

Cirrus Consulting, LLC

December 16, 2024

Ms. Liz Bisbey-Kuehn
New Mexico Environment Department
Air Quality Bureau
525 Camino de los Marquez, Suite 1
Santa Fe, New Mexico 87505

Re: Application to Renew Title V Permit Number P034-R4
Harvest Four Corners, LLC - Decker Junction Central Delivery Point

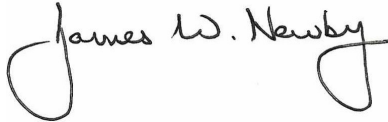
Dear Ms. Bisbey-Kuehn,

On behalf of Harvest Four Corners, LLC (HFC), Cirrus Consulting, LLC submits the enclosed application to modify and renew the Title V permit for the Decker Junction Central Delivery Point (CDP).

Thank you for your assistance. If you have questions or need any additional information, please contact Monica Smith of HFC at (505) 632-4625.

Sincerely,

CIRRUS CONSULTING, LLC



James W. Newby

Enclosures

Decker Junction CDP Title V Permit Application

cc: Monica Smith, HFC

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**NEW MEXICO 20.2.70 NMAC APPLICATION
TO MODIFY & RENEW PERMIT NUMBER P034-R4**

Decker Junction Central Delivery Point

Submitted By:



**HARVEST FOUR CORNERS, LLC
1755 Arroyo Drive
Bloomfield, New Mexico 87413**

Prepared By:

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

December 2024

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Introduction

The Harvest Four Corners, LLC (HFC) Decker Junction Central Delivery Point (CDP) currently operates under a construction permit issued by the New Mexico Air Quality Bureau (NMAQB), 1228-M4-R2, dated September 5, 2023 and a Title V operating permit, P034-R4, dated June 11, 2021.

This application is being submitted both to modify and renew the Title V operating permit. The following modifications are included:

- Increase permitted startup, shutdown and maintenance (SSM) emissions. Change the unit number from SSM to SSM/M (startup, shutdown and maintenance / malfunction);
- Remove malfunction emissions (Unit M1) from the permit;
- Increase the permitted throughput and emission limit for the existing 300 barrel (bbl) produced water storage tank (Unit T46);
- Remove from the permit the existing 70 bbl produced water storage tank (Unit T50);
- Add to the permit one 300 bbl produced water storage tank (Unit T52);
- Add to the permit 5 reciprocating compressors (Units RC1-RC3, RC6 & RC7). This is being done to comply with 20.2.50 New Mexico Administrative Code (NMAC);
- Add to the permit 14 pneumatic controllers (Units PC1-PC14). This is being done to comply with 20.2.50 NMAC. Note that the pneumatic controllers are exempt sources; and
- Add to the permit 4 pneumatic pumps (Units PP1-PP4). Again, this is being done to comply with 20.2.50 NMAC.

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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/aq		For Department use only: AIRS No.:
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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. [See Section 1-I for submittal instructions for other permits.](#)

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

Acknowledgements:

☒ I acknowledge that a pre-application meeting is available to me upon request. ☒ Title V Operating, Title IV Acid Rain, and NPR applications have no fees.
☐ \$500 NSR application Filing Fee enclosed **OR** ☐ The full permit fee associated with 10 fee points (required w/ streamline applications).
☐ Check No. _____ in the amount of _____
☒ I acknowledge the required submittal format for the hard copy application is printed double sided 'head-to-toe', 2-hole punched (except the Sect. 2 landscape tables is printed 'head-to-head'), numbered tab separators. Incl. a copy of the check on a separate page.
☒ 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: **20.2.70.300.B(2) NMAC & 20.2.70.404.C(1) NMAC** (e.g. application for a new minor source would be 20.2.72.200.A NMAC, one example for a Technical Permit Revision is 20.2.72.219.B.1.b NMAC, a Title V acid rain application would be: 20.2.70.200.C NMAC)

Section 1 – Facility Information

Section 1-A: Company Information

1 Facility Name: Decker Junction Central Delivery Point (CDP)		AI # if known (see 1 st 3 to 5 #s of permit IDEA ID No.): 1267	Updating Permit/NOI #: P034-R4
		Plant primary SIC Code (4 digits): 1389 Plant NAIC code (6 digits): 213112	
a	Facility Street Address (If no facility street address, provide directions from a prominent landmark): See directions in Section 1-D4.		
2	Plant Operator Company Name: Harvest Four Corners, LLC		Phone/Fax: 505-632-4600 / 505-632-4782
a	Plant Operator Address: 1755 Arroyo Drive, Bloomfield, NM 87413		
b	Plant Operator's New Mexico Corporate ID or Tax ID: 76-0451075		

3	Plant Owner(s) name(s): Same as #2 above	Phone/Fax: Same as #2 above
a	Plant Owner(s) Mailing Address(s): Same as #2a above	
4	Bill To (Company): Same as #2 above	Phone/Fax: Same as #2 above
a	Mailing Address: Same as #2a above	E-mail: N/A
5	☐ Preparer: ☒ Consultant: James Newby, Cirrus Consulting, LLC	Phone/Fax: (801) 294-3024
a	Mailing Address: 2611 Westbrook Loop, Pea Ridge, Arkansas 72751	E-mail: jnewby@cirrusllc.com
6	Plant Operator Contact: Monica Smith	Phone/Fax: (505) 632-4625 / (505) 632-4782
a	Address: Same as #2a above	E-mail: msmith@harvestmidstream.com
7	Air Permit Contact: Same as #6 above	Title: Environmental Specialist
a	E-mail: Same as #6a above	Phone/Fax: Same as #6 above
b	Mailing Address: Same as #2a above	
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): N/A
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 It is assumed this question refers to question 4 rather than question 3.	
6	Does this facility have a Title V operating permit (20.2.70 NMAC)? ☒ Yes ☐ No	If yes, the permit No. is: P034-R4
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: 1228-M3
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: 2.04 MMCF^(a)	Daily: 49.05 MMCF^(a)	Annually: 17,904 MMCF^(a)
b	Proposed	Hourly: 2.04 MMCF^(a)	Daily: 49.05 MMCF^(a)	Annually: 17,904 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: 2.04 MMCF^(a)	Daily: 49.05 MMCF^(a)	Annually: 17,904 MMCF^(a)
b	Proposed	Hourly: 2.04 MMCF^(a)	Daily: 49.05 MMCF^(a)	Annually: 17,904 MMCF^(a)

^(a) Station capacity is a direct function of available horsepower. The throughput is therefore dependent on atmospheric temperature, gas temperature, atmospheric pressure, gas pressure, relative humidity and gas quality, as well as other factors.

The “capacity” expressed in the application is a nominal quantity, neither an absolute maximum nor an average. The actual throughput will vary from the nominal amount.

Section 1-D: Facility Location Information

1	Section: 19	Range: 10W	Township: 32N	County: San Juan	Elevation (ft): 6,040
2	UTM Zone: ☐ 12 or ☒ 13			Datum: ☐ NAD 27 ☐ NAD 83 ☒ WGS 84	
a	UTM E (in meters, to nearest 10 meters): 240,229			UTM N (in meters, to nearest 10 meters): 4,095,283	
b	AND Latitude (deg., min., sec.): 36° 58' 04.20"			Longitude (deg., min., sec.): -107° 55' 04.69"	
3	Name and zip code of nearest New Mexico town: Aztec, New Mexico 87410				
4	Detailed Driving Instructions from nearest NM town (attach a road map if necessary): From Aztec drive north on Highway 550 to mile marker 24.7, turn left on CR 2300 and drive 1.3 miles to “Y”, keep left and drive 1.1 mile to site.				
5	The facility is approximately 10 miles (distance) north northeast (direction) of Aztec, New Mexico (nearest town).				
6	Status of land at facility (check one): ☒ Private ☐ Indian/Pueblo ☐ Federal BLM ☐ Federal Forest Service ☐ Other (specify)				
7	List all municipalities, Indian tribes, and counties within a ten (10) mile radius (20.2.72.203.B.2 NMAC) of the property on which the facility is proposed to be constructed or operated: Aztec, Southern Ute 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/aqb/modeling/class1areas.html)? ☐ Yes ☐ No (20.2.72.206.A.7 NMAC) If yes, list all with corresponding distances in kilometers: N/A				
9	Name nearest Class I area: 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): 46.38				
11	Distance (meters) from the perimeter of the Area of Operations (AO is defined as the plant site inclusive of all disturbed lands, including mining overburden removal areas) to nearest residence, school or occupied structure: ≈2,800				
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? ☐ Yes ☒ No If yes, what is the name and permit number (if known) of the other facility? N/A				

