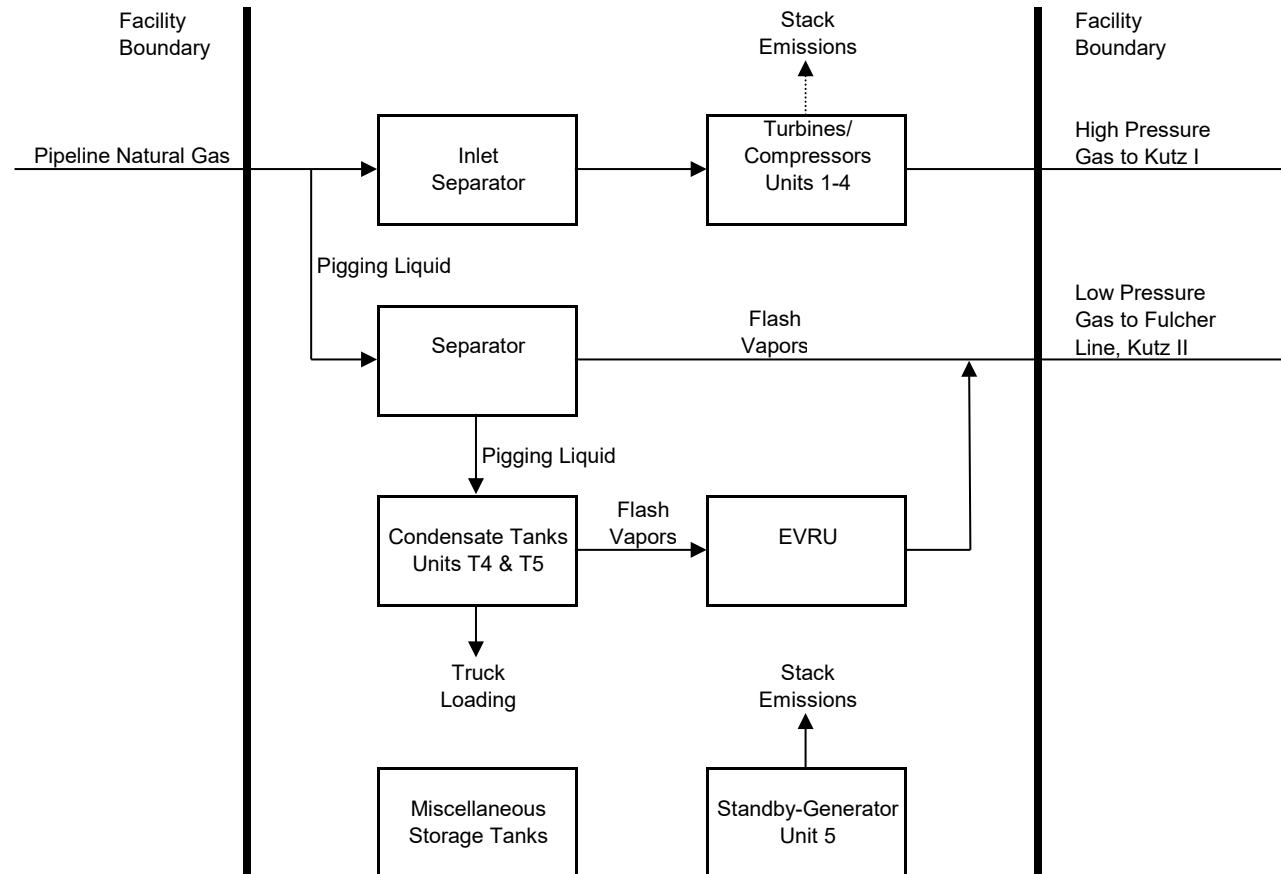
Section 4

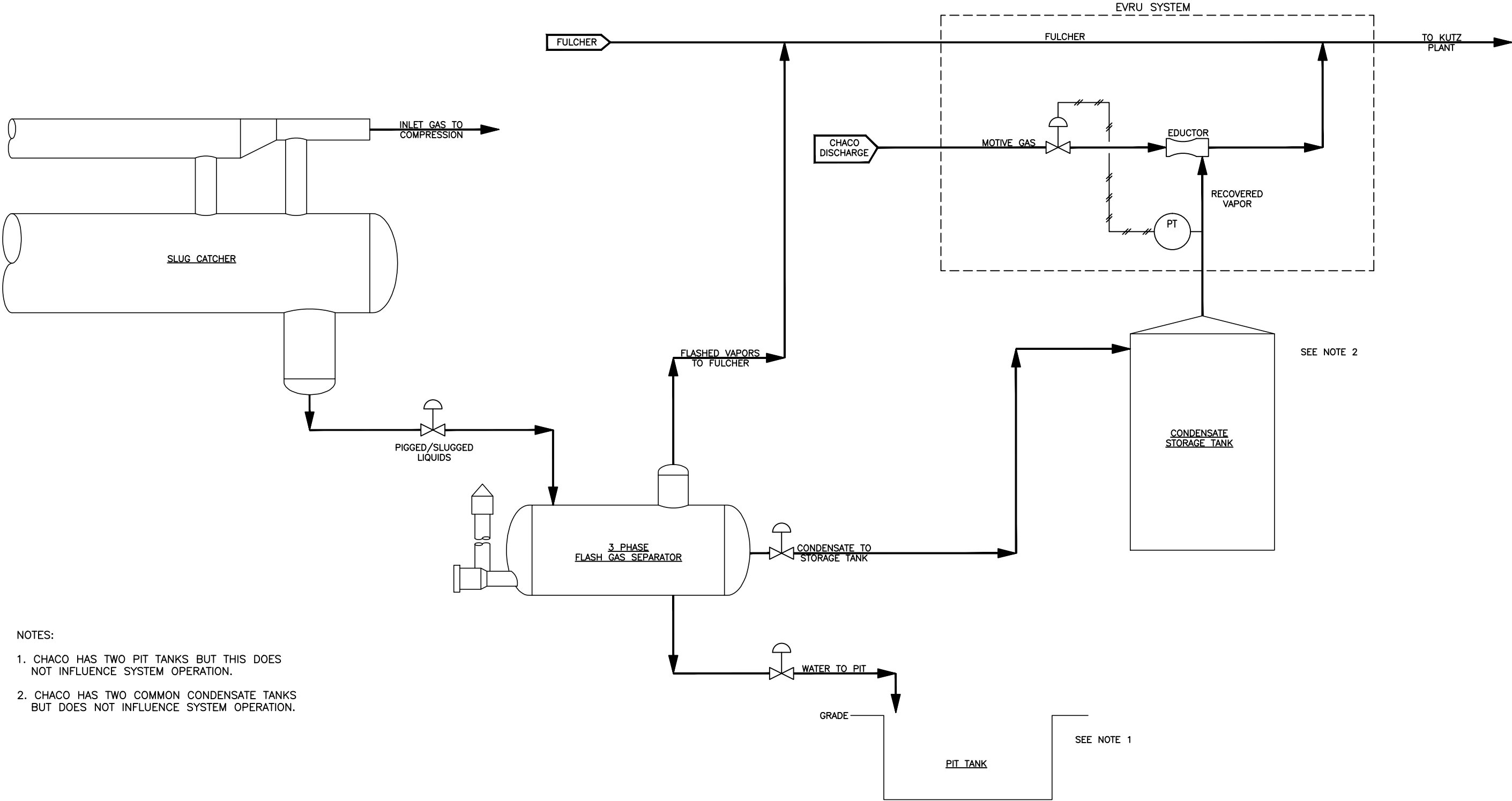
Process Flow Sheet

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.

A process flow diagram is provided in this section.

Flow Diagram





- NOTES:
- 1. CHACO HAS TWO PIT TANKS BUT THIS DOES NOT INFLUENCE SYSTEM OPERATION.
 - 2. CHACO HAS TWO COMMON CONDENSATE TANKS BUT DOES NOT INFLUENCE SYSTEM OPERATION.

NOTES:

..		..							WILLIAMS MIDSTREAM GAS & LIQUIDS		
..	..								CHACO AND BLANCO/HARE EVRU SYSTEMS PROCESS FLOW DIAGRAM		
..	..										
..	..										
..	..							DRAWN BY	T. GOOSSEN	SCALE:	A.F.E.:
..	..							CHECKED BY			
..	..							PROJECT ENG.	J.E.		
..	..							APPROVED BY			
..	..							DATE ISSUED	11/20/2013	0	
DRAWING NO.	TITLE			REV	DRAWN BY	DATE REVISED	CHECKED BY	PROJECT ENG.	APPROVED BY		
REFERENCE DRAWINGS				REVISIONS							

Section 5

Plot Plan Drawn to Scale

A **plot plan drawn to scale** showing emissions points, roads, structures, tanks, and fences of property owned, leased, or under direct control of the applicant. This plot plan must clearly designate the restricted area as defined in UA1, Section 1-D.12. The unit numbering system should be consistent throughout this application.

A plot plan is provided in this section. Please see the following page.

FIGURE 2

FACILITY LAYOUT MAP
WILLIAMS FOUR CORNERS LLC
CHACO FACILITY
SW¼ SE¼, SECTION 27, T29N, R11W
SAN JUAN COUNTY, NEW MEXICO
N36.69021, W107.97843



DRAWN BY:
C. Lameman

DATE DRAWN:
August 29, 2013

REVISIONS BY:
C. Lameman

DATE REVISED:
August 29, 2013

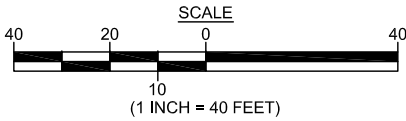
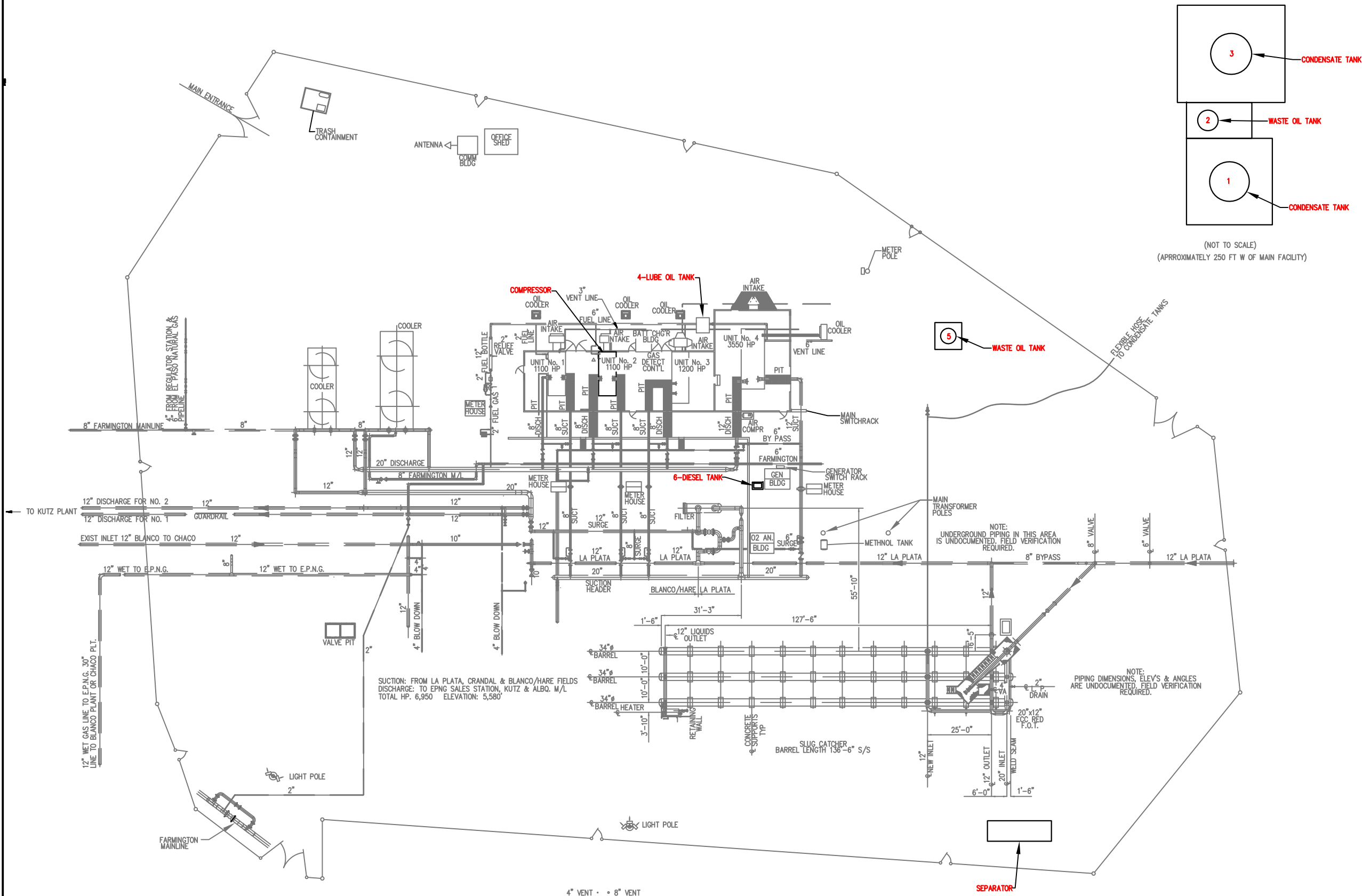
CHECKED BY:
R. Kennemer

DATE CHECKED:
August 29, 2013

APPROVED BY:
E. McNally

DATE APPROVED:
August 29, 2013

NOTE: SITE DIAGRAM OBTAINED FROM WILLIAMS.



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.

THIS PERMIT RENEWAL REQUESTS NO MODIFICATIONS TO EXISTING APPROVED EMISSIONS CALCULATIONS, METHODOLOGIES, EQUIPMENT OPERATION, OR THROUGHPUTS.

Turbines

The nitrogen oxide (NO_x), carbon monoxide (CO), and volatile organic compound (VOC) combustion emissions from the turbines (Units 1-4) are taken from previous applications and permits. SO₂ and particulate combustion emissions are calculated using the AP-42 emission factors from Table 3.1-2a. Hazardous air pollutant (HAP) combustion emissions are calculated using GRI-HAPCalc 3.0. Emissions are calculated assuming each turbine operates at full site capacity for 8,760 hours per year.

The turbines startup with no load and a rich fuel mixture. As a result, combustion emissions are minimized. Because the turbines take only minutes to reach operating temperature, combustion emissions during startup are not expected to exceed the steady-state allowable limits. Similarly, because fuel and air flow cease within seconds of shutdown, combustion emissions during shutdown do not exceed the steady-state allowable limits. Combustion emissions due to scheduled maintenance are negligible as the turbines are not in operation during maintenance.

Reciprocating Engine

Criteria pollutant and HAP emissions from the Detroit Diesel standby generator engine (Unit 5) are calculated using AP-42 emission factors from Tables 3.3-1 and 3.3-2. Since the unit will operate less than 500 hours per year and only during the loss of commercial utility power, it is an exempt source in accordance with 20.2.72.202.B.3 NMAC.

Heaters

Combustion emissions from the heaters (Units 6 & 7) are calculated using the AP-42 emission factors from Tables 1.4-1 and 1.4-2. It is assumed each heater will operate at full capacity for 8,760 hours per year. As criteria pollutant emissions are all less than 0.5 tpy, the heaters are exempt under 20.2.72.202.B.5 NMAC.

SSM (Turbines, Compressors and Piping)

SSM emissions from the turbines (Unit SSM) result from the blowdown of motive gas used to drive turbine components during startup and shutdown. SSM emissions from the compressors and piping associated with the station occur during startup and shutdown of the compressors. High pressure gas is used to purge air from the compressors and associated piping at startup and this gas is then vented to atmosphere. After shutdown, high pressure gas in the compressors and associated piping is released to atmosphere as a safety precaution. VOC and HAP emissions from blowdowns of the turbines, compressors and associated piping at the station are calculated from the quantity of gas vented during each event, the composition of the gas, and the number of events. The quantity of gas vented during each event is determined by HFC engineering. The composition of the gas is determined from an extended gas analysis. For each turbine and compressor, the annual number of blowdown events is estimated based on historical operations. A safety factor is added because VOC and HAP emissions from each blowdown event are dependent on the composition of the gas in the pipeline. 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 scheduled maintenance and do not include malfunctions or upsets.

Equipment Leaks

Equipment leaks (Unit F1) emissions are calculated using emission factors from Table 2.4 of the 1995 Protocol for Equipment Leak Emission Estimates published by the EPA. The component count is determined from the number of compressors and dehydrators permitted to operate at the station, using an equation derived by HFC that is representative of their facilities. Emissions are calculated assuming the equipment operates 8,760 hours per year.

To allow for variability in the composition of the inlet gas stream, the emission rates identified on the application forms are higher than the calculated emissions. Due to the nature of the source, it is estimated that SSM emissions from valves, connectors, seals, etc. are accounted for in the calculations.

Truck Loading

VOC emissions from the truck loading of condensate (Unit L1) are calculated using the AP-42 emissions factor identified in Section 5.2-1. Data used to calculate the emission factor are obtained from the TANKS 4 (condensate) output file. Condensate throughput is obtained from the ProMax results used to calculate the condensate storage tank flash emissions. HAP emissions are identified as percentages of the VOC emission rate, based on percentages calculated from the TANKS 4 results produced to estimate the condensate storage tank working/breathing losses.

VOC emissions from the truck loading of produced water (Unit L2) are also calculated using the AP-42 emissions factor identified in Section 5.2-1. Since produced water is water with trace amounts of hydrocarbons, the emission factor was calculated using the true vapor pressure and vapor molecular weight for pure water. The tank water temperature was estimated. The produced water throughput is provided by HFC. The HAP emission rates are percentages of the VOC emission rate, estimated from the ratio of the HAP produced water tank emission factors divided by the VOC produced water tank emission factor. Due to the nature of the source, it is estimated that SSM emissions from truck loading are accounted for in the calculations.

Unit L2 is exempt under 20.2.72.202.B.5 NMAC.

Pig Receiver

VOC and HAP emissions from the pig receiver (Unit PR) are calculated from the quantity of gas vented during each event, the composition of the gas, and the number of events. The quantity of gas vented during each event is determined by HFC engineering. The composition of the gas is determined from an extended gas analysis. The annual number of blowdown events is estimated based on historical operations. A safety factor is added because VOC and HAP emissions from each blowdown event are dependent on the composition of the gas in the pipeline and because the number of blowdowns in a year may vary. Due to the nature of the source, it is estimated that SSM emissions from pig receiver are accounted for in the calculations. As VOC emissions are less than 0.5 tpy, Unit PR is exempt under 20.2.72.202.B.5 NMAC.

Malfunctions

Malfunction (Unit M1) emissions are set at 10.0 tons of VOC per year to account for emissions that may occur during upsets and malfunctions (including, but not limited to, unscheduled blowdowns and relief valve release). Based on the gas release rate associated with this set VOC emission rate, HAP emissions are calculated using facility gas composition. Note that these malfunction emissions include the venting of gas only, not combustion emissions.

Storage Tanks

Emissions from the condensate storage tanks (T4 & T5) are calculated using TANKS 4.0.9d for working/breathing losses and ProMax for flash emissions. Emissions are calculated using the condensate (post-flash) throughput of 45,000 barrels per year. It is estimated the separator and EVRU combined will reduce flash emissions by approximately 48 percent. It is estimated the EVRU will reduce working/breathing losses by approximately 25 percent.

Where required, VOC and HAP emissions (working/breathing losses) from the remaining storage tanks are calculated using TANKS 4.0.9d. The following assumptions are made for the emissions calculations:

- Residual oil #6 is used to estimate lubrication oil and used lubrication oil emissions. As the vapor pressure of residual oil is less than 10 mm Hg, the tanks containing lubrication oil (Unit T1) and used lubrication oil (Unit T2) are exempt in accordance with 20.2.72.202.B.2 NMAC; and
- Distillate fuel oil #2 is used to estimate diesel fuel emissions. As the vapor pressure of distillate fuel oil #2 is less than 10 mm Hg, the tank containing diesel fuel (Unit T3) is exempt in accordance with 20.2.72.202.B.2 NMAC.

Methanol emissions from Unit T7 (the largest of the methanol storage tanks with a capacity of 500 gallons) are calculated at 36.3 pounds per year. Assuming emissions from each of the three remaining methanol tanks are equal to those of Unit T7, combined emissions from the four tanks are less than 0.5 tpy. As such, the methanol storage tanks are exempt sources in accordance with 20.2.72.202.B.5 NMAC.

Due to the nature of operations, startup and shutdown emissions (working/breathing losses) from the storage tanks are assumed to be accounted for in the TANKS 4 and ProMax programs. Emissions due to maintenance are negligible as the units are not in operation.

Facility Total Projected Emissions (Criteria Pollutants)

Company: **Harvest Four Corners, LLC**

Facility: **Chaco Compressor Station**

Date/Rev: **April 2026 / Revision 0**

Unit Number	Description	NOX,		CO,		VOC,		SOX,		TSP,		PM10,		PM2.5,	
		pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy
1	Solar Saturn 10-1001	3.30	14.30	3.50	15.10	1.00E-01	4.00E-01	3.67E-02	1.61E-01	7.12E-02	3.12E-01	7.12E-02	3.12E-01	7.12E-02	3.12E-01
2	Solar Saturn 10-1001	3.30	14.30	3.50	15.10	1.00E-01	4.00E-01	3.67E-02	1.61E-01	7.12E-02	3.12E-01	7.12E-02	3.12E-01	7.12E-02	3.12E-01
3	Solar Saturn 10-1202	3.30	14.30	3.50	15.10	1.00E-01	4.00E-01	3.67E-02	1.61E-01	7.12E-02	3.12E-01	7.12E-02	3.12E-01	7.12E-02	3.12E-01
4	Solar Centaur 40-4002	16.70	73.00	4.20	18.60	5.30E-01	2.30	1.75E-01	7.65E-01	3.39E-01	1.49	3.39E-01	1.49	3.39E-01	1.49
SSM	SSM	-	-	-	-	-	24.48	-	-	-	-	-	-	-	-
F1	Equipment Leaks	-	-	-	-	9.34E-01	4.20	-	-	-	-	-	-	-	-
L1	Truck Loading (Condensate)	-	-	-	-	37.12	3.90	-	-	-	-	-	-	-	-
M1	Malfunctions	-	-	-	-	-	10.00	-	-	-	-	-	-	-	-
T4	Condensate Tank	-	-	-	-	-	101.81	-	-	-	-	-	-	-	-
T5	Condensate Tank	-	-	-	-	-	91.79	-	-	-	-	-	-	-	-
T6	Produced Water Tank	-	-	-	-	-	7.69E-01	-	-	-	-	-	-	-	-
T12	Produced Water Tank	-	-	-	-	-	1.20	-	-	-	-	-	-	-	-
Total		26.60	115.90	14.70	63.90	38.88	241.65	2.85E-01	1.25	5.53E-01	2.42	5.53E-01	2.42	5.53E-01	2.42

Facility Total Projected Emissions (HAPs)

Company: Harvest Four Corners, LLC

Facility: Chaco Compressor Station

Date/Rev: April 2026 / Revision 0

Unit Number	Description	Total HAPs,		1,3-Butadiene,		Acetaldehyde,		Acrolein,		Benzene,		Biphenyl,	
		pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy
1	Solar Saturn 10-1001	8.93E-02	3.91E-01	1.37E-04	6.00E-04	3.73E-02	1.63E-01	5.48E-04	2.40E-03	1.16E-03	5.10E-03	7.08E-04	3.10E-03
2	Solar Saturn 10-1001	8.93E-02	3.91E-01	1.37E-04	6.00E-04	3.73E-02	1.63E-01	5.48E-04	2.40E-03	1.16E-03	5.10E-03	7.08E-04	3.10E-03
3	Solar Saturn 10-1202	8.93E-02	3.91E-01	1.37E-04	6.00E-04	3.73E-02	1.63E-01	5.48E-04	2.40E-03	1.16E-03	5.10E-03	7.08E-04	3.10E-03
4	Solar Centaur 40-4002	2.95E-01	1.29	4.34E-04	1.90E-03	1.23E-01	5.39E-01	1.85E-03	8.10E-03	3.81E-03	1.67E-02	2.35E-03	1.03E-02
SSM	SSM		5.73E-01								6.23E-02		
F1	Equipment Leaks	2.25E-02	9.87E-02							2.44E-03	1.07E-02		
L1	Truck Loading (Condensate)	3.61	3.79E-01							2.06E-01	2.17E-02		
M1	Malfunctions		2.41E-01								2.62E-02		
T4	Condensate Tank		8.09								6.50E-01		
T5	Condensate Tank		7.29								5.86E-01		
T6	Produced Water Tank		1.31E-01								2.05E-02		
T12	Produced Water Tank		2.04E-01								3.20E-02		
Total		4.19	19.47	8.45E-04	3.70E-03	2.35E-01	1.03	3.49E-03	1.53E-02	2.16E-01	1.44	4.47E-03	1.96E-02

Chromium,		Ethylbenzene,		Formaldehyde,		n-Hexane,		Isooctane		Manganese,		Mercury,		Naphthalene,	
pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy
4.57E-05	2.00E-04	2.28E-04	1.00E-03	3.64E-02	1.60E-01	3.24E-03	1.42E-02	3.45E-03	1.51E-02	4.57E-05	2.00E-04	2.28E-05	1.00E-04	2.28E-05	1.00E-04
4.57E-05	2.00E-04	2.28E-04	1.00E-03	3.64E-02	1.60E-01	3.24E-03	1.42E-02	3.45E-03	1.51E-02	4.57E-05	2.00E-04			2.28E-05	1.00E-04
4.57E-05	2.00E-04	2.28E-04	1.00E-03	3.64E-02	1.60E-01	3.24E-03	1.42E-02	3.45E-03	1.51E-02	4.57E-05	2.00E-04			2.28E-05	1.00E-04
1.14E-04	5.00E-04	7.31E-04	3.20E-03	1.20E-01	5.27E-01	1.07E-02	4.68E-02	1.14E-02	4.99E-02	1.14E-04	5.00E-04			4.57E-05	2.00E-04
			9.40E-04				4.30E-01		8.88E-03						
		3.69E-05	1.62E-04			1.69E-02	7.38E-02	3.97E-04	1.74E-03						
		6.38E-03	6.70E-04			3.08	3.23E-01	1.12E-02	1.18E-03						
			3.95E-04				1.80E-01		3.73E-03						
			1.81E-02				6.47E+00		2.40E-02						
			1.64E-02				5.84E+00		2.16E-02						
			2.05E-03				6.46E-02								
			3.20E-03				1.00E-01								
2.51E-04	1.10E-03	7.83E-03	4.81E-02	2.29E-01	1.01	3.12	13.57	3.33E-02	1.56E-01	2.51E-04	1.10E-03	2.28E-05	1.00E-04	1.14E-04	5.00E-04

Nickel,		Phenol,		Phosphorous,		Propionaldehyde,		Propylene Oxide,		Toluene,		Xylenes,	
pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy
2.28E-05	1.00E-04	2.28E-04	1.00E-03	1.37E-04	6.00E-04	1.85E-03	8.10E-03	2.74E-04	1.20E-03	8.90E-04	3.90E-03	2.67E-03	1.17E-02
2.28E-05	1.00E-04	2.28E-04	1.00E-03	1.37E-04	6.00E-04	1.85E-03	8.10E-03	2.74E-04	1.20E-03	8.90E-04	3.90E-03	2.67E-03	1.17E-02
2.28E-05	1.00E-04	2.28E-04	1.00E-03	1.37E-04	6.00E-04	1.85E-03	8.10E-03	2.74E-04	1.20E-03	8.90E-04	3.90E-03	2.67E-03	1.17E-02
4.57E-05	2.00E-04	7.76E-04	3.40E-03	4.57E-04	2.00E-03	6.14E-03	2.69E-02	8.90E-04	3.90E-03	2.92E-03	1.28E-02	8.84E-03	3.87E-02
											6.20E-02		9.40E-03
										2.43E-03	1.07E-02	3.69E-04	1.62E-03
										2.56E-01	2.69E-02	4.76E-02	5.00E-03
											2.60E-02		3.95E-03
											7.70E-01		1.54E-01
											6.94E-01		1.39E-01
											2.64E-02		1.76E-02
											4.11E-02		2.74E-02
1.14E-04	5.00E-04	1.46E-03	6.40E-03	8.68E-04	3.80E-03	1.17E-02	5.12E-02	1.71E-03	7.50E-03	2.64E-01	1.68	6.48E-02	4.31E-01

Turbine Exhaust Emissions Calculations

Unit Number: **1 & 2**
 Description: Solar Saturn 10-1001

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

Horsepower Calculations

5,575 ft above MSL

1,200 hp

976 hp

894 hp

Elevation

Nameplate hp

NMAQB Site-rated hp

Mfg. Site-rated hp

Mfg. data

NMAQB Procedure # 02.002-00

(Nameplate hp x [29.9 - (ft above MSL / 1000)] / 29.9)

Mfg. data

Fuel Consumption

105.00 MMscf/yr

900.00 Btu/scf

94,500.00 MMBtu/yr

8,760 hr/yr

11,986.30 scf/hr

10.79 MMBtu/hr

Annual fuel consumption

Field gas heating value

Annual fuel consumption

Annual operating time

Hourly fuel consumption

Hourly fuel consumption

2004 Title V permit application

Nominal heat content

MMscf/yr x (1,000,000 scf/MMscf) x Btu/scf / (1,000,000 Btu/MMBtu)

Harvest Four Corners, LLC

MMscf/yr x (1,000,000 scf/MMscf) / hr/yr

MMBtu/yr / hr/yr

Steady-State Emission Rates

Pollutants	Uncontrolled Emission Rates,	
	pph	tpy
NOX	3.30	14.30
CO	3.50	15.10
VOC	1.00E-01	4.00E-01

Emission rates taken from the current construction permit

Pollutants	Emission Factors, lb/MMBtu	Uncontrolled Emission Rates,	
		pph	tpy
SO2	3.40E-03	3.67E-02	1.61E-01
PM	6.60E-03	7.12E-02	3.12E-01
PM10	6.60E-03	7.12E-02	3.12E-01
PM2.5	6.60E-03	7.12E-02	3.12E-01

Emission factors taken from AP-42, Table 3.1-2a

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

819 °F

29,160 cfm

1.50 ft

1.77 ft^2

275.02 fps

22.00 ft

Exhaust temperature

Stack flowrate

Stack exit diameter

Stack exit area

Stack exit velocity

Stack height

2004 Title V permit application

2004 Title V permit application

Harvest Four Corners, LLC

3.1416 x ((ft / 2) ^2)

acfm / ft^2 / 60 sec/min

Harvest Four Corners, LLC

Turbine Exhaust Emissions Calculations

Unit Number: **3**
 Description: Solar Saturn 10-1202

Horsepower Calculations

5,575 ft above MSL

1,200 hp

976 hp

976 hp

Elevation

Nameplate hp

NMAQB Site-rated hp

Mfg. Site-rated hp

Mfg. data

NMAQB Procedure # 02.002-00

(Nameplate hp x [29.9 - (ft above MSL / 1000)] / 29.9)

Mfg. data

Fuel Consumption

105.00 MMscf/yr

900.00 Btu/scf

94,500.00 MMBtu/yr

8,760 hr/yr

11,986.30 scf/hr

10.79 MMBtu/hr

Annual fuel consumption

Field gas heating value

Annual fuel consumption

Annual operating time

Hourly fuel consumption

Hourly fuel consumption

2004 Title V permit application

Nominal heat content

MMscf/yr x (1,000,000 scf/MMscf) x Btu/scf / (1,000,000 Btu/MMBtu)

Harvest Four Corners, LLC

MMscf/yr x (1,000,000 scf/MMscf) / hr/yr

MMBtu/yr / hr/yr

Steady-State Emission Rates

Pollutants	Uncontrolled Emission Rates,	
	pph	tpy
NOX	3.30	14.30
CO	3.50	15.10
VOC	1.00E-01	4.00E-01

Emission rates taken from the current construction permit

Pollutants	Emission Factors, lb/MMBtu	Uncontrolled Emission Rates,	
		pph	tpy
SO2	3.40E-03	3.67E-02	1.61E-01
PM	6.60E-03	7.12E-02	3.12E-01
PM10	6.60E-03	7.12E-02	3.12E-01
PM2.5	6.60E-03	7.12E-02	3.12E-01

Emission factors taken from AP-42, Table 3.1-2a

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

794 °F

28,416 cfm

1.50 ft

1.77 ft²

268.00 fps

22.00 ft

Exhaust temperature

Stack flowrate

Stack exit diameter

Stack exit area

Stack exit velocity

Stack height

2004 Title V permit application

2004 Title V permit application

Harvest Four Corners, LLC

3.1416 x ((ft / 2) ^2)

acfm / ft² / 60 sec/min

Harvest Four Corners, LLC

Turbine Exhaust Emissions Calculations

Unit Number: **4**
 Description: Solar Centaur 40-4002

Horsepower Calculations

5,575 ft above MSL
3,961 hp
 3,222 hp

Elevation
 Nameplate hp
 NMAQB Site-rated hp

Mfg. data
 NMAQB Procedure # 02.002-00
 (Nameplate hp x [29.9 - (ft above MSL
 / 1000)] / 29.9)
 Mfg. data

3,115 hp

Mfg. Site-rated hp

Fuel Consumption

500.00 MMscf/yr
900.00 Btu/scf
 450,000.00 MMBtu/yr

Annual fuel consumption
 Field gas heating value
 Annual fuel consumption

8,760 hr/yr
 57,077.63 scf/hr
 51.37 MMBtu/hr

Annual operating time
 Hourly fuel consumption
 Hourly fuel consumption

2004 Title V permit application
 Nominal heat content
 MMscf/yr x (1,000,000 scf/MMscf) x Btu/scf
 / (1,000,000 Btu/MMBtu)
 Harvest Four Corners, LLC
 MMscf/yr x (1,000,000 scf/MMscf) / hr/yr
 MMBtu/yr / hr/yr

Steady-State Emission Rates

Pollutants	Uncontrolled Emission Rates,	
	pph	tpy
NOX	16.70	73.00
CO	4.20	18.60
VOC	5.30E-01	2.30

Emission rates taken from the current construction permit

Pollutants	Emission Factors, lb/MMBtu	Uncontrolled Emission Rates,	
		pph	tpy
SO2	3.40E-03	1.75E-01	7.65E-01
PM	6.60E-03	3.39E-01	1.49
PM10	6.60E-03	3.39E-01	1.49
PM2.5	6.60E-03	3.39E-01	1.49

Emission factors taken from AP-42, Table 3.1-2a

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

824 °F
82,758 cfm
2.50 ft
 4.91 ft²
 280.99 fps
22.00 ft

Exhaust temperature
 Stack flowrate
 Stack exit diameter
 Stack exit area
 Stack exit velocity
 Stack height

2004 Title V permit application
 2004 Title V permit application
 Harvest Four Corners, LLC
 $3.1416 \times ((ft / 2) ^2)$
 acfm / ft² / 60 sec/min
 Harvest Four Corners, LLC

GRI-HAPCalc® 3.0
Turbine Report

Facility ID: CHACO
Operation Type: COMPRESSOR STATION
Facility Name: CHACO COMPRESSOR STATION
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".