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

1	Facility maximum operating ($\frac{\text{hours}}{\text{day}}$): 24	($\frac{\text{days}}{\text{week}}$): 7	($\frac{\text{weeks}}{\text{year}}$): 52	($\frac{\text{hours}}{\text{year}}$): 8,760
2	Facility’s maximum daily operating schedule (if less than 24 $\frac{\text{hours}}{\text{day}}$)? Start: N/A		☐ AM ☐ PM	End: N/A ☐ AM ☐ PM
3	Month and year of anticipated start of construction: N/A			
4	Month and year of anticipated construction completion: N/A			
5	Month and year of anticipated startup of new or modified facility: N/A			
6	Will this facility operate at this site for more than one year? ☒ Yes ☐ No			

Section 1-F: Other Facility Information

1	Are there any current Notice of Violations (NOV), compliance orders, or any other compliance or enforcement issues related to this facility? ☐ Yes ☒ No If yes, specify: N/A	
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: N/A 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 McCracken		Phone: (713) 515-3924
a	R.O. Title: EHS Manager	R.O. e-mail: michelle.mccracken@harvestmidstream.com	
b	R. O. Address: 1111 Travis Street, Houston, Texas 77002		
2	Alternate Responsible Official (20.2.70.300.D.2 NMAC): Nathan Work		Phone: (505) 215-6107
a	A. R.O. Title: Operations Manager	A. R.O. e-mail: nwork@harvestmidstream.com	
b	A. R. O. Address: 1755 Arroyo Drive, Bloomfield, New Mexico 87413		
3	Company's Corporate or Partnership Relationship to any other Air Quality Permittee (List the names of any companies that have operating (20.2.70 NMAC) permits and with whom the applicant for this permit has a corporate or partnership relationship): N/A		
4	Name of Parent Company ("Parent Company" means the primary name of the organization that owns the company to be permitted wholly or in part.): Hilcorp Energy Company		
a	Address of Parent Company: 1111 Travis Street, Houston, Texas 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 (≈ 3.6 km), Southern Ute Reservation (≈ 3.6 km), Navajo Reservation (≈ 32.2 km), Jicarilla Apache Reservation (≈ 49.9 km), and Ute Mountain Indian Reservation (≈ 30.6 km)		

Table 2-A: Regulated Emission Sources

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

Unit Number ¹	Source Description	Make	Model #	Serial #	Manufact-urer's Rated Capacity ³ (Specify Units)	Requested Permitted Capacity ³ (Specify Units)	Date of Manufacture ²	Controlled by Unit #	Source Classi-fication Code (SCC)	For Each Piece of Equipment, Check One	RICE Ignition Type (CI, SI, 4SLB, 4SRB, 2SLB) ⁴	Replacing Unit No.	
							Date of Construction/ Reconstruction ²	Emissions vented to Stack #					
1	Reciprocating Engine	Waukesha	L7042G L	C-10664/1 (X00424)	1,478 hp	1,388 hp	9/9/1993	NA	20200202	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	4SLB	N/A
							9/9/1993	1					
2	Reciprocating Engine	Waukesha	L7042G L	978303A (X00105)	1,478 hp	1,388 hp	1970	NA	20200202	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	4SLB	N/A
							1970	2					
3	Reciprocating Engine	Waukesha	L7042G L	TBD	1,478 hp	1,388 hp	TBD	NA	20200202	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	4SLB	N/A
							TBD	3					
6	Reciprocating Engine	Waukesha	L7042G L	TBD	1,478 hp	1,388 hp	TBD	NA	20200202	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	4SLB	N/A
							TBD	6					
7	Reciprocating Engine	Waukesha	L7042G L	TBD	1,478 hp	1,388 hp	TBD	NA	20200202	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	4SLB	N/A
							TBD	7					
RC1-RC3, RC6 & RC7	Reciprocating Compressors	N/A	N/A	N/A	N/A	N/A	N/A	NA	31000299	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	4SLB	N/A
							N/A	N/A					
18a	Dehydrator	Enertek	J2P12M7 49	42000	12 MMSCFD	12 MMSCFD	11/1/1992	NA	31000227	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	N/A	N/A
							9/9/2011	18a					
18b	Dehydrator Reboiler	Enertek	J2P12M7 49	N/A	1.1 MMBtu/hr	1.1 MMBtu/hr	11/1/1992	NA	31000228	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	N/A	N/A
							9/9/2011	18b					
19a ⁶	Dehydrator	Enertek	J2P12M7 49	TBD	12 MMSCFD	12 MMSCFD	TBD	NA	31000227	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	N/A	N/A
							TBD	19a					
19b ⁶	Dehydrator Reboiler	Enertek	J2P12M7 49	TBD	1.1 MMBtu/hr	1.1 MMBtu/hr	TBD	NA	31000228	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	N/A	N/A
							TBD	19b					
19c ⁶	Dehydrator	Enertek	J2P20M1 109	TBD	20 MMSCFD	20 MMSCFD	TBD	NA	31000227	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	N/A	N/A
							TBD	19c					
19d ⁶	Dehydrator Reboiler	Enertek	J2P20M1 109	TBD	1.5 MMBtu/hr	1.5 MMBtu/hr	TBD	NA	31000228	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	N/A	N/A
							TBD	19d					
20a ⁷	Dehydrator	Enertek	J2P12M7 49	TBD	12 MMSCFD	12 MMSCFD	TBD	NA	31000227	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	N/A	N/A
							TBD	20a					
20b ⁷	Dehydrator Reboiler	Enertek	J2P12M7 49	TBD	1.1 MMBtu/hr	1.1 MMBtu/hr	TBD	NA	31000228	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	N/A	N/A
							TBD	20b					

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 #				
20c ⁷	Dehydrator	Enertek	J2P20M1109	TBD	20 MMSCFD	20 MMSCFD	TBD	NA	31000227	☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
20d ⁷	Dehydrator Reboiler	Enertek	J2P20M1109	TBD	1.5 MMBtu/hr	1.5 MMBtu/hr	TBD	NA	31000228	☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
SSM	SSM Blowdowns	N/A	N/A	N/A	N/A	N/A	N/A	N/A	31000299	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☒ To Be Modified ☐ To be Replaced	N/A	N/A
M1	Malfunction Emissions	N/A	N/A	N/A	N/A	N/A	N/A	N/A	31000299	☐ Existing (unchanged) ☒ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
F1	Equipment Leaks	N/A	N/A	N/A	N/A	N/A	N/A	N/A	31000299	☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
PP1-PP4	Pneumatic Pumps	N/A	N/A	N/A	N/A	N/A	N/A	N/A	31000299	☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
T46	Produced Water Storage Tank	N/A	N/A	N/A	300 bbl	300 bbl	Before 2009	N/A	31000299	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☒ To Be Modified ☐ To be Replaced	N/A	N/A
T50	Produced Water Storage Tank	N/A	N/A	N/A	72 bbl	72 bbl	Before 2009	N/A	31000299	☐ Existing (unchanged) ☒ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
T52	Produced Water Storage Tank	N/A	N/A	N/A	72 bbl	72 bbl	TBD	N/A	31000299	☐ Existing (unchanged) ☐ To be Removed ☒ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
PC1-PC14	Pneumatic Controllers	N/A	N/A	N/A	N/A	N/A	N/A	N/A	31000299	☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	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

⁶ HFC is permitted to install Units 19a & 19b (a 12 MMSCFD dehydrator) **OR** Units 19c & 19d (a 20 MMSCFD dehydrator).

⁷ HFC is permitted to install Units 20a & 20b (a 12 MMSCFD dehydrator) **OR** Units 20c & 20d (a 20 MMSCFD dehydrator).

Table 2-B: Insignificant Activities¹ (20.2.70 NMAC) OR Exempted Equipment (20.2.72 NMAC)

All 20.2.70 NMAC (Title V) applications must list all Insignificant Activities in this table. All 20.2.72 NMAC applications must list Exempted Equipment in this table. If equipment listed on this table is exempt under 20.2.72.202.B.5, include emissions calculations and emissions totals for 202.B.5 "similar functions" units, operations, and activities in Section 6, Calculations. Equipment and activities exempted under 20.2.72.202 NMAC may not necessarily be Insignificant under 20.2.70 NMAC (and vice versa). Unit & stack numbering must be consistent throughout the application package. Per Exemptions Policy 02-012.00 (see http://www.env.nm.gov/aqb/permit/aqb_pol.html), 20.2.72.202.B NMAC Exemptions do not apply, but 20.2.72.202.A NMAC exemptions do apply to NOI facilities under 20.2.73 NMAC. List 20.2.72.301.D.4 NMAC Auxiliary Equipment for Streamline applications in Table 2-A. The List of Insignificant Activities (for TV) can be found online at <https://www.env.nm.gov/wp-content/uploads/sites/2/2017/10/InsignificantListTitleV.pdf>. TV sources may elect to enter both TV Insignificant Activities and Part 72 Exemptions on this form.

Unit Number	Source Description	Manufacturer	Model No.	Max Capacity	List Specific 20.2.72.202 NMAC Exemption (e.g. 20.2.72.202.B.5)	Date of Manufacture /Reconstruction ²	For Each Piece of Equipment, Check One
			Serial No.	Capacity Units	Insignificant Activity citation (e.g. IA List Item #1.a)	Date of Installation /Construction ²	
T1 - T5	Lubrication Oil Storage Tank			500	20.2.72.202.B(2) NMAC		☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
				gal	#1a, #1b & #5		
T17 - T21	Used Oil Storage Tank			500	20.2.72.202.B(2) NMAC		☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
				gal	#1a, #1b & #5		
T33 - T35	TEG Storage Tank			100	20.2.72.202.B(2) NMAC		☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
				gal	#1a, #1b & #5		
T43	Waste Water Storage Tank			6,300	20.2.72.202.B(5) NMAC		☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
				gal	#1a, #1b & #5		
T47 - T49	TEG Storage Tank			50	20.2.72.202.B(2) NMAC		☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
				gal	#1a, #1b & #5		
T51	Corrosion Inhibitor Storage Tank			170	20.2.72.202.B(2) NMAC		☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
				gal	#1a & #1b		
L1	Produced Water Truck Loading			-	20.2.72.202.B(5) NMAC		☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
				-	#1a & #1b		
							☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
							☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
							☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
							☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
							☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced

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

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

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.

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

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).

[illegible]

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Table 2-E: Requested Allowable Emissions

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

Unit No.	NOx		CO		VOC		SOx		PM ¹		PM10 ¹		PM2.5 ¹		H ₂ S		Lead	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
1	4.59	20.10	8.11	35.51	3.06	13.40	6.00E-03	2.63E-02	1.02E-01	4.46E-01	1.02E-01	4.46E-01	1.02E-01	4.46E-01	-	-	-	-
2	4.59	20.10	8.11	35.51	3.06	13.40	6.00E-03	2.63E-02	1.02E-01	4.46E-01	1.02E-01	4.46E-01	1.02E-01	4.46E-01	-	-	-	-
3	4.59	20.10	8.11	35.51	3.06	13.40	6.00E-03	2.63E-02	1.02E-01	4.46E-01	1.02E-01	4.46E-01	1.02E-01	4.46E-01	-	-	-	-
6	4.59	20.10	8.11	35.51	3.06	13.40	6.00E-03	2.63E-02	1.02E-01	4.46E-01	1.02E-01	4.46E-01	1.02E-01	4.46E-01	-	-	-	-
7	4.59	20.10	8.11	35.51	3.06	13.40	6.00E-03	2.63E-02	1.02E-01	4.46E-01	1.02E-01	4.46E-01	1.02E-01	4.46E-01	-	-	-	-
18a	-	-	-	-	1.26	5.51	-	-	-	-	-	-	-	-	-	-	-	-
19a	-	-	-	-	1.26	5.51	-	-	-	-	-	-	-	-	-	-	-	-
20a	-	-	-	-	1.26	5.51	-	-	-	-	-	-	-	-	-	-	-	-
19c	-	-	-	-	2.64	11.59	-	-	-	-	-	-	-	-	-	-	-	-
20c	-	-	-	-	2.64	11.59	-	-	-	-	-	-	-	-	-	-	-	-
18b	4.29E-02	1.88E-01	3.25E-02	1.42E-01	9.58E-03	4.20E-02	8.33E-04	3.65E-03	9.18E-03	4.02E-02	9.18E-03	4.02E-02	9.18E-03	4.02E-02	-	-	6.04E-07	2.65E-06
19b	4.29E-02	1.88E-01	3.25E-02	1.42E-01	9.58E-03	4.20E-02	8.33E-04	3.65E-03	9.18E-03	4.02E-02	9.18E-03	4.02E-02	9.18E-03	4.02E-02	-	-	6.04E-07	2.65E-06
20b	4.29E-02	1.88E-01	3.25E-02	1.42E-01	9.58E-03	4.20E-02	8.33E-04	3.65E-03	9.18E-03	4.02E-02	9.18E-03	4.02E-02	9.18E-03	4.02E-02	-	-	6.04E-07	2.65E-06
19d	4.29E-02	1.88E-01	4.46E-02	1.95E-01	1.29E-02	5.66E-02	8.33E-04	3.65E-03	1.25E-02	5.49E-02	1.25E-02	5.49E-02	1.25E-02	5.49E-02	-	-	8.24E-07	3.61E-06
20d	4.29E-02	1.88E-01	4.46E-02	1.95E-01	1.29E-02	5.66E-02	8.33E-04	3.65E-03	1.25E-02	5.49E-02	1.25E-02	5.49E-02	1.25E-02	5.49E-02	-	-	8.24E-07	3.61E-06
SSM/M	-	-	-	-	-	13.80	-	-	-	-	-	-	-	-	-	-	-	-
F1	-	-	-	-	-	1.35	-	-	-	-	-	-	-	-	-	-	-	-
PP1-PP4	-	-	-	-	-	17.60	-	-	-	-	-	-	-	-	-	-	-	-
T46	-	-	-	-	-	5.90E-01	-	-	-	-	-	-	-	-	-	-	-	-
T52	-	-	-	-	-	5.90E-01	-	-	-	-	-	-	-	-	-	-	-	-
Totals ²	23.07	101.05	40.63	177.96	19.10	117.57	3.25E-02	1.42E-01	5.37E-01	2.35	0.536901	2.35	0.536901	2.35	-	-	1.81E-06	7.94E-06
Totals ³	23.07	101.05	40.64	178.01	20.48	123.66	3.25E-02	1.42E-01	5.40E-01	2.37	0.540245	2.37	0.540245	2.37	-	-	2.03E-06	8.90E-06
Totals ⁴	23.07	101.05	40.65	178.06	21.86	129.76	3.25E-02	1.42E-01	5.44E-01	2.38	0.543589	2.38	0.543589	2.38	-	-	2.25E-06	9.86E-06

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

² Assumes HFC elects to operate three 12 MMSCFD dehydrators (Units 18a & b, 19a & b, and 20a & b).

³ Assumes HFC elects to operate two 12 MMSCFD dehydrators (Units 18a & b and 19a & b or 20a & b) and one 20 MMSCFD dehydrator (Unit 19c & d or 20c & d).

⁴ Assumes HFC elects to operate one 12 MMSCFD dehydrator (Unit 18a & b) and two 20 MMSCFD dehydrators (Units 19c & d and 20c & d).

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).

Unit No.	NOx		CO		VOC		SOx		PM ²		PM10 ²		PM2.5 ²		H ₂ S		Lead	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19c	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20c	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18b	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19b	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20b	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19d	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20d	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SSM/M	-	-	-	-	-	13.80	-	-	-	-	-	-	-	-	-	-	-	-
F1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PP1-PP4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
T46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
T52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	13.80	-	-	-	-	-	-	-	-	-	-	-	-

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

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

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

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Table 2-H: Stack Exit Conditions

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

[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.

Stack No.	Unit No.(s)	Total HAPs		Benzene ☑ HAP or ☐ TAP		Formaldehyde ☑ HAP or ☐ TAP		Toluene ☑ HAP or ☐ TAP		Xylenes ☑ HAP or ☐ TAP		Provide Pollutant Name Here ☐ HAP or ☐ TAP		Provide Pollutant Name Here ☐ HAP or ☐ TAP		Provide Pollutant Name Here ☐ HAP or ☐ TAP		Provide Pollutant Name Here ☐ HAP or ☐ TAP	
		lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
1	1	0.5	2.4	0.0	0.1	0.5	2.3	0.0	0.0	0.0	0.0								
2	2	0.5	2.4	0.0	0.1	0.5	2.3	0.0	0.0	0.0	0.0								
3	3	0.5	2.4	0.0	0.1	0.5	2.3	0.0	0.0	0.0	0.0								
6	6	0.5	2.4	0.0	0.1	0.5	2.3	0.0	0.0	0.0	0.0								
7	7	0.5	2.4	0.0	0.1	0.5	2.3	0.0	0.0	0.0	0.0								
18a	18a	0.2	1.1	0.0	0.2	-	-	0.1	0.5	0.1	0.3								
19a	19a	0.2	1.1	0.0	0.2	-	-	0.1	0.5	0.1	0.3								
20a	20a	0.2	1.1	0.0	0.2	-	-	0.1	0.5	0.1	0.3								
19c	19c	0.5	2.1	0.1	0.4	-	-	0.2	1.0	0.1	0.6								
20c	20c	0.5	2.1	0.1	0.4	-	-	0.2	1.0	0.1	0.6								
18b	18b	-	-	-	-	-	-	-	-	-	-								
19b	19b	-	-	-	-	-	-	-	-	-	-								
20b	20b	-	-	-	-	-	-	-	-	-	-								
19d	19d	-	-	-	-	-	-	-	-	-	-								
20d	20d	-	-	-	-	-	-	-	-	-	-								
SSM/M	SSM/M	-	0.3	-	-	-	-	-	0.1	-	-								
F1	F1	-	-	-	-	-	-	-	-	-	-								
PP1-PP4	PP1-PP4	-	0.4	-	-	-	-	-	0.1	-	0.1								
T46	T46	-	0.1	-	-	-	-	-	-	-	-								
T50	T50	-	0.1	-	-	-	-	-	-	-	-								
Totals ¹		3.4	16.1	0.2	1.0	2.6	11.3	0.4	1.9	0.3	1.3								
Totals ²		3.7	17.2	0.3	1.2	2.6	11.3	0.5	2.4	0.3	1.6								
Totals ³		3.9	18.2	0.3	1.4	2.6	11.3	0.6	2.9	0.4	1.9								