Turbine Unit

Unit Name: 10-1001

Hours of Operation: 8,760 Yearly
Rate Power: 976 hp
Fuel Type: NATURAL GAS
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			
Formaldehyde	0.1595	0.01693680 g/bhp-hr	GRI Field
Acetaldehyde	0.1632	0.01733570 g/bhp-hr	GRI Field
1,3-Butadiene	0.0006	0.00006160 g/bhp-hr	GRI Field
Acrolein	0.0024	0.00026000 g/bhp-hr	GRI Field
Propional	0.0081	0.00086500 g/bhp-hr	GRI Field
Propylene Oxide	0.0012	0.00012480 g/bhp-hr	EPA
n-Nitrosodimethylamine	0.0000	0.00000100 g/bhp-hr	EPA
Benzene	0.0051	0.00053840 g/bhp-hr	GRI Field
Toluene	0.0039	0.00041100 g/bhp-hr	GRI Field
Ethylbenzene	0.0010	0.00010330 g/bhp-hr	EPA
Xylenes(m,p,o)	0.0117	0.00124410 g/bhp-hr	GRI Field
2,2,4-Trimethylpentane	0.0151	0.00160530 g/bhp-hr	GRI Field
n-Hexane	0.0142	0.00150580 g/bhp-hr	GRI Field
Phenol	0.0010	0.00011010 g/bhp-hr	GRI Field
n-Nitrosomorpholine	0.0000	0.00000100 g/bhp-hr	EPA
Naphthalene	0.0001	0.00000760 g/bhp-hr	GRI Field
2-Methylnaphthalene	0.0000	0.00000130 g/bhp-hr	GRI Field
Biphenyl	0.0031	0.00033050 g/bhp-hr	GRI Field
Phenanthrene	0.0000	0.00000050 g/bhp-hr	GRI Field
Chrysene	0.0000	0.00000100 g/bhp-hr	GRI Field
Beryllium	0.0000	0.00000010 g/bhp-hr	GRI Field
Phosphorous	0.0006	0.00006520 g/bhp-hr	GRI Field
Chromium	0.0001	0.00000820 g/bhp-hr	GRI Field
Chromium	0.0001	0.00000560 g/bhp-hr	EPA
Manganese	0.0002	0.00001750 g/bhp-hr	GRI Field
Nickel	0.0001	0.00000610 g/bhp-hr	GRI Field
Cobalt	0.0000	0.00000160 g/bhp-hr	GRI Field

Arsenic	0.0000	0.00000060 g/bhp-hr	GRI Field
Selenium	0.0000	0.00000030 g/bhp-hr	GRI Field
Cadmium	0.0000	0.00000020 g/bhp-hr	GRI Field
Mercury	0.0000	0.00000270 g/bhp-hr	GRI Field
Lead	0.0000	0.00000340 g/bhp-hr	GRI Field

Total 0.3913

Criteria Pollutants

PM	0.2999	0.03184680 g/bhp-hr	EPA
CO	19.8517	2.10828420 g/bhp-hr	GRI Field
NMHC	1.8256	0.19387800 g/bhp-hr	GRI Field
NMEHC	0.1135	0.01205010 g/bhp-hr	EPA
NOx	11.7904	1.25216290 g/bhp-hr	GRI Field
SO2	0.0097	0.00102720 g/bhp-hr	GRI Field

Other Pollutants

Methane	9.2954	0.98719230 g/bhp-hr	GRI Field
Acetylene	0.0675	0.00716540 g/bhp-hr	GRI Field
Ethylene	0.1314	0.01395450 g/bhp-hr	GRI Field
Ethane	1.4132	0.15008370 g/bhp-hr	GRI Field
Propane	0.1507	0.01600000 g/bhp-hr	GRI Field
Isobutane	0.0452	0.00480000 g/bhp-hr	GRI Field
Butane	0.0490	0.00520000 g/bhp-hr	GRI Field
Trimethylamine	0.0000	0.00000070 g/bhp-hr	EPA
Cyclopentane	0.0155	0.00165110 g/bhp-hr	GRI Field
Butyrald/Isobutyraldehyde	0.0126	0.00134000 g/bhp-hr	GRI Field
n-Pentane	0.7641	0.08115000 g/bhp-hr	GRI Field
Cyclohexane	0.0577	0.00612400 g/bhp-hr	GRI Field
Methylcyclohexane	0.0832	0.00883120 g/bhp-hr	GRI Field
n-Octane	0.0300	0.00318890 g/bhp-hr	GRI Field
1,3,5-Trimethylbenzene	0.0282	0.00300000 g/bhp-hr	GRI Field
n-Nonane	0.0050	0.00053260 g/bhp-hr	GRI Field
CO2	4,457.5333	473.39811550 g/bhp-hr	EPA
Vanadium	0.0000	0.00000070 g/bhp-hr	GRI Field
Copper	0.0002	0.00002050 g/bhp-hr	GRI Field
Molybdenum	0.0002	0.00002030 g/bhp-hr	GRI Field
Barium	0.0002	0.00002290 g/bhp-hr	GRI Field

Unit Name: 10-1202

Hours of Operation: 8,760 Yearly
Rate Power: 976 hp
Fuel Type: NATURAL GAS
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			
Formaldehyde	0.1595	0.01693680 g/bhp-hr	GRI Field
Acetaldehyde	0.1632	0.01733570 g/bhp-hr	GRI Field
1,3-Butadiene	0.0006	0.00006160 g/bhp-hr	GRI Field
Acrolein	0.0024	0.00026000 g/bhp-hr	GRI Field
Propional	0.0081	0.00086500 g/bhp-hr	GRI Field

Propylene Oxide	0.0012	0.00012480 g/bhp-hr	EPA
n-Nitrosodimethylamine	0.0000	0.00000100 g/bhp-hr	EPA
Benzene	0.0051	0.00053840 g/bhp-hr	GRI Field
Toluene	0.0039	0.00041100 g/bhp-hr	GRI Field
Ethylbenzene	0.0010	0.00010330 g/bhp-hr	EPA
Xylenes(m,p,o)	0.0117	0.00124410 g/bhp-hr	GRI Field
2,2,4-Trimethylpentane	0.0151	0.00160530 g/bhp-hr	GRI Field
n-Hexane	0.0142	0.00150580 g/bhp-hr	GRI Field
Phenol	0.0010	0.00011010 g/bhp-hr	GRI Field
n-Nitrosomorpholine	0.0000	0.00000100 g/bhp-hr	EPA
Naphthalene	0.0001	0.00000760 g/bhp-hr	GRI Field
2-Methylnaphthalene	0.0000	0.00000130 g/bhp-hr	GRI Field
Biphenyl	0.0031	0.00033050 g/bhp-hr	GRI Field
Phenanthrene	0.0000	0.00000050 g/bhp-hr	GRI Field
Chrysene	0.0000	0.00000100 g/bhp-hr	GRI Field
Beryllium	0.0000	0.00000010 g/bhp-hr	GRI Field
Phosphorous	0.0006	0.00006520 g/bhp-hr	GRI Field
Chromium	0.0001	0.00000820 g/bhp-hr	GRI Field
Chromium	0.0001	0.00000560 g/bhp-hr	EPA
Manganese	0.0002	0.00001750 g/bhp-hr	GRI Field
Nickel	0.0001	0.00000610 g/bhp-hr	GRI Field
Cobalt	0.0000	0.00000160 g/bhp-hr	GRI Field
Arsenic	0.0000	0.00000060 g/bhp-hr	GRI Field
Selenium	0.0000	0.00000030 g/bhp-hr	GRI Field
Cadmium	0.0000	0.00000020 g/bhp-hr	GRI Field
Mercury	0.0000	0.00000270 g/bhp-hr	GRI Field
Lead	0.0000	0.00000340 g/bhp-hr	GRI Field
Total	0.3913		

Criteria Pollutants

PM	0.2999	0.03184680 g/bhp-hr	EPA
CO	19.8517	2.10828420 g/bhp-hr	GRI Field
NMHC	1.8256	0.19387800 g/bhp-hr	GRI Field
NMEHC	0.1135	0.01205010 g/bhp-hr	EPA
NOx	11.7904	1.25216290 g/bhp-hr	GRI Field
SO2	0.0097	0.00102720 g/bhp-hr	GRI Field

Other Pollutants

Methane	9.2954	0.98719230 g/bhp-hr	GRI Field
Acetylene	0.0675	0.00716540 g/bhp-hr	GRI Field
Ethylene	0.1314	0.01395450 g/bhp-hr	GRI Field
Ethane	1.4132	0.15008370 g/bhp-hr	GRI Field
Propane	0.1507	0.01600000 g/bhp-hr	GRI Field
Isobutane	0.0452	0.00480000 g/bhp-hr	GRI Field
Butane	0.0490	0.00520000 g/bhp-hr	GRI Field
Trimethylamine	0.0000	0.00000070 g/bhp-hr	EPA
Cyclopentane	0.0155	0.00165110 g/bhp-hr	GRI Field
Butyrald/Isobutyraldehyde	0.0126	0.00134000 g/bhp-hr	GRI Field
n-Pentane	0.7641	0.08115000 g/bhp-hr	GRI Field
Cyclohexane	0.0577	0.00612400 g/bhp-hr	GRI Field
Methylcyclohexane	0.0832	0.00883120 g/bhp-hr	GRI Field
n-Octane	0.0300	0.00318890 g/bhp-hr	GRI Field
1,3,5-Trimethylbenzene	0.0282	0.00300000 g/bhp-hr	GRI Field
n-Nonane	0.0050	0.00053260 g/bhp-hr	GRI Field
CO2	4,457.5333	473.39811550 g/bhp-hr	EPA

Vanadium	0.0000	0.00000070 g/bhp-hr	GRI Field
Copper	0.0002	0.00002050 g/bhp-hr	GRI Field
Molybdenum	0.0002	0.00002030 g/bhp-hr	GRI Field
Barium	0.0002	0.00002290 g/bhp-hr	GRI Field

Unit Name: 40-4002

Hours of Operation: 8,760 Yearly
Rate Power: 3222 hp
Fuel Type: NATURAL GAS
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	0.5265	0.01693680 g/bhp-hr	GRI Field
Acetaldehyde	0.5389	0.01733570 g/bhp-hr	GRI Field
1,3-Butadiene	0.0019	0.00006160 g/bhp-hr	GRI Field
Acrolein	0.0081	0.00026000 g/bhp-hr	GRI Field
Propional	0.0269	0.00086500 g/bhp-hr	GRI Field
Propylene Oxide	0.0039	0.00012480 g/bhp-hr	EPA
n-Nitrosodimethylamine	0.0000	0.00000100 g/bhp-hr	EPA
Benzene	0.0167	0.00053840 g/bhp-hr	GRI Field
Toluene	0.0128	0.00041100 g/bhp-hr	GRI Field
Ethylbenzene	0.0032	0.00010330 g/bhp-hr	EPA
Xylenes(m,p,o)	0.0387	0.00124410 g/bhp-hr	GRI Field
2,2,4-Trimethylpentane	0.0499	0.00160530 g/bhp-hr	GRI Field
n-Hexane	0.0468	0.00150580 g/bhp-hr	GRI Field
Phenol	0.0034	0.00011010 g/bhp-hr	GRI Field
n-Nitrosomorpholine	0.0000	0.00000100 g/bhp-hr	EPA
Naphthalene	0.0002	0.00000760 g/bhp-hr	GRI Field
2-Methylnaphthalene	0.0000	0.00000130 g/bhp-hr	GRI Field
Biphenyl	0.0103	0.00033050 g/bhp-hr	GRI Field
Phenanthrene	0.0000	0.00000050 g/bhp-hr	GRI Field
Chrysene	0.0000	0.00000100 g/bhp-hr	GRI Field
Beryllium	0.0000	0.00000010 g/bhp-hr	GRI Field
Phosphorous	0.0020	0.00006520 g/bhp-hr	GRI Field
Chromium	0.0003	0.00000820 g/bhp-hr	GRI Field
Chromium	0.0002	0.00000560 g/bhp-hr	EPA
Manganese	0.0005	0.00001750 g/bhp-hr	GRI Field
Nickel	0.0002	0.00000610 g/bhp-hr	GRI Field
Cobalt	0.0000	0.00000160 g/bhp-hr	GRI Field
Arsenic	0.0000	0.00000060 g/bhp-hr	GRI Field
Selenium	0.0000	0.00000030 g/bhp-hr	GRI Field
Cadmium	0.0000	0.00000020 g/bhp-hr	GRI Field
Mercury	0.0001	0.00000270 g/bhp-hr	GRI Field
Lead	0.0001	0.00000340 g/bhp-hr	GRI Field
Total	1.2916		

Criteria Pollutants

PM	0.9899	0.03184680 g/bhp-hr	EPA
CO	65.5349	2.10828420 g/bhp-hr	GRI Field
NMHC	6.0266	0.19387800 g/bhp-hr	GRI Field

NMEHC	0.3746	0.01205010 g/bhp-hr	EPA
NOx	38.9228	1.25216290 g/bhp-hr	GRI Field
SO2	0.0319	0.00102720 g/bhp-hr	GRI Field

Other Pollutants

Methane	30.6864	0.98719230 g/bhp-hr	GRI Field
Acetylene	0.2227	0.00716540 g/bhp-hr	GRI Field
Ethylene	0.4338	0.01395450 g/bhp-hr	GRI Field
Ethane	4.6653	0.15008370 g/bhp-hr	GRI Field
Propane	0.4974	0.01600000 g/bhp-hr	GRI Field
Isobutane	0.1492	0.00480000 g/bhp-hr	GRI Field
Butane	0.1616	0.00520000 g/bhp-hr	GRI Field
Trimethylamine	0.0000	0.00000070 g/bhp-hr	EPA
Cyclopentane	0.0513	0.00165110 g/bhp-hr	GRI Field
Butyrald/Isobutyraldehyde	0.0417	0.00134000 g/bhp-hr	GRI Field
n-Pentane	2.5225	0.08115000 g/bhp-hr	GRI Field
Cyclohexane	0.1904	0.00612400 g/bhp-hr	GRI Field
Methylcyclohexane	0.2745	0.00883120 g/bhp-hr	GRI Field
n-Octane	0.0991	0.00318890 g/bhp-hr	GRI Field
1,3,5-Trimethylbenzene	0.0933	0.00300000 g/bhp-hr	GRI Field
n-Nonane	0.0166	0.00053260 g/bhp-hr	GRI Field
CO2	14,715.3406	473.39811550 g/bhp-hr	EPA
Vanadium	0.0000	0.00000070 g/bhp-hr	GRI Field
Copper	0.0006	0.00002050 g/bhp-hr	GRI Field
Molybdenum	0.0006	0.00002030 g/bhp-hr	GRI Field
Barium	0.0007	0.00002290 g/bhp-hr	GRI Field

Engine Exhaust Emissions Calculations

Unit Number: 5

Description: Detroit Diesel Standby Generator (*Exempt Source*)

Horsepower Calculations

5,575 ft above MSL

200 hp

Elevation

Nameplate hp

Mfg. data

Fuel Consumption

1.41 MMBtu/hr

137,000 Btu/gal

10.29 gal/hr

500 hr/yr

5,145.99 gal/yr

705.00 MMBtu/yr

Hourly fuel consumption

Field gas heating value

Hourly fuel consumption

Annual operating time

Hourly fuel consumption

Annual fuel consumption

Mfg. data

Nominal heat content

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

Harvest Four Corners, LLC

gal/hr x hr/yr

MMBtu/hr x hr/yr

Steady-State Emission Rates

Pollutants	Emission Factors, lb/MMBtu	Uncontrolled Emission Rates,	
		pph	tpy
NO2	4.41	6.22	1.55
CO	9.50E-01	1.34	3.35E-01
VOC	3.60E-01	5.08E-01	1.27E-01
SO2	2.90E-01	4.09E-01	1.02E-01
PM	3.10E-01	4.37E-01	1.09E-01
PM10	3.10E-01	4.37E-01	1.09E-01
PM2.5	3.10E-01	4.37E-01	1.09E-01
Acetaldehyde	7.67E-04	1.08E-03	2.70E-04
Benzene	9.33E-04	1.32E-03	3.29E-04
Formaldehyde	1.18E-03	1.66E-03	4.16E-04
Naphthalene	8.48E-05	1.20E-04	2.99E-05
Toluene	4.09E-04	5.77E-04	1.44E-04
Xylene	2.85E-04	4.02E-04	1.00E-04

Emission factors taken from AP-42, Tables 3.3-1 & 3.3-2

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

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

Heater Exhaust Emissions Calculations

Unit Number: 6

Description: Ejector Vapory Recovery Unit (EVRU) Heater (*Exempt Source*)

Fuel Consumption

0.51 MMBtu/hr
 900 Btu/scf
 566.67 scf/hr
 8,760 hr/yr
 4,467.60 MMBtu/yr
 4.96 MMscf/yr

Capacity
 Field gas heating value
 Hourly fuel consumption
 Annual operating time
 Annual fuel consumption
 Annual fuel consumption

Mfg. data
 Nominal heat content
 $\text{MMBtu/hr} \times 1,000,000 / \text{Btu/scf}$
 Harvest Four Corners, LLC
 $\text{MMBtu/hr} \times \text{hr/yr}$
 $\text{scf/hr} \times \text{hr/yr} / 1,000,000$

Steady-State Emission Rates

Pollutants	Emission Factors, lb/MMscf	Uncontrolled Emission Rates, pph tpy	
NOX	100	5.67E-02	2.48E-01
CO	84	4.76E-02	2.08E-01
VOC	5.5	3.12E-03	1.37E-02
SO2	0.6	3.40E-04	1.49E-03
TSP	7.60	4.31E-03	1.89E-02
PM10	7.60	4.31E-03	1.89E-02
PM2.5	7.60	4.31E-03	1.89E-02
Lead	5.00E-04	2.83E-07	1.24E-06

Emission factors taken from AP-42, Tables 1.4-1 & 1.4-2

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

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

Heater Exhaust Emissions Calculations

Unit Number: 7

Description: Heater (*Exempt Source*)

Fuel Consumption

0.005 MMBtu/hr

900.00 Btu/scf

5.56 scf/hr

8,760 hr/yr

43.80 MMBtu/yr

0.049 MMscf/yr

Capacity

Field gas heating value

Hourly fuel consumption

Annual operating time

Annual fuel consumption

Annual fuel consumption

Mfg. data

Nominal heat content

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

Harvest Four Corners, LLC

MMBtu/hr x hr/yr

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

Steady-State Emission Rates

Pollutants	Emission Factors, lb/MMscf	Uncontrolled Emission Rates, pph tpy	
NOX	100	5.56E-04	2.43E-03
CO	84	4.67E-04	2.04E-03
VOC	5.5	3.06E-05	1.34E-04
SO2	0.6	3.33E-06	1.46E-05
TSP	7.60	4.22E-05	1.85E-04
PM10	7.60	4.22E-05	1.85E-04
PM2.5	7.60	4.22E-05	1.85E-04
Lead	5.00E-04	2.78E-09	1.22E-08

Emission factors taken from AP-42, Tables 1.4-1 & 1.4-2

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

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

Turbine & Compressor Blowdown Emissions Calculations

Unit Number: **SSM**

Description: Turbine, Compressor & Piping Associated With Station

Throughput

4 # of units	Number of units	Harvest Four Corners, LLC
105 events/yr/unit	Blowdowns per year per unit	Harvest Four Corners, LLC
3,602 scf/event	Gas loss per blowdown (compressor)	Harvest Four Corners, LLC
12,400 scf/event	Gas loss per blowdown (turbine)	Harvest Four Corners, LLC
6,720,840 scf/yr	Annual gas loss	# of units x events/yr/unit x [scf/event (compressor) + scf/event (turbine)]

Emission Rates

Pollutants	Emission Factors, lb/scf	Uncontrolled, Emission Rates, tpy
VOC	7.085E-03	23.81
Benzene	1.853E-05	6.23E-02
Ethylbenzene	2.798E-07	9.40E-04
n-Hexane	1.279E-04	4.30E-01
Isooctane	2.641E-06	8.88E-03
Toluene	1.846E-05	6.20E-02
Xylene	2.798E-06	9.40E-03

Emission factors calculated from gas composition (see table below)

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

Gas Composition

Components	Mole Percents, %	Molecular Weights, lb/lb-mole	Emission Factors, lb/scf
Carbon dioxide	1.9364	44.01	2.246E-03
Hydrogen sulfide	0.0000	34.07	0.000E+00
Nitrogen	0.3306	28.01	2.441E-04
Methane	85.6254	16.04	3.620E-02
Ethane	7.0286	30.07	5.571E-03
Propane	2.9810	44.09	3.464E-03
Isobutane	0.5417	58.12	8.298E-04
n-Butane	0.7958	58.12	1.219E-03
Isopentane	0.2733	72.15	5.197E-04
n-Pentane	0.1943	72.15	3.695E-04
Cyclopentane	0.0080	70.14	1.479E-05
n-Hexane	0.0563	86.17	1.279E-04
Cyclohexane	0.0193	84.16	4.281E-05
Other hexanes	0.1341	86.18	3.046E-04
Heptanes	0.0275	100.20	7.263E-05
Methylcyclohexane	0.0228	98.19	5.901E-05
2,2,4-Trimethylpentane	0.0010	100.21	2.641E-06
Benzene	0.0090	78.11	1.853E-05
Toluene	0.0076	92.14	1.846E-05
Ethylbenzene	0.0001	106.17	2.798E-07
Xylenes	0.0010	106.17	2.798E-06
C8+ Heavies	0.0064	110.00	1.856E-05
Total	100.0002		
Total VOC			7.085E-03

Gas stream composition obtained from **Chaco Compressor Station** extended gas analysis dated **11/29/2018**

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

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	441	0.0045	0.0099	4.37	19.12
Connectors	415	0.0002	0.0004	0.18	0.80
Pump Seals	0	0.0024	0.0053	0.00	0.00
Compressor Seals	40	0.0088	0.0194	0.77	3.39
Pressure Relief Valves	31	0.0088	0.0194	0.60	2.63
Open-Ended Lines	118	0.0020	0.0044	0.52	2.27
Total				6.44	28.22

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	1.9364	44.010				
Hydrogen sulfide	0.0000	34.070				
Nitrogen	0.3306	28.013				
Methane	85.6254	16.043	1373.688	74.096		
Ethane	7.0286	30.070	211.350	11.400		
Propane	2.9810	44.097	131.453	7.091	4.57E-01	2.00E+00
Isobutane	0.5417	58.123	31.485	1.698	1.09E-01	4.79E-01
n-Butane	0.7958	58.123	46.254	2.495	1.61E-01	7.04E-01
Isopentane	0.2733	72.150	19.719	1.064	6.85E-02	3.00E-01
n-Pentane	0.1943	72.150	14.019	0.756	4.87E-02	2.13E-01
Cyclopentane	0.0080	70.134	0.561	0.030	1.95E-03	8.54E-03
n-Hexane	0.0563	86.177	4.852	0.262	1.69E-02	7.38E-02
Cyclohexane	0.0193	84.161	1.624	0.088	5.64E-03	2.47E-02
Other hexanes	0.1341	86.177	11.556	0.623	4.02E-02	1.76E-01
Heptanes	0.0275	100.204	2.756	0.149	9.58E-03	4.19E-02
Methylcyclohexane	0.0228	98.188	2.239	0.121	7.78E-03	3.41E-02
Isooctane	0.0010	114.231	0.114	0.006	3.97E-04	1.74E-03
Benzene	0.0090	78.114	0.703	0.038	2.44E-03	1.07E-02
Toluene	0.0076	92.141	0.700	0.038	2.43E-03	1.07E-02
Ethylbenzene	0.0001	106.167	0.011	0.001	3.69E-05	1.62E-04
Xylenes	0.0010	106.167	0.106	0.006	3.69E-04	1.62E-03
C8+ Heavies	0.0064	114.231	0.731	0.039	2.54E-03	1.11E-02
Total	100.0002		1853.921			
Total VOC				14.503	9.34E-01	4.09

Gas stream composition obtained from **Chaco Compressor Station** extended gas analysis dated **11/29/2018**

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)

Uncontrolled Emission Rates (tpy) = Total Uncontrolled TOC Emission Rate (tpy) x (% / 100)

Equipment Leaks Emissions Calculations

Unit Number: **F1**

Description: Valves, Connectors, Seals & Lines

Number of Compression Units at the Facility: **4**Number of Dehydrators at the Facility: **0**

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	176	236	0	16	24	44	0	16	36
Components from dehydrators	0	0	0	0	0	0	0	0	0
Total	297	309	0	40	31	92	3	26	48
Adjusted Total	441	415	0	40	31	118			

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)

Truck Loading (Condensate) Emissions Calculations

Unit Number: **L1**

Description: Truck Loading

Emission Factor

0.6

Saturation factor, S

AP-42, Table 5.2-1 (submerged loading
& dedicated service)**4.409** psia

True vapor pressure of liquid, P

TANKS 4.0 output file

65.6443 lb/lb-mole

Molecular weight of vapors, M

TANKS 4.0 output file

64.94 °F

Temperature of liquid

TANKS 4.0 output file

524.61 °R

Temperature of liquid, T

°F + 459.67

4.12 lb/10³ gal

Emission factor, L

AP-42, Section 5.2, Equation 1

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

Production Rate

9.00 10³ gal/hr

Maximum hourly production rate

Harvest Four Corners, LLC

1,890.00 10³ gal/yr

Maximum annual production rate

Harvest Four Corners, LLC

Steady-State Emission Rates

Pollutant	Uncontrolled Emission Rates,	
	pph	tpy
VOC	37.12	3.90

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

Pollutants	Percent of VOC, %	Uncontrolled Emission Rates,	
		pph	tpy
Benzene	0.5560	2.06E-01	2.17E-02
Ethylbenzene	0.0172	6.38E-03	6.70E-04
n-Hexane	8.2937	3.08	3.23E-01
Isooctane	0.0302	1.12E-02	1.18E-03
Toluene	0.6893	2.56E-01	2.69E-02
m-Xylene	0.1283	4.76E-02	5.00E-03

Percent of VOC calculated from the TANKS 4.0 results

Percent of VOC (%) = 100 x Pollutant Emission Rate (lb/yr) / Total VOC Emission Rate (lb/yr)

Uncontrolled Emission Rates (pph) = VOC Uncontrolled Emission Rate (pph) x (%) / 100

Uncontrolled Emission Rates (tpy) = VOC Uncontrolled Emission Rate (tpy) x (%) / 100

Truck Loading (Produced Water) Emissions Calculations

Unit Number: **L2**Description: Truck Loading (*Exempt Source*)

Emission Factor

0.6	Saturation factor, S	AP-42, Table 5.2-1 (submerged loading & dedicated service)
0.3619 psia	True vapor pressure of liquid, P	Estimated using Antoine's Equation
18.02 lb/lb-mole	Molecular weight of vapors, M	TANKS 4.0 Database
70 °F	Temperature of liquid	Estimated
529.67 °R	Temperature of liquid, T	°F + 459.67
0.09 lb/10 ³ gal	Emission factor, L	AP-42, Section 5.2, Equation 1
$L = 12.46 \frac{SPM}{T}$		

Production Rate

9.00 10 ³ gal/hr	Maximum hourly production rate	Harvest Four Corners, LLC
630.00 10 ³ gal/yr	Maximum annual production rate	Harvest Four Corners, LLC

Steady-State Emission Rates

Pollutant	Uncontrolled Emission Rates,	
	pph	tpy
VOC	8.28E-01	2.90E-02

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

Pollutants	Mass Fraction	Uncontrolled Emission Rates,	
		pph	tpy
Benzene	0.0267	2.21E-04	7.75E-06
Ethylbenzene	0.0027	2.21E-05	7.75E-07
n-Hexane	0.0840	6.96E-04	2.43E-05
Toluene	0.0344	2.85E-04	9.96E-06
m-Xylene	0.0229	1.90E-04	6.64E-06

HAP mass fractions are estimated from the produced water tank emission factors

HAP Mass Fraction = HAP Emission Factor (lb/bbl) / VOC Emission Factor (lb/bbl)

Emission Rates (pph) = VOC Emission Rate (pph) x HAP Mass Fraction

Emission Rates (tpy) = VOC Emission Rate (tpy) x HAP Mass Fraction

Pig Receiver Emissions Calculations

Unit Number: **PR**Description: Pig Receiver (*Exempt Source*)

Throughput

130 events/yr**937** scf/event

121,810 scf/yr

Blowdowns per year

Gas loss per blowdown

Annual gas loss

Harvest Four Corners, LLC

Harvest Four Corners, LLC

events/yr x scf/event

Emission Rates

Pollutants	Emission Factors, lb/scf	Uncontrolled, Emission Rates, tpy
VOC	7.085E-03	4.32E-01
Benzene	1.853E-05	1.13E-03
Ethylbenzene	2.798E-07	1.70E-05
n-Hexane	1.279E-04	7.79E-03
Isooctane	2.641E-06	1.61E-04
Toluene	1.846E-05	1.12E-03
Xylene	2.798E-06	1.70E-04

Emission factors calculated from gas composition (see table below)

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

Gas Composition

Components	Mole Percents, %	Molecular Weights, lb/lb-mole	Emission Factors, lb/scf
Carbon dioxide	1.9364	44.01	2.246E-03
Hydrogen sulfide	0.0000	34.07	0.000E+00
Nitrogen	0.3306	28.01	2.441E-04
Methane	85.6254	16.04	3.620E-02
Ethane	7.0286	30.07	5.571E-03
Propane	2.9810	44.09	3.464E-03
Isobutane	0.5417	58.12	8.298E-04
n-Butane	0.7958	58.12	1.219E-03
Isopentane	0.2733	72.15	5.197E-04
n-Pentane	0.1943	72.15	3.695E-04
Cyclopentane	0.0080	70.14	1.479E-05
n-Hexane	0.0563	86.17	1.279E-04
Cyclohexane	0.0193	84.16	4.281E-05
Other hexanes	0.1341	86.18	3.046E-04
Heptanes	0.0275	100.20	7.263E-05
Methylcyclohexane	0.0228	98.19	5.901E-05
Isooctane	0.0010	100.21	2.641E-06
Benzene	0.0090	78.11	1.853E-05
Toluene	0.0076	92.14	1.846E-05
Ethylbenzene	0.0001	106.17	2.798E-07
Xylenes	0.0010	106.17	2.798E-06
C8+ Heavies	0.0064	110.00	1.856E-05
Total	100.0002		
Total VOC			7.085E-03

Gas stream composition obtained from **Chaco Compressor Station** extended gas analysis dated **11/29/2018**

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

Malfunction Emissions Data and Calculations

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

Emission Rates

Pollutants	Weight Percents, %	Uncontrolled Emission Rates, tpy
VOC		10.00
Benzene	2.615E-01	2.62E-02
Ethylbenzene	3.950E-03	3.95E-04
n-Hexane	1.805E+00	1.80E-01
Isooctane	3.728E-02	3.73E-03
Toluene	2.605E-01	2.60E-02
Xylene	3.950E-02	3.95E-03

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	1.9364	44.01		
Hydrogen sulfide	0.0000	34.07		
Nitrogen	0.3306	28.01		
Methane	85.6254	16.04		
Ethane	7.0286	30.07		
Propane	2.9810	44.09	1.3143	4.889E+01
Isobutane	0.5417	58.12	0.3148	1.171E+01
n-Butane	0.7958	58.12	0.4625	1.721E+01
Isopentane	0.2733	72.15	0.1972	7.335E+00
n-Pentane	0.1943	72.15	0.1402	5.215E+00
Cyclopentane	0.0080	70.14	0.0056	2.087E-01
n-Hexane	0.0563	86.17	0.0485	1.805E+00
Cyclohexane	0.0193	84.16	0.0162	6.042E-01
Other hexanes	0.1341	86.18	0.1156	4.299E+00
Heptanes	0.0275	100.20	0.0276	1.025E+00
Methylcyclohexane	0.0228	98.19	0.0224	8.328E-01
Isooctane	0.0010	100.21	0.0010	3.728E-02
Benzene	0.0090	78.11	0.0070	2.615E-01
Toluene	0.0076	92.14	0.0070	2.605E-01
Ethylbenzene	0.0001	106.17	0.0001	3.950E-03
Xylenes	0.0010	106.17	0.0011	3.950E-02
C8+ Heavies	0.0064	110.00	0.0070	2.619E-01
Total	100.0002			
Total VOC			2.6882	

Gas stream composition obtained from **Chaco Compressor Station** extended gas analysis dated **11/29/2018**

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)

Controlled Condensate Storage Tank Emissions Data and Calculations

Unit Number: **T4 & T5**

Description: Condensate Storage Tanks (with flash emissions)