¹ Assumes HFC elects to operate three 12 MMSCFD dehydrators (Units 18a & b, 19a & b, and 20a & b).

² Assumes HFC elects to operate two 12 MMSCFD dehydrators (Units 18a & b and 19a & b or 20a & b) and one 20 MMSCFD dehydrator (Unit 19c & d or 20c & d).

³ Assumes HFC elects to operate one 12 MMSCFD dehydrator (Unit 18a & b) and two 20 MMSCFD dehydrators (Units 19c & d and 20c & d).

Table 2-J: Fuel

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

[illegible]

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

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

Material Processed				Material Produced			
Description	Chemical Composition	Phase (Gas, Liquid, or Solid)	Quantity (specify units)	Description	Chemical Composition	Phase	Quantity (specify units)
Low pressure natural gas	C1-C6+	Gas	17,904 MMCF/yr	High pressure natural gas	C1-C6+	Gas	17,904 MMCF/yr
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, was 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.							

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.

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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									
1	mass GHG	6,010.45	1.13E-02	1.13E-01										6,010.58	-
	CO ₂ e	6,010.45	3.38	2.83										-	6,016.66
2	mass GHG	6,010.45	1.13E-02	1.13E-01										6,010.58	-
	CO ₂ e	6,010.45	3.38	2.83										-	6,016.66
3	mass GHG	6,010.45	1.13E-02	1.13E-01										6,010.58	-
	CO ₂ e	6,010.45	3.38	2.83										-	6,016.66
6	mass GHG	6,010.45	1.13E-02	1.13E-01										6,010.58	-
	CO ₂ e	6,010.45	3.38	2.83										-	6,016.66
7	mass GHG	6,010.45	1.13E-02	1.13E-01										6,010.58	-
	CO ₂ e	6,010.45	3.38	2.83										-	6,016.66
18a	mass GHG	29.70	-	84.11										113.80	-
	CO ₂ e	29.70	-	2,102.65										-	2,132.34
18b	mass GHG	617.63	1.16E-03	1.16E-02										617.65	-
	CO ₂ e	617.63	3.47E-01	2.91E-01										-	618.27
19a	mass GHG	29.70	-	84.11										113.80	-
	CO ₂ e	29.70	-	2,102.65										-	2,132.34
19b	mass GHG	617.63	1.16E-03	1.16E-02										617.65	-
	CO ₂ e	617.63	3.47E-01	2.91E-01										-	618.27
19c	mass GHG	63.51	-	179.67										243.18	-
	CO ₂ e	63.51	-	4,491.79										-	4,555.30
19d	mass GHG	842.60	1.59E-03	1.59E-02										842.62	-
	CO ₂ e	842.60	4.73E-01	3.97E-01										-	843.47
20a	mass GHG	29.70	-	84.11										113.80	-
	CO ₂ e	29.70	-	2,102.65										-	2,132.34

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									
20b	mass GHG	617.63	1.16E-03	1.16E-02										617.65	-
	CO ₂ e	617.63	3.47E-01	2.91E-01										-	618.27
20c	mass GHG	63.51	-	179.67										243.18	-
	CO ₂ e	63.51	-	4,491.79										-	4,555.30
20d	mass GHG	842.60	1.59E-03	1.59E-02										842.62	-
	CO ₂ e	842.60	4.73E-01	3.97E-01										-	843.47
SSM/M	mass GHG	108.69	-	232.41										341.10	-
	CO ₂ e	108.69	-	5,810.32										-	5,919.01
F1	mass GHG	6.41	-	13.74										20.15	-
	CO ₂ e	6.41	-	343.38										-	349.80
PP1- PP4	mass GHG	3.76	-	8.04										11.80	-
	CO ₂ e	3.76	-	200.94										-	204.70
RC1-RC3, RC6 & RC7	mass GHG	123.96	-	265.48										389.44	-
	CO ₂ e	123.96	-	6,636.93										-	6,760.89
	mass GHG														
	CO ₂ e														
TOTAL ⁶	mass GHG	32237.09	6.01E-02	772.58										33009.73	
	CO ₂ e	32237.09	17.92	19314.54											51569.55
TOTAL ⁷	mass GHG	32495.87	6.06E-02	868.15										33364.08	
	CO ₂ e	32495.87	18.05	21703.79											54217.70
TOTAL ⁸	mass GHG	32754.64	6.10E-02	963.72										33718.43	
	CO ₂ e	32754.64	18.17	24093.04											56865.85

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.

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									

⁶ Assumes HFC elects to operate three 12 MMSCFD dehydrators (Units 18a & b, 19a & b, and 20a & b).

⁷ Assumes HFC elects to operate two 12 MMSCFD dehydrators (Units 18a & b and 19a & b or 20a & b) and one 20 MMSCFD dehydrator (Unit 19c & d or 20c & d).

⁸ Assumes HFC elects to operate one 12 MMSCFD dehydrator (Unit 18a & b) and two 20 MMSCFD dehydrators (Units 19c & d and 20c & d).

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Section 3

Application Summary

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

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

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

Application Summary

The HFC Decker Junction CDP currently operates under a construction permit issued by the NMAQB, 1228-M4-R2, dated September 5, 2023 and a Title V operating permit, P034-R4, dated June 11, 2021.

This application is being submitted both to modify and renew the Title V operating permit. The following modifications are included:

- Increase permitted SSM emissions. Change the unit number from SSM to SSM/M (startup, shutdown and maintenance / malfunction);
- Remove malfunction emissions (Unit M1) from the permit;
- Increase the permitted throughput and emission limit for the existing 300 bbl produced water storage tank (Unit T46);
- Remove from the permit the existing 70 bbl produced water storage tank (Unit T50);
- Add to the permit one 300 bbl produced water storage tank (Unit T52);
- Add to the permit five (5) reciprocating compressors (Units RC1-RC3, RC6 & RC7). This is being done to comply with 20.2.50 New Mexico Administrative Code (NMAC);
- Add to the permit fourteen (14) pneumatic controllers (Units PC1-PC14). This is being done to comply with 20.2.50 NMAC. Note that the pneumatic controllers are exempt sources; and
- Add to the permit four (4) pneumatic pumps (Units PP1-PP4). Again, this is being done to comply with 20.2.50 NMAC.

The applicable regulation is 20.2.70 NMAC. The lowest level regulatory citations are 20.2.70.300.B(2) NMAC and 20.2.70.404.C(1) NMAC.

There are no modifications to de-bottleneck impacts or change the facility's major/minor status (both prevention of significant deterioration [PSD] & Title V).

Process Description

The facility is a production field natural gas compressor station that pressurizes and dehydrates natural gas for pipeline transport. Natural gas-fired combustion engines drive the gas compressors that pressurize the gas. A list of the equipment currently approved for use at the facility by the Title V operating permit can be found in Tables 2-A and 2-B of Section 2 of this application.

Startup, Shutdown and Maintenance Emissions

For the engines, dehydrators, equipment leaks (valves, connectors, seals, etc.), and storage tanks, it is concluded there are no SSM emissions in excess of those identified for steady-state operation as seen in Section 2, Table 2-E. Discussions justifying this conclusion are provided in Section 6.

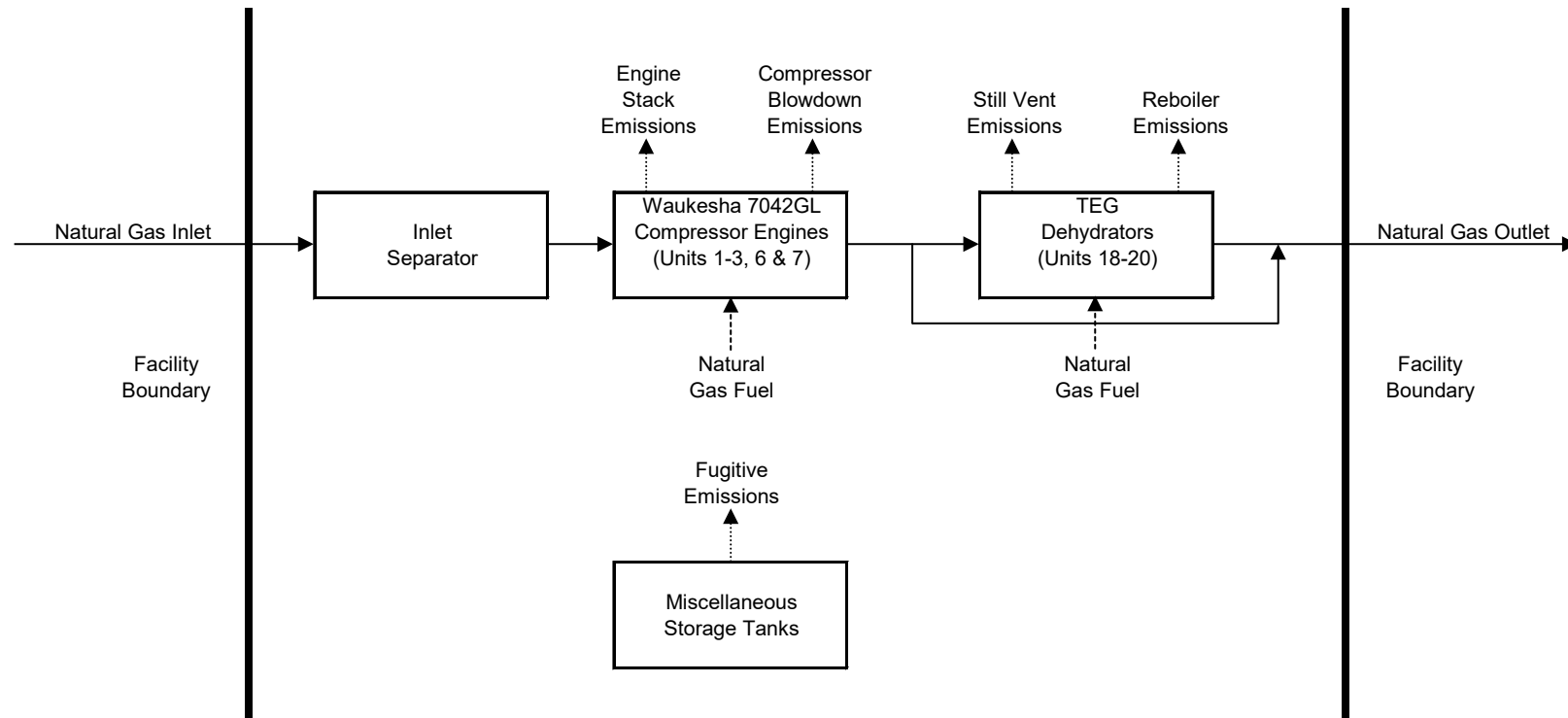
Blowdown SSM/M emissions from compressors and piping associated with the facility are calculated from the quantity of gas vented during each event, the composition of the gas, and the number of events.

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. Please see the following page.

Flow Diagram

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

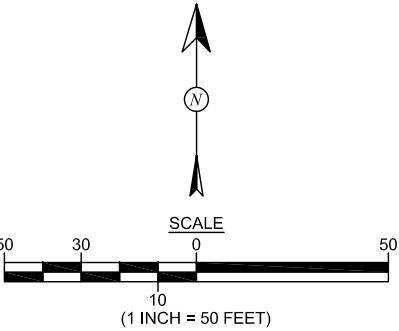
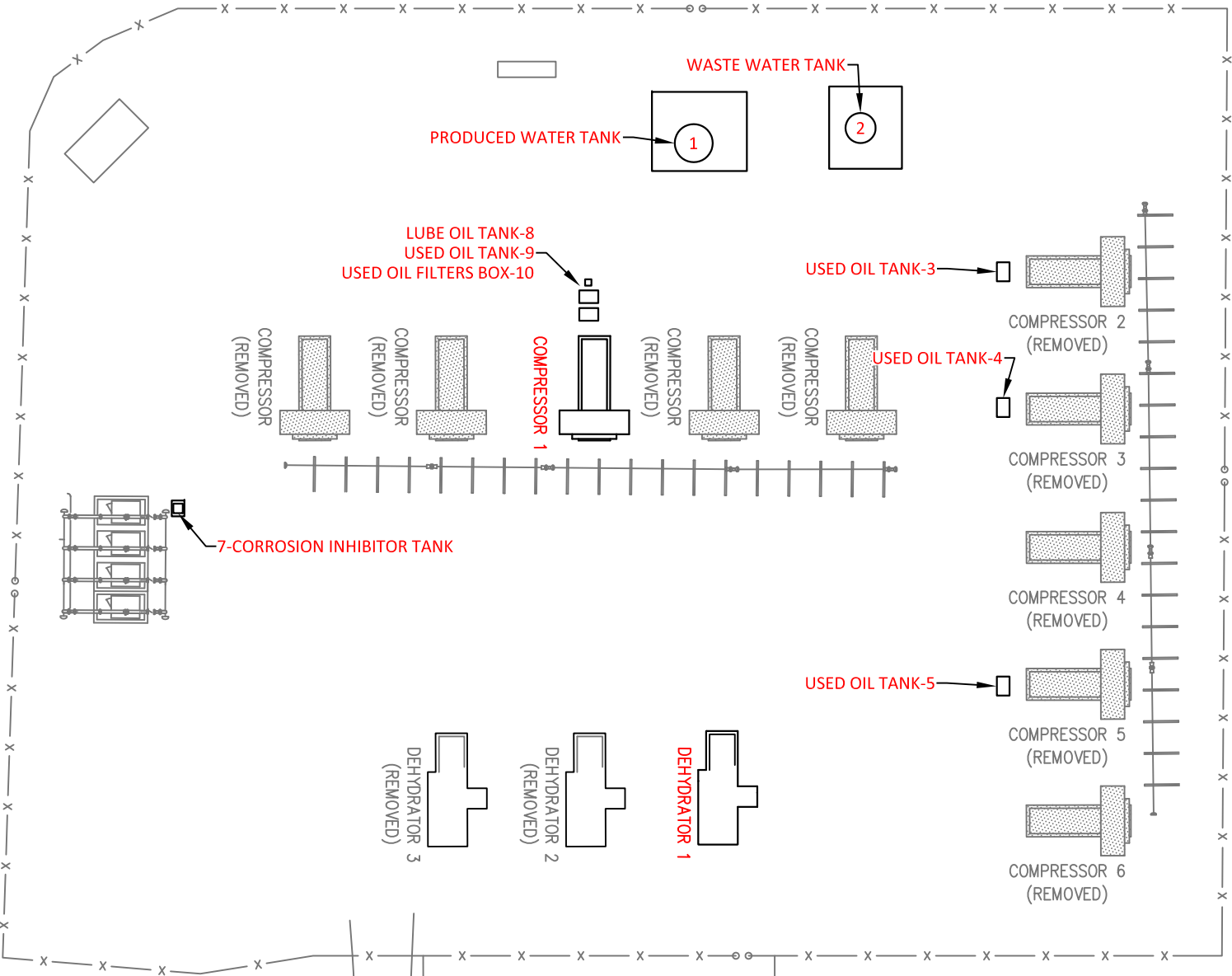
FACILITY LAYOUT
WILLIAMS FOUR CORNERS LLC
DECKER JUNCTION CDP FACILITY
NE¼, SE¼, SECTION 19, T32N, R10W
SAN JUAN COUNTY, NEW MEXICO
N36.96854, W107.91734



Animas Environmental Services, LLC

DRAWN BY: C. Lameman	DATE DRAWN: January 9, 2014
REVISIONS BY: C. Lameman	DATE REVISED: January 9, 2014
CHECKED BY: K. Christiansen	DATE CHECKED: January 9, 2014
APPROVED BY: E. McNally	DATE APPROVED: January 9, 2014

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.