Emission Rates

Source/Pollutants	Working/Breathing Losses,		Flash Losses, tpy	Uncontrolled Emission Rates, tpy
	ppy	tpy		
T4				
VOC	6,470.86	3.24	98.58	101.81
Benzene	35.98	1.80E-02	6.32E-01	6.50E-01
Ethylbenzene	1.11	5.55E-04	1.76E-02	1.81E-02
n-Hexane	536.67	2.68E-01	6.20	6.47
Isooctane	1.96	9.79E-04	2.30E-02	2.40E-02
Toluene	44.60	2.23E-02	7.48E-01	7.70E-01
Xylene	8.30	4.15E-03	1.50E-01	1.54E-01
T5				
VOC	6,137.86	3.07	88.72	91.79
Benzene	34.13	1.71E-02	5.69E-01	5.86E-01
Ethylbenzene	1.06	5.29E-04	1.58E-02	1.64E-02
n-Hexane	509.06	2.55E-01	5.58	5.84
Isooctane	1.85	9.26E-04	2.07E-02	2.16E-02
Toluene	42.31	2.12E-02	6.73E-01	6.94E-01
Xylene	7.88	3.94E-03	1.35E-01	1.39E-01
Combined Total				
VOC	12,608.72	6.30	187.30	193.60
Benzene	70.10	3.51E-02	1.20	1.24
Ethylbenzene	2.17	1.08E-03	3.34E-02	3.45E-02
n-Hexane	1,045.73	5.23E-01	11.78	12.31
Isooctane	3.81	1.91E-03	4.37E-02	4.56E-02
Toluene	86.91	4.35E-02	1.42	1.46
Xylene	16.18	8.09E-03	2.84E-01	2.92E-01

Working/breathing losses are taken from TANKS 4.0 results

Flash emissions are taken from ProMax 4 results

It is assumed the condensate throughput to each tank will be proportional to its capacity. Unit T4 will receive 52.6% of the condensate and Unit T5 will receive the remainder. This distribution is used for the TANKS 4 input. The flash emissions (from ProMax 4) are assigned to the tanks using the same percentages

It is assumed the EVRU captures 25% of the working/breathing losses as well as 25% of the flash emissions

Controlled Condensate Storage Tank Emissions Data and Calculations

Unit Number: **T4 & T5**

Description: Condensate Tanks (flash emissions)

Calculation of Emission Rates from ProMax Results

Pollutant	Emission Rate,	
	pph	tpy
VOC	--	187.30
Benzene	2.74E-01	1.20
Ethylbenzene	7.63E-03	3.34E-02
n-Hexane	2.69	11.78
Isooctane	9.99E-03	4.37E-02
Toluene	3.25E-01	1.42
Xylenes	6.49E-02	2.84E-01

VOC tpy and HAP pph emission rates are obtained from the ProMax output

HAP Emission Rate (tpy) = HAP Emission Rate (pph) x 8,760 hr/yr / 2,000 lb/ton

Composition of Post Flash Condensate (for use in TANKS 4)

Component	Speciated Mass Fraction	Mass Percent, Of VOC, %
Carbon dioxide	1.127E-04	--
Nitrogen	1.690E-07	--
Methane	1.462E-04	--
Ethane	1.834E-03	--
Propane	1.202E-02	--
Isobutane	1.165E-02	1.7699
n-Butane	2.822E-02	3.4305
Isopentane	3.824E-02	3.8319
n-Pentane	3.954E-02	3.9625
n-Hexane	1.136E-01	11.3795
Cyclohexane	0.000E+00	0.0000
n-Heptane	2.594E-01	25.9911
Octane	2.877E-01	28.8337
Nonane	6.620E-02	6.6341
Decane	3.479E-02	3.4862
Isooctane	1.310E-03	0.1313
Benzene	1.237E-02	1.2395
Ethylbenzene	3.971E-03	0.3979
Toluene	5.335E-02	5.3460
Xylenes	3.558E-02	3.5659
Total	1.000E+00	
VOC Total	9.979E-01	100.0000

Speciated Mass Fractions are obtained from the ProMax output

VOC Total = Sum (Propane - C8+ Heavies Mass Fractions)

Mass Percent of VOC (%) = 100 x Component Mass Fraction / VOC Total Mass Fraction

Propane Mass Percent of VOC is included with the n-butane and isobutane percentages (even distribution)

Uncontrolled Condensate Storage Tank Emissions Data and Calculations

Unit Number: **T4 & T5**

Description: Condensate Storage Tanks (with flash emissions)

Emission Rates

Source/Pollutants	Working/Breathing Losses,		Flash Losses, tpy	Uncontrolled Emission Rates, tpy
	ppy	tpy		
T4				
VOC	8,627.81	4.31	131.42	135.73
Benzene	47.97	2.40E-02	8.42E-01	8.66E-01
Ethylbenzene	1.48	7.40E-04	2.35E-02	2.42E-02
n-Hexane	715.56	3.58E-01	8.27	8.63
Isooctane	2.61	1.31E-03	3.07E-02	3.20E-02
Toluene	59.47	2.97E-02	9.97E-01	1.03E+00
Xylene	11.07	5.54E-03	2.00E-01	2.05E-01
T5				
VOC	8,183.81	4.09	118.28	122.37
Benzene	45.50	2.28E-02	7.58E-01	7.81E-01
Ethylbenzene	1.41	7.05E-04	2.11E-02	2.18E-02
n-Hexane	678.74	3.39E-01	7.44	7.78
Isooctane	2.47	1.24E-03	2.76E-02	2.89E-02
Toluene	56.41	2.82E-02	8.98E-01	9.26E-01
Xylene	10.50	5.25E-03	1.80E-01	1.85E-01
Combined Total				
VOC	16,811.62	8.41	249.70	258.11
Benzene	93.47	4.67E-02	1.60	1.65
Ethylbenzene	2.89	1.45E-03	4.46E-02	4.60E-02
n-Hexane	1,394.30	6.97E-01	15.71	16.41
Isooctane	5.08	2.54E-03	5.83E-02	6.09E-02
Toluene	115.88	5.79E-02	1.90	1.95
Xylene	21.57	1.08E-02	3.79E-01	3.90E-01

Working/breathing losses are taken from TANKS 4.0 results

Flash emissions are taken from ProMax 4 results

It is assumed the condensate throughput to each tank will be proportional to its capacity. Unit T4 will receive 52.6% of the condensate and Unit T5 will receive the remainder. This distribution is used for the TANKS 4 input. The flash emissions (from ProMax 4) are assigned to the tanks using the same percentages

Uncontrolled Condensate Storage Tank Emissions Data and Calculations

Unit Number: T4 & T5
Description: Condensate Tanks (flash emissions)

Calculation of Emission Rates from ProMax Results

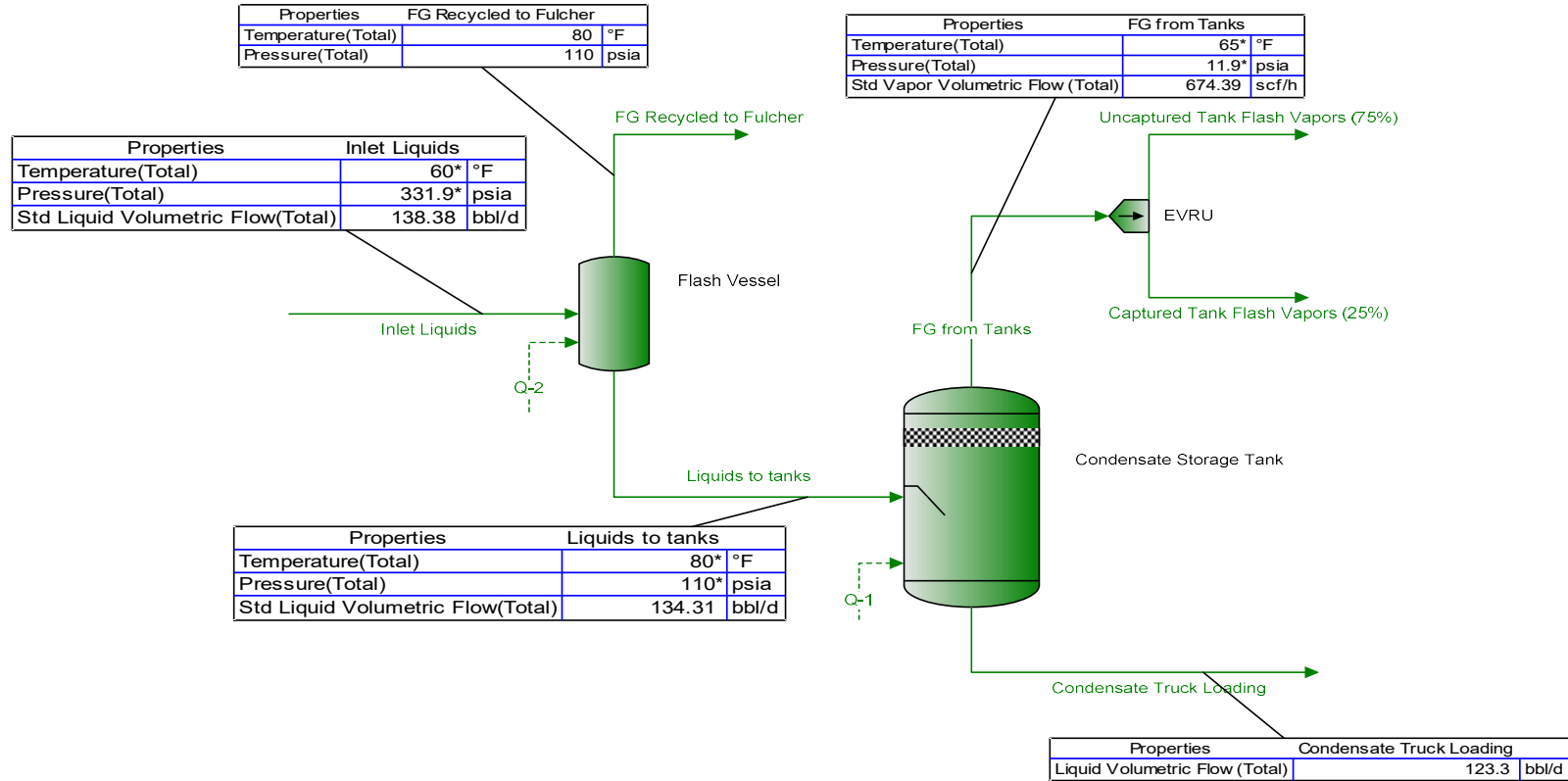
Pollutant	Emission Rate,	
	pph	tpy
VOC	--	249.70
Benzene	3.65E-01	1.60
Ethylbenzene	1.02E-02	4.46E-02
n-Hexane	3.59	15.71
Isooctane	1.33E-02	5.83E-02
Toluene	4.33E-01	1.90
Xylenes	8.65E-02	3.79E-01

VOC tpy and HAP pph emission rates are obtained from the ProMax output
HAP Emission Rate (tpy) = HAP Emission Rate (pph) x 8,760 hr/yr / 2,000 lb/ton

Actual Chaco Condensate Flash Emissions **Updated 6.20.2018**

Stream Uncaptured Tank Flash Vapors (75%) C3+ Mass Flow =187.3 ton/yr

Stream FG from Tanks C3+ Mass Flow =249.7 ton/yr



12 Month Rolling Sum = 45,000 bbls

Process Streams		Captured Tank Flash Vapors (25%)		Condensate Truck Loading	FG from Tanks
Composition	Status:	Solved	Solved	Solved	
Phase: Total	From Block:	EVRU	Condensate Storage Tank	Condensate Storage Tank	
	To Block:	--	--	EVRU	
Mole Fraction					
Nitrogen		0.000496614	5.79014E-07	0.000496614	
Carbon Dioxide		0.0195727	0.000245753	0.0195727	
Methane		0.208166	0.000874726	0.208166	
Ethane		0.206726	0.00585617	0.206726	
Propane		0.253693	0.0261633	0.253693	
Isobutane		0.0692628	0.0192473	0.0692628	
n-Butane		0.112481	0.0466189	0.112481	
Isopentane		0.0469359	0.0508805	0.0469359	
n-Pentane		0.0354017	0.0526141	0.0354017	
Hexane		0.0234232	0.126504	0.0234232	
Benzene		0.00263250	0.0152018	0.00263250	
Cyclohexane		0	0	0	
Heptane		0.0138252	0.248493	0.0138252	
Toluene		0.00264260	0.0555843	0.00264260	
Octane		0.00389027	0.241819	0.00389027	
m-Xylene		0.000458718	0.0321776	0.000458718	
Nonane		0.000236961	0.0495536	0.000236961	
2,2,4-Trimethylpentane		6.55946E-05	0.00110134	6.55946E-05	
C10		3.55535E-05	0.0234729	3.55535E-05	
Ethylbenzene		5.39256E-05	0.00359094	5.39256E-05	
Molar Flow		lbmol/h	lbmol/h	lbmol/h	
Nitrogen		0.000220635	7.57350E-06	0.000882541	
Carbon Dioxide		0.00869574	0.00321445	0.0347829	
Methane		0.0924841	0.0114414	0.369936	
Ethane		0.0918440	0.0765987	0.367376	
Propane		0.112711	0.342216	0.450842	
Isobutane		0.0307720	0.251754	0.123088	
n-Butane		0.0499728	0.609775	0.199891	
Isopentane		0.0208527	0.665516	0.0834106	
n-Pentane		0.0157282	0.688193	0.0629129	
Hexane		0.0104065	1.65467	0.0416259	
Benzene		0.00116957	0.198839	0.00467827	
Cyclohexane		0	0	0	
Heptane		0.00614223	3.25029	0.0245689	
Toluene		0.00117405	0.727043	0.00469622	
Octane		0.00172837	3.16299	0.00691346	
m-Xylene		0.000203799	0.420883	0.000815195	
Nonane		0.000105277	0.648161	0.000421107	
2,2,4-Trimethylpentane		2.91423E-05	0.0144055	0.000116569	
C10		1.57957E-05	0.307026	6.31827E-05	
Ethylbenzene		2.39580E-05	0.0469695	9.58321E-05	

Process Streams		FG Recycled to Fulcher Inlet Liquids		Liquids to tanks	Uncaptured Tank Flash Vapors (75%)
Composition	Status:	Solved	Solved	Solved	Solved
Phase: Total	From Block:	Flash Vessel	--	Flash Vessel	EVRU
	To Block:	--	Flash Vessel	Condensate Storage Tank	--
Mole Fraction					
Nitrogen		0.00543886	0.00038*	5.99117E-05	0.000496614
Carbon Dioxide		0.0254534	0.00392*	0.00255752	0.0195727
Methane		0.700715	0.06584*	0.0256697	0.208166
Ethane		0.137383	0.03628*	0.0298830	0.206726
Propane		0.0738966	0.0546*	0.0533790	0.253693
Isobutane		0.0139736	0.02456*	0.0252298	0.0692628
n-Butane		0.0207721	0.05249*	0.0544969	0.112481
Isopentane		0.00791586	0.04788*	0.0504086	0.0469359
n-Pentane		0.00593451	0.0479*	0.0505553	0.0354017
Hexane		0.00403655	0.10762*	0.114174	0.0234232
Benzene		0.000451105	0.01291*	0.0136983	0.00263250
Cyclohexane		0	0*	0	0
Heptane		0.00257418	0.20746*	0.220424	0.0138252
Toluene		0.000489120	0.04635*	0.0492517	0.00264260
Octane		0.000790585	0.20071*	0.213359	0.00389027
m-Xylene		9.21087E-05	0.0267*	0.0283836	0.000458718
Nonane		5.21947E-05	0.04106*	0.0436547	0.000236961
2,2,4-Trimethylpentane		1.20274E-05	0.00092*	0.000977450	6.55946E-05
C10		8.60600E-06	0.01944*	0.0206695	3.55535E-05
Ethylbenzene		1.08341E-05	0.00298*	0.00316787	5.39256E-05
Molar Flow		lbmol/h	lbmol/h	lbmol/h	lbmol/h
Nitrogen		0.00511281	0.00600292*	0.000890115	0.000661906
Carbon Dioxide		0.0239275	0.0619249*	0.0379974	0.0260872
Methane		0.658708	1.04009*	0.381378	0.277452
Ethane		0.129147	0.573121*	0.443975	0.275532
Propane		0.0694666	0.862525*	0.793059	0.338132
Isobutane		0.0131358	0.387978*	0.374843	0.0923161
n-Butane		0.0195268	0.829193*	0.809666	0.149918
Isopentane		0.00744131	0.756368*	0.748927	0.0625580
n-Pentane		0.00557874	0.756684*	0.751106	0.0471847
Hexane		0.00379456	1.70009*	1.69630	0.0312194
Benzene		0.000424061	0.203941*	0.203517	0.00350870
Cyclohexane		0	0*	0	0
Heptane		0.00241986	3.27728*	3.27486	0.0184267
Toluene		0.000459798	0.732199*	0.731739	0.00352216
Octane		0.000743190	3.17065*	3.16991	0.00518510
m-Xylene		8.65869E-05	0.421784*	0.421698	0.000611396
Nonane		4.90657E-05	0.648632*	0.648583	0.000315830
2,2,4-Trimethylpentane		1.13063E-05	0.0145334*	0.0145221	8.74270E-05
C10		8.09008E-06	0.307097*	0.307089	4.73870E-05
Ethylbenzene		1.01846E-05	0.0470756*	0.0470654	7.18740E-05

Process Streams		Captured Tank Flash Vapors (25%)		Condensate Truck Loading	FG from Tanks
Composition	Status:	Solved	Solved	Solved	
Phase: Total	From Block:	EVRU	Condensate Storage Tank	Condensate Storage Tank	
	To Block:	--	--	EVRU	
Mass Fraction					
Nitrogen		0.000327213	1.68958E-07	0.000327213	
Carbon Dioxide		0.0202602	0.000112660	0.0202602	
Methane		0.0785467	0.000146173	0.0785467	
Ethane		0.146204	0.00183425	0.146204	
Propane		0.263118	0.0120175	0.263118	
Isobutane		0.0946866	0.0116530	0.0946866	
n-Butane		0.153768	0.0282247	0.153768	
Isopentane		0.0796490	0.0382388	0.0796490	
n-Pentane		0.0600757	0.0395418	0.0600757	
Hexane		0.0474762	0.113556	0.0474762	
Benzene		0.00483651	0.0123690	0.00483651	
Cyclohexane		0	0	0	
Heptane		0.0325831	0.259367	0.0325831	
Toluene		0.00572689	0.0533479	0.00572689	
Octane		0.0104520	0.287733	0.0104520	
m-Xylene		0.00114544	0.0355844	0.00114544	
Nonane		0.000714820	0.0662026	0.000714820	
2,2,4-Trimethylpentane		0.000176234	0.00131045	0.000176234	
C10		0.000118981	0.0347889	0.000118981	
Ethylbenzene		0.000134655	0.00397113	0.000134655	
Mass Flow		lb/h	lb/h	lb/h	
Nitrogen		0.00618075	0.000212159	0.0247230	
Carbon Dioxide		0.382695	0.141467	1.53078	
Methane		1.48367	0.183548	5.93469	
Ethane		2.76166	2.30325	11.0466	
Propane		4.97004	15.0902	19.8802	
Isobutane		1.78854	14.6325	7.15416	
n-Butane		2.90453	35.4415	11.6181	
Isopentane		1.50449	48.0162	6.01797	
n-Pentane		1.13477	49.6523	4.53909	
Hexane		0.896781	142.592	3.58712	
Benzene		0.0913570	15.5317	0.365428	
Cyclohexane		0	0	0	
Heptane		0.615464	325.685	2.46185	
Toluene		0.108176	66.9886	0.432702	
Octane		0.197429	361.304	0.789715	
m-Xylene		0.0216363	44.6830	0.0865452	
Nonane		0.0135023	83.1300	0.0540091	
2,2,4-Trimethylpentane		0.00332888	1.64552	0.0133155	
C10		0.00224743	43.6841	0.00898974	
Ethylbenzene		0.00254350	4.98652	0.0101740	

Process Streams		FG Recycled to Fulcher Inlet Liquids		Liquids to tanks	Uncaptured Tank Flash Vapors (75%)
Composition	Status:	Solved	Solved	Solved	Solved
Phase: Total	From Block:	Flash Vessel	--	Flash Vessel	EVRU
	To Block:	--	Flash Vessel	Condensate Storage Tank	--
Mass Fraction					
Nitrogen		0.00642369	0.000124238*	1.87306E-05	0.000327213
Carbon Dioxide		0.0472283	0.00201344*	0.00125615	0.0202602
Methane		0.473939	0.0123273*	0.00459586	0.0785467
Ethane		0.174165	0.0127319*	0.0100281	0.146204
Propane		0.137382	0.0280992*	0.0262689	0.263118
Isobutane		0.0342420	0.0166601*	0.0163656	0.0946866
n-Butane		0.0509017	0.0356062*	0.0353500	0.153768
Isopentane		0.0240789	0.0403171*	0.0405891	0.0796490
n-Pentane		0.0180520	0.0403340*	0.0407072	0.0600757
Hexane		0.0146657	0.108239*	0.109806	0.0474762
Benzene		0.00148561	0.0117693*	0.0119415	0.00483651
Cyclohexane		0	0*	0	0
Heptane		0.0108749	0.242615*	0.246496	0.0325831
Toluene		0.00190006	0.0498422*	0.0506452	0.00572689
Octane		0.00380744	0.267578*	0.271996	0.0104520
m-Xylene		0.000412280	0.0330826*	0.0336298	0.00114544
Nonane		0.000282235	0.0614611*	0.0624857	0.000714820
2,2,4-Trimethylpentane		5.79235E-05	0.00122650*	0.00124608	0.000176234
C10		5.16251E-05	0.0322814*	0.0328212	0.000118981
Ethylbenzene		4.84936E-05	0.00369236*	0.00375339	0.000134655
Mass Flow		lb/h	lb/h	lb/h	lb/h
Nitrogen		0.143227	0.168162*	0.0249351	0.0185422
Carbon Dioxide		1.05304	2.72528*	1.67225	1.14809
Methane		10.5673	16.6855*	6.11824	4.45102
Ethane		3.88332	17.2332*	13.3499	8.28498
Propane		3.06317	38.0336*	34.9704	14.9101
Isobutane		0.763484	22.5502*	21.7867	5.36562
n-Butane		1.13494	48.1945*	47.0596	8.71359
Isopentane		0.536881	54.5711*	54.0342	4.51348
n-Pentane		0.402499	54.5938*	54.1913	3.40432
Hexane		0.326997	146.506*	146.179	2.69034
Benzene		0.0331242	15.9302*	15.8971	0.274071
Cyclohexane		0	0*	0	0
Heptane		0.242475	328.390*	328.147	1.84639
Toluene		0.0423650	67.4636*	67.4213	0.324527
Octane		0.0848935	362.179*	362.094	0.592286
m-Xylene		0.00919250	44.7787*	44.7695	0.0649089
Nonane		0.00629292	83.1903*	83.1840	0.0405068
2,2,4-Trimethylpentane		0.00129150	1.66013*	1.65884	0.00998665
C10		0.00115107	43.6943*	43.6931	0.00674230
Ethylbenzene		0.00108125	4.99778*	4.99670	0.00763051

Process Streams		Captured Tank Flash Vapors (25%)		Condensate Truck Loading	FG from Tanks
Properties	Status:	Solved	Solved	Solved	
Phase: Total	From Block:	EVRU	Condensate Storage Tank	Condensate Storage Tank	
	To Block:	--	--	EVRU	
Property	Units				
Temperature	°F	65	65	65*	
Pressure	psia	11.9	11.9	11.9*	
Mole Fraction Vapor		1	0	1	
Mole Fraction Light Liquid		0	1	0	
Mole Fraction Heavy Liquid		0	0	0	
Molecular Weight	lb/lbmol	42.5162	96.0009	42.5162	
Mass Density	lb/ft^3	0.0910137	43.5334	0.0910137	
Molar Flow	lbmol/h	0.444279	13.0800	1.77712	
Mass Flow	lb/h	18.8890	1255.69	75.5562	
Vapor Volumetric Flow	ft^3/h	207.541	28.8444	830.163	
Liquid Volumetric Flow	gpm	25.8752	3.59618	103.501	
Std Vapor Volumetric Flow	MMSCFD	0.00404633	0.119128	0.0161853	
Std Liquid Volumetric Flow	sgpm	0.0762358	3.61229*	0.304943	
Compressibility		0.987290	0.00466069	0.987290	
Specific Gravity		1.46797	0.697997	1.46797	
API Gravity			70.5105		
Enthalpy	Btu/h	-21136.4	-1.09709E+06	-84545.5	
Mass Enthalpy	Btu/lb	-1118.98	-873.691	-1118.98	
Mass Cp	Btu/(lb*°F)	0.401948	0.504728	0.401948	
Ideal Gas CpCv Ratio		1.13240	1.05850	1.13240	
Dynamic Viscosity	cP	0.00844620	0.410362	0.00844620	
Kinematic Viscosity	cSt	5.79340	0.588470	5.79340	
Thermal Conductivity	Btu/(h*ft*°F)	0.0110781	0.0723474	0.0110781	
Surface Tension	lbf/ft		0.00141778?		
Net Ideal Gas Heating Value	Btu/ft^3	2184.29	4844.58	2184.29	
Net Liquid Heating Value	Btu/lb	19352.1	18989.2	19352.1	
Gross Ideal Gas Heating Value	Btu/ft^3	2374.76	5213.61	2374.76	
Gross Liquid Heating Value	Btu/lb	21052.2	20447.9	21052.2	

Process Streams		FG Recycled to Fulcher Inlet Liquids		Liquids to tanks	Uncaptured Tank Flash Vapors (75%)
Properties	Status:	Solved	Solved	Solved	Solved
Phase: Total	From Block:	Flash Vessel	--	Flash Vessel	EVRU
	To Block:	--	Flash Vessel	Condensate Storage Tank	--
Property	Units				
Temperature	°F	80	60*	80*	65
Pressure	psia	110	331.9*	110*	11.9
Mole Fraction Vapor		1	0	0	1
Mole Fraction Light Liquid		0	1	1	0
Mole Fraction Heavy Liquid		0	0	0	0
Molecular Weight	lb/lbmol	23.7186	85.6828	89.6034	42.5162
Mass Density	lb/ft^3	0.466021	42.7432	42.4268	0.0910137
Molar Flow	lbmol/h	0.940051	15.7972	14.8571	1.33284
Mass Flow	lb/h	22.2967	1353.54	1331.25	56.6671
Vapor Volumetric Flow	ft^3/h	47.8449	31.6669	31.3775	622.622
Liquid Volumetric Flow	gpm	5.96508	3.94808	3.91200	77.6256
Std Vapor Volumetric Flow	MMSCFD	0.00856162	0.143875	0.135313	0.0121390
Std Liquid Volumetric Flow	sgpm	0.118979	4.03621	3.91724	0.228708
Compressibility		0.966686	0.119301	0.0401130	0.987290
Specific Gravity		0.818940	0.685327	0.680255	1.46797
API Gravity			74.9708	73.4031	
Enthalpy	Btu/h	-36218.2	-1.23508E+06	-1.18278E+06	-63409.2
Mass Enthalpy	Btu/lb	-1624.37	-912.477	-888.474	-1118.98
Mass Cp	Btu/(lb*°F)	0.469460	0.510195	0.519980	0.401948
Ideal Gas CpCv Ratio		1.22547	1.06605	1.06119	1.13240
Dynamic Viscosity	cP	0.0106496	0.349775	0.332812	0.00844620
Kinematic Viscosity	cSt	1.42661	0.510860	0.489708	5.79340
Thermal Conductivity	Btu/(h*ft*°F)	0.0168813	0.0712908	0.0697053	0.0110781
Surface Tension	lbf/ft		0.00116573	0.00123630	
Net Ideal Gas Heating Value	Btu/ft^3	1226.65	4330.01	4526.37	2184.29
Net Liquid Heating Value	Btu/lb	19548.3	19018.6	19009.8	19352.1
Gross Ideal Gas Heating Value	Btu/ft^3	1348.67	4664.26	4874.05	2374.76
Gross Liquid Heating Value	Btu/lb	21500.5	20499.0	20482.2	21052.2

Process Streams		Captured Tank Flash Vapors (25%)		Condensate Truck Loading	FG from Tanks
Composition	Status:	Solved	Solved	Solved	
Phase: Vapor	From Block:	EVRU	Condensate Storage Tank	Condensate Storage Tank	
	To Block:	--	--	EVRU	
Mole Fraction					
Nitrogen		0.000496614		0.000496614	
Carbon Dioxide		0.0195727		0.0195727	
Methane		0.208166		0.208166	
Ethane		0.206726		0.206726	
Propane		0.253693		0.253693	
Isobutane		0.0692628		0.0692628	
n-Butane		0.112481		0.112481	
Isopentane		0.0469359		0.0469359	
n-Pentane		0.0354017		0.0354017	
Hexane		0.0234232		0.0234232	
Benzene		0.00263250		0.00263250	
Cyclohexane		0		0	
Heptane		0.0138252		0.0138252	
Toluene		0.00264260		0.00264260	
Octane		0.00389027		0.00389027	
m-Xylene		0.000458718		0.000458718	
Nonane		0.000236961		0.000236961	
2,2,4-Trimethylpentane		6.55946E-05		6.55946E-05	
C10		3.55535E-05		3.55535E-05	
Ethylbenzene		5.39256E-05		5.39256E-05	
Molar Flow		lbmol/h	lbmol/h	lbmol/h	
Nitrogen		0.000220635		0.000882541	
Carbon Dioxide		0.00869574		0.0347829	
Methane		0.0924841		0.369936	
Ethane		0.0918440		0.367376	
Propane		0.112711		0.450842	
Isobutane		0.0307720		0.123088	
n-Butane		0.0499728		0.199891	
Isopentane		0.0208527		0.0834106	
n-Pentane		0.0157282		0.0629129	
Hexane		0.0104065		0.0416259	
Benzene		0.00116957		0.00467827	
Cyclohexane		0		0	
Heptane		0.00614223		0.0245689	
Toluene		0.00117405		0.00469622	
Octane		0.00172837		0.00691346	
m-Xylene		0.000203799		0.000815195	
Nonane		0.000105277		0.000421107	
2,2,4-Trimethylpentane		2.91423E-05		0.000116569	
C10		1.57957E-05		6.31827E-05	
Ethylbenzene		2.39580E-05		9.58321E-05	

Process Streams		FG Recycled to Fulcher Inlet Liquids		Liquids to tanks	Uncaptured Tank Flash Vapors (75%)
Composition	Status:	Solved	Solved	Solved	Solved
Phase: Vapor	From Block:	Flash Vessel	--	Flash Vessel	EVRU
	To Block:	--	Flash Vessel	Condensate Storage Tank	--
Mole Fraction					
Nitrogen		0.00543886			0.000496614
Carbon Dioxide		0.0254534			0.0195727
Methane		0.700715			0.208166
Ethane		0.137383			0.206726
Propane		0.0738966			0.253693
Isobutane		0.0139736			0.0692628
n-Butane		0.0207721			0.112481
Isopentane		0.00791586			0.0469359
n-Pentane		0.00593451			0.0354017
Hexane		0.00403655			0.0234232
Benzene		0.000451105			0.00263250
Cyclohexane		0			0
Heptane		0.00257418			0.0138252
Toluene		0.000489120			0.00264260
Octane		0.000790585			0.00389027
m-Xylene		9.21087E-05			0.000458718
Nonane		5.21947E-05			0.000236961
2,2,4-Trimethylpentane		1.20274E-05			6.55946E-05
C10		8.60600E-06			3.55535E-05
Ethylbenzene		1.08341E-05			5.39256E-05
Molar Flow		lbmol/h	lbmol/h	lbmol/h	lbmol/h
Nitrogen		0.00511281			0.000661906
Carbon Dioxide		0.0239275			0.0260872
Methane		0.658708			0.277452
Ethane		0.129147			0.275532
Propane		0.0694666			0.338132
Isobutane		0.0131358			0.0923161
n-Butane		0.0195268			0.149918
Isopentane		0.00744131			0.0625580
n-Pentane		0.00557874			0.0471847
Hexane		0.00379456			0.0312194
Benzene		0.000424061			0.00350870
Cyclohexane		0			0
Heptane		0.00241986			0.0184267
Toluene		0.000459798			0.00352216
Octane		0.000743190			0.00518510
m-Xylene		8.65869E-05			0.000611396
Nonane		4.90657E-05			0.000315830
2,2,4-Trimethylpentane		1.13063E-05			8.74270E-05
C10		8.09008E-06			4.73870E-05
Ethylbenzene		1.01846E-05			7.18740E-05

Process Streams		Captured Tank Flash Vapors (25%)		Condensate Truck Loading	FG from Tanks
Composition	Status:	Solved	Solved	Solved	
Phase: Vapor	From Block:	EVRU	Condensate Storage Tank	Condensate Storage Tank	
	To Block:	--	--	EVRU	
Mass Fraction					
Nitrogen		0.000327213		0.000327213	
Carbon Dioxide		0.0202602		0.0202602	
Methane		0.0785467		0.0785467	
Ethane		0.146204		0.146204	
Propane		0.263118		0.263118	
Isobutane		0.0946866		0.0946866	
n-Butane		0.153768		0.153768	
Isopentane		0.0796490		0.0796490	
n-Pentane		0.0600757		0.0600757	
Hexane		0.0474762		0.0474762	
Benzene		0.00483651		0.00483651	
Cyclohexane		0		0	
Heptane		0.0325831		0.0325831	
Toluene		0.00572689		0.00572689	
Octane		0.0104520		0.0104520	
m-Xylene		0.00114544		0.00114544	
Nonane		0.000714820		0.000714820	
2,2,4-Trimethylpentane		0.000176234		0.000176234	
C10		0.000118981		0.000118981	
Ethylbenzene		0.000134655		0.000134655	
Mass Flow		lb/h	lb/h	lb/h	
Nitrogen		0.00618075		0.0247230	
Carbon Dioxide		0.382695		1.53078	
Methane		1.48367		5.93469	
Ethane		2.76166		11.0466	
Propane		4.97004		19.8802	
Isobutane		1.78854		7.15416	
n-Butane		2.90453		11.6181	
Isopentane		1.50449		6.01797	
n-Pentane		1.13477		4.53909	
Hexane		0.896781		3.58712	
Benzene		0.0913570		0.365428	
Cyclohexane		0		0	
Heptane		0.615464		2.46185	
Toluene		0.108176		0.432702	
Octane		0.197429		0.789715	
m-Xylene		0.0216363		0.0865452	
Nonane		0.0135023		0.0540091	
2,2,4-Trimethylpentane		0.00332888		0.0133155	
C10		0.00224743		0.00898974	
Ethylbenzene		0.00254350		0.0101740	

Process Streams		FG Recycled to Fulcher Inlet Liquids		Liquids to tanks	Uncaptured Tank Flash Vapors (75%)
Composition	Status:	Solved	Solved	Solved	Solved
Phase: Vapor	From Block:	Flash Vessel	--	Flash Vessel	EVRU
	To Block:	--	Flash Vessel	Condensate Storage Tank	--
Mass Fraction					
Nitrogen		0.00642369			0.000327213
Carbon Dioxide		0.0472283			0.0202602
Methane		0.473939			0.0785467
Ethane		0.174165			0.146204
Propane		0.137382			0.263118
Isobutane		0.0342420			0.0946866
n-Butane		0.0509017			0.153768
Isopentane		0.0240789			0.0796490
n-Pentane		0.0180520			0.0600757
Hexane		0.0146657			0.0474762
Benzene		0.00148561			0.00483651
Cyclohexane		0			0
Heptane		0.0108749			0.0325831
Toluene		0.00190006			0.00572689
Octane		0.00380744			0.0104520
m-Xylene		0.000412280			0.00114544
Nonane		0.000282235			0.000714820
2,2,4-Trimethylpentane		5.79235E-05			0.000176234
C10		5.16251E-05			0.000118981
Ethylbenzene		4.84936E-05			0.000134655
Mass Flow		lb/h	lb/h	lb/h	lb/h
Nitrogen		0.143227			0.0185422
Carbon Dioxide		1.05304			1.14809
Methane		10.5673			4.45102
Ethane		3.88332			8.28498
Propane		3.06317			14.9101
Isobutane		0.763484			5.36562
n-Butane		1.13494			8.71359
Isopentane		0.536881			4.51348
n-Pentane		0.402499			3.40432
Hexane		0.326997			2.69034
Benzene		0.0331242			0.274071
Cyclohexane		0			0
Heptane		0.242475			1.84639
Toluene		0.0423650			0.324527
Octane		0.0848935			0.592286
m-Xylene		0.00919250			0.0649089
Nonane		0.00629292			0.0405068
2,2,4-Trimethylpentane		0.00129150			0.00998665
C10		0.00115107			0.00674230
Ethylbenzene		0.00108125			0.00763051

Process Streams		Captured Tank Flash Vapors (25%)		Condensate Truck Loading	FG from Tanks
Properties	Status:	Solved		Solved	Solved
Phase: Vapor	From Block:	EVRU		Condensate Storage Tank	Condensate Storage Tank
	To Block:	--		--	EVRU
Property	Units				
Temperature	°F	65			65
Pressure	psia	11.9			11.9
Mole Fraction Vapor		1			1
Mole Fraction Light Liquid		0			0
Mole Fraction Heavy Liquid		0			0
Molecular Weight	lb/lbmol	42.5162			42.5162
Mass Density	lb/ft^3	0.0910137			0.0910137
Molar Flow	lbmol/h	0.444279			1.77712
Mass Flow	lb/h	18.8890			75.5562
Vapor Volumetric Flow	ft^3/h	207.541			830.163
Liquid Volumetric Flow	gpm	25.8752			103.501
Std Vapor Volumetric Flow	MMSCFD	0.00404633			0.0161853
Std Liquid Volumetric Flow	sgpm	0.0762358			0.304943
Compressibility		0.987290			0.987290
Specific Gravity		1.46797			1.46797
API Gravity					
Enthalpy	Btu/h	-21136.4			-84545.5
Mass Enthalpy	Btu/lb	-1118.98			-1118.98
Mass Cp	Btu/(lb*°F)	0.401948			0.401948
Ideal Gas CpCv Ratio		1.13240			1.13240
Dynamic Viscosity	cP	0.00844620			0.00844620
Kinematic Viscosity	cSt	5.79340			5.79340
Thermal Conductivity	Btu/(h*ft*°F)	0.0110781			0.0110781
Surface Tension	lbf/ft				
Net Ideal Gas Heating Value	Btu/ft^3	2184.29			2184.29
Net Liquid Heating Value	Btu/lb	19352.1			19352.1
Gross Ideal Gas Heating Value	Btu/ft^3	2374.76			2374.76
Gross Liquid Heating Value	Btu/lb	21052.2			21052.2

Process Streams		FG Recycled to Fulcher Inlet Liquids		Liquids to tanks	Uncaptured Tank Flash Vapors (75%)
Properties	Status:	Solved	Solved	Solved	Solved
Phase: Vapor	From Block:	Flash Vessel	--	Flash Vessel	EVRU
	To Block:	--	Flash Vessel	Condensate Storage Tank	--
Property	Units				
Temperature	°F	80			65
Pressure	psia	110			11.9
Mole Fraction Vapor		1			1
Mole Fraction Light Liquid		0			0
Mole Fraction Heavy Liquid		0			0
Molecular Weight	lb/lbmol	23.7186			42.5162
Mass Density	lb/ft^3	0.466021			0.0910137
Molar Flow	lbmol/h	0.940051			1.33284
Mass Flow	lb/h	22.2967			56.6671
Vapor Volumetric Flow	ft^3/h	47.8449			622.622
Liquid Volumetric Flow	gpm	5.96508			77.6256
Std Vapor Volumetric Flow	MMSCFD	0.00856162			0.0121390
Std Liquid Volumetric Flow	sgpm	0.118979			0.228708
Compressibility		0.966686			0.987290
Specific Gravity		0.818940			1.46797
API Gravity					
Enthalpy	Btu/h	-36218.2			-63409.2
Mass Enthalpy	Btu/lb	-1624.37			-1118.98
Mass Cp	Btu/(lb*°F)	0.469460			0.401948
Ideal Gas CpCv Ratio		1.22547			1.13240
Dynamic Viscosity	cP	0.0106496			0.00844620
Kinematic Viscosity	cSt	1.42661			5.79340
Thermal Conductivity	Btu/(h*ft*°F)	0.0168813			0.0110781
Surface Tension	lbf/ft				
Net Ideal Gas Heating Value	Btu/ft^3	1226.65			2184.29
Net Liquid Heating Value	Btu/lb	19548.3			19352.1
Gross Ideal Gas Heating Value	Btu/ft^3	1348.67			2374.76
Gross Liquid Heating Value	Btu/lb	21500.5			21052.2

Process Streams		Captured Tank Flash Vapors (25%)		Condensate Truck Loading	FG from Tanks
Composition	Status:	Solved	Solved	Solved	
Phase: Light Liquid	From Block:	EVRU	Condensate Storage Tank	Condensate Storage Tank	
	To Block:	--	--	EVRU	
Mole Fraction					
Nitrogen			5.79014E-07		
Carbon Dioxide			0.000245753		
Methane			0.000874726		
Ethane			0.00585617		
Propane			0.0261633		
Isobutane			0.0192473		
n-Butane			0.0466189		
Isopentane			0.0508805		
n-Pentane			0.0526141		
Hexane			0.126504		
Benzene			0.0152018		
Cyclohexane			0		
Heptane			0.248493		
Toluene			0.0555843		
Octane			0.241819		
m-Xylene			0.0321776		
Nonane			0.0495536		
2,2,4-Trimethylpentane			0.00110134		
C10			0.0234729		
Ethylbenzene			0.00359094		
Molar Flow		lbmol/h	lbmol/h	lbmol/h	
Nitrogen			7.57350E-06		
Carbon Dioxide			0.00321445		
Methane			0.0114414		
Ethane			0.0765987		
Propane			0.342216		
Isobutane			0.251754		
n-Butane			0.609775		
Isopentane			0.665516		
n-Pentane			0.688193		
Hexane			1.65467		
Benzene			0.198839		
Cyclohexane			0		
Heptane			3.25029		
Toluene			0.727043		
Octane			3.16299		
m-Xylene			0.420883		
Nonane			0.648161		
2,2,4-Trimethylpentane			0.0144055		
C10			0.307026		
Ethylbenzene			0.0469695		

Process Streams		FG Recycled to Fulcher Inlet Liquids		Liquids to tanks	Uncaptured Tank Flash Vapors (75%)
Composition	Status:	Solved	Solved	Solved	Solved
Phase: Light Liquid	From Block:	Flash Vessel	--	Flash Vessel	EVRU
	To Block:	--	Flash Vessel	Condensate Storage Tank	--
Mole Fraction					
Nitrogen			0.00038	5.99117E-05	
Carbon Dioxide			0.00392	0.00255752	
Methane			0.06584	0.0256697	
Ethane			0.03628	0.0298830	
Propane			0.0546	0.0533790	
Isobutane			0.02456	0.0252298	
n-Butane			0.05249	0.0544969	
Isopentane			0.04788	0.0504086	
n-Pentane			0.0479	0.0505553	
Hexane			0.10762	0.114174	
Benzene			0.01291	0.0136983	
Cyclohexane			0	0	
Heptane			0.20746	0.220424	
Toluene			0.04635	0.0492517	
Octane			0.20071	0.213359	
m-Xylene			0.0267	0.0283836	
Nonane			0.04106	0.0436547	
2,2,4-Trimethylpentane			0.00092	0.000977450	
C10			0.01944	0.0206695	
Ethylbenzene			0.00298	0.00316787	
Molar Flow		lbmol/h	lbmol/h	lbmol/h	lbmol/h
Nitrogen			0.00600292	0.000890115	
Carbon Dioxide			0.0619249	0.0379974	
Methane			1.04009	0.381378	
Ethane			0.573121	0.443975	
Propane			0.862525	0.793059	
Isobutane			0.387978	0.374843	
n-Butane			0.829193	0.809666	
Isopentane			0.756368	0.748927	
n-Pentane			0.756684	0.751106	
Hexane			1.70009	1.69630	
Benzene			0.203941	0.203517	
Cyclohexane			0	0	
Heptane			3.27728	3.27486	
Toluene			0.732199	0.731739	
Octane			3.17065	3.16991	
m-Xylene			0.421784	0.421698	
Nonane			0.648632	0.648583	
2,2,4-Trimethylpentane			0.0145334	0.0145221	
C10			0.307097	0.307089	
Ethylbenzene			0.0470756	0.0470654	

Process Streams		Captured Tank Flash Vapors (25%)		Condensate Truck Loading	FG from Tanks
Composition	Status:	Solved	Solved	Solved	
Phase: Light Liquid	From Block:	EVRU	Condensate Storage Tank	Condensate Storage Tank	
	To Block:	--	--	EVRU	
Mass Fraction					
Nitrogen			1.68958E-07		
Carbon Dioxide			0.000112660		
Methane			0.000146173		
Ethane			0.00183425		
Propane			0.0120175		
Isobutane			0.0116530		
n-Butane			0.0282247		
Isopentane			0.0382388		
n-Pentane			0.0395418		
Hexane			0.113556		
Benzene			0.0123690		
Cyclohexane			0		
Heptane			0.259367		
Toluene			0.0533479		
Octane			0.287733		
m-Xylene			0.0355844		
Nonane			0.0662026		
2,2,4-Trimethylpentane			0.00131045		
C10			0.0347889		
Ethylbenzene			0.00397113		
Mass Flow		lb/h	lb/h	lb/h	
Nitrogen			0.000212159		
Carbon Dioxide			0.141467		
Methane			0.183548		
Ethane			2.30325		
Propane			15.0902		
Isobutane			14.6325		
n-Butane			35.4415		
Isopentane			48.0162		
n-Pentane			49.6523		
Hexane			142.592		
Benzene			15.5317		
Cyclohexane			0		
Heptane			325.685		
Toluene			66.9886		
Octane			361.304		
m-Xylene			44.6830		
Nonane			83.1300		
2,2,4-Trimethylpentane			1.64552		
C10			43.6841		
Ethylbenzene			4.98652		

Process Streams		FG Recycled to Fulcher Inlet Liquids		Liquids to tanks	Uncaptured Tank Flash Vapors (75%)
Composition	Status:	Solved	Solved	Solved	Solved
Phase: Light Liquid	From Block:	Flash Vessel	--	Flash Vessel	EVRU
	To Block:	--	Flash Vessel	Condensate Storage Tank	--
Mass Fraction					
Nitrogen			0.000124238	1.87306E-05	
Carbon Dioxide			0.00201344	0.00125615	
Methane			0.0123273	0.00459586	
Ethane			0.0127319	0.0100281	
Propane			0.0280992	0.0262689	
Isobutane			0.0166601	0.0163656	
n-Butane			0.0356062	0.0353500	
Isopentane			0.0403171	0.0405891	
n-Pentane			0.0403340	0.0407072	
Hexane			0.108239	0.109806	
Benzene			0.0117693	0.0119415	
Cyclohexane			0	0	
Heptane			0.242615	0.246496	
Toluene			0.0498422	0.0506452	
Octane			0.267578	0.271996	
m-Xylene			0.0330826	0.0336298	
Nonane			0.0614611	0.0624857	
2,2,4-Trimethylpentane			0.00122650	0.00124608	
C10			0.0322814	0.0328212	
Ethylbenzene			0.00369236	0.00375339	
Mass Flow		lb/h	lb/h	lb/h	lb/h
Nitrogen			0.168162	0.0249351	
Carbon Dioxide			2.72528	1.67225	
Methane			16.6855	6.11824	
Ethane			17.2332	13.3499	
Propane			38.0336	34.9704	
Isobutane			22.5502	21.7867	
n-Butane			48.1945	47.0596	
Isopentane			54.5711	54.0342	
n-Pentane			54.5938	54.1913	
Hexane			146.506	146.179	
Benzene			15.9302	15.8971	
Cyclohexane			0	0	
Heptane			328.390	328.147	
Toluene			67.4636	67.4213	
Octane			362.179	362.094	
m-Xylene			44.7787	44.7695	
Nonane			83.1903	83.1840	
2,2,4-Trimethylpentane			1.66013	1.65884	
C10			43.6943	43.6931	
Ethylbenzene			4.99778	4.99670	

Process Streams		Captured Tank Flash Vapors (25%)	Condensate Truck Loading	FG from Tanks
Properties	Status:	Solved	Solved	Solved
Phase: Light Liquid	From Block:	EVRU	Condensate Storage Tank	Condensate Storage Tank
	To Block:	--	--	EVRU
Property	Units			
Temperature	°F		65	
Pressure	psia		11.9	
Mole Fraction Vapor			0	
Mole Fraction Light Liquid			1	
Mole Fraction Heavy Liquid			0	
Molecular Weight	lb/lbmol		96.0009	
Mass Density	lb/ft^3		43.5334	
Molar Flow	lbmol/h		13.0800	
Mass Flow	lb/h		1255.69	
Vapor Volumetric Flow	ft^3/h		28.8444	
Liquid Volumetric Flow	gpm		3.59618	
Std Vapor Volumetric Flow	MMSCFD		0.119128	
Std Liquid Volumetric Flow	sgpm		3.61229	
Compressibility			0.00466069	
Specific Gravity			0.697997	
API Gravity			70.5105	
Enthalpy	Btu/h		-1.09709E+06	
Mass Enthalpy	Btu/lb		-873.691	
Mass Cp	Btu/(lb*°F)		0.504728	
Ideal Gas CpCv Ratio			1.05850	
Dynamic Viscosity	cP		0.410362	
Kinematic Viscosity	cSt		0.588470	
Thermal Conductivity	Btu/(h*ft*°F)		0.0723474	
Surface Tension	lbf/ft		0.00141778?	
Net Ideal Gas Heating Value	Btu/ft^3		4844.58	
Net Liquid Heating Value	Btu/lb		18989.2	
Gross Ideal Gas Heating Value	Btu/ft^3		5213.61	
Gross Liquid Heating Value	Btu/lb		20447.9	

Process Streams		FG Recycled to Fulcher Inlet Liquids	Liquids to tanks	Uncaptured Tank Flash Vapors (75%)
Properties	Status:	Solved	Solved	Solved
Phase: Light Liquid	From Block:	Flash Vessel	--	Flash Vessel
	To Block:	--	Flash Vessel	Condensate Storage Tank
Property	Units			
Temperature	°F	60	80	
Pressure	psia	331.9	110	
Mole Fraction Vapor		0	0	
Mole Fraction Light Liquid		1	1	
Mole Fraction Heavy Liquid		0	0	
Molecular Weight	lb/lbmol	85.6828	89.6034	
Mass Density	lb/ft^3	42.7432	42.4268	
Molar Flow	lbmol/h	15.7972	14.8571	
Mass Flow	lb/h	1353.54	1331.25	
Vapor Volumetric Flow	ft^3/h	31.6669	31.3775	
Liquid Volumetric Flow	gpm	3.94808	3.91200	
Std Vapor Volumetric Flow	MMSCFD	0.143875	0.135313	
Std Liquid Volumetric Flow	sgpm	4.03621	3.91724	
Compressibility		0.119301	0.0401130	
Specific Gravity		0.685327	0.680255	
API Gravity		74.9708	73.4031	
Enthalpy	Btu/h	-1.23508E+06	-1.18278E+06	
Mass Enthalpy	Btu/lb	-912.477	-888.474	
Mass Cp	Btu/(lb*°F)	0.510195	0.519980	
Ideal Gas CpCv Ratio		1.06605	1.06119	
Dynamic Viscosity	cP	0.349775	0.332812	
Kinematic Viscosity	cSt	0.510860	0.489708	
Thermal Conductivity	Btu/(h*ft*°F)	0.0712908	0.0697053	
Surface Tension	lbf/ft	0.00116573	0.00123630	
Net Ideal Gas Heating Value	Btu/ft^3	4330.01	4526.37	
Net Liquid Heating Value	Btu/lb	19018.6	19009.8	
Gross Ideal Gas Heating Value	Btu/ft^3	4664.26	4874.05	
Gross Liquid Heating Value	Btu/lb	20499.0	20482.2	

Storage Tank Emissions Calculations

Unit Number: T6
Description: Produced Water Tank

Throughput

45 bbl/turnover

130 turnover/yr

5,870 bbl/yr

Tank capacity

Turnovers per year

Annual liquid throughput

Harvest Four Corners, LLC

Harvest Four Corners, LLC

bbl/turnover x turnover/yr

Emission Rates

Pollutant	Emission Factor, lb/bbl	Uncontrolled, Emission Rate, tpy
VOC	0.262	7.69E-01
Benzene	0.007	2.05E-02
Ethylbenzene	0.0007	2.05E-03
n-Hexane	0.022	6.46E-02
Toluene	0.009	2.64E-02
Xylene	0.006	1.76E-02

VOC, Benzene, and n-Hexane emission factors are taken from the CDPHE PS Memo 09-02 (Oil & Gas Produced Water Tank Batteries - Regulatory Definitions & Permitting Guidance)

Ethylbenzene, toluene, and xylene emissions factors (Non-Texas) are taken from the TCEQ Project 2010-29 (Emission Factor Determination for Produced Water Storage Tanks) report

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

Storage Tank Emissions Calculations

Unit Number: **T12**
Description: Produced Water Tank

Throughput

70 bbl/turnover

130 turnover/yr

9,130 bbl/yr

Tank capacity

Turnovers per year

Annual liquid throughput

Harvest Four Corners, LLC

Harvest Four Corners, LLC

bbl/turnover x turnover/yr

Emission Rates

Pollutant	Emission Factor, lb/bbl	Uncontrolled, Emission Rate, tpy
VOC	0.262	1.20
Benzene	0.007	3.20E-02
Ethylbenzene	0.0007	3.20E-03
n-Hexane	0.022	1.00E-01
Toluene	0.009	4.11E-02
Xylene	0.006	2.74E-02

VOC, Benzene, and n-Hexane emission factors are taken from the CDPHE PS Memo 09-02 (Oil & Gas Produced Water Tank Batteries - Regulatory Definitions & Permitting Guidance)

Ethylbenzene, toluene, and xylene emissions factors (Non-Texas) are taken from the TCEQ Project 2010-29 (Emission Factor Determination for Produced Water Storage Tanks) report

Uncontrolled Emission Rates (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:	Chaco T4 (Condensate)
City:	Bloomfield
State:	New Mexico
Company:	Williams Four Corners LLC
Type of Tank:	Vertical Fixed Roof Tank
Description:	21,000 Gallon Condensate Storage Tank

Tank Dimensions

Shell Height (ft):	16.00
Diameter (ft):	15.00
Liquid Height (ft) :	15.00
Avg. Liquid Height (ft):	7.50
Volume (gallons):	19,828.82
Turnovers:	50.17
Net Throughput(gal/yr):	994,737.00
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)	15.00

Breather Vent Settings

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

Meteorological 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

Chaco T4 (Condensate) - Vertical Fixed Roof Tank Bloomfield, 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.					
Condensate	All	64.94	53.24	76.64	58.39	4.4090	3.4776	5.5241	65.6443			97.09	
2,2,4-Trimethylpentane (isooctane)						0.6857	0.4887	0.9450	114.2300	0.0013	0.0003	114.23	Option 2: A=6.8118, B=1257.84, C=220.74
Benzene						1.3372	0.9653	1.8208	78.1100	0.0124	0.0056	78.11	Option 2: A=6.905, B=1211.033, C=220.79
Butane (-n)						28.6734	23.0445	35.2667	58.1230	0.0343	0.3300	58.12	Option 1: VP60 = 26.1 VP70 = 31.31
Decane (-n)						0.0374	0.0286	0.0489	142.2900	0.0349	0.0004	142.29	Option 1: VP60 = .033211 VP70 = .041762
Ethylbenzene						0.1286	0.0854	0.1894	106.1700	0.0040	0.0002	106.17	Option 2: A=6.975, B=1424.255, C=213.21
Heptane (-n)						0.7080	0.4981	0.9910	100.2000	0.2599	0.0617	100.20	Option 3: A=37358, B=8.2585
Hexane (-n)						2.1727	1.6003	2.9030	86.1700	0.1138	0.0829	86.17	Option 2: A=6.876, B=1171.17, C=224.41
Isobutane						41.6075	33.9758	50.4378	58.1230	0.0177	0.2470	58.12	Option 1: VP60 = 38.14 VP70 = 45.16
Isopentane						11.2522	8.5746	14.3915	72.1500	0.0383	0.1446	72.15	Option 1: VP60 = 10.005 VP70 = 12.53
Nonane (-n)						0.0741	0.0558	0.0981	128.2600	0.0663	0.0016	128.26	Option 1: VP60 = .065278 VP70 = .08309
Octane (-n)						0.1666	0.1231	0.2250	114.2300	0.2883	0.0161	114.23	Option 1: VP60 = .145444 VP70 = .188224
Pentane (-n)						7.6199	5.8716	9.7769	72.1500	0.0396	0.1013	72.15	Option 3: A=27691, B=7.558
Toluene						0.3844	0.2666	0.5435	92.1300	0.0535	0.0069	92.13	Option 2: A=6.954, B=1344.8, C=219.48
Xylenes (mixed isomers)						0.1073	0.0710	0.1586	106.1700	0.0357	0.0013	106.17	Option 2: A=7.009, B=1462.266, C=215.11

TANKS 4.0.9d

Emissions Report - Detail Format

Detail Calculations (AP-42)

Chaco T4 (Condensate) - Vertical Fixed Roof Tank Bloomfield, New Mexico

Annual Emission Calculations

Standing Losses (lb):	3,386.3521
Vapor Space Volume (cu ft):	1,683.8880
Vapor Density (lb/cu ft):	0.0514
Vapor Space Expansion Factor:	0.3458
Vented Vapor Saturation Factor:	0.3099

Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	1,683.8880
Tank Diameter (ft):	15.0000
Vapor Space Outage (ft):	9.5289
Tank Shell Height (ft):	16.0000
Average Liquid Height (ft):	7.5000
Roof Outage (ft):	1.0289

Roof Outage (Dome Roof)	
Roof Outage (ft):	1.0289
Dome Radius (ft):	15.0000
Shell Radius (ft):	7.5000

Vapor Density	
Vapor Density (lb/cu ft):	0.0514
Vapor Molecular Weight (lb/lb-mole):	65.6443
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	4.4090
Daily Avg. Liquid Surface Temp. (deg. R):	524.6094
Daily Average Ambient Temp. (deg. F):	56.1542
Ideal Gas Constant R (psia cu ft / (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:	0.3458
Daily Vapor Temperature Range (deg. R):	46.7976
Daily Vapor Pressure Range (psia):	2.0465
Breather Vent Press. Setting Range (psia):	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	4.4090
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	3.4776
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	5.5241
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:	0.3099
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	4.4090
Vapor Space Outage (ft):	9.5289

Working Losses (lb):	5,241.4594
Vapor Molecular Weight (lb/lb-mole):	65.6443
Vapor Pressure at Daily Average Liquid	
Surface Temperature (psia):	4.4090
Annual Net Throughput (gal/yr.):	994,737.0000
Annual Turnovers:	50.1700
Turnover Factor:	0.7646
Maximum Liquid Volume (gal):	19,828.8200
Maximum Liquid Height (ft):	15.0000
Tank Diameter (ft):	15.0000
Working Loss Product Factor:	1.0000
 Total Losses (lb):	 8,627.8115

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

Emissions Report for: Annual

Chaco T4 (Condensate) - Vertical Fixed Roof Tank
Bloomfield, New Mexico

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Condensate	5,241.46	3,386.35	8,627.81
Isobutane	1,294.81	836.54	2,131.35
Butane (-n)	1,729.51	1,117.38	2,846.89
Isopentane	758.12	489.80	1,247.92
Pentane (-n)	530.89	342.99	873.88
Hexane (-n)	434.71	280.85	715.56
Heptane (-n)	323.56	209.04	532.61
Octane (-n)	84.45	54.56	139.01
Nonane (-n)	8.64	5.58	14.22
Decane (-n)	2.29	1.48	3.78
2,2,4-Trimethylpentane (isooctane)	1.58	1.02	2.61
Benzene	29.14	18.83	47.97
Ethylbenzene	0.90	0.58	1.48
Toluene	36.13	23.34	59.47
Xylenes (mixed isomers)	6.73	4.35	11.07

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

Identification

User Identification:	Chaco T5 (Condensate)
City:	Bloomfield
State:	New Mexico
Company:	Williams Four Corners LLC
Type of Tank:	Vertical Fixed Roof Tank
Description:	18,900 Gallon Condensate Storage Tank

Tank Dimensions

Shell Height (ft):	15.00
Diameter (ft):	15.00
Liquid Height (ft) :	14.00
Avg. Liquid Height (ft):	7.00
Volume (gallons):	18,506.90
Turnovers:	48.37
Net Throughput(gal/yr):	895,263.00
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)	15.00

Breather Vent Settings

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

Meteorological 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

Chaco T5 (Condensate) - Vertical Fixed Roof Tank

Bloomfield, 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.					
Condensate	All	64.94	53.24	76.64	58.39	4.4090	3.4776	5.5241	65.6443			97.09	
2,2,4-Trimethylpentane (isooctane)						0.6857	0.4887	0.9450	114.2300	0.0013	0.0003	114.23	Option 2: A=6.8118, B=1257.84, C=220.74
Benzene						1.3372	0.9653	1.8208	78.1100	0.0124	0.0056	78.11	Option 2: A=6.905, B=1211.033, C=220.79
Butane (-n)						28.6734	23.0445	35.2667	58.1230	0.0343	0.3300	58.12	Option 1: VP60 = 26.1 VP70 = 31.31
Decane (-n)						0.0374	0.0286	0.0489	142.2900	0.0349	0.0004	142.29	Option 1: VP60 = .033211 VP70 = .041762
Ethylbenzene						0.1286	0.0854	0.1894	106.1700	0.0040	0.0002	106.17	Option 2: A=6.975, B=1424.255, C=213.21
Heptane (-n)						0.7080	0.4981	0.9910	100.2000	0.2599	0.0617	100.20	Option 3: A=37358, B=8.2585
Hexane (-n)						2.1727	1.6003	2.9030	86.1700	0.1138	0.0829	86.17	Option 2: A=6.876, B=1171.17, C=224.41
Isobutane						41.6075	33.9758	50.4378	58.1230	0.0177	0.2470	58.12	Option 1: VP60 = 38.14 VP70 = 45.16
Isopentane						11.2522	8.5746	14.3915	72.1500	0.0383	0.1446	72.15	Option 1: VP60 = 10.005 VP70 = 12.53
Nonane (-n)						0.0741	0.0558	0.0981	128.2600	0.0663	0.0016	128.26	Option 1: VP60 = .065278 VP70 = .08309
Octane (-n)						0.1666	0.1231	0.2250	114.2300	0.2883	0.0161	114.23	Option 1: VP60 = .145444 VP70 = .188224
Pentane (-n)						7.6199	5.8716	9.7769	72.1500	0.0396	0.1013	72.15	Option 3: A=27691, B=7.558
Toluene						0.3844	0.2666	0.5435	92.1300	0.0535	0.0069	92.13	Option 2: A=6.954, B=1344.8, C=219.48
Xylenes (mixed isomers)						0.1073	0.0710	0.1586	106.1700	0.0357	0.0013	106.17	Option 2: A=7.009, B=1462.266, C=215.11

TANKS 4.0.9d

Emissions Report - Detail Format

Detail Calculations (AP-42)

Chaco T5 (Condensate) - Vertical Fixed Roof Tank Bloomfield, New Mexico

Annual Emission Calculations

Standing Losses (lb):	3,329.2145
Vapor Space Volume (cu ft):	1,595.5307
Vapor Density (lb/cu ft):	0.0514
Vapor Space Expansion Factor:	0.3458
Vented Vapor Saturation Factor:	0.3216
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	1,595.5307
Tank Diameter (ft):	15.0000
Vapor Space Outage (ft):	9.0289
Tank Shell Height (ft):	15.0000
Average Liquid Height (ft):	7.0000
Roof Outage (ft):	1.0289
Roof Outage (Dome Roof)	
Roof Outage (ft):	1.0289
Dome Radius (ft):	15.0000
Shell Radius (ft):	7.5000
Vapor Density	
Vapor Density (lb/cu ft):	0.0514
Vapor Molecular Weight (lb/lb-mole):	65.6443
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	4.4090
Daily Avg. Liquid Surface Temp. (deg. R):	524.6094
Daily Average Ambient Temp. (deg. F):	56.1542
Ideal Gas Constant R (psia cu ft / (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:	0.3458
Daily Vapor Temperature Range (deg. R):	46.7976
Daily Vapor Pressure Range (psia):	2.0465
Breather Vent Press. Setting Range (psia):	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	4.4090
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	3.4776
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	5.5241
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:	0.3216
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	4.4090
Vapor Space Outage (ft):	9.0289

Working Losses (lb):	4,854.5942
Vapor Molecular Weight (lb/lb-mole):	65.6443
Vapor Pressure at Daily Average Liquid	
Surface Temperature (psia):	4.4090
Annual Net Throughput (gal/yr.):	895,263.0000
Annual Turnovers:	48.3700
Turnover Factor:	0.7869
Maximum Liquid Volume (gal):	18,506.9000
Maximum Liquid Height (ft):	14.0000
Tank Diameter (ft):	15.0000
Working Loss Product Factor:	1.0000
 Total Losses (lb):	 8,183.8087

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

Emissions Report for: Annual

Chaco T5 (Condensate) - Vertical Fixed Roof Tank
Bloomfield, New Mexico

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Condensate	4,854.59	3,329.21	8,183.81
Isobutane	1,199.24	822.42	2,021.66
Butane (-n)	1,601.86	1,098.53	2,700.39
Isopentane	702.16	481.53	1,183.70
Pentane (-n)	491.70	337.20	828.91
Hexane (-n)	402.62	276.11	678.74
Heptane (-n)	299.68	205.52	505.20
Octane (-n)	78.22	53.64	131.86
Nonane (-n)	8.00	5.49	13.49
Decane (-n)	2.13	1.46	3.58
2,2,4-Trimethylpentane (isooctane)	1.47	1.01	2.47
Benzene	26.99	18.51	45.50
Ethylbenzene	0.83	0.57	1.41
Toluene	33.46	22.95	56.41
Xylenes (mixed isomers)	6.23	4.27	10.50

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

Identification

User Identification:	Chaco T7 (Methanol)
City:	Bloomfield
State:	New Mexico
Company:	Williams Four Corners LLC
Type of Tank:	Horizontal Tank
Description:	500 Gallon Methanol Tank

Tank Dimensions

Shell Length (ft):	6.00
Diameter (ft):	4.00
Volume (gallons):	500.00
Turnovers:	12.00
Net Throughput(gal/yr):	6,000.00
Is Tank Heated (y/n):	N
Is Tank Underground (y/n):	N

Paint Characteristics

Shell Color/Shade:	Gray/Light
Shell Condition	Good

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

Chaco T7 (Methanol) - Horizontal Tank
Bloomfield, 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)

Chaco T7 (Methanol) - Horizontal Tank Bloomfield, New Mexico

Annual Emission Calculations

Standing Losses (lb):	28.5886
Vapor Space Volume (cu ft):	48.0243
Vapor Density (lb/cu ft):	0.0096
Vapor Space Expansion Factor:	0.2008
Vented Vapor Saturation Factor:	0.8487
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	48.0243
Tank Diameter (ft):	4.0000
Effective Diameter (ft):	5.5293
Vapor Space Outage (ft):	2.0000
Tank Shell Length (ft):	6.0000
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
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:	0.8487
Vapor Pressure at Daily Average Liquid:	
Surface Temperature (psia):	1.6820
Vapor Space Outage (ft):	2.0000
Working Losses (lb):	7.6985
Vapor Molecular Weight (lb/lb-mole):	32.0400
Vapor Pressure at Daily Average Liquid	
Surface Temperature (psia):	1.6820
Annual Net Throughput (gal/yr.):	6,000.0000

Annual Turnovers:	12.0000
Turnover Factor:	1.0000
Tank Diameter (ft):	4.0000
Working Loss Product Factor:	1.0000

Total Losses (lb):	36.2872
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TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

Chaco T7 (Methanol) - Horizontal Tank
Bloomfield, New Mexico

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Methyl alcohol	7.70	28.59	36.29

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 Emissions

Carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O) combustion emissions (Units 1-7) are calculated using emission factors from the 40 Code of Federal Regulations (CFR), Part C, Tables C-1 & C-2 and the turbine, reciprocating engine and heater higher heating value (HHV) design heat rates.

The GHG emissions from SSM blowdowns of the turbines, compressors and piping (Unit SSM) and blowdowns from the pig receiver (Unit PR) are calculated from the quantity of gas vented during each event, the composition of the gas, and the number of events. The quantity of gas vented during each event is determined by HFC engineering. The composition of the gas is determined from an extended gas analysis. For each unit, the annual number of blowdown events is estimated based on historical operations. A safety factor is added because emissions from each blowdown event are dependent on the composition of the gas in the pipeline and because the number of blowdowns in a year may vary.