Reciprocating Engines

The nitrogen oxides (NO_x), carbon monoxide (CO), and VOC emissions from the engines (Units 1, 2, 3 6 and 7) were calculated from manufacturer's data. The sulfur dioxide (SO₂) and particulate emissions were calculated using AP-42 emission factors from Table 3.2-2. Hazardous air pollutant (HAP) emissions were calculated using GRI-HAPCalc 3.0. Emissions were calculated assuming the engines all operate at full capacity for 8,760 hours per year.

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

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

The emissions identified in this application are carried forward and not revised.

Dehydrator Still Vents

The VOC and HAP emissions from the dehydrator still vents (Units 18a, 19a or 19c, 20a or 20c) were calculated using GRI-GLYCalc 4.0. Emissions were calculated assuming the dehydrators all operate at full capacity for 8,760 hours per year. Note that the dehydrators have not been in operation for years and current operating data is not available. Consequently, the GRI-GLYCalc 4.0 results from the 2019 Title V application are used in this application to identify dehydrator emissions.

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

The VOC emissions identified in this application are carried forward and not revised.

Dehydrator Reboilers

The NO_x emission factors for the reboilers (Units 18a, 19a or 19c, 20a or 20c) were identified from an Enertek letter dated August 19, 1994. The CO, VOC, and SO₂ emission factors were identified from an InFab letter dated July 22, 1998. The particulate and lead emissions were calculated using AP-42

emission factors from Table 1.4-2. HAP emissions were calculated using GRI-HAPCalc 3.0. Emissions were calculated assuming the reboilers all operate 8,760 hours per year.

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

The criteria pollutant and HAP emission rates are carried forward and not revised.

SSM/M (Compressors and Piping)

VOC and HAP emissions from blowdowns of the compressors and piping associated with the station (Unit SSM/M) occur during startups and shutdowns. SSM/M emissions from the compressors occur when high pressure gas is used to purge air from the compressors and associated piping prior to startups. This gas is vented to atmosphere. SSM/M emissions from the compressors also occur after shutdowns when high pressure gas in the compressors and associated piping is released to atmosphere as a safety precaution.

SSM/M emissions from blowdown of the compressors and piping associated with the plant were 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 was determined by HFC engineering. The composition of the gas was determined from extended gas analyses. The annual number of blowdown events were estimated based on historical operations. A safety factor was 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. Experience indicates the composition of the gas is likely to vary.

Equipment Leaks

Equipment leaks (Unit F1) emissions were calculated using emission factors from Table 2.4 of the 1995 Protocol for Equipment Leak Emission Estimates published by the EPA. The component count was 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 were calculated assuming the equipment operates 8,760 hours per year.

Due to the nature of the source, it is estimated that SSM emissions from valves, connectors, seals, etc. are accounted for in the calculations.

Pneumatic Pumps

Pneumatic pump emissions were calculated from the quantity and composition of the vented gas.

Due to the nature of the source, it is estimated that SSM emissions from valves, connectors, seals, etc. are accounted for in the calculations.

Truck Loading

The VOC emissions from produced water truck loading were calculated using the AP-42 emissions factor identified in Section 5.2-1. The data used to calculate the emission factor was obtained assuming the liquid was pure water.

Due to the nature of the source, it is estimated that SSM emissions from truck loading are accounted for in the calculations.

The produced water truck loading is an exempt source in accordance with 20.2.72.202.B(5) NMAC (VOC emissions are less than 0.5 tons per year) and a Title V insignificant source in accordance with Insignificant Activity Item #1.

Pneumatic Controllers

Pneumatic controller emissions were calculated from the quantity and composition of the vented gas.

Due to the nature of the source, it is estimated that SSM emissions from valves, connectors, seals, etc. are accounted for in the calculations.

The pneumatic controllers are exempt sources in accordance with 20.2.72.202.B(5) NMAC (VOC emissions are less than 0.5 tons per year).

Storage Tanks

VOC and HAP emissions from the produced water storage tanks (Units T-46 and T-52) were calculated using produced water tank emission factors prepared by the Colorado Department of Public Health and Environment (CDPHE) and the Texas Commission on Environmental Quality (TCEQ).

Residual oil #6 was used to estimate lubrication oil, used lubrication oil, and waste water emissions. As the vapor pressure of residual oil is less than 10 mm Hg, the tanks containing lubrication oil (Units T-1 thru T-5), used lubrication oil (Units T17 thru T-21), and waste water (Unit T-43) are exempt in accordance with 20.2.72.202.B(2) NMAC and Title V insignificant in accordance with Insignificant Activity Item #1.

As the vapor pressure of TEG is less than 0.2 psia, the tanks containing TEG (Units T-33 thru T-35 and T-47 thru T-49) are exempt in accordance with 20.2.72.202.B.2 NMAC. and Title V insignificant in accordance with Insignificant Activity Item #1.

Emissions from the corrosion inhibitor tank (Unit T-51) were calculated at 13.04 pound per year using TANKS 4. The tank is exempt in accordance with 20.2.72.202.B.5 NMAC (emissions less than 0.5 tpy) and Title V insignificant in accordance with Insignificant Activity Item #1.

Engine Exhaust Emissions Calculations

Unit Number: 1-3, 6 & 7
 Description: Waukesha L7042GL
 Type: Four Stroke Lean Burn (Turbocharged)

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

Horsepower Calculations

6,040 ft above MSL	Elevation	Mfg. data
1,478 hp	Nameplate hp	NMAQB Procedure # 02.002-00
1,388 hp	NMAQB Site-rated hp	(loss of 3% for every 1,000 ft over 4,000 ft)
1,344 hp	Mfg. Site-rated hp	Mfg. product bulletin Power Derate, S8154-6, April 2001
		(loss of 2% for every 1,000 ft over 1,500 ft)

Engine Specifications

1200 rpm	Engine rpm	Mfg. data
7040 cu in	Engine displacement	Mfg. data
130.08 psi	BMEP	Mfg. data $[(792,000 \times \text{NMAQB Site-rated hp}) / (\text{rpm} \times \text{in}^3)]$

Fuel Consumption

7351 Btu/hp-hr	Brake specific fuel consumption	Mfg. data
10.20 MMBtu/hr	Hourly fuel consumption	Btu/hp-hr x NMAQB site-rated hp / 1,000,000
900 Btu/scf	Field gas heating value	Nominal heat content
11,334 scf/hr	Hourly fuel consumption	MMBtu/hr x 1,000,000 / Btu/scf
8,760 hr/yr	Annual operating time	Harvest Four Corners, LLC
89,355 MMBtu/yr	Annual fuel consumption	MMBtu/hr x hr/yr
99.28 MMscf/yr	Annual fuel consumption	scf/hr x hr/yr / 1,000,000

Steady-State Emission Rates

Pollutants	Emission Factors, g/hp-hr	Uncontrolled Emission Rates,	
		pph	tpy
NOX	1.50	4.589	20.10
CO	2.65	8.106	35.51
VOC	1.00	3.06	13.40

Emission factors taken from Waukesha Bulletin 7005 0107

Uncontrolled Emission Rates (pph) = g/hp-hr x NMAQB Site-rated hp / 453.59 g/lb

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

Pollutants	Emission Factors, lb/MMBtu	Uncontrolled Emission Rates,	
		pph	tpy
SO2	5.88E-04	6.00E-03	2.63E-02
PM	9.99E-03	1.02E-01	4.46E-01
PM10	9.99E-03	1.02E-01	4.46E-01
PM2.5	9.99E-03	1.02E-01	4.46E-01

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

Particulate factors include both filterable and condensable emissions

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

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

Engine Exhaust Emissions Calculations

Unit Number: 1-3, 6 & 7
Description: Waukesha L7042GL
Type: Four Stroke Lean Burn (Turbocharged)

Exhaust Parameters

703 °F	Stack exit temperature	Mfg. data
7715 acfm	Stack flowrate	Mfg. data
1.02 ft	Stack exit diameter	Harvest Four Corners, LLC
0.82 ft ²	Stack exit area	$3.1416 \times ((ft / 2) ^2)$
157.10 fps	Stack exit velocity	acfm / ft ² / 60 sec/min
22.00 ft	Stack height	Harvest Four Corners, LLC

GRI-HAPCalc® 3.0
Engines Report

Facility ID:	DECKER JUNCTION	Notes:
Operation Type:	COMPRESSOR STATION	
Facility Name:	DECKER JUNCTION CDP	
User Name:	Harvest Four Corners, LLC	
Units of Measure:	U.S. STANDARD	

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

Engine Unit

Unit Name: L7042GL

Hours of Operation:	8,760	Yearly
Rate Power:	1,388	hp
Fuel Type:	FIELD GAS	
Engine Type:	4-Stroke, Lean Burn	
Emission Factor Set:	FIELD > EPA > LITERATURE	
Additional EF Set:	-NONE-	