GHG emissions from centrifugal compressor venting (blowdown valve leakage, oil degassing vents, and isolation valve leakage) are calculated in accordance with the applicable Subpart W methodology using Best Available Monitoring Method (BAMM) emission factors prepared by Williams Four Corners LLC (during the time they owned the facility). The facility CO₂ and CH₄ contents are taken from an extended gas analysis. Since the combined blowdown valve leakage and oil degassing vent emissions (when the compressors are in operation) are greater than the isolation valve leakage (when the compressors are not in operation), potential emissions are calculated assuming the compressors operate 8,760 hours per year (in other words, isolation valve leakage occurs 0 hours per year).

GHG emissions from valves, connectors, open-ended lines and pressure relief valves (Unit F1) are calculated using the Subpart W methodology applicable to these source types. The component count is determined from the number of compressors and dehydrators permitted to operate at the station using an equation derived by HFC that is representative of their facilities. Emission factors are obtained from Table W-1A of Subpart W (Western U.S. – Gas Service). The facility CO₂ and CH₄ contents are taken from an extended gas analysis. Emissions are calculated assuming the equipment operates 8,760 hours per year.

GHG emissions from natural gas pneumatic device and pump venting are calculated using the Subpart W methodologies applicable to these source types. The component count is identified by HFC. Emission factors are obtained from Table W-1A of Subpart W (Western U.S. – Gas Service). The facility CO₂ and CH₄ contents are taken from an extended gas analysis. Emissions are calculated assuming the equipment operates 8,760 hours per year.

There are no GHG emissions associated with the truck loading operations (Units L1 & L2). Malfunction (Unit M1) emissions are set at 10.0 tons of VOC per year to account for emissions that may occur during upsets and malfunctions (including, but not limited to, unscheduled blowdowns and relief valve release). Based on the gas release rate associated with the set annual VOC emission rate, GHG emissions are calculated using the extended gas analysis.

GHG emissions from the condensate storage tanks (Unit T4 & T5) are taken from the ProMax modeling results. There are no GHG emissions associated with the produced water tanks (Units T6 & T12).

Green House Gas Emissions Data and Calculations

Sources	Facility Total Emissions				
	CO ₂ , tpy	CH ₄ , tpy	N ₂ O, tpy	GHG, tpy	CO ₂ e, tpy
Engine & Turbine Exhaust Emissions	43,239.00	8.16E-01	8.19E-02	43,239.90	43283.81
SSM Emissions	7.68	121.96	--	129.64	3056.56
Centrifugal Compressor Venting Emissions	36.58	581.59	--	618.18	14576.46
Heater & Boiler Exhaust Emissions	292.57	5.51E-03	5.51E-04	292.58	292.87
Pig Launcher & Receiver Emissions	1.39E-01	2.21	--	2.35	55.40
Equipment Leak Emissions	7.01E-01	11.15	--	11.85	279.44
Natural Gas Pneumatic Device Venting Emissions	5.41E-01	8.58	--	9.12	214.94
Natural Gas Driven Pneumatic Pump Venting Emissions	1.33E-01	2.11	--	2.25	52.94
Malfunction Emissions	3.14	49.81	--	52.95	1248.42
Storage Tank Emissions	5.03	19.50	--	24.52	492.41
Total	43,585.52	797.73	8.24E-02	44,383.33	63,553.26

Engine & Turbine Exhaust Emissions

Unit Numbers	Description	Emission Factors			Emission Rates		
		CO ₂ , kg/MMBtu	CH ₄ , kg/MMBtu	N ₂ O, kg/MMBtu	CO ₂ , tpy	CH ₄ , tpy	N ₂ O, tpy
1	Solar Saturn 10-1001	53.06	1.00E-03	1.00E-04	7,555.67	1.42E-01	1.42E-02
2	Solar Saturn 10-1001	53.06	1.00E-03	1.00E-04	7,555.67	1.42E-01	1.42E-02
3	Solar Saturn 10-1202	53.06	1.00E-03	1.00E-04	7,555.67	1.42E-01	1.42E-02
4	Solar Centaur 10-4002	53.06	1.00E-03	1.00E-04	20,508.26	3.87E-01	3.87E-02
5	Detroit Diesel Engine	73.96	3.00E-03	6.00E-04	63.73	2.59E-03	5.17E-04
	Total				43,239.00	8.16E-01	8.19E-02

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	Solar Saturn 10-1001	Nat. Gas	8,760	13.30	14.78	129,453
2	Solar Saturn 10-1001	Nat. Gas	8,760	13.30	14.78	129,453
3	Solar Saturn 10-1202	Nat. Gas	8,760	13.30	14.78	129,453
4	Solar Centaur 10-4002	Nat. Gas	8,760	36.10	40.11	351,373
5	Detroit Diesel Engine	Diesel	500	1.41	1.57	783

The fuel types and operating times are provided by Harvest

The LHV design heat rates are taken from manufacturers data

HHV Design Heat Rates (MMBtu/hr) = LHV Design Heat Rates (MMBtu/hr) / 0.9 LHV/HHV

HHV Fuel Usages (MMBtu/yr) = HHV Design Heat Rates (MMBtu/hr) x hr/yr

SSM Emissions

Unit Numbers	Description	Total Gas Losses, scf/yr	CO ₂ Emission Factors, lb/scf	CH ₄ Emission Factors, lb/scf	Emission Rates	
					CO ₂ , tpy	CH ₄ , tpy
SSM	SSM Blowdowns	6,720,840	0.0023	0.0363	7.68	121.96

The annual blowdown volumes are calculated from data provided by Harvest

The CO₂ and CH₄ emission factors are calculated from the facility extended gas analysis

Emission Rates (tpy) = scf/yr x lb/scf / 2,000 lb/ton

Green House Gas Emissions Data and Calculations

Centrifugal Compressor Venting Emissions

Unit Numbers	Description	Emission Rates	
		CO2, tpy	CH4, tpy
NA	Blowdown Valve Leakage	6.70	106.57
NA	Oil Degassing Vents	29.88	475.03
NA	Isolation Valve Leakage	0.00E+00	0.00E+00
	Total	36.58	581.59

Operating mode - includes blowdown valve leakage (wet and dry seal) and the oil degassing vents (wet seal)

Non-operating depressurized mode - includes isolation valve leakage (wet & dry seal) through open blowdown vents (without blind flanges)

A combination of equations W-22 & W-36 (Subpart W) is used to calculate centrifugal 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	4	167.4	8,760	1.97	85.84	0.0526	0.0192
NA	Oil Degassing Vents	4	746.2	8,760	1.97	85.84	0.0526	0.0192
NA	Isolation Valve Leakage	4	10.8	0	1.97	85.84	0.0526	0.0192

The number of compressors are provided by Harvest

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) is 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)

Heater & Boiler Exhaust Emissions

Unit Numbers	Description	Emission Factors			Emission Rates		
		CO2, kg/MMBtu	CH4, kg/MMBtu	N2O, kg/MMBtu	CO2, tpy	CH4, tpy	N2O, tpy
6	EVRU Separator Heater	53.06	1.00E-03	1.00E-04	289.73	5.46E-03	5.46E-04
7	Heater	53.06	1.00E-03	1.00E-04	2.84	5.35E-05	5.35E-06
	Total				292.57	5.51E-03	5.51E-04

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
6	EVRU Separator Heater	Nat. Gas	8,760	0.510	0.567	4,964
7	Heater	Nat. Gas	8,760	0.005	0.006	49

The fuel type and operating time are provided by Harvest

The LHV design heat rates are taken from manufacturers data

HHV Design Heat Rates (MMBtu/hr) = LHV Design Heat Rate (MMBtu/hr) / 0.9 LHV/HHV

HHV Fuel Usages (MMBtu/yr) = HHV Design Heat Rate (MMBtu/hr) x hr/yr

Green House Gas Emissions Data and Calculations

Pig Launcher & Receiver Emissions

Unit Numbers	Description	Total Gas Losses, scf/yr	CO2 Emission Factors, lb/scf	CH4 Emission Factors, lb/scf	Emission Rates	
					CO2, tpy	CH4, tpy
PR	Pig Receiver	121,810	0.0023	0.0363	1.39E-01	2.21

The annual blowdown volumes are calculated from data provided by Harvest

The CO2 and CH4 emission factors are calculated from the facility extended gas analysis

Emission Rates (tpy) = scf/yr x lb/scf / 2,000 lb/ton

Equipment Leaks Emissions

Unit Numbers	Description	Emission Rates	
		CO2, tpy	CH4, tpy
NA	Valves	5.34E-01	8.49
NA	Connectors	7.06E-02	1.12
NA	Open-Ended Lines	3.66E-02	5.82E-01
NA	Pressure Relief Valves	5.99E-02	9.52E-01
	Total	7.01E-01	11.15

A combination of equations W-31 & W-36 (Subpart W) is used to calculate uncombusted CO2 & CH4 emissions

As the NMED requires CO2 & CH4 emissions rather than CO2e emissions, it is not necessary to include the global warming potential from equation W-36

CO2 Emission Rate (tpy) = # x scf/hr/component x (CO2 Content (mole %) / 100) x hr/yr x CO2 Density (kg/scf) x (2,204.6 lb/tonne / 2,000 lb/ton) / 1,000 kg/tonne

CH4 Emission Rate (tpy) = # x scf/hr/component x (CH4 Content (mole %) / 100) x hr/yr x CH4 Density (kg/scf) x (2,204.6 lb/tonne / 2,000 lb/ton) / 1,000 kg/tonne

Unit Numbers	Description	Number of Components, #	Emission Factors, scf/hr /component	CO2 Contents, mole %	CH4 Contents, mole %	Operating Times, hr/yr	CO2 Density, kg/scf	CH4 Density, kg/scf
NA	Valves	441	0.121	1.97	85.84	8,760	0.0526	0.0192
NA	Connectors	415	0.017	1.97	85.84	8,760	0.0526	0.0192
NA	Open-Ended Lines	118	0.031	1.97	85.84	8,760	0.0526	0.0192
NA	Pressure Relief Valves	31	0.193	1.97	85.84	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	CH4, tpy
NA	Continuous High Bleed Pneumatic Devices	0	37.3	8,760	0.00E+00	0.00E+00
NA	Intermittent Bleed Pneumatic Devices	4	13.5	8,760	5.41E-01	8.58
NA	Continuous Low Bleed Pneumatic Devices	0	1.39	8,760	0.00E+00	0.00E+00
	Total				5.41E-01	8.58

The number of devices are provided by Harvest

The emission factors are taken from Subpart W, Table W-1A (Western U.S. - Gas Service)

The operating times are provided by Harvest

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	1.97	85.84	5.262E-05	4.790E-04	1	25
NA	Continuous Low Bleed Pneumatic Devices	1.97	85.84	5.262E-05	4.790E-04	1	25
NA	Intermittent Bleed Pneumatic Devices	1.97	85.84	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	CH4, tpy
NA	Pneumatic Pump Venting	1	13.3	8,760	1.33E-01	2.11

The number of pumps are 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	1.97	85.84	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

Green House Gas Emissions Data and Calculations

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	CH4, tpy
M1	Malfunctions	19.51	2.76	4.45	70.57	10.00	3.14	49.81

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)

The total & VOC component weights and CO2 & CH4 weight % of totals are calculated from the facility extended gas analysis

Storage Tank Emissions

Unit Number	Description	Emission Rates		Operating Time, hr/yr	Emission Rates	
		CO2, pph	CH4, pph		CO2, tpy	CH4, tpy
T4	Condensate Tank	6.04E-01	2.34	8,760	2.65	10.26
T5	Condensate Tank	5.44E-01	2.11	8,760	2.38	9.23
	Total				5.03	19.50

Short-term emission rates (pph) are taken from the ProMax output

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	1.9710	44.01	0.87	4.4460	0.0023
Hydrogen Sulfide	0.0000	34.07	0.00	0.0000	0.0000
Nitrogen	0.2867	28.01	0.08	0.4116	0.0002
Methane	85.8419	16.04	13.77	70.5717	0.0363
Ethane	6.7499	30.07	2.03	10.4030	0.0053
Propane	2.9232	44.09	1.29	6.6058	0.0034
IsoButane	0.5439	58.12	0.32	1.6202	0.0008
Normal Butane	0.8195	58.12	0.48	2.4412	0.0013
IsoPentane	0.2949	72.15	0.21	1.0905	0.0006
Normal Pentane	0.2178	72.15	0.16	0.8054	0.0004
Cyclopentane	0.0086	70.14	0.01	0.0309	0.0000
n-Hexane	0.0632	86.17	0.05	0.2791	0.0001
Cyclohexane	0.0236	84.16	0.02	0.1018	0.0001
Other Hexanes	0.1496	86.18	0.13	0.6608	0.0003
Heptanes	0.0389	100.20	0.04	0.1998	0.0001
Methylcyclohexane	0.0329	98.19	0.03	0.1656	0.0001
Isooctane	0.0018	100.21	0.00	0.0092	0.0000
Benzene	0.0101	78.11	0.01	0.0404	0.0000
Toluene	0.0105	92.14	0.01	0.0496	0.0000
Ethylbenzene	0.0012	106.17	0.00	0.0065	0.0000
Xylenes	0.0002	106.17	0.00	0.0011	0.0000
C8+ heavies	0.0106	110.00	0.01	0.0598	0.0000
Total	100.0000		19.51	100.0000	0.0514
VOC			2.76	--	0.0073

Gas stream composition obtained from Chaco extended gas analysis dated 11/29/2018

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.
-

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

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

^a Reference 11. Units are in pounds of pollutant per million standard cubic feet of natural gas fired. To convert from lb/10⁶ scf to kg/10⁶ m³, multiply by 16. Emission factors are based on an average natural gas higher heating value of 1,020 Btu/scf. To convert from lb/10⁶ scf to lb/MMBtu, divide by 1,020. The emission factors in this table may be converted to other natural gas heating values by multiplying the given emission factor by the ratio of the specified heating value to this average heating value. SCC = Source Classification Code. ND = no data. NA = not applicable.

^b Expressed as NO₂. For large and small wall fired boilers with SNCR control, apply a 24 percent reduction to the appropriate NO_x emission factor. For tangential-fired boilers with SNCR control, apply a 13 percent reduction to the appropriate NO_x emission factor.

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

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

Pollutant	Emission Factor (lb/10 ⁶ scf)	Emission Factor Rating
CO ₂ ^b	120,000	A
Lead	0.0005	D
N ₂ O (Uncontrolled)	2.2	E
N ₂ O (Controlled-low-NO _x burner)	0.64	E
PM (Total) ^c	7.6	D
PM (Condensable) ^c	5.7	D
PM (Filterable) ^c	1.9	B
SO ₂ ^d	0.6	A
TOC	11	B
Methane	2.3	B
VOC	5.5	C

^a Reference 11. Units are in pounds of pollutant per million standard cubic feet of natural gas fired. Data are for all natural gas combustion sources. To convert from lb/10⁶ scf to kg/10⁶ m³, multiply by 16. To convert from lb/10⁶ scf to 1b/MMBtu, divide by 1,020. The emission factors in this table may be converted to other natural gas heating values by multiplying the given emission factor by the ratio of the specified heating value to this average heating value. TOC = Total Organic Compounds.

VOC = Volatile Organic Compounds.

^b Based on approximately 100% conversion of fuel carbon to CO₂. CO₂[lb/10⁶ scf] = (3.67) (CON) (C)(D), where CON = fractional conversion of fuel carbon to CO₂, C = carbon content of fuel by weight (0.76), and D = density of fuel, 4.2x10⁴ lb/10⁶ scf.

^c All PM (total, condensable, and filterable) is assumed to be less than 1.0 micrometer in diameter. Therefore, the PM emission factors presented here may be used to estimate PM₁₀, PM_{2.5} or PM₁ emissions. Total PM is the sum of the filterable PM and condensable PM. Condensable PM is the particulate matter collected using EPA Method 202 (or equivalent). Filterable PM is the particulate matter collected on, or prior to, the filter of an EPA Method 5 (or equivalent) sampling train.

^d Based on 100% conversion of fuel sulfur to SO₂.

Assumes sulfur content is natural gas of 2,000 grains/10⁶ scf. The SO₂ emission factor in this table can be converted to other natural gas sulfur contents by multiplying the SO₂ emission factor by the ratio of the site-specific sulfur content (grains/10⁶ scf) to 2,000 grains/10⁶ scf.

Table 3.1-2a. EMISSION FACTORS FOR CRITERIA POLLUTANTS AND GREENHOUSE GASES FROM STATIONARY GAS TURBINES

Emission Factors ^a - Uncontrolled				
Pollutant	Natural Gas-Fired Turbines ^b		Distillate Oil-Fired Turbines ^d	
	(lb/MMBtu) ^c (Fuel Input)	Emission Factor Rating	(lb/MMBtu) ^e (Fuel Input)	Emission Factor Rating
CO ₂ ^f	110	A	157	A
N ₂ O	0.003 ^g	E	ND	NA
Lead	ND	NA	1.4 E-05	C
SO ₂	0.94S ^h	B	1.01S ^h	B
Methane	8.6 E-03	C	ND	NA
VOC	2.1 E-03	D	4.1 E-04 ^j	E
TOC ^k	1.1 E-02	B	4.0 E-03 ^l	C
PM (condensable)	4.7 E-03 ^l	C	7.2 E-03 ^l	C
PM (filterable)	1.9 E-03 ^l	C	4.3 E-03 ^l	C
PM (total)	6.6 E-03 ^l	C	1.2 E-02 ^l	C

^a Factors are derived from units operating at high loads (≥ 80 percent load) only. For information on units operating at other loads, consult the background report for this chapter (Reference 16), available at “www.epa.gov/ttn/chief”. ND = No Data, NA = Not Applicable.

^b SCCs for natural gas-fired turbines include 2-01-002-01, 2-02-002-01 & 03, and 2-03-002-02 & 03.

^c Emission factors based on an average natural gas heating value (HHV) of 1020 Btu/scf at 60°F. To convert from (lb/MMBtu) to (lb/10⁶ scf), multiply by 1020. Similarly, these emission factors can be converted to other natural gas heating values.

^d SCCs for distillate oil-fired turbines are 2-01-001-01, 2-02-001-01, 2-02-001-03, and 2-03-001-02.

^e Emission factors based on an average distillate oil heating value of 139 MMBtu/10³ gallons. To convert from (lb/MMBtu) to (lb/10³ gallons), multiply by 139.

^f Based on 99.5% conversion of fuel carbon to CO₂ for natural gas and 99% conversion of fuel carbon to CO₂ for distillate oil. CO₂ (Natural Gas) [lb/MMBtu] = (0.0036 scf/Btu)(%CON)(C)(D), where %CON = weight percent conversion of fuel carbon to CO₂, C = carbon content of fuel by weight, and D = density of fuel. For natural gas, C is assumed at 75%, and D is assumed at 4.1 E+04 lb/10⁶scf. For distillate oil, CO₂ (Distillate Oil) [lb/MMBtu] = (26.4 gal/MMBtu) (%CON)(C)(D), where C is assumed at 87%, and the D is assumed at 6.9 lb/gallon.

^g Emission factor is carried over from the previous revision to AP-42 (Supplement B, October 1996) and is based on limited source tests on a single turbine with water-steam injection (Reference 5).

^h All sulfur in the fuel is assumed to be converted to SO₂. S = percent sulfur in fuel. Example, if sulfur content in the fuel is 3.4 percent, then S = 3.4. If S is not available, use 3.4 E-03 lb/MMBtu for natural gas turbines, and 3.3 E-02 lb/MMBtu for distillate oil turbines (the equations are more accurate).

^j VOC emissions are assumed equal to the sum of organic emissions.

^k Pollutant referenced as THC in the gathered emission tests. It is assumed as TOC, because it is based on EPA Test Method 25A.

^l Emission factors are based on combustion turbines using water-steam injection.

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

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

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

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

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

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

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

where:

L_L = loading loss, pounds per 1000 gallons (lb/10³ gal) of liquid loaded

S = a saturation factor (see Table 5.2-1)

P = true vapor pressure of liquid loaded, pounds per square inch absolute (psia)
(see Figure 7.1-5, Figure 7.1-6, and Table 7.1-2)

M = molecular weight of vapors, pounds per pound-mole (lb/lb-mole) (see Table 7.1-2)

T = temperature of bulk liquid loaded, °R (°F + 460)

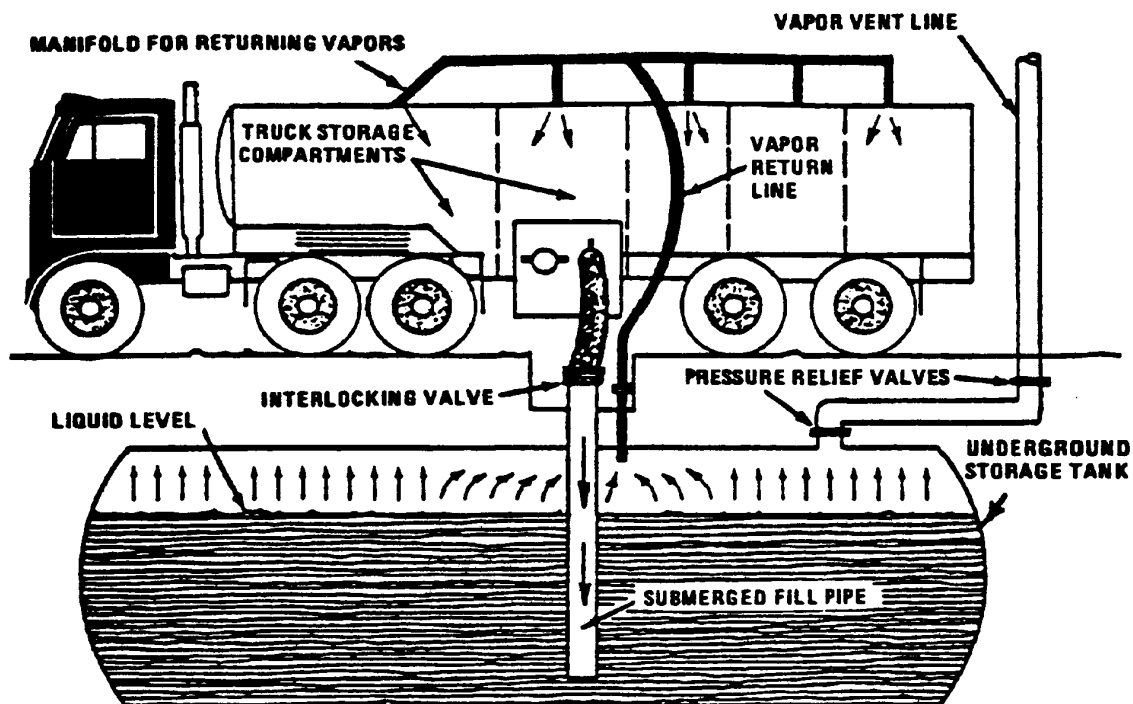


Figure 5.2-5. Tank truck unloading into a service station underground storage tank and practicing "vapor balance" form of emission control.

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

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

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

TABLE 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.



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

Analysis No: HM180006
Cust No: 33700-10025

Well/Lease Information

Customer Name: HARVEST MIDSTREAM
Well Name: CHACO COMP INLET
County/State:
Location:
Field:
Formation:
Cust. Stn. No.: 0247730

Source: SPOT
Well Flowing:
Pressure: 253 PSIG
Flow Temp: 52 DEG. F
Ambient Temp: DEG. F
Flow Rate: MCF/D
Sample Method:
Sample Date: 11/27/2018
Sample Time: 11.34 AM
Sampled By: MARVIN WOOD
Sampled by (CO): HARVEST

Heat Trace:
Remarks: CALCULATED MOLECULAR WEIGHT = 19.5051

Analysis

Component:	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.3306	0.3218	0.0360	0.00	0.0032
CO2	1.9364	1.8846	0.3310	0.00	0.0294
Methane	85.6254	83.3344	14.5560	864.82	0.4743
Ethane	7.0286	6.8405	1.8850	124.38	0.0730
Propane	2.9810	2.9012	0.8240	75.00	0.0454
Iso-Butane	0.5417	0.5272	0.1780	17.62	0.0109
N-Butane	0.7937	0.7725	0.2510	25.89	0.0159
Neopentane 2,2 dmc3	0.0021	0.0020	0.0010	0.08	0.0001
I-Pentane	0.2733	0.2660	0.1000	10.93	0.0068
N-Pentane	0.1943	0.1891	0.0710	7.79	0.0048
Neohexane	0.0111	N/R	0.0050	0.53	0.0003
2-3-Dimethylbutane	0.0077	N/R	0.0030	0.37	0.0002
Cyclopentane	0.0080	N/R	0.0020	0.30	0.0002
2-Methylpentane	0.0518	N/R	0.0220	2.46	0.0015
3-Methylpentane	0.0246	N/R	0.0100	1.17	0.0007
C6	0.0563	0.2851	0.0230	2.68	0.0017
Methylcyclopentane	0.0389	N/R	0.0140	1.75	0.0011
Benzene	0.0090	N/R	0.0030	0.34	0.0002
Cyclohexane	0.0193	N/R	0.0070	0.86	0.0006
2-Methylhexane	0.0057	N/R	0.0030	0.31	0.0002
3-Methylhexane	0.0063	N/R	0.0030	0.34	0.0002
2-2-4-Trimethylpentane	0.0010	N/R	0.0010	0.06	0.0000
i-heptanes	0.0035	N/R	0.0020	0.19	0.0001
Heptane	0.0120	N/R	0.0060	0.66	0.0004

Methylcyclohexane	0.0228	N/R	0.0090	1.19	0.0008
Toluene	0.0076	N/R	0.0030	0.34	0.0002
2-Methylheptane	0.0019	N/R	0.0010	0.12	0.0001
4-Methylheptane	0.0009	N/R	0.0000	0.06	0.0000
i-Octanes	0.0005	N/R	0.0000	0.03	0.0000
Octane	0.0016	N/R	0.0010	0.10	0.0001
Ethylbenzene	0.0001	N/R	0.0000	0.01	0.0000
m, p Xylene	0.0008	N/R	0.0000	0.04	0.0000
o Xylene (& 2,2,4 tmc7)	0.0002	N/R	0.0000	0.01	0.0000
i-C9	0.0005	N/R	0.0000	0.03	0.0000
C9	0.0003	N/R	0.0000	0.02	0.0000
i-C10	0.0003	N/R	0.0000	0.02	0.0000
C10	0.0003	N/R	0.0000	0.02	0.0000
i-C11	0.0000	N/R	0.0000	0.00	0.0000
C11	0.0001	N/R	0.0000	0.01	0.0000
C12P	0.0000	N/R	0.0000	0.00	0.0000
Total	100.00	97.324	18.351	1140.53	0.6727

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z):	1.003	CYLINDER #:	0623
BTU/CU.FT IDEAL:	1143.2	CYLINDER PRESSURE:	268 PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	1146.5	ANALYSIS DATE:	11/29/2018
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	1126.6	ANALYSIS TIME:	11:31:53 AM
DRY BTU @ 15.025:	1169.5	ANALYSIS RUN BY:	PATRICIA KING
REAL SPECIFIC GRAVITY:	0.6744		

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: 11/29/2018

GC Method: C12+BTEX Gas



HARVEST MIDSTREAM
WELL ANALYSIS COMPARISON

Lease: CHACO COMP INLET
Stn. No.: 0247730
Mtr. No.:

SPOT

11/29/2018
33700-10025

Smpl Date: 11/27/2018
Test Date: 11/29/2018
Run No: HM180006

Nitrogen: 0.3306
CO2: 1.9364
Methane: 85.6254
Ethane: 7.0286
Propane: 2.9810
I-Butane: 0.5417
N-Butane: 0.7937
2,2 dmc3: 0.0021
I-Pentane: 0.2733
N-Pentane: 0.1943
Neohexane: 0.0111
2-3-: 0.0077
Cyclopentane: 0.0080
2-Methylpentane: 0.0518
3-Methylpentane: 0.0246
C6: 0.0563
Methylcyclopentane: 0.0389
Benzene: 0.0090
Cyclohexane: 0.0193
2-Methylhexane: 0.0057
3-Methylhexane: 0.0000
2-2-4-: 0.0010
i-heptanes: 0.0035
Heptane: 0.0120
Methylcyclohexane: 0.0228
Toluene: 0.0076
2-Methylheptane: 0.0019
4-Methylheptane: 0.0009
i-Octanes: 0.0005
Octane: 0.0016
Ethylbenzene: 0.0001
m, p Xylene: 0.0008
o Xylene (& 2,2,4: 0.0002
i-C9: 0.0005
C9: 0.0003
i-C10: 0.0003
C10: 0.0003
i-C11: 0.0000
C11: 0.0001
C12P: 0.0000

BTU: 1146.5
GPM: 18.3630
SPG: 0.6744

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

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	^a 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
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
PFC-318 (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, FC-72)	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, HG-11)	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 (HG-00)	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	134769-21-4	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 (HFE-7000)	375-03-1	CH ₃ OCF ₂ CF ₂ CF ₃	575
HFE-347mcf2	171182-95-9	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 CHF ₂ CF ₃	101
HFE-356pcc3	160620-20-2	CH ₃ OCF ₂ CF ₂ CHF ₂	110
HFE-356pcf2	50807-77-7	CHF ₂ CH ₂ OCF ₂ CHF ₂	265
HFE-356pcf3	35042-99-0	CHF ₂ OCH ₂ CF ₂ CHF ₂	502
HFE-365mcf3	378-16-5	CF ₃ CF ₂ CH ₂ OCH ₃	11
HFE-374pc2	512-51-6	CH ₃ CH ₂ OCF ₂ CHF ₂	557
HFE-449s1 (HFE-7100)	163702-07-6	C ₄ F ₉ OCH ₃	297
Chemical blend	163702-08-7	(CF ₃) ₂ CFCF ₂ OCH ₃	
HFE-569sf2 (HFE-7200)	163702-05-4	C ₄ F ₉ OC ₂ H ₅	59
Chemical blend	163702-06-5	(CF ₃) ₂ CFCF ₂ OC ₂ H ₅	
Sevoflurane (HFE-347mmz1)	28523-86-6	CH ₂ FOCH(CF ₃) ₂	345
HFE-356mm1	13171-18-1	(CF ₃) ₂ CHOCH ₃	27
HFE-338mmz1	26103-08-2	CHF ₂ OCH(CF ₃) ₂	380
(Octafluorotetramethyl-ene) hydroxymethyl group	NA	X-(CF ₂) ₄ CH(OH)-X	73
HFE-347mmy1	22052-84-2	CH ₃ OCF(CF ₃) ₂	343
Bis(trifluoromethyl)-methanol	920-66-1	(CF ₃) ₂ CHOH	195
2,2,3,3,3-pentafluoropropanol	422-05-9	CF ₃ CF ₂ CH ₂ OH	42
PPFMIE (HT-70)	NA	CF ₃ OCF(CF ₃)CF ₂ OCF ₂ OCF ₃	10,300

^aThe 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

DEFAULT CO₂ EMISSION FACTORS AND HIGH HEAT VALUES FOR VARIOUS TYPES OF FUEL

Fuel type	Default high heat value	Default CO₂ 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	66.88
Other Oil (>401 deg F)	0.139	76.22
Pentanes Plus	0.110	70.02

Petrochemical Feedstocks	0.125	71.02
Petroleum Coke	0.143	102.41
Special Naphtha	0.125	72.34
Unfinished Oils	0.139	74.54
Heavy Gas Oils	0.148	74.92
Lubricants	0.144	74.27
Motor Gasoline	0.125	70.22
Aviation Gasoline	0.120	69.25
Kerosene-Type Jet Fuel	0.135	72.22
Asphalt and Road Oil	0.158	75.36
Crude Oil	0.138	74.54
Other fuels—solid	mmBtu/short ton	kg CO ₂ /mmBtu
Municipal Solid Waste	9.95 ³	90.7
Tires	28.00	85.97
Plastics	38.00	75.00
Petroleum Coke	30.00	102.41
Other fuels—gaseous	mmBtu/scf	kg CO ₂ /mmBtu
Blast Furnace Gas	0.092 × 10 ⁻³	274.32
Coke Oven Gas	0.599 × 10 ⁻³	46.85
Propane Gas	2.516 × 10 ⁻³	61.46
Fuel Gas ⁴	1.388 × 10 ⁻³	59.00
Biomass fuels—solid	mmBtu/short ton	kg CO ₂ /mmBtu
Wood and Wood Residuals (dry basis) ⁵	17.48	93.80
Agricultural Byproducts	8.25	118.17
Peat	8.00	111.84
Solid Byproducts	10.39	105.51
Biomass fuels—gaseous	mmBtu/scf	kg CO ₂ /mmBtu
Landfill Gas	0.485 × 10 ⁻³	52.07
Other Biomass Gases	0.655 × 10 ⁻³	52.07
Biomass Fuels—Liquid	mmBtu/gallon	kg CO ₂ /mmBtu
Ethanol	0.084	68.44
Biodiesel (100%)	0.128	73.84
Rendered Animal Fat	0.125	71.06
Vegetable Oil	0.120	81.55

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

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

³Use 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.

⁴Reporters 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.

⁵Use 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.

[78 FR 71950, Nov. 29, 2013]

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Table C-2 to Subpart C of Part 98—Default CH₄ and N₂O Emission Factors for Various Types of Fuel

Fuel type	Default CH ₄ emission factor (kg CH ₄ /mmBtu)	Default N ₂ O emission factor (kg N ₂ O/mmBtu)
Coal and Coke (All fuel types in Table C-1)	1.1×10^{-02}	1.6×10^{-03}
Natural Gas	1.0×10^{-03}	1.0×10^{-04}
Petroleum (All fuel types in Table C-1)	3.0×10^{-03}	6.0×10^{-04}
Fuel Gas	3.0×10^{-03}	6.0×10^{-04}
Municipal Solid Waste	3.2×10^{-02}	4.2×10^{-03}
Tires	3.2×10^{-02}	4.2×10^{-03}
Blast Furnace Gas	2.2×10^{-05}	1.0×10^{-04}
Coke Oven Gas	4.8×10^{-04}	1.0×10^{-04}
Biomass Fuels—Solid (All fuel types in Table C-1, except wood and wood residuals)	3.2×10^{-02}	4.2×10^{-03}
Wood and wood residuals	7.2×10^{-03}	3.6×10^{-03}
Biomass Fuels—Gaseous (All fuel types in Table C-1)	3.2×10^{-03}	6.3×10^{-04}
Biomass Fuels—Liquid (All fuel types in Table C-1)	1.1×10^{-03}	1.1×10^{-04}

Note: Those employing this table are assumed to fall under the IPCC definitions of the “Energy Industry” or “Manufacturing Industries and Construction”. In all fuels except for coal the values for these two categories are identical. For coal combustion, those who fall within the IPCC “Energy Industry” category may employ a value of 1g of CH₄/mmBtu.

Table W-1A of Subpart W of Part 98—Default Whole Gas Emission Factors for Onshore Petroleum and Natural Gas Production

Onshore petroleum and natural gas production	Emission factor (scf/hour/component)
Eastern U.S.	
Population Emission Factors—All Components, Gas Service¹	
Valve	0.027
Connector	0.003
Open-ended Line	0.061
Pressure Relief Valve	0.040
Low Continuous Bleed Pneumatic Device Vents ²	1.39
High Continuous Bleed Pneumatic Device Vents ²	37.3
Intermittent Bleed Pneumatic Device Vents ²	13.5
Pneumatic Pumps ³	13.3
Population Emission Factors—All Components, Light Crude Service⁴	
Valve	0.05
Flange	0.003
Connector	0.007
Open-ended Line	0.05
Pump	0.01
Other ⁵	0.30
Population Emission Factors—All Components, Heavy Crude Service⁶	
Valve	0.0005
Flange	0.0009
Connector (other)	0.0003
Open-ended Line	0.006
Other ⁵	0.003
Western U.S.	
Population Emission Factors—All Components, Gas Service¹	
Valve	0.121
Connector	0.017
Open-ended Line	0.031
Pressure Relief Valve	0.193
Low Continuous Bleed Pneumatic Device Vents ²	1.39
High Continuous Bleed Pneumatic Device Vents ²	37.3
Intermittent Bleed Pneumatic Device Vents ²	13.5
Pneumatic Pumps ³	13.3
Population Emission Factors—All Components, Light Crude Service⁴	
Valve	0.05
Flange	0.003

Connector (other)	0.007
Open-ended Line	0.05
Pump	0.01
Other ⁵	0.30
Population Emission Factors—All Components, Heavy Crude Service⁶	
Valve	0.0005
Flange	0.0009
Connector (other)	0.0003
Open-ended Line	0.006
Other ⁵	0.003

¹For multi-phase flow that includes gas, use the gas service emissions factors.

²Emission Factor is in units of “scf/hour/device.”

³Emission Factor is in units of “scf/hour/pump.”

⁴Hydrocarbon liquids greater than or equal to 20°API are considered “light crude.”

⁵“Others” category includes instruments, loading arms, pressure relief valves, stuffing boxes, compressor seals, dump lever arms, and vents.

⁶Hydrocarbon liquids less than 20°API are considered “heavy crude.”

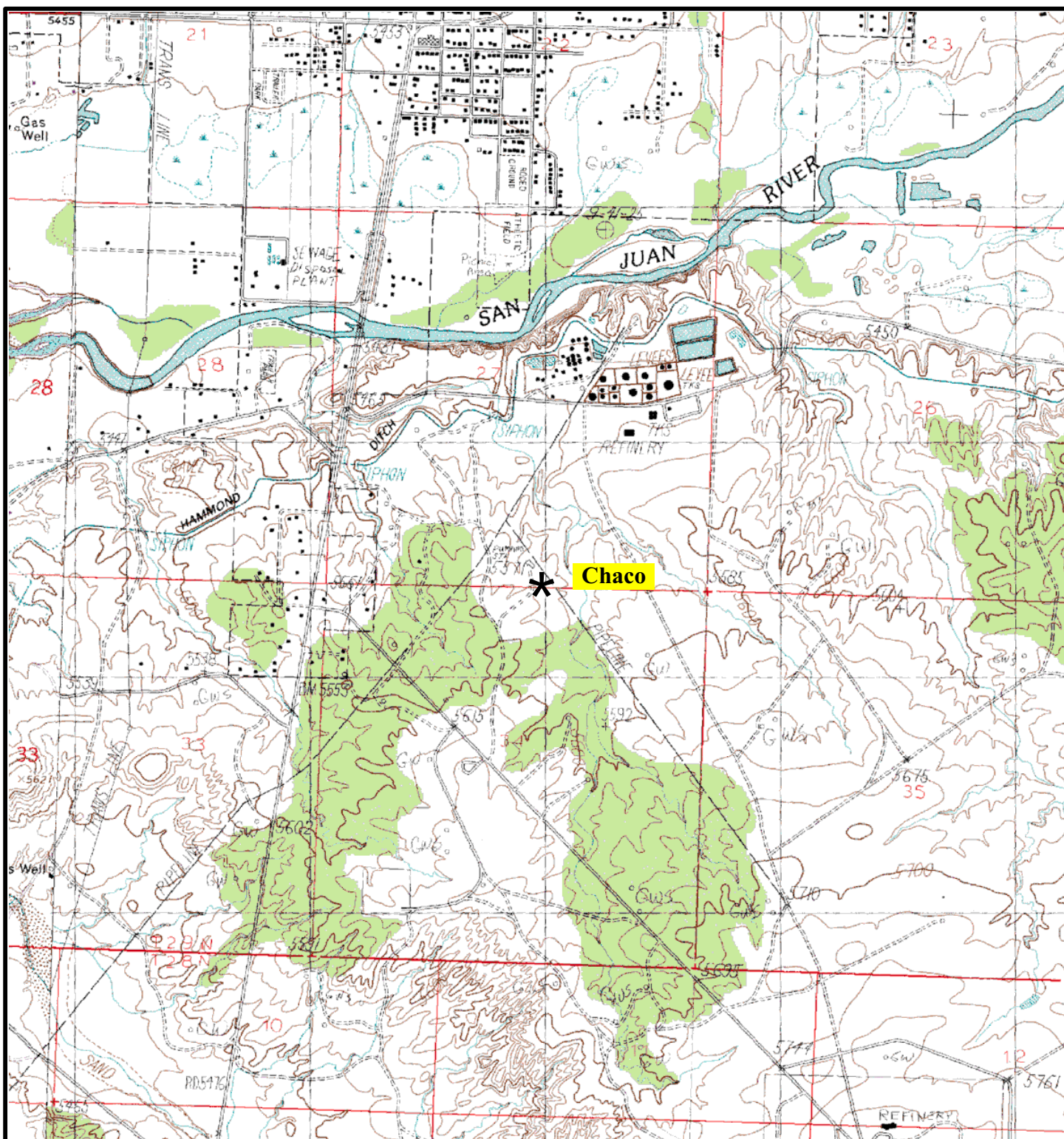
Section 8

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	

A map is provided in this section. Please see the following page.



Source: USGS Bloomfield, NM Quadrangle

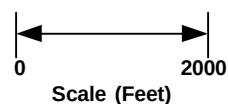


Figure 1 Site Vicinity / Topographic Map
Chaco Compressor Station
 Section 27, Township 29N Range 11W
 San Juan County, New Mexico

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, as this is a Title V application.

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 Chaco Compressor Station compresses pipeline natural gas for transmission. The facility is permitted for the operation of four natural gas-fired turbines (all driving compressors), one standby generator, one pig receiver, truck loading, equipment leaks, two condensate storage tanks, and two produced water storage tanks. Other sources at the facility include heaters and miscellaneous storage tanks. The storage tanks are used to store oil, used oil, condensate, produced water, and methanol.

The facility typically operates 24 hours per day, 7 days per week, 52 weeks per year, 8,760 hours per year. A separator and EVRU reduce emissions from the condensate storage tanks at the station. A flow diagram is provided in Section 4 and a description of the EVRU is provided below.

An EVRU system operates on the Venturi Principle to recover atmospheric vapors flashed off of volatile liquids that would otherwise be emitted to the atmosphere. The EVRU causes high pressure gas to flow across a nozzle and draw vapors from the atmospheric tanks. The high-pressure, high-velocity gas is referred to as the motive gas. The low-pressure gas on which a vacuum is imposed is referred to as the recovered vapor. The motive gas and recovered vapors combine and flow into a contained, low pressure process stream.

Pressure in the atmospheric tanks produces a signal that opens the control valve that allows motive gas across the nozzle (motive gas is taken from the discharge of Chaco Compressor Station). The combined vapors discharge into the Fulcher line which flows to the Kutz Plant for processing. As vapors are recovered from the tanks, pressure is reduced. Once pressure is near-atmospheric, the motive gas control valve closes.

In order to reduce the volume of vapor the EVRU must recover from the atmospheric tanks, the system includes a gas-fired three-phase separator. The separator warms the hydrocarbon liquids while simultaneously lowering their pressure. The flashed vapors are also vented into the Fulcher line. The system utilizes very few moving parts so that very little maintenance is required and downtime is minimized (when compared to systems utilizing mechanical compression).

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):

Chaco Compressor Station – natural gas compressor station

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

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

☒ **Yes** ☐ **No**

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

☒ **Yes** ☐ **No**

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

☒ **Yes** ☐ **No**

C. Make a determination:

- ☒ The source, as described in this application, constitutes the entire source for 20.2.70, 20.2.72, 20.2.73, or 20.2.74 NMAC applicability purposes. If in "A" above you evaluated only the source that is the subject of this application, all "**YES**" boxes should be checked. If in "A" above you evaluated other sources as well, you must check **AT LEAST ONE** of the boxes "**NO**" to conclude that the source, as described in the application, is the entire source for 20.2.70, 20.2.72, 20.2.73, and 20.2.74 NMAC applicability purposes.
- ☐ The source, as described in this application, **does not** constitute the entire source for 20.2.70, 20.2.72, 20.2.73, or 20.2.74 NMAC applicability purposes (A permit may be issued for a portion of a source). The entire source consists of the following facilities or emissions sources (list and describe):

Section 12

Section 12.A

PSD Applicability Determination for All Sources

(Submitting under 20.2.72, 20.2.74 NMAC)

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

A. This facility is:

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

B. This facility **[is or is not]** one of the listed 20.2.74.501 Table I – PSD Source Categories. The “project” emissions for this modification are **[significant or not significant]**. **[Discuss why.]** The “project” emissions listed below **[do or do not]** only result from changes described in this permit application, thus no emissions from other **[revisions or modifications, past or future]** to this facility. Also, specifically discuss whether this project results in “de-bottlenecking”, or other associated emissions resulting in higher emissions. The project emissions (before netting) for this project are as follows [see Table 2 in 20.2.74.502 NMAC for a complete list of significance levels]:

- a. NOx: **XX.X** TPY
- b. CO: **XX.X** TPY
- c. VOC: **XX.X** TPY
- d. SOx: **XX.X** TPY
- e. PM: **XX.X** TPY
- f. PM10: **XX.X** TPY
- g. PM2.5: **XX.X** TPY
- h. Fluorides: **XX.X** TPY
- i. Lead: **XX.X** TPY
- j. Sulfur compounds (listed in Table 2): **XX.X** TPY
- k. GHG: **XX.X** TPY

C. Netting **[is required, and analysis is attached to this document.] OR [is not required (project is not significant)] OR [Applicant is submitting a PSD Major Modification and chooses not to net.]**

D. BACT is **[not required for this modification, as this application is a minor modification.] OR [required, as this application is a major modification. List pollutants subject to BACT review and provide a full top down BACT determination.]**

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

Not applicable, as this is a Title V application.

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/>

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

Example of a Table for State Regulations:

State Regulation Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
20.2.1 NMAC	General Provisions	Yes	Facility	The facility is subject to Title 20 Environmental Protection Chapter 2 Air Quality of the New Mexico Administrative Code so is subject to Part 1 General Provisions, Update to Section 116 of regulation for Significant figures & rounding. Applicable with no permitting requirements.
20.2.3 NMAC	Ambient Air Quality Standards NMAAQs	Yes	Facility	Title V: 20.2.3.9 NMAC, LIMITATION OF APPLICABILITY TO 20.2.70 NMAC. The requirements of NMAAQs are not applicable requirements under 20.2.70 NMAC, as defined by 20.2.3.9 NMAC, 20.2.3.9 NMAC does not limit the applicability of this part to sources required to obtain a permit under the minor NSR regulation, 20.2.72 NMAC, nor does it limit which terms and conditions of NSR permits issued pursuant to 20.2.72 NMAC are applicable requirements in a Title V permit.
20.2.7 NMAC	Excess Emissions	Yes, (Except for Sections 6(b); 110(b)(15); 111; 112; 113; 115; and 116 that are State Enforceable Only)	Facility	Yes, (Except for Sections 6(b); 110(b)(15); 111; 112; 113; 115; and 116 that are State Enforceable Only)
20.2.8 NMAC	Emissions Leaving New Mexico	Yes	Facility	This regulation is applicable because it establishes prohibitions on the release of pollutants that cross New Mexico State boundaries.
20.2.33 NMAC	Gas Burning Equipment - Nitrogen Dioxide	No	N/A	This regulation is not applicable because the facility is not equipped with external gas burning equipment which have heat input rates exceeding the trigger level (one million MMBtu/year) established by the regulation (see 20.2.33.108 NMAC).
20.2.34 NMAC	Oil Burning Equipment: NO ₂	No	N/A	This regulation is not applicable because the facility does not burn oil (see 20.2.34.6 NMAC).
20.2.35 NMAC	Natural Gas Processing Plant – Sulfur	No	N/A	This regulation is not applicable because the facility is not a natural gas processing plant (see 20.2.35.6 NMAC).
20.2.38 NMAC	Hydrocarbon Storage Facility	No	N/A	This regulation is not applicable because the facility does not store hydrocarbons containing hydrogen sulfide, nor is there a tank battery storing hydrocarbon liquids with a capacity greater than or equal to 65,000 gallons (see 20.2.38.112 NMAC).
20.2.39 NMAC	Sulfur Recovery Plant - Sulfur	No	N/A	This regulation is not applicable because the facility is not equipped with a sulfur recovery plant (see 20.2.39.6 NMAC).
20.2.50 NMAC	Oil and Gas Sector – Ozone Precursor Pollutants	Yes	1-5, F1, L1	Applies to certain crude oil and natural gas production and processing equipment associated with operations that extract, collect, separate, dehydrate, store, process, transport, transmit, or handle hydrocarbon liquids or produced water in the areas specified in 20.2.50.2 NMAC and

State Regulation Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:																				
				are located at well sites, tank batteries, gathering and boosting stations, natural gas processing plants, and transmission compressor stations, up to the point of the local distribution company custody transfer station (20.2.50.111.A NMAC). Applies in the following Counties in New Mexico: Chaves, Dona Ana, Eddy, Lea, Rio Arriba, Sandoval, San Juan, and Valencia (20.2.50.2 NMAC). The facility is subject as a gathering and boosting compressor station as located in San Juan County. Several facility components and specific equipment are subject as follows. 20.2.50.113 NMAC – Turbines. The existing natural gas-fired stationary combustion turbines (Units 1, 2, 3, and 4) and are subject to the applicable requirements of this subpart. Harvest Four Corners, LLC will comply with the turbine emission standards in Table 2 in accordance with the timeline set forth in NMAC 20.2.50.113 B.7.c. Table 3 – Emission Standards of existing stationary combustion turbines between 1,000 and 4,100 bhp. <table><caption>Table 3 - EMISSION STANDARDS FOR STATIONARY COMBUSTION TURBINES</caption><tr><th colspan="4">For each applicable existing natural gas-fired combustion turbine, the owner or operator shall ensure the turbine does not exceed the following emission standards no later than the schedule set forth in Paragraph (7)(a) of Subsection B of 20.2.50.113 NMAC:</th></tr><tr><th>Turbine Rating (bhp)</th><th>NO_x (ppmvd @ 15% O₂)</th><th>CO (ppmvd @ 15% O₂)</th><th>NMNEHC (as propane, ppmvd @ 15% O₂)</th></tr><tr><td>≥1,000 and <4,100</td><td>150</td><td>50</td><td>9</td></tr><tr><td>≥4,100 and <15,000</td><td>50</td><td>50</td><td>9</td></tr><tr><td>≥15,000</td><td>50</td><td>50 or 93% reduction</td><td>5 or 50% reduction</td></tr></table> The existing stationary compression ignition engine is < 500 hP and is not subject to the rule. 20.2.50.114 NMAC – Compressor Seals. The centrifugal compressors comply with the emission standards of 20.2.50.114B NMAC by use of a closed vent system to collect the wet seal fluid degassing system and route to a catalytic oxidizer. 20.2.50.115 NMAC – There are no control devices or closed vent systems as defined in 20.2.50.7 NMAC. 20.2.50.116 NMAC – Equipment Leaks and Fugitive Monitoring. The piping and equipment components (FUG) at the facility are subject to the applicable audio, visual, and olfactory (AVO) inspections; EPA M21 or optical gas imaging (OGI) inspections; and leak repair and replacement requirements of this subpart. 20.2.50.120 NMAC – Hydrocarbon Liquid Transfers. The condensate loading operation utilizes vapor balance to maintain compliance with the regulation. The facility does not contain any dehydrators, hydrocarbon storage tanks, natural-gas driven pneumatic controllers and pumps, or pigging operations subject to the regulation.	For each applicable existing natural gas-fired combustion turbine, the owner or operator shall ensure the turbine does not exceed the following emission standards no later than the schedule set forth in Paragraph (7)(a) of Subsection B of 20.2.50.113 NMAC:				Turbine Rating (bhp)	NO _x (ppmvd @ 15% O ₂)	CO (ppmvd @ 15% O ₂)	NMNEHC (as propane, ppmvd @ 15% O ₂)	≥1,000 and <4,100	150	50	9	≥4,100 and <15,000	50	50	9	≥15,000	50	50 or 93% reduction	5 or 50% reduction
For each applicable existing natural gas-fired combustion turbine, the owner or operator shall ensure the turbine does not exceed the following emission standards no later than the schedule set forth in Paragraph (7)(a) of Subsection B of 20.2.50.113 NMAC:																								
Turbine Rating (bhp)	NO _x (ppmvd @ 15% O ₂)	CO (ppmvd @ 15% O ₂)	NMNEHC (as propane, ppmvd @ 15% O ₂)																					
≥1,000 and <4,100	150	50	9																					
≥4,100 and <15,000	50	50	9																					
≥15,000	50	50 or 93% reduction	5 or 50% reduction																					
20.2.61.109 NMAC	Smoke & Visible Emissions	Yes	1-5	This regulation that limits opacity to 20% applies to Stationary Combustion Equipment, such as engines, boilers, heaters, and flares																				

State Regulation Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
				unless your equipment is subject to another state regulation that limits particulate matter such as 20.2.19 NMAC (see 20.2.61.109 NMAC).
20.2.70 NMAC	Operating Permits	Yes	Facility	This regulation is applicable because the facility is a major source of CO, NOx & HAP emissions (see 20.2.70.200 NMAC).
20.2.71 NMAC	Operating Permit Fees	Yes	Facility	Source is subject to 20.2.70 NMAC as cited at 20.2.71.109 NMAC.
20.2.72 NMAC	Construction Permits	Yes	Facility	PER > 10 pph or 25 tpy for a criteria pollutant, or NSR Permits are the applicable requirement, including 20.2.72 NMAC.
20.2.73 NMAC	NOI & Emissions Inventory Requirements	Yes	Facility	Applicable to all facilities that require a permit. PER > 10 tpy for a regulated air contaminant.
20.2.74 NMAC	Permits – Prevention of Significant Deterioration (PSD)	No	N/A	This regulation is not applicable because the facility is not a PSD major source.
20.2.75 NMAC	Construction Permit Fees	No	N/A	No, in accordance with 20.2.75.11.E an annual NSR enforcement and compliance fee shall not apply to sources subject to 20.2.71 NMAC.
20.2.77 NMAC	New Source Performance	Yes	4	This regulation is applicable because it adopts by reference the federal NSPS codified in 40 CFR 60. The facility is subject to 40 CFR 60, Subparts A & GG.
20.2.78 NMAC	Emission Standards for HAPS	No	See Sources subject to 40 CFR 61	This regulation applies to all sources emitting hazardous air pollutants, which are subject to the requirements of 40 CFR Part 61.
20.2.79 NMAC	Permits – Nonattainment Areas	No	N/A	This facility is not located in, nor does it affect, a nonattainment area.
20.2.80 NMAC	Stack Heights	Yes	1-4	This regulation is applicable because it establishes guidelines for the selection of an appropriate stack height for the purposes of atmospheric dispersion modeling.
20.2.82 NMAC	MACT Standards for source categories of HAPS	Yes	5	This regulation is applicable because it adopts by reference the federal MACT Standards for source categories codified in 40 CFR 63 (see 20.2.82.6 NMAC). The facility is subject to 40 CFR 63, Subparts A & ZZZZ.

Federal Regulatory Analysis:

Federal Regulation Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
40 CFR 50	NAAQS	Yes	Facility	Independent of permit applicability; applies to all sources of emissions for which there is a Federal Ambient Air Quality Standard.
40 CFR 52	Approval and Promulgation of Implementation Plans	No	N/A	40 CFR 52.21 Prevention of Significant Deterioration of Air Quality is not applicable because the facility is not a major Prevention of Significant Deterioration source. The remainder of 40 CFR 52 is not applicable because it addresses approval and promulgation of implementation plans.
NSPS 40 CFR 60, Subpart A	General Provisions	Yes	4	This regulation applies because 40 CFR 60, Subpart GG applies (see §60.1(a)).

Federal Regulation Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
NSPS 40 CFR 60, Subpart Ka	Standards of Performance for Storage Vessels for Petroleum Liquids for which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984	No	N/A	This regulation is not applicable because the petroleum liquids storage tanks at the facility have capacities less than the minimum applicability threshold capacity of 40,000 gallons (see §60.110(a)).
NSPS 40 CFR 60, Subpart Kb	Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984	No	No	This regulation is not applicable because all volatile organic storage tanks at the facility have capacities less than the minimum applicability threshold capacity of 75 cubic meters (19,812 gallons) (see §60.110b(a)).
NSPS 40 CFR 60, Subpart GG	Standards of Performance for Stationary Gas Turbines	Yes	4	This regulation is applicable because one the turbines at the facility, Unit 4, has a heat input at peak load equal to or greater than 10.7 gigajoules (10 MMBtu) per hour and commenced construction after October 3, 1977. This regulation is not applicable to Units 1-3, as they were constructed prior to the applicability date (they have not been modified or reconstructed). Unit 4 must comply with the NOX emission limitation of 150 ppmv at 15% O2 on a dry basis (§60.332(c)). The units must comply with the SO2 emissions limitation of 0.015% by volume at 15% O2 on a dry basis or use a fuel that does not contain sulfur in excess of 0.8 percent by weight (8,000 ppmw) (40 CFR 60.333).
NSPS 40 CFR 60, Subpart KKK	Leaks of VOC from Onshore Gas Plants	No	No	This regulation is not applicable because the facility is not an onshore natural gas processing plant as defined by the subpart (see §60.630(a)(1)). Natural gas processing plant (gas plant) means any processing site engaged in the extraction of natural gas liquids from field gas, fractionation of mixed natural gas liquids to natural gas products, or both (see §60.631).
NSPS 40 CFR Part 60 Subpart LLL	Standards of Performance for Onshore Natural Gas Processing: SO ₂ Emissions	No	No	This regulation is not applicable because the facility is not a natural gas processing plant as defined by the subpart. It is not equipped with a sweetening unit (see §60.640(a)).
NSPS 40 CFR 60, Subpart IIII	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines	No		This regulation does not apply because the stationary CI ICE at the facility, Unit 5, commenced construction prior to July 12, 2005 and it was manufactured prior to April 2, 2006.
NSPS 40 CFR Part	Standards of Performance for	No	No	This regulation is not applicable because there are no stationary SI ICE at the facility.

Federal Regulation Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
60 Subpart JJJJ	Stationary Spark Ignition Internal Combustion Engines			
NSPS 40 CFR Part 60 Subpart OOOO	Standards of Performance for Crude Oil and Natural Gas Production, Transmission, and Distribution for which construction, modification or reconstruction commenced after August 23, 2011 and before September 18, 2015	No	N/A	This regulation does not apply because the facility is not equipped with “affected” sources that are constructed, modified, or reconstructed after Aug 23, 2011 and on or before September 18, 2015: gas wells, centrifugal or reciprocating compressors, pneumatic controllers, and storage vessels (see §60.5365). Note that the facility is not a natural gas processing plant as defined by the subpart (see §60.5430). Note that the condensate storage tanks (Units T4 & T5) have not been modified or reconstructed. Commenced construction means a continuous program of fabrication, erection or installation (see §60.2). Modification means any physical change in or change in the method of operation of an existing facility which increases emissions or results in new emissions (see §60.2). The following, by themselves, are not modifications: routine maintenance, repair or replacement, production increase without capital expenditure, increase in hours of operation, addition of emission controls, or the relocation or change in ownership of an existing facility (see §60.14). Reconstruction means the replacement of components of an existing facility such that the fixed capital cost of the new components exceeds 50% of the fixed capital cost required to construct a comparable entirely new facility. Fixed capital cost means the capital needed to provide all the depreciable components (see §60.15).
NSPS 40 CFR Part 60 Subpart OOOOa	Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015 and on or Before December 6, 2022	No	N/A	This regulation is not applicable because the facility is not equipped with “affected” sources that commenced construction, modification or reconstruction after September 18, 2015 and on or before December 6, 2022 (see §60.5365a). Note that the facility is not a natural gas processing plant as defined by the subpart (see §60.5430a). See the definitions of construction, modification, and reconstruction referenced in Subpart OOOO above.
NSPS 40 CFR Part 60 Subpart OOOOb	Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After December 6, 2022	No	N/A	This regulation is not applicable because the facility is not equipped with “affected” sources that commenced construction, modification or reconstruction after December 6, 2022 (see §60.5365b). Note that the facility is not a natural gas processing plant as defined by the subpart (see §60.5430b). See the definitions of construction, modification, and reconstruction referenced in Subpart OOOO above.
NESHAP 40 CFR 61 Subpart A	General Provisions	No	N/A	This regulation is not applicable because no other 40 CFR Part 61 subparts apply (see §61.01(c)).
NESHAP 40 CFR 61 Subpart V	National Emission Standards for Equipment Leaks	No	N/A	This regulation is not applicable because none of the listed equipment at the facility is in VHAP service.

Federal Regulation Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
40 CFR 61 Subpart V	(Fugitive Emission Sources)			The provisions of this subpart apply to each of the following sources that are intended to operate in volatile hazardous air pollutant (VHAP) service: pumps, compressors, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, surge control vessels, bottoms receivers, and control devices or systems required by this subpart (see §61.240(a)). VHAP service means a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least 10 percent by weight of VHAP. VHAP means a substance regulated under this subpart for which a standard for equipment leaks of the substance has been promulgated (see §61.241).
MACT 40 CFR 63, Subpart A	General Provisions	Yes	5	This regulation is applicable because 40 CFR 63 Subpart ZZZZ applies (see §63.1(b)).
MACT 40 CFR 63.760 Subpart HH	National Emission Standards for Hazardous Air Pollutants For Oil and Natural Gas Production Facilities	No	N/A	This regulation is not applicable because the facility is not equipped with dehydrators, storage vessels with the potential for flashing losses or compressors or ancillary equipment in volatile HAP service as defined by the subpart (see §63.761). This subpart defines a production field facility as a facility "located prior to the point of custody transfer". The Chaco facility is a production field facility. Note: This subpart defines a natural gas processing plant as "any processing site engaged in the extraction of natural gas liquids from field gas, or the fractionation of mixed NGL to natural gas products, or a combination of both". The Chaco facility does not engage in either of these activities; therefore, it is not a processing plant as defined by the subpart. The subpart states, "For facilities that are production field facilities, only HAP emissions from glycol dehydration units and storage vessels shall be aggregated for a major source determination". By this definition the Chaco facility is a major HAP source. Storage vessel with the potential for flash emissions means any storage vessel that contains a hydrocarbon liquid with a stock tank gas-to-oil ratio equal to or greater than 0.31 cubic meters per liter and an American Petroleum Institute gravity equal to or greater than 40 degrees and an actual annual average hydrocarbon liquid throughput equal to or greater than 79,500 liters per day (500 barrels per day). Flash emissions occur when dissolved hydrocarbons in the fluid evolve from solution when the fluid pressure is reduced. At HFC facilities, condensate storage tanks are the only tanks in which the liquid has the properties identified by the definition and for which the fluid pressure is reduced so as to produce flash emissions. Since this facility is not equipped with dehydrators, condensate tanks with an actual annual average condensate throughput of 500 bbl/day, or compressors or ancillary equipment in VHAP service, Subpart HH does not apply.
MACT 40 CFR 63 Subpart HHH	National Emission Standards for Hazardous Air Pollutants From Natural Gas Transmission and Storage Facilities	No	N/A	This regulation is not applicable because the facility is not a natural gas transmission and storage facility as defined by the subpart. A compressor station that transports natural gas prior to the point of custody transfer or to a natural gas processing plant (if present) are not considered a part of the natural gas transmission and storage source category (see §63.1270(a)).

Federal Regulation Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
MACT 40 CFR 63, Subpart YYYY	National Emission Standards for Hazardous Air Pollutants From Stationary Combustion Turbines	No		This regulation is not applicable because none of the turbines at the plant were constructed after the applicability date of January 14, 2003.
MACT 40 CFR 63 Subpart ZZZZ	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE MACT)	Yes	5	This regulation applies because the plant is an area HAP source equipped with a stationary RICE (Unit 5). This facility is a production field facility; therefore, only HAP emissions from glycol dehydration units, storage vessels with the potential for flash emissions, combustion turbines and reciprocating internal combustion engines are aggregated for a major source determination. Storage vessel with the potential for flash emissions means any storage vessel that contains a hydrocarbon liquid with a stock tank gas-to-oil ratio equal to or greater than 0.31 cubic meters per liter and an American Petroleum Institute gravity equal to or greater than 40 degrees and an actual annual average hydrocarbon liquid throughput equal to or greater than 79,500 liters per day (500 barrels per day). Flash emissions occur when dissolved hydrocarbons in the fluid evolve from solution when the fluid pressure is reduced (see § 63.6675). At HFC facilities, condensate storage tanks are the only tanks in which the liquid has the properties identified by the definition and for which the fluid pressure is reduced so as to produce flash emissions. This facility is not equipped with dehydrators and the actual annual average condensate throughput will be much less than 500 bbl/day; therefore, it is an area HAP source. The engine is an existing (constructed or reconstructed before June 12, 2006) emergency stationary RICE as defined by the subpart. It must meet the following requirements: a. Change oil and filter every 500 hours of operation or annually, whichever comes first; b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.
MACT 40 CFR 63, Subpart DDDDD	National Emission Standards for Hazardous Air Pollutants for Major Industrial, Commercial, and Institutional Boilers & Process Heaters	No		This regulation is not applicable because the facility is an area HAP source as defined by the subpart.
MACT 40 CFR 63, Subpart	National Emission Standards for Hazardous Air	No		This regulation does not apply because the station is not equipped with boilers as defined by the subpart.

Federal Regulation Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
JJJJJJ	Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources			
40 CFR 64	Compliance Assurance Monitoring	No	N/A	This regulation is not applicable because no equipment at the facility requires a control device to achieve compliance with emission limits or standards where pre control emissions equal or exceed the major source threshold (100 tons per year). (see §64.2(a)).
40 CFR 68	Chemical Accident Prevention	No	N/A	This regulation is not applicable because the facility does not store any of the identified toxic and flammable substances in quantities exceeding the applicability thresholds (see §68.10(a), §68.115(a), and §68.130 Tables 1-4).
40 CFR 70	State Operating Permit Programs	No	N/A	This regulation is not applicable, as the requirements associated with Title V are delegated to the State of New Mexico and implemented under 20 NMAC 2.70.
Title VI – 40 CFR 82	Protection of Stratospheric Ozone	No	N/A	This regulation is not applicable because the facility does not produce, transform, destroy, import, or export ozone-depleting substances (see §82.1(b)); does not service motor vehicle air conditioning units (see §82.30(b)); and does not sell, distribute, or offer for sale or distribution any product that contains ozone-depleting substances (see §82.64).

The Applicability of 40 CFR Part 64 to the Condensate Storage Tanks (Units T4 & T5)

40 CFR Part 64 defines control devices and inherent process equipment as follows (see § 64.1 Definitions): *Control device* means equipment, other than inherent process equipment, that is used to destroy or remove air pollutant(s) prior to discharge to the atmosphere. The types of equipment that may commonly be used as control devices include, but are not limited to, fabric filters, mechanical collectors, electrostatic precipitators, inertial separators, afterburners, thermal or catalytic incinerators, adsorption devices (such as carbon beds), condensers, scrubbers (such as wet collection and gas absorption devices), selective catalytic or non-catalytic reduction systems, flue gas recirculation systems, spray dryers, spray towers, mist eliminators, acid plants, sulfur recovery plants, injection systems (such as water, steam, ammonia, sorbent or limestone injection), and combustion devices independent of the particular process being conducted at an emissions unit (e.g., the destruction of emissions achieved by venting process emission streams to flares, boilers or process heaters). For purposes of this part, a control device does not include passive control measures that act to prevent pollutants from forming, such as the use of seals, lids, or roofs to prevent the release of pollutants, use of low-polluting fuel or feedstocks, or the use of combustion or other process design features or characteristics. If an applicable requirement establishes that particular equipment which otherwise meets this definition of a control device does not constitute a control device as applied to a particular pollutant-specific emissions unit, then that definition shall be binding for purposes of this part.

Inherent process equipment means equipment that is necessary for the proper or safe functioning of the process, or material recovery equipment that the owner or operator documents is installed and operated primarily for purposes other than compliance with air pollution regulations. Equipment that must be operated at an efficiency higher than that achieved during normal process operations in order to comply with the applicable emission limitation or standard is not inherent process equipment. For the purposes of this part, inherent process equipment is not considered a control device.