Calculated Emissions (ton/yr)

<u>Chemical Name</u>	<u>Emissions</u>	<u>Emission Factor</u>	<u>Emission Factor Set</u>
<u>HAPs</u>			
Formaldehyde	2.2537	0.16830000 g/bhp-hr	GRI Literature
Benzene	0.0696	0.00520000 g/bhp-hr	GRI Literature
Toluene	0.0281	0.00210000 g/bhp-hr	GRI Literature
Xylenes(m,p,o)	0.0187	0.00140000 g/bhp-hr	GRI Literature
Total	2.3701		

GRI-GLYCalc VERSION 4.0 - SUMMARY OF INPUT VALUES

Case Name: Decker Junction TEG Dehydrator

File Name: C:\1 - Office\1-Cirrus\1-Projects\1a - Harvest\1 - Permitting\4 - Title V\2
- Decker Junction\1 - Application\Decker Junction - GRI-GLYCalc (12 MMSCFD).ddf

Date: September 24, 2019

DESCRIPTION:

Description: Capacity: 12 MMSCFD
Extended gas analysis sampled 06/18/2019

Annual Hours of Operation: 8760.0 hours/yr

WET GAS:

Temperature: 85.00 deg. F
Pressure: 360.00 psig
Wet Gas Water Content: Saturated

Component	Conc. (vol %)
Carbon Dioxide	4.1481
Nitrogen	0.4103
Methane	94.4915
Ethane	0.5836
Propane	0.2244
Isobutane	0.0440
n-Butane	0.0560
Isopentane	0.0227
n-Pentane	0.0131
Cyclopentane	0.0002
n-Hexane	0.0009
Cyclohexane	0.0004
Other Hexanes	0.0021
Heptanes	0.0008
Methylcyclohexane	0.0007
Benzene	0.0002
Toluene	0.0003
Xylenes	0.0001
C8+ Heavies	0.0007

DRY GAS:

Flow Rate: 12.0 MMSCF/day
Water Content: 7.0 lbs. H2O/MMSCF

LEAN GLYCOL:

Glycol Type: TEG

Water Content: 1.5 wt% H2O
Flow Rate: 3.5 gpm

PUMP:

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

GRI-GLYCalc VERSION 4.0 - AGGREGATE CALCULATIONS REPORT

Case Name: Decker Junction TEG Dehydrator

File Name: C:\1 - Office\1-Cirrus\1-Projects\1a - Harvest\1 - Permitting\4 - Title V\2

- Decker Junction\1 - Application\Decker Junction - GRI-GLYCalc (12 MMSCFD).ddf

Date: September 24, 2019

DESCRIPTION:

Description: Capacity: 12 MMSCFD

Extended gas analysis sampled 06/18/2019

Annual Hours of Operation: 8760.0 hours/yr

EMISSIONS REPORTS:

UNCONTROLLED REGENERATOR EMISSIONS

Component	lbs/hr	lbs/day	tons/yr
Methane	19.2022	460.854	84.1058
Ethane	0.3042	7.300	1.3322
Propane	0.2375	5.700	1.0402
Isobutane	0.0811	1.948	0.3554
n-Butane	0.1276	3.061	0.5587
Isopentane	0.0714	1.713	0.3127
n-Pentane	0.0508	1.219	0.2225
Cyclopentane	0.0026	0.063	0.0116
n-Hexane	0.0072	0.172	0.0315
Cyclohexane	0.0121	0.290	0.0529
Other Hexanes	0.0129	0.309	0.0565
Heptanes	0.0150	0.360	0.0656
Methylcyclohexane	0.0315	0.755	0.1378
Benzene	0.0435	1.045	0.1907
Toluene	0.1163	2.791	0.5093
Xylenes	0.0786	1.885	0.3441
C8+ Heavies	0.1180	2.833	0.5171
Total Emissions	20.5125	492.299	89.8446
Total Hydrocarbon Emissions	20.5125	492.299	89.8446
Total VOC Emissions	1.0061	24.146	4.4066
Total HAP Emissions	0.2456	5.894	1.0756
Total BTEX Emissions	0.2384	5.721	1.0442

EQUIPMENT REPORTS:

ABSORBER

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

Calculated Absorber Stages: 1.25
 Calculated Dry Gas Dew Point: 4.29 lbs. H2O/MMSCF

Temperature: 85.0 deg. F
 Pressure: 360.0 psig
 Dry Gas Flow Rate: 12.0000 MMSCF/day
 Glycol Losses with Dry Gas: 0.0283 lb/hr
 Wet Gas Water Content: Saturated
 Calculated Wet Gas Water Content: 84.02 lbs. H2O/MMSCF
 Calculated Lean Glycol Recirc. Ratio: 5.27 gal/lb H2O

Component	Remaining in Dry Gas	Absorbed in Glycol
Water	5.10%	94.90%
Carbon Dioxide	99.80%	0.20%
Nitrogen	99.99%	0.01%
Methane	99.99%	0.01%
Ethane	99.95%	0.05%
Propane	99.90%	0.10%
Isobutane	99.84%	0.16%
n-Butane	99.79%	0.21%
Isopentane	99.75%	0.25%
n-Pentane	99.68%	0.32%
Cyclopentane	98.65%	1.35%
n-Hexane	99.38%	0.62%
Cyclohexane	97.36%	2.64%
Other Hexanes	99.54%	0.46%
Heptanes	98.67%	1.33%
Methylcyclohexane	96.61%	3.39%
Benzene	78.93%	21.07%
Toluene	68.17%	31.83%
Xylenes	43.94%	56.06%
C8+ Heavies	92.57%	7.43%

REGENERATOR

No Stripping Gas used in regenerator.

Component	Remaining in Glycol	Distilled Overhead
Water	42.51%	57.49%
Carbon Dioxide	0.00%	100.00%
Nitrogen	0.00%	100.00%
Methane	0.00%	100.00%
Ethane	0.00%	100.00%
Propane	0.00%	100.00%
Isobutane	0.00%	100.00%

n-Butane	0.00%	100.00%
Isopentane	0.37%	99.63%
n-Pentane	0.40%	99.60%
Cyclopentane	0.47%	99.53%
n-Hexane	0.44%	99.56%
Cyclohexane	3.10%	96.90%
Other Hexanes	0.85%	99.15%
Heptanes	0.47%	99.53%
Methylcyclohexane	3.91%	96.09%
Benzene	4.98%	95.02%
Toluene	7.88%	92.12%
Xylenes	12.89%	87.11%
C8+ Heavies	11.91%	88.09%

STREAM REPORTS:

WET GAS STREAM

Temperature: 85.00 deg. F
Pressure: 374.70 psia
Flow Rate: 5.01e+005 scfh

Component	Conc. (vol%)	Loading (lb/hr)
Water	1.77e-001	4.21e+001
Carbon Dioxide	4.14e+000	2.41e+003
Nitrogen	4.10e-001	1.51e+002
Methane	9.43e+001	2.00e+004
Ethane	5.83e-001	2.31e+002
Propane	2.24e-001	1.30e+002
Isobutane	4.39e-002	3.37e+001
n-Butane	5.59e-002	4.29e+001
Isopentane	2.27e-002	2.16e+001
n-Pentane	1.31e-002	1.25e+001
Cyclopentane	2.00e-004	1.85e-001
n-Hexane	8.98e-004	1.02e+000
Cyclohexane	3.99e-004	4.44e-001
Other Hexanes	2.10e-003	2.39e+000
Heptanes	7.99e-004	1.06e+000
Methylcyclohexane	6.99e-004	9.06e-001
Benzene	2.00e-004	2.06e-001
Toluene	2.99e-004	3.64e-001
Xylenes	9.98e-005	1.40e-001
C8+ Heavies	6.99e-004	1.57e+000
Total Components	100.00	2.31e+004

DRY GAS STREAM

Temperature: 85.00 deg. F
 Pressure: 374.70 psia
 Flow Rate: 5.00e+005 scfh

Component	Conc. (vol%)	Loading (lb/hr)
-----	-----	-----
Water	9.04e-003	2.15e+000
Carbon Dioxide	4.14e+000	2.40e+003
Nitrogen	4.10e-001	1.51e+002
Methane	9.45e+001	2.00e+004
Ethane	5.83e-001	2.31e+002
Propane	2.24e-001	1.30e+002
Isobutane	4.39e-002	3.37e+001
n-Butane	5.59e-002	4.28e+001
Isopentane	2.26e-002	2.15e+001
n-Pentane	1.31e-002	1.24e+001
Cyclopentane	1.97e-004	1.82e-001
n-Hexane	8.95e-004	1.02e+000
Cyclohexane	3.89e-004	4.32e-001
Other Hexanes	2.09e-003	2.37e+000
Heptanes	7.89e-004	1.04e+000
Methylcyclohexane	6.76e-004	8.75e-001
Benzene	1.58e-004	1.63e-001
Toluene	2.05e-004	2.48e-001
Xylenes	4.39e-005	6.15e-002
C8+ Heavies	6.48e-004	1.45e+000
-----	-----	-----
Total Components	100.00	2.30e+004