The Chaco Compressor Station EVRU system is classified as inherent process equipment, since it is material recovery equipment operated to recover vapors from the condensate storage tanks (Units T4 & T5) and inject them back into pipeline (“operated primarily for purposes other than compliance with air pollution regulations”). As such, it does not meet the definition of a control device “used to destroy or remove air pollutant(s) prior to discharge to the atmosphere.” Williams Four Corners LLC (during the time they owned the facility) agreed to install the EVRU system as part of a settlement agreement; however, the violations associated with the settlement agreement were unrelated to the condensate tanks and their emissions. The reduction of VOC from the condensate tanks was chosen as a Supplemental Environmental Project for the settlement agreement, and Williams

recognized the value of recovering product and injecting it back into the pipeline. The system was not installed to achieve compliance with air pollution regulations. The condensate storage tanks have been in operation for many years. Also, the condensate tanks are not subject to 40 CFR Part 60, Subparts Kb and OOOO or 40 CFR Part 63, Subpart HH. Since the emission rates identified in this application are based on normal operation, the equipment will not need to be "operated at an efficiency higher than that achieved during normal process operations in order to comply with the applicable emission limitation or standard."

As the condensate tanks do not use control devices to achieve compliance with emission limits, where pre control emissions equal or exceed the major source threshold (100 tons per year), compliance assurance monitoring is not required.

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.
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Section 15

Alternative Operating Scenarios

(Submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

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

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

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

The current permit includes an AOS to replace the EVRU with a VRU. However, the AOS has not been implemented and Harvest is requesting the removal of the AOS as part of this application as indicated in Table .

Section 16

Air Dispersion Modeling

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

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

Check each box that applies:

- ☐ See attached, approved modeling **waiver for all** pollutants from the facility.
- ☐ See attached, approved modeling **waiver for some** pollutants from the facility.
- ☐ Attached in Universal Application Form 4 (UA4) is a **modeling report for all** pollutants from the facility.
- ☐ Attached in UA4 is a **modeling report for some** pollutants from the facility.
- ☒ No modeling is required.

Modeling was last submitted for NSR permit number 0759-M3.

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.

To save paper and to standardize the application format, delete this sentence and the samples in the Compliance Test History Table, and begin your submittal for this attachment on this page.

Compliance Test History Table

Unit No.	Test Description	Test Date
1	Not performed, insufficient run time	2021
	NOx and CO testing with a portable analyzer	8/31/2022
	Not performed, insufficient run time	2023
	Not performed, insufficient run time	2024
	Not performed, insufficient run time	2025
2	Not performed, insufficient run time	2021
	NOx and CO testing with a portable analyzer	8/31/2022
	Not performed, insufficient run time	2023
	Not performed, insufficient run time	2024
	Not performed, insufficient run time	2025
3	NOx and CO testing with a portable analyzer	11/18/2021
	Not performed, insufficient run time	2022
	Not performed, insufficient run time	2023
	Not performed, insufficient run time	2024
	Not performed, insufficient run time	2025
4	NOx and CO testing with a portable analyzer	9/27/2021
	NOx and CO testing with a portable analyzer	10/13/2022
	NOx and CO testing with a portable analyzer	9/14/2023
	NOx and CO testing with a portable analyzer	5/8/2024
	NOx and CO testing with a portable analyzer	7/21/2025
5	NOx and CO testing with a portable analyzer	9/16/2022
	NOx and CO testing with a portable analyzer	12/12/2023
	NOx and CO testing with a portable analyzer	7/8/2024
	NOx and CO testing with a portable analyzer	7/21/2025

Section 19

Requirements for Title V Program

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 www.env.nm.gov/air-quality/air-quality-title-v-operating-permits-guidance-page/. 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.

There are no sources at the station subject to 40 CFR, Part 64, Compliance Assurance Monitoring (CAM); consequently, a monitoring protocol is not required.

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 station is in compliance with all applicable requirements affecting the facility. A copy of Part 1 (Permit Requirements Certification Table) of the 2015 annual compliance certification is provided in Section 20, Other Relevant Information. It identifies all the requirements of the current Title V operating permit and the methods and data used to determine compliance. 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 station 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.)

None

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

HFC 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 www.env.nm.gov/air-quality/air-quality-title-v-operating-permits-guidance-page/. Sources that are subject to both the Title V and Acid Rain regulations are **encouraged** to submit both applications **simultaneously**.

The station 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 station 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 station 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.)

The station is located within 80 kilometers (km) of the following states, local pollution control programs, Indian tribes and pueblos:

Colorado (33.8 km)
Navajo Indian Reservation (1.6 km)
Southern Ute Indian Reservation (33.8 km)
Jicarilla Apache Indian Reservation (57.9 km)
Ute Mountain Indian Reservation (19.3 km)

19.9 - Responsible Official

Provide the Responsible Official as defined in 20.2.70.7.AD NMAC:

The responsible official for the Chaco Compressor Station is Michelle Roger.

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.

A copy of Part 1 (Permit Requirements Certification Table) of the 2025 annual compliance certification is provided in this section. Please see the following pages



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



Version 07.20.18

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: Chaco Compressor Station		
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): Michelle McCracken		H. Title: EHS Manager		I. Phone Number: 713-505-3924	
J. Fax Number:					
K. ® AI Number: 1189	L. Title V Permit Number: P236-R3	M. Title V Permit Issue Date: 4/22/2022	N. NSR Permit Number:		O. NSR Permit Issue Date:
P. Reporting Period: From: 4/1/2024 To: 3/31/2025					

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. ☒	Title V Annual Compliance Certification	Permit Condition(s): A109.B	Description: Submittal of Annual Compliance Certification	
B. ☐	Title V Semi-Annual Monitoring Report	Permit Condition(s):	Description:	
C. ☐	NSPS Requirement (40CFR60)	Regulation:	Section(s):	Description:
D. ☐	MACT Requirement (40CFR63)	Regulation:	Section(s):	Description:
E. ☐	NMAC Requirement (20.2.xx) or NESHAP Requirement (40CFR61)	Regulation:	Section(s):	Description:
F. ☐	Permit or Notice of Intent (NOI) Requirement	Permit No. ☐: or NOI No. ☐:	Condition(s):	Description:
G. ☐	Requirement of an Enforcement Action	NOV No. ☐: or SFO No. ☐: or CD No. ☐: or Other ☐:	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: <u>Monica Smith</u>		® Title: Environmental Specialist	® Date: 4/29/2025
		® Responsible Official for Title V? ☐ Yes ☒ 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: Chaco Compressor Station

Facility Address: 1755 Arroyo Drive

State: NM

Zip: 87413

Responsible Official (RO): Michelle McCracken

Phone: 713-515-3924

Fax:

RO Title: EHS Manager

RO e-mail: michellemccracken@harves...

Permit No.: P236-R3

Date Permit Issued: 4/22/2022

Report Due Date (as required by the permit): 4/30/2025

Permit AI number: 1189

Time period covered by this Report: From: 4/1/2024

To: 3/31/2025

III. Certification of Truth, Accuracy, and Completeness

I am the Responsible Official indicated above. I, (Michelle McCracken) 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: _____.

Annual Compliance Certification - Permit Requirements Certification Table

Annual Compliance Certification Data for Title V Permit No. P236-R3				
Was this facility <i>continuously</i> in compliance with <i>all conditions</i> of this <i>permit</i> during the reporting period? (Did you check either “Yes” or “N/A” for every condition in response to question 3?)				☒ Yes ☐ No
1. Provide <i>Method(s)</i> or other information or other facts used to determine the compliance status in the “Methods:” row beneath each permit condition. 2. If you answered <i>No</i> to question 3, list <i>all</i> deviations in the <i>Deviations</i> section. For all Deviations that <i>produced</i> excess emissions, provide <i>only a)</i> the AQBCR EER Tracking Number. For all Deviations that <i>did not produce</i> excess emissions, provide <i>a)</i> The Unit ID, <i>b)</i> The Cause of and a Description of the Deviation, <i>c)</i> the Corrective Action, and <i>d)</i> the Start & End Dates of the deviation. Please indicate in <i>b)</i> , your <i>Description</i> , whether each deviation has been previously reported to NMED.				3. Was this facility <i>continuously</i> in compliance with <i>all</i> requirements of this condition during the reporting period?
<u>FACILITY SPECIFIC REQUIREMENTS:</u> <u>A101 Permit Duration (expiration)</u> 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).				☒ Yes ☐ No ☐ N/A
Methods: No renewal application was due during this reporting period.				
Deviations: Unit ID	Cause, Description of Deviation, and Corrective Action Taken or Tracking number	Start Date	End Date	
<u>A101 Permit Duration (expiration)</u> 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)				☒ Yes ☐ No ☐ N/A
Methods: No renewal application was due during this reporting period.				
Deviations: Unit ID	Cause, Description of Deviation, and Corrective Action Taken or Tracking number	Start Date	End Date	
<u>A102 Facility: Description</u> B. This facility is located approximately one (1) miles south of Bloomfield in San Juan County, New Mexico. (20.2.70.302.A(7) NMAC)				☒ Yes ☐ No ☐ N/A
Methods: The facility only operated at this location during the reporting period.				
Deviations: Unit ID	Cause, Description of Deviation, and Corrective Action Taken or Tracking number	Start Date	End Date	
<u>A102 Facility: Description</u> B. Tables 102.A and Table 102.B show the potential to emit (PTE) from this facility for information only. This is not an enforceable condition and excludes insignificant or trivial activities.				☐ Yes ☐ No ☒ N/A
Methods: There are no requirements associated with this condition.				

1. Provide <i>Method(s)</i> or other information or other facts used to determine the compliance status in the "Methods:" row beneath each permit condition. 2. If you answered <i>No</i> to question 3, list <i>all</i> deviations in the <i>Deviations</i> section. For <i>all</i> Deviations that <i>produced</i> excess emissions, provide <i>only a)</i> the AQBCR EER Tracking Number. For <i>all</i> Deviations that <i>did not produce</i> excess emissions, provide <i>a)</i> The Unit ID, <i>b)</i> The Cause of and a Description of the Deviation, <i>c)</i> the Corrective Action, and <i>d)</i> the Start & End Dates of the deviation. Please indicate in <i>b)</i> , your <i>Description</i> , whether each deviation has been previously reported to NMED.				3. Was this facility <i>continuously</i> in compliance with <i>all</i> requirements of this condition during the reporting period?	
Deviations: Unit ID	Cause, Description of Deviation, and Corrective Action Taken or Tracking number	Start Date	End Date		
A103 Facility: Applicable Regulations and Non-Applicable Regulations A. The permittee shall comply with all applicable sections of the requirements listed in Table 103.A.				☒ Yes ☐ No ☐ N/A	
Methods: The semi-annual monitoring reports (SARs) and annual emissions inventory were used to determine the compliance status for this reporting period.					
Deviations: Unit ID	Cause, Description of Deviation, and Corrective Action Taken or Tracking number	Start Date	End Date		
A103 Facility: Applicable Regulations and Non-Applicable Regulations 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 0759-M6.				☒ Yes ☐ No ☐ N/A	
Methods: The SARs and annual emissions inventory were used to determine the compliance status for this reporting period.					
Deviations: Unit ID	Cause, Description of Deviation, and Corrective Action Taken or Tracking number	Start Date	End Date		
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.				☒ Yes ☐ No ☐ N/A	
Methods: Records of monitoring, SARs, the annual emissions inventory, and company Management of Change Request (MOCR) procedures were used to determine the compliance status for this reporting period.					
Deviations: Unit ID	Cause, Description of Deviation, and Corrective Action Taken or Tracking number	Start Date	End Date		
A105 Facility: Control Equipment 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.				☒ Yes ☐ No ☐ N/A	
Methods: Records of monitoring, SARs, the annual emissions inventory, and company MOCR procedures were used to determine the compliance status for this reporting period.					
Deviations: Unit ID	Cause, Description of Deviation, and Corrective Action Taken or Tracking number	Start Date	End Date		
A106 Facility: Allowable Emissions					

1. Provide <i>Method(s)</i> or other information or other facts used to determine the compliance status in the "Methods:" row beneath each permit condition. 2. If you answered <i>No</i> to question 3, list <i>all</i> deviations in the <i>Deviations</i> section. For <i>all</i> Deviations that <i>produced</i> excess emissions, provide <i>only a)</i> the AQBCR EER Tracking Number. For <i>all</i> Deviations that <i>did not produce</i> excess emissions, provide <i>a)</i> The Unit ID, <i>b)</i> The Cause of and a Description of the Deviation, <i>c)</i> the Corrective Action, and <i>d)</i> the Start & End Dates of the deviation. Please indicate in <i>b)</i> , your <i>Description</i> , whether each deviation has been previously reported to NMED.				3. Was this facility <i>continuously</i> in compliance with <i>all</i> requirements of this condition during the reporting period?	
A. The following Section lists the emission units, and their allowable emission limits. (40 CFR 50; 40 CFR 60, Subparts A and GG; 40 CFR 63, Subparts A and ZZZZ; Paragraphs 1, 7, and 8 of 20.2.70.302.A NMAC; and NSR Permit 0759-M6).				☒ Yes ☐ No ☐ N/A	
Methods: Records of monitoring, SARs, and the annual emissions inventory were used to determine the compliance status for this reporting period.					
Deviations: Unit ID	Cause, Description of Deviation, and Corrective Action Taken or Tracking number	Start Date	End Date		
A106 Facility: Allowable Emissions B. Unit 4, nitrogen dioxide emissions shall not exceed 150 ppmv at 15 percent oxygen and on a dry basis, and the fuel burned shall not contain total sulfur in excess 0.8 percent by weight (8000 ppmw). (40 CFR 60, Subpart GG)				☒ Yes ☐ No ☐ N/A	
Methods: Records of monitoring, SARs, and the annual emissions inventory were used to determine the compliance status for this reporting period.					
Deviations: Unit ID	Cause, Description of Deviation, and Corrective Action Taken or Tracking number	Start Date	End Date		
A107 Facility: Allowable Startup, Shutdown, & Maintenance (SSM) and Malfunction Emissions A. The maximum allowable SSM and Malfunction emission limits for this facility are listed in Table 107.A and were relied upon by the Department to determine compliance with applicable regulations.				☐ Yes ☐ No ☒ N/A	
Methods: There are no requirements associated with this condition.					
Deviations: Unit ID	Cause, Description of Deviation, and Corrective Action Taken or Tracking number	Start Date	End Date		
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.				☒ Yes ☐ No ☐ N/A	
Methods: The facility SSM Plan, records of monitoring, SARs, and the annual emissions inventory were used to determine the compliance status for this reporting period.					
Deviations: Unit ID	Cause, Description of Deviation, and Corrective Action Taken or Tracking number	Start Date	End Date		
A107 Facility: Allowable Startup, Shutdown, & Maintenance (SSM) and Malfunction Emissions C. SSM VOC Emissions for venting of gas (SSM) Requirement: The permittee shall perform a facility inlet gas analysis once every year based on a calendar year and complete the following recordkeeping to demonstrate compliance with routine and predictable startup, shutdown, and maintenance (SSM) emission limits in Table 107.A. (NSR 0759-M6 Condition A107.C) Monitoring: The permittee shall monitor the permitted routine and predictable startups and shutdowns and scheduled maintenance events.				☒ Yes ☐ No ☐ N/A	

1. Provide <i>Method(s)</i> or other information or other facts used to determine the compliance status in the "Methods:" row beneath each permit condition. 2. If you answered <i>No</i> to question 3, list <i>all</i> deviations in the <i>Deviations</i> section. For <i>all</i> Deviations that <i>produced</i> excess emissions, provide <i>only a)</i> the AQBCR EER Tracking Number. For <i>all</i> Deviations that <i>did not produce</i> excess emissions, provide <i>a)</i> The Unit ID, <i>b)</i> The Cause of and a Description of the Deviation, <i>c)</i> the Corrective Action, and <i>d)</i> the Start & End Dates of the deviation. Please indicate in <i>b)</i>, your <i>Description</i>, whether each deviation has been previously reported to NMED.		3. Was this facility <i>continuously</i> in compliance with <i>all</i> requirements of this condition during the reporting period?							
Recordkeeping: (1) To demonstrate compliance, each month records shall be kept of the cumulative total VOC emissions during the first 12 months due to SSM events and, thereafter of the monthly rolling 12-month total of VOC emissions due to SSM events. (2) Records shall also be kept of the inlet gas analysis, the percent VOC of the gas based on the most recent gas analysis, and of the volume of total gas vented in MMscf used to calculate the VOC emissions. (3) The permittee shall record the demonstrated compliance in accordance with Condition B109, except the requirement in B109.C to record the start and end times of SSM events shall not apply to the venting of known quantities of VOC. Reporting: The permittee shall report in accordance with Section B110.									
Methods: Records of monitoring (SSM events, volumes, and calculations), an annual gas analysis, SARs, and the annual emissions inventory were used to determine the compliance status for this reporting period.									
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 15%;">Deviations: Unit ID</th> <th style="width: 55%;">Cause, Description of Deviation, and Corrective Action Taken or Tracking number</th> <th style="width: 15%;">Start Date</th> <th style="width: 15%;">End Date</th> </tr> <tr> <td style="height: 20px;"></td> <td></td> <td></td> <td></td> </tr> </table>	Deviations: Unit ID		Cause, Description of Deviation, and Corrective Action Taken or Tracking number	Start Date	End Date				
Deviations: Unit ID	Cause, Description of Deviation, and Corrective Action Taken or Tracking number	Start Date	End Date						
A107 Facility: Allowable Startup, Shutdown, & Maintenance (SSM) and Malfunction Emissions D. Malfunction Emissions (M1) Requirement: The permittee shall perform a facility inlet gas analysis once every year based on a calendar year and complete the following recordkeeping to demonstrate compliance with malfunction (M1) emission limits in Table 107.A. (NSR 0759-M6 Condition A107.D) 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. Recordkeeping: (1) 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. (2) Records shall also be kept of the inlet gas analysis, the percent VOC of the gas based on the most recent gas analysis, of the volume of total gas vented in MMscf used to calculate the VOC emissions, a description of the event, and whether the emissions resulting from the event will be used toward the permitted malfunction emission limit or whether the event is reported as excess emissions of the pound per hour limits in Table 106.A (or the pound per hour limits in condition B110E, if applicable), under 20.2.7 NMAC. (3) The permittee shall record the demonstrated compliance 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.		☒ Yes ☐ No ☐ N/A							

1. Provide <i>Method(s)</i> or other information or other facts used to determine the compliance status in the "Methods:" row beneath each permit condition. 2. If you answered <i>No</i> to question 3, list <i>all</i> deviations in the <i>Deviations</i> section. For <i>all</i> Deviations that <i>produced</i> excess emissions, provide <i>only a)</i> the AQBCR EER Tracking Number. For <i>all</i> Deviations that <i>did not produce</i> excess emissions, provide <i>a)</i> The Unit ID, <i>b)</i> The Cause of and a Description of the Deviation, <i>c)</i> the Corrective Action, and <i>d)</i> the Start & End Dates of the deviation. Please indicate in <i>b)</i> , your <i>Description</i> , whether each deviation has been previously reported to NMED.			3. Was this facility <i>continuously</i> in compliance with <i>all</i> requirements of this condition during the reporting period?	
Methods: Records of monitoring (malfunction events, volumes, and calculations), an annual gas analysis, SARs, and the annual emissions inventory were used to determine the compliance status for this reporting period.				
Deviations: Unit ID	Cause, Description of Deviation, and Corrective Action Taken or Tracking number	Start Date		End Date
A108 Facility: Hours of Operation A. This facility is authorized for continuous operation, except for the restriction on operating hours of unit 5 in condition A201B. Monitoring, recordkeeping, and reporting are not required to demonstrate compliance with continuous hours of operation.				
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 six (6) month reporting period. The six (6) month reporting periods start on April 1st and October 1st of each year.			☒ Yes ☐ No ☐ N/A	
Methods: The SAR submittals were used to determine the compliance status for this reporting period.				
Deviations: Unit ID	Cause, Description of Deviation, and Corrective Action Taken or Tracking number	Start Date		End Date
A109 Facility: Reporting Schedules (20.2.70.302.E NMAC) B. The Annual Compliance Certification Report is due within 30 days of the end of every 12-month reporting period. The 12-month reporting period starts on April 1st of each year.			☒ Yes ☐ No ☐ N/A	
Methods: The annual compliance certification (ACC) submittal was used to determine the compliance status for this reporting period.				
Deviations: Unit ID	Cause, Description of Deviation, and Corrective Action Taken or Tracking number	Start Date		End Date
A110 Facility: Fuel and Fuel Sulfur Requirements A. Fuel and Fuel Sulfur Requirements (Units 1, 2, 3 and 4) Requirement: All combustion emission units shall combust only natural gas containing no more than 0.2 grains of total sulfur per 100 dry standard cubic feet. (NSR 0759-M6 Condition A110.A) Monitoring: None. Compliance is demonstrated through records. Recordkeeping: (1) The permittee shall demonstrate compliance with the natural gas or fuel oil limit on total sulfur content by maintaining records of a current, valid purchase contract, tariff sheet or transportation contract for the gaseous or liquid fuel, or fuel gas analysis, specifying the allowable limit or less. (2) If fuel gas analysis is used, the analysis shall occur not less than 9 months and not greater than 15 months since the previous analysis.			☒ Yes ☐ No ☐ N/A	

1. Provide <i>Method(s)</i> or other information or other facts used to determine the compliance status in the "Methods:" row beneath each permit condition. 2. If you answered <i>No</i> to question 3, list <i>all</i> deviations in the <i>Deviations</i> section. For <i>all</i> Deviations that <i>produced</i> excess emissions, provide <i>only a)</i> the AQBCR EER Tracking Number. For <i>all</i> Deviations that <i>did not produce</i> excess emissions, provide <i>a)</i> The Unit ID, <i>b)</i> The Cause of and a Description of the Deviation, <i>c)</i> the Corrective Action, and <i>d)</i> the Start & End Dates of the deviation. Please indicate in <i>b)</i>, your <i>Description</i>, whether each deviation has been previously reported to NMED.			3. Was this facility <i>continuously</i> in compliance with <i>all</i> requirements of this condition during the reporting period?	
(3) Alternatively, compliance shall 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. Reporting: The permittee shall report in accordance with Section B110.				
Methods: The annual fuel sulfur analysis contained in the SARs were used to determine the compliance status for this reporting period.				
Deviations: Unit ID	Cause, Description of Deviation, and Corrective Action Taken or Tracking number	Start Date		End Date
A111 Facility: 20.2.61 NMAC Opacity A. 20.2.61 NMAC Opacity Requirements (Units 1, 2, 3 and 4) 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. (NSR 0759-M6 Condition A111.A) Monitoring: (1) Use of natural gas fuel constitutes compliance with 20.2.61 NMAC unless opacity equals or exceeds 20% averaged over a 10-minute period. When any visible emissions are observed during operation other than during startup mode, opacity shall be measured over a 10-minute period, in accordance with the procedures at 40 CFR 60, Appendix A, Reference Method 9 (EPA Method 9) as required by 20.2.61.114 NMAC, or the operator will be allowed to shut down the equipment to perform maintenance/repair to eliminate the visible emissions. Following completion of equipment maintenance/repair, the operator shall conduct visible emission observations following startup in accordance with the following procedures: (a) 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. (b) If any visible emissions are observed during completion of the EPA Method 22 observation, subsequent opacity observations shall be conducted over a 10-minute period, in accordance with the procedures at EPA Method 9 as required by 20.2.61.114 NMAC. For the purposes of this condition, <i>Startup mode</i> is defined as the startup period that is described in the facility's startup plan. Recordkeeping: (1) If any visible emissions observations were conducted, the permittee shall keep records in accordance with the requirements of Section B109 and as follows: (a) 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. (b) For any opacity observations conducted in accordance with the requirements of EPA Method 9, record the information on the form				☒ Yes ☐ No ☐ N/A

1. Provide <i>Method(s)</i> or other information or other facts used to determine the compliance status in the "Methods:" row beneath each permit condition. 2. If you answered <i>No</i> to question 3, list <i>all</i> deviations in the <i>Deviations</i> section. For <i>all</i> Deviations that <i>produced</i> excess emissions, provide <i>only a)</i> the AQBCR EER Tracking Number. For <i>all</i> Deviations that <i>did not produce</i> excess emissions, provide <i>a)</i> The Unit ID, <i>b)</i> The Cause of and a Description of the Deviation, <i>c)</i> the Corrective Action, and <i>d)</i> the Start & End Dates of the deviation. Please indicate in <i>b)</i> , your <i>Description</i> , whether each deviation has been previously reported to NMED.			3. Was this facility <i>continuously</i> in compliance with <i>all</i> requirements of this condition during the reporting period?
referenced in EPA Method 9, Sections 2.2 and 2.4.			
Reporting: The permittee shall report in accordance with Section B110.			
Methods: Records of monitoring and the SARs were used to determine the compliance status for this reporting period.			
Deviations: Unit ID	Cause, Description of Deviation, and Corrective Action Taken or Tracking number	Start Date	End Date
A111 Facility: 20.2.61 NMAC Opacity B. 20.2.61 NMAC Opacity Requirements (Unit 5) Requirement: Visible emissions from all emission stacks of all compression ignition engines shall not equal or exceed an opacity of 20 percent in accordance with the requirements at 20.2.61.109 NMAC. Monitoring: (1) For emergency, standby, or limited use compression ignition engines that operate on a limited basis, the permittee shall, at least once during any year that the unit is operated and no less frequently than once every 5 years regardless of unit operation, measure opacity during steady state operation on each Unit for a minimum of 10 minutes in accordance with the procedures of 40 CFR 60, Appendix A, Method 9. The permittee shall also measure opacity on a Unit's emissions stack anytime when visible emissions are observed during steady state operation. (3) Alternatively for any compression ignition engine, if visible emissions are observed during steady state operation, within 1 hour of seeing visible emissions, the permittee shall shut down the engine and perform maintenance and/or repair to eliminate the visible emissions. Following completion of equipment maintenance and/or repair, the permittee shall conduct visible emission observations following startup in accordance with the following procedures: (a) 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. (b) If any visible emissions are observed during completion of the EPA Method 22 observation, subsequent opacity observations shall be conducted over a 10-minute period, in accordance with the procedures at EPA Method 9 as required by 20.2.61.114 NMAC. For the purposes of this condition, <i>Startup mode</i> is defined as the startup period that is described in the facility's startup plan. Recordkeeping: (1) If any visible emissions observations were conducted, the permittee shall keep records in accordance with the requirements of Section B109 and as follows: (2) For any visible emissions observations conducted in accordance with EPA Method 22, record the information on the form referenced in EPA	☒ Yes ☐ No ☐ N/A		

1. Provide <i>Method(s)</i> or other information or other facts used to determine the compliance status in the "Methods:" row beneath each permit condition. 2. If you answered <i>No</i> to question 3, list <i>all</i> deviations in the <i>Deviations</i> section. For all Deviations that <i>produced</i> excess emissions, provide <i>only a)</i> the AQBCR EER Tracking Number. For all Deviations that <i>did not produce</i> excess emissions, provide <i>a)</i> The Unit ID, <i>b)</i> The Cause of and a Description of the Deviation, <i>c)</i> the Corrective Action, and <i>d)</i> the Start & End Dates of the deviation. Please indicate in <i>b)</i> , your <i>Description</i> , whether each deviation has been previously reported to NMED.			3. Was this facility <i>continuously</i> in compliance with <i>all</i> requirements of this condition during the reporting period?	
Method 22, Section 11.2. (3) 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. (4) For each emergency, black start, and limited use compression ignition engine, the permittee shall also record the number of operating hours per year of each Unit and the reason for operating the unit. Reporting: The permittee shall report in accordance with Section B110.				
Methods: Records of monitoring and the SARs were used to determine the compliance status for this reporting period.				
Deviations: Unit ID	Cause, Description of Deviation, and Corrective Action Taken or Tracking number	Start Date		End Date
A112 Alternative Operating Scenario (AOS) – Increased Tanks Throughput and VRU A. The permittee shall operate this facility under only one operating scenario at a time.				☒ Yes ☐ No ☐ N/A
Methods: The alternative operating scenario was not used during this reporting period.				
Deviations: Unit ID	Cause, Description of Deviation, and Corrective Action Taken or Tracking number	Start Date	End Date	
A112 Alternative Operating Scenario (AOS) – Increased Tanks Throughput and VRU B. Condensate Throughput authorized to increase from 45,000 bbl/yr to 60,000 bbl/yr with installation of Vapor Recovery System: The permittee is authorized to increase condensate throughput to Tanks T-4 and T-5 with installation and operation of a vapor recovery system, VRU-AOS, with a minimum capture efficiency of 75% of condensate tank flash, working, and breathing VOC and HAP emissions. The VRU-AOS is a replacement for the EVRU system required by Settlement Agreement AQCA-09-00(CO), and upon installation will void authorization to operate or reinstall the EVRU at the Chaco Compressor Station. Upon installation the VRU AOS is the required control device meeting the requirements of the Environmental Project under Settlement Agreement AQCA-09-00(CO). Upon installation of the VRU-AOS, the permittee shall demonstrate compliance with all applicable permit conditions and emission limits for affected units specified in Section A204 Tanks and Vapor Recovery System Installation Alternative Operating Scenario, Conditions A204.A, A204.B, A204.C, A204.D, and A204.E. (NSR 0759-M6 Condition A112.B)				☒ Yes ☐ No ☐ N/A
Methods: The alternative operating scenario was not used during this reporting period.				
Deviations: Unit ID	Cause, Description of Deviation, and Corrective Action Taken or Tracking number	Start Date	End Date	

1. Provide <i>Method(s)</i> or other information or other facts used to determine the compliance status in the “Methods:” row beneath each permit condition. 2. If you answered <i>No</i> to question 3, list <i>all</i> deviations in the <i>Deviations</i> section. For <i>all</i> Deviations that <i>produced</i> excess emissions, provide <i>only a)</i> the AQBCR EER Tracking Number. For <i>all</i> Deviations that <i>did not produce</i> excess emissions, provide <i>a)</i> The Unit ID, <i>b)</i> The Cause of and a Description of the Deviation, <i>c)</i> the Corrective Action, and <i>d)</i> the Start & End Dates of the deviation. Please indicate in <i>b)</i>, your <i>Description</i>, whether each deviation has been previously reported to NMED.		3. Was this facility <i>continuously</i> in compliance with <i>all</i> requirements of this condition during the reporting period?								
<u>EQUIPMENT SPECIFIC REQUIREMENTS:</u> <u>OIL AND GAS INDUSTRY</u> <u>A201 Engines</u> A. 40 CFR 63, Subpart ZZZZ (Unit 5) Requirement: The unit is subject to 40 CFR 63 Subpart ZZZZ and the permittee shall comply with all applicable requirements of Subpart A and Subpart ZZZZ. (NSR 0759-M6 Condition A201.A) Monitoring: The permittee shall comply with all applicable monitoring requirements of 40 CFR 63, Subpart A and Subpart ZZZZ. Recordkeeping: The permittee shall comply with all applicable recordkeeping requirements of 40 CFR 63, Subpart A and Subpart ZZZZ, including but not limited to 63.6655 and 63.10. Reporting: The permittee shall comply with all applicable reporting requirements of 40 CFR 63, Subpart A and ZZZZ, including but not limited to 63.6645, 63.6650, 63.9, and 63.10.		☒ Yes ☐ No ☐ N/A								
Methods: Records of monitoring and the SARs were used to determine the compliance status for this reporting period. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">Deviations: Unit ID</th> <th style="width: 55%;">Cause, Description of Deviation, and Corrective Action Taken or Tracking number</th> <th style="width: 15%;">Start Date</th> <th style="width: 15%;">End Date</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>			Deviations: Unit ID	Cause, Description of Deviation, and Corrective Action Taken or Tracking number	Start Date	End Date				
Deviations: Unit ID	Cause, Description of Deviation, and Corrective Action Taken or Tracking number		Start Date	End Date						
<u>A201 Engines</u> B. Hours of Operation (Unit 5) Requirement: To ensure compliance with NSR Exemption 20.2.72.202(B)(3) NMAC, the monthly rolling 12-month total hours of operation for Standby Generator Unit 5 is limited to 500 hours. (NSR 0759-M6 Condition A201.B) Monitoring: The permittee shall monitor the dates and hours of operation for the unit. Recordkeeping: The permittee shall record the daily hours of operation, calculate and record the monthly rolling 12-month total hours of operation, and shall meet the recordkeeping requirements in Section B109. Reporting: The permittee shall report in accordance with Section B110.										
Methods: Records of monitoring and the SARs were used to determine the compliance status for this reporting period. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">Deviations: Unit ID</th> <th style="width: 55%;">Cause, Description of Deviation, and Corrective Action Taken or Tracking number</th> <th style="width: 15%;">Start Date</th> <th style="width: 15%;">End Date</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>		Deviations: Unit ID	Cause, Description of Deviation, and Corrective Action Taken or Tracking number	Start Date	End Date					☒ Yes ☐ No ☐ N/A
Deviations: Unit ID	Cause, Description of Deviation, and Corrective Action Taken or Tracking number	Start Date	End Date							
<u>A203 Tanks – Without the Alternative Operating Scenario</u> A. Upon operation of the facility’s alternative operating scenario (AOS) at Condition A112, Conditions A203.B, A203.C, A203.D, A203.E are voided, and the permittee shall comply with A204.A, A204.B, A204.C, A204.D, and A204.E. For a description of the alternative operating scenario, refer to Condition A112. (NSR 0759-M6 Condition A203.A)		☒ Yes ☐ No ☐ N/A								

1. Provide <i>Method(s)</i> or other information or other facts used to determine the compliance status in the "Methods:" row beneath each permit condition. 2. If you answered <i>No</i> to question 3, list <i>all</i> deviations in the <i>Deviations</i> section. For <i>all</i> Deviations that <i>produced</i> excess emissions, provide <i>only a)</i> the AQBCR EER Tracking Number. For <i>all</i> Deviations that <i>did not produce</i> excess emissions, provide <i>a)</i> The Unit ID, <i>b)</i> The Cause of and a Description of the Deviation, <i>c)</i> the Corrective Action, and <i>d)</i> the Start & End Dates of the deviation. Please indicate in <i>b)</i> , your <i>Description</i> , whether each deviation has been previously reported to NMED.			3. Was this facility <i>continuously</i> in compliance with <i>all</i> requirements of this condition during the reporting period?	
Methods: The alternative operating scenario was not used during this reporting period.				
Deviations: Unit ID	Cause, Description of Deviation, and Corrective Action Taken or Tracking number	Start Date		End Date
A203 Tanks – Without the Alternative Operating Scenario B. Tank Operations (Units T4 & T5) [with flash emissions] Requirement: (1) Compliance with the allowable emission limits in Table 106.A shall be demonstrated by limiting the total throughput to tanks T4 and T5 to 1,890,000 gallons per year (45,000 bbl/yr), and by monthly monitoring of the actual total condensate throughput and separator pressure and by calculating emission rates as required. (2) The permittee shall calculate the monthly rolling 12-month total tpy VOC emission rates using actual measured condensate throughput, actual measured average separator pressure, and the most recent condensate VOC analysis. (NSR 0759-M6 Condition A203.B) Monitoring: (1) The permittee shall monitor the monthly total condensate throughput, and at least once per month, the upstream separator pressure. (2) Annually the permittee shall complete a liquids analysis of the tank condensate to determine the VOC content. Recordkeeping: (1) The permittee shall record the monthly total condensate throughput of liquids and the monthly average separator pressure. Each month the permittee shall use these values to calculate and record a monthly rolling 12-month total condensate throughput and a monthly rolling 12-month average separator pressure. (2) The permittee shall calculate the monthly rolling 12-month total VOC tpy emission rates using ProMax®, Aspen HYSYS or other approved thermodynamic model, such as VMGSim, etc. and Tanks 4.09d or equivalent Department approved method for tank working and breathing emissions; the number of hours that the EVRU control system is non-operational as defined in Condition A203.B; the actual measured condensate throughput; the actual measured average separator pressure; and the most recent condensate VOC analysis. (3) The permittee shall keep records of the parameters, calculations, and VOC emission rates summarized in a table or spreadsheet and shall meet the recordkeeping requirements in Section B109. Reporting: (1) The permittee shall report in accordance with Section B110. (2) All excess emissions and Title V deviations of allowable emission limits shall be reported according to 20.2.7 NMAC and 20.2.70.302.E(2) NMAC.			☒ Yes ☐ N/A ☐ No	

1. Provide <i>Method(s)</i> or other information or other facts used to determine the compliance status in the "Methods:" row beneath each permit condition. 2. If you answered <i>No</i> to question 3, list <i>all</i> deviations in the <i>Deviations</i> section. For <i>all</i> Deviations that <i>produced</i> excess emissions, provide <i>only a)</i> the AQBCR EER Tracking Number. For <i>all</i> Deviations that <i>did not produce</i> excess emissions, provide <i>a)</i> The Unit ID, <i>b)</i> The Cause of and a Description of the Deviation, <i>c)</i> the Corrective Action, and <i>d)</i> the Start & End Dates of the deviation. Please indicate in <i>b)</i> , your <i>Description</i> , whether each deviation has been previously reported to NMED.			3. Was this facility <i>continuously</i> in compliance with <i>all</i> requirements of this condition during the reporting period?
Methods: Records of monitoring and the SARs were used to determine the compliance status for this reporting period.			
Deviations: Unit ID	Cause, Description of Deviation, and Corrective Action Taken or Tracking number	Start Date	End Date
A203 Tanks – Without the Alternative Operating Scenario C. Tank EVRU Operations (Units T4 & T5) Requirement: To demonstrate compliance with allowable emission limits in Table 106.A, emissions from T4 & T5 shall be routed to and controlled by an Ejector Vapor Recovery Unit (EVRU), as required in Table 105.A (Control Equipment List). (SFO and Settlement Agreement # AQCA 09-00(CO) dated May 18, 2010). (1) The permittee shall operate and maintain the EVRU according to manufacturer's or supplier's recommendations. (2) The permittee shall install a system to continuously monitor the tank pressure. The tank Pressure Relief Valves (PRVs) shall open only to prevent damage to the system and shall be set to open at no less than 14.4 ounces per square inch of gauge pressure. Other than venting from PRVs to avoid system damage, T4 & T5 tank emissions shall at all times be routed to and controlled by the EVRU as a closed loop system that captures and routes tank emissions back to the process. (NSR 0759-M6 Condition A203.C) Monitoring: At least weekly, the permittee shall inspect the EVRU control system and tank PRVs for defects that could result in air emissions. Defects include, but are not limited to, visible cracks, holes, or gaps; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices. In the event that a leak or defect is detected, the permittee shall repair the leak or defect as soon as practicable and in a manner that minimizes VOC emissions to the atmosphere. In addition, the permittee shall continuously monitor the following parameters: (1) Hours of non-operation of the EVRU; and (2) Tank pressure. Recordkeeping: (1) For the purposes of calculating VOC emission rates, at any time a 100% capture efficiency is not achieved the EVRU control system shall be considered non-operational with a 0% control efficiency. EVRU control system non-operation includes any time PRVs open, any time leaks or defects are found during weekly EVRU control system inspections, and any other time when 100% of tank emissions are not captured. (2) The permittee shall record all dates and times that the EVRU control system was non-operational and the reason(s) that the EVRU control system is non-operational (e.g. PRVs open). (3) The permittee shall continuously record the tank pressure.			☒ Yes ☐ No ☐ N/A

1. Provide <i>Method(s)</i> or other information or other facts used to determine the compliance status in the “Methods:” row beneath each permit condition. 2. If you answered <i>No</i> to question 3, list <i>all</i> deviations in the <i>Deviations</i> section. For all Deviations that <i>produced</i> excess emissions, provide <i>only a)</i> the AQBCR EER Tracking Number. For all Deviations that <i>did not produce</i> excess emissions, provide <i>a)</i> The Unit ID, <i>b)</i> The Cause of and a Description of the Deviation, <i>c)</i> the Corrective Action, and <i>d)</i> the Start & End Dates of the deviation. Please indicate in <i>b)</i> , your <i>Description</i> , whether each deviation has been previously reported to NMED.			3. Was this facility <i>continuously</i> in compliance with <i>all</i> requirements of this condition during the reporting period?						
(4) Each month, the permittee shall calculate and record the monthly rolling 12-month total number of hours that the EVRU is not meeting the 100% capture efficiency and is non-operational. (5) Each month, the permittee shall calculate and record the monthly rolling 12-month tpy VOC emission rates from the tank as required by Condition A203.A assuming 0% control when the EVRU control system is non-operational as defined in this condition. (6) The permittee shall record the results of the EVRU inspections noting any defects, the date a defect is found, and the dates and description of any repairs and/or maintenance performed. (7) The permittee shall meet the recordkeeping requirements in Section B109. Reporting: (1) The permittee shall report in accordance with Section B110. (2) Any emissions exceedance of the allowable emission limit in Table 106.A, shall be reported as excess emissions and Title V deviations according to 20.2.7 NMAC, 20.2.70.302.E(2) NMAC, and Condition B110.B and C.									
Methods: Records of monitoring and the SARs were used to determine the compliance status for this reporting period.									
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 15%;">Deviations: Unit ID</th> <th style="width: 55%;">Cause, Description of Deviation, and Corrective Action Taken or Tracking number</th> <th style="width: 15%;">Start Date</th> <th style="width: 15%;">End Date</th> </tr> <tr> <td style="height: 20px;"></td> <td></td> <td></td> <td></td> </tr> </table>	Deviations: Unit ID	Cause, Description of Deviation, and Corrective Action Taken or Tracking number		Start Date	End Date				
Deviations: Unit ID	Cause, Description of Deviation, and Corrective Action Taken or Tracking number	Start Date	End Date						
A203 Tanks – Without the Alternative Operating Scenario D. Tank Throughput (Units T-6 and T-12) [without flash emissions] Requirement: Compliance with the allowable emission limits in Table 106.A shall be demonstrated by the total produced water throughput to the unit(s) not exceeding 630,000 gallons per year (15,000 bbl/yr) of combined throughput. (NSR 0759-M6 Condition A203.D) Monitoring: The permittee shall monitor the monthly total throughput once per month. Recordkeeping: The permittee shall record the monthly total throughput of liquids. Each month, during the first 12 months of monitoring, the permittee shall record the cumulative total liquid throughput and after the first 12 months of monitoring, the permittee shall calculate and record the monthly rolling 12-month total liquid throughput. Produced water tank emissions were calculated using the most conservative emission factors from 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 the Texas Commission on Environmental Quality (TCEQ) August 2010 project “Emission Factor Determination for Produced Water Storage Tanks”, and the estimated annual facility-wide produced water throughput. Emission rates computed using the same parameters, but with a different Department approved algorithm that exceed these values will not be deemed non-compliance with this permit. Records shall also be maintained in accordance with Section B109. Reporting: The permittee shall report in accordance with Section B110.			☒ Yes ☐ No ☐ N/A						

1. Provide <i>Method(s)</i> or other information or other facts used to determine the compliance status in the "Methods:" row beneath each permit condition. 2. If you answered <i>No</i> to question 3, list <i>all</i> deviations in the <i>Deviations</i> section. For all Deviations that <i>produced</i> excess emissions, provide <i>only a)</i> the AQBCR EER Tracking Number. For all Deviations that <i>did not produce</i> excess emissions, provide <i>a)</i> The Unit ID, <i>b)</i> The Cause of and a Description of the Deviation, <i>c)</i> the Corrective Action, and <i>d)</i> the Start & End Dates of the deviation. Please indicate in <i>b)</i> , your <i>Description</i> , whether each deviation has been previously reported to NMED.			3. Was this facility <i>continuously</i> in compliance with <i>all</i> requirements of this condition during the reporting period?	
Methods: Records of monitoring and the SARs were used to determine the compliance status for this reporting period.				
Deviations: Unit ID	Cause, Description of Deviation, and Corrective Action Taken or Tracking number	Start Date		End Date
A203 Tanks – Without the Alternative Operating Scenario E. Truck Loading - Condensate Loadout (Unit L1) Requirement: Compliance with the allowable emission limits in Table 106.A shall be demonstrated by monitoring the total annual condensate loadout volume to ensure that it does not exceed 1,890,000 gallons per year (45,000 bbl/yr). (NSR 0759-M6 Condition A203.E) Monitoring: The permittee shall monitor the condensate truck loadout volume on a monthly basis. Recordkeeping: The permittee shall record the monthly condensate truck loadout volume. Each month during the first 12 months of monitoring the permittee shall record the cumulative condensate loadout volume and after the first 12 months of monitoring, the permittee shall calculate and record the monthly rolling 12-month total loadout volume. Records shall also be maintained in accordance with Section B109. Reporting: The permittee shall report in accordance with Section B110.			☒ Yes ☐ No ☐ N/A	
Methods: Records of monitoring and the SARs were used to determine the compliance status for this reporting period.				
Deviations: Unit ID	Cause, Description of Deviation, and Corrective Action Taken or Tracking number	Start Date		End Date
A204 Tanks and Vapor Recovery System Installation – Alternative Operating Scenario A. Tank Operations (Units T4 AOS & T5 AOS) [with flash emissions] Requirement: (1) Compliance with the allowable emission limits in Table 106.A shall be demonstrated by limiting the total throughput to tanks T4 and T5 to 2,520,000 gallons per year (60,000 bbl/yr), and by monthly monitoring of the actual total condensate throughput and separator pressure and by calculating emission rates as required. (2) The permittee shall calculate the monthly rolling 12-month total, tpy VOC emission rates using actual measured condensate throughput, actual measured average separator pressure, and the most recent condensate VOC analysis. (NSR 0759-M6 Condition A204.A) Monitoring: (1) The permittee shall monitor the monthly total condensate throughput, and at least once per month, the upstream separator pressure. (2) Annually the permittee shall complete a liquids analysis of the tank condensate to determine the VOC content. Recordkeeping:			☒ Yes ☐ No ☐ N/A	

1. Provide <i>Method(s)</i> or other information or other facts used to determine the compliance status in the "Methods:" row beneath each permit condition. 2. If you answered <i>No</i> to question 3, list <i>all</i> deviations in the <i>Deviations</i> section. For <i>all</i> Deviations that <i>produced</i> excess emissions, provide <i>only a)</i> the AQBCR EER Tracking Number. For <i>all</i> Deviations that <i>did not produce</i> excess emissions, provide <i>a)</i> The Unit ID, <i>b)</i> The Cause of and a Description of the Deviation, <i>c)</i> the Corrective Action, and <i>d)</i> the Start & End Dates of the deviation. Please indicate in <i>b)</i>, your <i>Description</i>, whether each deviation has been previously reported to NMED.			3. Was this facility <i>continuously</i> in compliance with <i>all</i> requirements of this condition during the reporting period?								
(1) The permittee shall record the monthly total condensate throughput of liquids and the monthly average separator pressure. Each month the permittee shall use these values to calculate and record a monthly rolling 12-month total condensate throughput and a monthly rolling 12-month average separator pressure. (2) The permittee shall calculate the monthly rolling 12-month total VOC tpy emission rates using ProMax®, Aspen HYSYS or other approved thermodynamic model, such as VMGSim, etc. and Tanks 4.09d or equivalent Department approved method for tank working and breathing emissions; the number of hours that the VRU AOS control system is non-operational as defined in Condition A204.B; the actual measured condensate throughput; the actual measured average separator pressure; and the most recent condensate VOC analysis. (3) The permittee shall keep records of the parameters, calculations, and VOC emission rates summarized in a table or spreadsheet and shall meet the recordkeeping requirements in Section B109. Reporting: (1) The permittee shall report in accordance with Section B110. (2) All excess emissions and Title V deviations of allowable emission limits shall be reported according to 20.2.7 NMAC and 20.2.70.302.E(2) NMAC.											
Methods: The alternative operating scenario was not used during this reporting period.											
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 15%;">Deviations: Unit ID</th> <th style="width: 55%;">Cause, Description of Deviation, and Corrective Action Taken or Tracking number</th> <th style="width: 15%;">Start Date</th> <th style="width: 15%;">End Date</th> </tr> <tr> <td style="height: 20px;"></td> <td></td> <td></td> <td></td> </tr> </table>	Deviations: Unit ID	Cause, Description of Deviation, and Corrective Action Taken or Tracking number		Start Date	End Date						
Deviations: Unit ID	Cause, Description of Deviation, and Corrective Action Taken or Tracking number	Start Date	End Date								
A204 Tanks and Vapor Recovery System Installation – Alternative Operating Scenario B. Tank VRU AOS Operations (Units T4 AOS/T5 AOS and control device) Requirement: To demonstrate compliance with allowable emission limits in Table 106.A, emissions from T4 AOS & T5 AOS shall be routed to and controlled by a Vapor Recovery System (VRU-AOS), as required in Table 105.A (Control Equipment List). (SFO and Settlement Agreement # AQCA 09-00(CO) dated May 18, 2010). (1) The permittee shall operate and maintain the VRU according to manufacturer's or supplier's recommendations. (2) The permittee shall install a system to continuously monitor the tank pressure. The tank Pressure Relief Valves (PRVs) shall open only to prevent damage to the system and shall be set to open at no less than 14.4 ounces per square inch of gauge pressure. Other than venting from PRVs to avoid system damage, T4 & T5 tank emissions shall at all times be routed to and controlled by the VRU as a closed loop system that captures and routes tank emissions back to the process. (NSR 0759-M6 Condition A204.B) Monitoring: At least weekly, the permittee shall inspect the VRU control system and tank PRVs for defects that could result in air emissions. Defects include, but are not limited to, visible cracks, holes, or gaps; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices. In the event that a leak or defect is detected, the permittee shall repair the leak or defect as soon as practicable and in a manner that minimizes VOC emissions to the atmosphere.			☒ Yes ☐ N/A ☐ No								

1. Provide <i>Method(s)</i> or other information or other facts used to determine the compliance status in the "Methods:" row beneath each permit condition. 2. If you answered <i>No</i> to question 3, list <i>all</i> deviations in the <i>Deviations</i> section. For <i>all</i> Deviations that <i>produced</i> excess emissions, provide <i>only a)</i> the AQBCR EER Tracking Number. For <i>all</i> Deviations that <i>did not produce</i> excess emissions, provide <i>a)</i> The Unit ID, <i>b)</i> The Cause of and a Description of the Deviation, <i>c)</i> the Corrective Action, and <i>d)</i> the Start & End Dates of the deviation. Please indicate in <i>b)</i>, your <i>Description</i>, whether each deviation has been previously reported to NMED.	3. Was this facility <i>continuously</i> in compliance with <i>all</i> requirements of this condition during the reporting period?								
In addition, the permittee shall continuously monitor the following parameters: (1) Hours of non-operation of the VRU; and (2) Tank pressure. Recordkeeping: (1) For the purposes of calculating VOC emission rates, at any time a 100% capture efficiency is not achieved the VRU control system shall be considered non-operational with a 0% control efficiency. VRU control system non-operation includes any time PRVs open, any time leaks or defects are found during weekly VRU control system inspections, and any other time when 100% of tank emissions are not captured. (2) The permittee shall record all dates and times that the VRU control system was non-operational and the reason(s) that the VRU control system is non-operational (e.g. PRVs open). (3) The permittee shall continuously record the tank pressure. (4) Each month, the permittee shall calculate and record the monthly rolling 12-month total number of hours that the VRU is not meeting the 100% capture efficiency and is non-operational. (5) Each month, the permittee shall calculate and record the monthly rolling 12-month tpy VOC emission rates from the tank as required by Condition A204.A assuming 0% control when the VRU control system is non-operational as defined in this condition. (6) The permittee shall record the results of the VRU inspections noting any defects, the date a defect is found, and the dates and description of any repairs and/or maintenance performed. (7) The permittee shall meet the recordkeeping requirements in Section B109. Reporting: (1) The permittee shall report in accordance with Section B110. (2) Any emissions exceedance of the allowable emission limit in Table 106.A, shall be reported as excess emissions and Title V deviations according to 20.2.7 NMAC, 20.2.70.302.E(2) NMAC, and Condition B110.B and C.									
Methods: The alternative operating scenario was not used during this reporting period.									
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Deviations: Unit ID	Cause, Description of Deviation, and Corrective Action Taken or Tracking number	Start Date	End Date						
A204 Tanks and Vapor Recovery System Installation – Alternative Operating Scenario C. Tank Throughput (Units T-6 AOS and T-12 AOS) [without flash emissions] Requirement: Compliance with the allowable emission limits in Table 106.A shall be demonstrated by the total produced water throughput to the		☒ Yes ☐ No ☐ N/A							

1. Provide <i>Method(s)</i> or other information or other facts used to determine the compliance status in the "Methods:" row beneath each permit condition. 2. If you answered <i>No</i> to question 3, list <i>all</i> deviations in the <i>Deviations</i> section. For all Deviations that <i>produced</i> excess emissions, provide <i>only a)</i> the AQBCR EER Tracking Number. For all Deviations that <i>did not produce</i> excess emissions, provide <i>a)</i> The Unit ID, <i>b)</i> The Cause of and a Description of the Deviation, <i>c)</i> the Corrective Action, and <i>d)</i> the Start & End Dates of the deviation. Please indicate in <i>b)</i> , your <i>Description</i> , whether each deviation has been previously reported to NMED.			3. Was this facility <i>continuously</i> in compliance with <i>all</i> requirements of this condition during the reporting period?	
unit(s) not exceeding 840,000 gallons per year (20,000 bbl/yr) of combined throughput. (NSR 0759-M6 Condition A204.C)			}	
Monitoring: The permittee shall monitor the monthly total throughput once per month. Recordkeeping: The permittee shall record the monthly total throughput of liquids. Each month, during the first 12 months of monitoring, the permittee shall record the cumulative total liquid throughput and after the first 12 months of monitoring, the permittee shall calculate and record the monthly rolling 12-month total liquid throughput. Produced water tank emissions were calculated using the most conservative emission factors from 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 the Texas Commission on Environmental Quality (TCEQ) August 2010 project "Emission Factor Determination for Produced Water Storage Tanks", and the estimated annual facility-wide produced water throughput. Emission rates computed using the same parameters, but with a different Department approved algorithm that exceed these values will not be deemed non-compliance with this permit. Records shall also be maintained in accordance with Section B109. Reporting: The permittee shall report in accordance with Section B110.				
Methods: The alternative operating scenario was not used during this reporting period.				
Deviations: Unit ID	Cause, Description of Deviation, and Corrective Action Taken or Tracking number	Start Date		End Date
A204 Tanks and Vapor Recovery System Installation – Alternative Operating Scenario D. Truck Loading - Condensate Loadout (Unit L1 AOS) Requirement: Compliance with the allowable emission limits in Table 106.A shall be demonstrated by monitoring the total annual condensate loadout volume to ensure that it does not exceed 2,520,000 gallons per year (60,000 bbl/yr). (NSR 0759-M6 Condition A204.D) Monitoring: The permittee shall monitor the condensate truck loadout volume on a monthly basis. Recordkeeping: The permittee shall record the monthly condensate truck loadout volume. Each month during the first 12 months of monitoring the permittee shall record the cumulative condensate loadout volume and after the first 12 months of monitoring, the permittee shall calculate and record the monthly rolling 12-month total loadout volume. Records shall also be maintained in accordance with Section B109. Reporting: The permittee shall report in accordance with Section B110.			}	
Methods: The alternative operating scenario was not used during this reporting period.				
Deviations: Unit ID	Cause, Description of Deviation, and Corrective Action Taken or Tracking number	Start Date		End Date
A204 Tanks and Vapor Recovery System Installation – Alternative Operating Scenario				

☒ **Yes**
☐ **No**
☐ **N/A**

1. Provide <i>Method(s)</i> or other information or other facts used to determine the compliance status in the "Methods:" row beneath each permit condition. 2. If you answered <i>No</i> to question 3, list <i>all</i> deviations in the <i>Deviations</i> section. For <i>all</i> Deviations that <i>produced</i> excess emissions, provide <i>only a)</i> the AQBCR EER Tracking Number. For <i>all</i> Deviations that <i>did not produce</i> excess emissions, provide <i>a)</i> The Unit ID, <i>b)</i> The Cause of and a Description of the Deviation, <i>c)</i> the Corrective Action, and <i>d)</i> the Start & End Dates of the deviation. Please indicate in <i>b)</i> , your <i>Description</i> , whether each deviation has been previously reported to NMED.		3. Was this facility <i>continuously</i> in compliance with <i>all</i> requirements of this condition during the reporting period?	
E. 40 CFR 60, Subpart OOOOa (Potentially Unit VRU-AOS) Requirement: The permittee shall complete a regulatory applicability determination for the VRU system selected for any applicable requirements under NSPS. Reciprocating and centrifugal compressors will be subject to 40 CFR 60, Subparts A and OOOOa if the source is constructed, modified, or reconstructed after the applicability date in 40 CFR 60.5365a and the permittee shall comply with the notification requirements in Subpart A and the specific requirements of Subpart OOOOa, including standards in 60.5385a or 60.5380a. (NSR 0759-M6 Condition A204.E) Monitoring: The permittee shall comply with all applicable monitoring requirements in 40 CFR 60, Subpart A and Subpart OOOOa. Recordkeeping: The permittee shall comply with all applicable recordkeeping requirements in 40 CFR 60, Subpart A and Subpart OOOOa. Reporting: The permittee shall comply with all applicable reporting requirements in 40 CFR 60, Subpart A and Subpart OOOOa and in Section B110.		☒ Yes ☐ No ☐ N/A	
Methods: The alternative operating scenario was not used during this reporting period.			
Deviations: Unit ID	Cause, Description of Deviation, and Corrective Action Taken or Tracking number	Start Date	End Date
A206 Turbines A. Periodic Emissions Tests (Units 1, 2, 3, and 4) Requirement: Compliance with the allowable emission limits in Table 106.A shall be demonstrated by conducting periodic emission tests during the monitoring period. (NSR 0759-M6 Condition A205.A) Monitoring: The permittee shall test using a portable analyzer or EPA Reference Methods subject to the requirements and limitations of Section B108, General Monitoring Requirements. Emissions testing is required for NOx and CO and shall be carried out as described below. Test results that demonstrate compliance with the CO emission limits shall also be considered to demonstrate compliance with the VOC emission limits. (1) The testing shall be conducted as follows: a. Testing frequency shall be once per year. b. The monitoring period is a calendar year (January 1 to December 31). (2) The tests shall continue based on the existing testing schedule. (3) All subsequent testing shall occur in each succeeding monitoring period. No two monitoring events shall occur closer together in time than 25% of a monitoring period. (4) The permittee shall follow the General Testing Procedures of Section B111. (5) Performance testing required by 40 CFR 60, Subpart GG may be used to satisfy these periodic testing requirements if they meet the requirements of this condition and are completed during the specified monitoring period.		☒ Yes ☐ No ☐ N/A	

1. Provide <i>Method(s)</i> or other information or other facts used to determine the compliance status in the "Methods:" row beneath each permit condition. 2. If you answered <i>No</i> to question 3, list <i>all</i> deviations in the <i>Deviations</i> section. For <i>all</i> Deviations that <i>produced</i> excess emissions, provide <i>only a)</i> the AQBCR EER Tracking Number. For <i>all</i> Deviations that <i>did not produce</i> excess emissions, provide <i>a)</i> The Unit ID, <i>b)</i> The Cause of and a Description of the Deviation, <i>c)</i> the Corrective Action, and <i>d)</i> the Start & End Dates of the deviation. Please indicate in <i>b)</i> , your <i>Description</i> , whether each deviation has been previously reported to NMED.			3. Was this facility <i>continuously</i> in compliance with <i>all</i> requirements of this condition during the reporting period?
Recordkeeping: The permittee shall maintain records in accordance with Section B109, B110, and B111. The permittee shall also record the results of the periodic emissions tests, including the turbine's fuel flow rate and horsepower at the time of the test, and the type of fuel fired (natural gas, field gas, etc.). The permittee shall also keep records of all raw data used to determine exhaust gas flow and of all calculations used to determine flow rates and mass emissions rates. Reporting: The permittee shall report in accordance with Section B109, B110, and B111.			
Methods: Records of testing and the SARs were used to determine the compliance status for this reporting period.			
Deviations: Unit ID	Cause, Description of Deviation, and Corrective Action Taken or Tracking number	Start Date	End Date
A206 Turbines B. 40 CFR 60, Subpart GG (Unit 4) Requirement: The unit is subject to 40 CFR 60, Subpart GG and the permittee shall comply with the applicable requirements of 40 CFR 60, Subpart A and Subpart GG. (NSR 0759-M6 Condition A205.B) Monitoring: The permittee shall comply with the monitoring and testing requirements of 40 CFR 60.334 and 60.335. Recordkeeping: The permittee shall comply with the recordkeeping requirements of 40 CFR 60.334 and 40 CFR 60.7. Reporting: The permittee shall comply with the reporting requirements of 40 CFR 60.7.			☒ Yes ☐ No ☐ N/A
Methods: Records of monitoring and the SARs were used to determine the compliance status for this reporting period.			
Deviations: Unit ID	Cause, Description of Deviation, and Corrective Action Taken or Tracking number	Start Date	End Date
A206 Turbines C. Maintenance and Repair Monitoring (Units 1, 2, 3, and 4) Requirement: Compliance with the allowable emission limits in Table 106.A shall be demonstrated by properly maintaining and repairing the units. Monitoring: Maintenance and repair shall meet the minimum manufacturer's or permittee's recommended maintenance schedule. Activities that involve maintenance, adjustment, replacement, or repair of functional components with the potential to affect the operation of an emission unit shall be documented as they occur for the following events: (1) Routine maintenance that takes a unit out of service for more than two hours during any twenty-four hour period. (2) Unscheduled repairs that require a unit to be taken out of service for more than two hours in any twenty-four hour period. Recordkeeping: The permittee shall maintain records, including dates, and maintenance activities conducted in accordance with Section B109. The permittee shall also maintain a copy of the manufacturer's or permittee's recommended maintenance schedule.			☒ Yes ☐ No ☐ N/A

1. Provide <i>Method(s)</i> or other information or other facts used to determine the compliance status in the “Methods:” row beneath each permit condition. 2. If you answered <i>No</i> to question 3, list <i>all</i> deviations in the <i>Deviations</i> section. For <i>all</i> Deviations that <i>produced</i> excess emissions, provide <i>only a)</i> the AQBCR EER Tracking Number. For <i>all</i> Deviations that <i>did not produce</i> excess emissions, provide <i>a)</i> The Unit ID, <i>b)</i> The Cause of and a Description of the Deviation, <i>c)</i> the Corrective Action, and <i>d)</i> the Start & End Dates of the deviation. Please indicate in <i>b)</i> , your <i>Description</i> , whether each deviation has been previously reported to NMED.			3. Was this facility <i>continuously</i> in compliance with <i>all</i> requirements of this condition during the reporting period?	
Reporting: The permittee shall report in accordance with Section B110.				
Methods: Records of monitoring and the SARs were used to determine the compliance status for this reporting period.				
Deviations: Unit ID	Cause, Description of Deviation, and Corrective Action Taken or Tracking number	Start Date		End Date

PART B General Conditions

1. Have these General Conditions been met during this reporting period? <u>Check only one box per subject heading.</u> <u>Explain answers in remarks row under subject heading.</u>	2. Was this facility <i>continuously</i> in compliance with this requirement during the reporting period?
B101 <u>Legal</u>	☒ Yes ☐ No ☐ N/A – Explain Below
REMARKS: The facility was in compliance with applicable requirements during this reporting period.	
B102 <u>Authority</u>	☒ Yes ☐ No ☐ N/A – Explain Below
REMARKS: The facility was in compliance with applicable requirements during this reporting period.	
B103 <u>Annual Fee</u>	☒ Yes ☐ No ☐ N/A – Explain Below
REMARKS: The annual operating permit emission fees were most recently submitted on June 20, 2024.	
B104 <u>Appeal Procedures</u>	☐ Yes ☐ No ☒ N/A – Explain Below
REMARKS: This condition places no requirement on the facility.	
B105 <u>Submittal of Reports and Certifications</u>	☒ Yes ☐ No ☐ N/A – Explain Below
REMARKS: Stack test reports, SARs, and the ACC were submitted to the appropriate regulatory personnel.	
B106 <u>NSPS and/or MACT Startup, Shutdown, and Malfunction Operations</u>	☒ Yes ☐ No ☐ N/A – Explain Below
REMARKS: NSPS requirements for affected sources (turbines) do not require a continuous monitoring device. No excess emissions occurred from affected NSPS sources.	
B107 <u>Startup, Shutdown, and Maintenance Operations</u>	☒ Yes ☐ No ☐ N/A – Explain Below
REMARKS: The facility operated in accordance with its SSM work practice plan.	
B108 <u>General Monitoring Requirements</u>	☒ Yes ☐ No ☐ N/A – Explain Below
REMARKS: During this reporting period, monitoring was conducted in accordance with these requirements.	
B109 <u>General Recordkeeping Requirements</u>	☒ Yes ☐ No ☐ N/A – Explain Below
REMARKS: During this reporting period, records were maintained in accordance with these requirements.	
B110 <u>General Reporting Requirements</u>	☒ Yes ☐ No ☐ N/A – Explain Below
REMARKS: During this reporting period, reports are submitted in accordance with these requirements.	
B111 <u>General Testing Requirements</u>	☒ Yes ☐ No ☐ N/A – Explain Below
REMARKS: During this reporting period, testing was completed in accordance with these requirements.	
B112 <u>Compliance</u>	☒ Yes ☐ No ☐ N/A – Explain Below
REMARKS: During this reporting period, records and permits were maintained as required. Also, representatives have not been denied access to the facility or to applicable	

PART B General Conditions

files.	
B113 <u>Permit Reopening and Revocation</u>	☒ Yes ☐ No ☐ N/A – Explain Below
REMARKS: During this reporting period, the facility received no communications to indicate the permit has been reopened, revoked or revised.	
B114 <u>Emergencies</u>	☒ Yes ☐ No ☐ N/A – Explain Below
REMARKS: No emergencies occurred during this reporting period.	
B115 <u>Stratospheric Ozone</u>	☐ Yes ☐ No ☒ N/A – Explain Below
REMARKS: The facility is not subject to 40 CFR 82 Subpart F.	
B116 <u>Acid Rain Sources</u>	☐ Yes ☐ No ☒ N/A – Explain Below
REMARKS: The facility is not subject to 40 CFR 72.	
B117 <u>Risk Management Plan</u>	☐ Yes ☐ No ☒ N/A – Explain Below
REMARKS: The facility is not subject to 40 CFR 68.	

Section 22: Certification

Company Name: Harvest Four Corners, LLC

I, Michelle Roger, 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 25 day of Mar, 2026, upon my oath or affirmation, before a notary of the State of

New Mexico.

Michelle Roger
*Signature

3-25-26
Date

Michelle Roger
Printed Name

Director - EHS
Title

Scribed and sworn before me on this 25th day of March, 2026

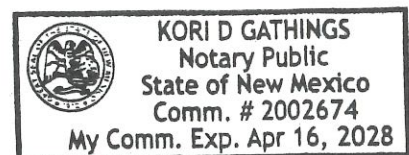
My authorization as a notary of the State of New Mexico expires on the

25th day of March, 2026.

Kori D. Gathings
Notary's Signature

3-25-2026
Date

Kori D. Gathings
Notary's Printed Name



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



Air Permit Application Compliance History Disclosure Form

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

Permittee/Applicant Company Name		Expected Application Submittal Date
Harvest Four Corners, LLC		April 17, 2026
Permittee/Company Contact	Phone	Email
Monica Smith	505-632-4625	msmith@harvestmidstream.com
Within the 10 years preceding the expected date of submittal of the application, has the permittee or applicant:		
1	Knowingly misrepresented a material fact in an application for a permit?	☐ Yes ☒ No
2	Refused to disclose information required by the provisions of the New Mexico Air Quality Control Act?	☐ Yes ☒ No
3	Been convicted of a felony related to environmental crime in any court of any state or the United States?	☐ Yes ☒ No
4	Been convicted of a crime defined by state or federal statute as involving or being in restraint of trade, price fixing, bribery, or fraud in any court of any state or the United States?	☐ Yes ☒ No
5a	Constructed or operated any facility for which a permit was sought, including the current facility, without the required air quality permit(s) under 20.2.70 NMAC, 20.2.72 NMAC, 20.2.74 NMAC, 20.2.79 NMAC, or 20.2.84 NMAC?	☐ Yes ☒ No
5b	If "No" to question 5a, go to question 6. If "Yes" to question 5a, state whether each facility that was constructed or operated without the required air quality permit met at least one of the following exceptions: a. The unpermitted facility was discovered after acquisition during a timely environmental audit that was authorized by the Department; or b. The operator of the facility estimated that the facility's emissions would not require an air permit, and the operator applied for an air permit within 30 calendar days of discovering that an air permit was required for the facility.	☐ Yes ☐ No
6	Had any permit revoked or permanently suspended for cause under the environmental laws of any state or the United States?	☐ Yes ☒ No
7	For each "yes" answer, please provide an explanation and documentation.	