LEAN GLYCOL STREAM

Temperature: 85.00 deg. F
 Flow Rate: 3.50e+000 gpm

Component	Conc. (wt%)	Loading (lb/hr)
-----	-----	-----
TEG	9.85e+001	1.94e+003
Water	1.50e+000	2.96e+001
Carbon Dioxide	2.42e-011	4.76e-010
Nitrogen	9.57e-014	1.89e-012
Methane	4.15e-018	8.18e-017
Ethane	2.63e-009	5.19e-008
Propane	2.64e-010	5.21e-009
Isobutane	8.05e-011	1.59e-009
n-Butane	1.15e-010	2.27e-009
Isopentane	1.36e-005	2.68e-004
n-Pentane	1.03e-005	2.03e-004
Cyclopentane	6.34e-007	1.25e-005
n-Hexane	1.61e-006	3.18e-005
Cyclohexane	1.96e-005	3.87e-004
Other Hexanes	5.58e-006	1.10e-004
Heptanes	3.59e-006	7.08e-005
Methylcyclohexane	6.49e-005	1.28e-003

Benzene	1.16e-004	2.28e-003
Toluene	5.05e-004	9.95e-003
Xylenes	5.90e-004	1.16e-002
C8+ Heavies	8.10e-004	1.60e-002

Total Components	100.00	1.97e+003

RICH GLYCOL AND PUMP GAS STREAM

Temperature: 85.00 deg. F
 Pressure: 374.70 psia
 Flow Rate: 3.64e+000 gpm
 NOTE: Stream has more than one phase.

Component	Conc. (wt%)	Loading (lb/hr)
-----	-----	-----
TEG	9.52e+001	1.94e+003
Water	3.41e+000	6.95e+001
Carbon Dioxide	3.33e-001	6.78e+000
Nitrogen	7.17e-003	1.46e-001
Methane	9.43e-001	1.92e+001
Ethane	1.49e-002	3.04e-001
Propane	1.17e-002	2.37e-001
Isobutane	3.98e-003	8.11e-002
n-Butane	6.26e-003	1.28e-001
Isopentane	3.52e-003	7.17e-002
n-Pentane	2.50e-003	5.10e-002
Cyclopentane	1.30e-004	2.66e-003
n-Hexane	3.54e-004	7.22e-003
Cyclohexane	6.12e-004	1.25e-002
Other Hexanes	6.38e-004	1.30e-002
Heptanes	7.39e-004	1.51e-002
Methylcyclohexane	1.61e-003	3.28e-002
Benzene	2.25e-003	4.58e-002
Toluene	6.20e-003	1.26e-001
Xylenes	4.43e-003	9.02e-002
C8+ Heavies	6.58e-003	1.34e-001
-----	-----	-----
Total Components	100.00	2.04e+003

REGENERATOR OVERHEADS STREAM

Temperature: 212.00 deg. F
 Pressure: 14.70 psia
 Flow Rate: 1.37e+003 scfh

Component	Conc. (vol%)	Loading (lb/hr)
-----	-----	-----
Water	6.16e+001	4.00e+001
Carbon Dioxide	4.28e+000	6.78e+000
Nitrogen	1.45e-001	1.46e-001
Methane	3.32e+001	1.92e+001

Ethane	2.81e-001	3.04e-001
Propane	1.50e-001	2.37e-001
Isobutane	3.88e-002	8.11e-002
n-Butane	6.09e-002	1.28e-001
Isopentane	2.75e-002	7.14e-002
n-Pentane	1.95e-002	5.08e-002
Cyclopentane	1.05e-003	2.64e-003
n-Hexane	2.32e-003	7.19e-003
Cyclohexane	3.99e-003	1.21e-002
Other Hexanes	4.15e-003	1.29e-002
Heptanes	4.15e-003	1.50e-002
Methylcyclohexane	8.90e-003	3.15e-002
Benzene	1.55e-002	4.35e-002
Toluene	3.50e-002	1.16e-001
Xylenes	2.05e-002	7.86e-002
C8+ Heavies	1.92e-002	1.18e-001
-----	-----	-----
Total Components	100.00	6.74e+001

GRI-GLYCalc VERSION 4.0 - SUMMARY OF INPUT VALUES

Case Name: Decker Junction TEG Dehydrator

File Name: C:\1 - Office\1-Cirrus\1-Projects\1a - Harvest\1 - Permitting\4 - Title V\2

- Decker Junction\1 - Application\Decker Junction - GRI-GLYCalc (20 MMSCFD).ddf

Date: September 24, 2019

DESCRIPTION:

Description: Capacity: 20 MMSCFD

Extended gas analysis sampled 06/18/2019

Annual Hours of Operation: 8760.0 hours/yr

WET GAS:

Temperature: 85.00 deg. F

Pressure: 360.00 psig

Wet Gas Water Content: Saturated

Component	Conc. (vol %)
Carbon Dioxide	4.1481
Nitrogen	0.4103
Methane	94.4915
Ethane	0.5836
Propane	0.2244
Isobutane	0.0440
n-Butane	0.0560
Isopentane	0.0227
n-Pentane	0.0131
Cyclopentane	0.0002
n-Hexane	0.0009
Cyclohexane	0.0004
Other Hexanes	0.0021
Heptanes	0.0008
Methylcyclohexane	0.0007
Benzene	0.0002
Toluene	0.0003
Xylenes	0.0001
C8+ Heavies	0.0007

DRY GAS:

Flow Rate: 20.0 MMSCF/day
Water Content: 7.0 lbs. H2O/MMSCF

LEAN GLYCOL:

Glycol Type: TEG

Water Content: 1.5 wt% H2O
Flow Rate: 7.5 gpm

PUMP:

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

GRI-GLYCalc VERSION 4.0 - AGGREGATE CALCULATIONS REPORT

Case Name: Decker Junction TEG Dehydrator

File Name: C:\1 - Office\1-Cirrus\1-Projects\1a - Harvest\1 - Permitting\4 - Title V\2

- Decker Junction\1 - Application\Decker Junction - GRI-GLYCalc (20 MMSCFD).ddf

Date: September 24, 2019

DESCRIPTION:

Description: Capacity: 20 MMSCFD

Extended gas analysis sampled 06/18/2019

Annual Hours of Operation: 8760.0 hours/yr

EMISSIONS REPORTS:

UNCONTROLLED REGENERATOR EMISSIONS

Component	lbs/hr	lbs/day	tons/yr
Methane	41.0209	984.501	179.6714
Ethane	0.6523	15.656	2.8572
Propane	0.5085	12.205	2.2274
Isobutane	0.1741	4.178	0.7625
n-Butane	0.2738	6.571	1.1991
Isopentane	0.1534	3.682	0.6719
n-Pentane	0.1092	2.621	0.4783
Cyclopentane	0.0057	0.137	0.0251
n-Hexane	0.0155	0.372	0.0678
Cyclohexane	0.0261	0.627	0.1145
Other Hexanes	0.0278	0.667	0.1217
Heptanes	0.0324	0.777	0.1418
Methylcyclohexane	0.0680	1.632	0.2978
Benzene	0.0895	2.148	0.3921
Toluene	0.2327	5.584	1.0190
Xylenes	0.1471	3.531	0.6444
C8+ Heavies	0.2532	6.078	1.1091
Total Emissions	43.7902	1050.964	191.8009
Total Hydrocarbon Emissions	43.7902	1050.964	191.8009
Total VOC Emissions	2.1170	50.808	9.2724
Total HAP Emissions	0.4848	11.635	2.1233
Total BTEX Emissions	0.4693	11.263	2.0555

EQUIPMENT REPORTS:

ABSORBER

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

Calculated Absorber Stages: 1.25
 Calculated Dry Gas Dew Point: 3.86 lbs. H2O/MMSCF

Temperature: 85.0 deg. F
 Pressure: 360.0 psig
 Dry Gas Flow Rate: 20.0000 MMSCF/day
 Glycol Losses with Dry Gas: 0.0472 lb/hr
 Wet Gas Water Content: Saturated
 Calculated Wet Gas Water Content: 84.02 lbs. H2O/MMSCF
 Calculated Lean Glycol Recirc. Ratio: 6.74 gal/lb H2O

Component	Remaining in Dry Gas	Absorbed in Glycol
Water	4.59%	95.41%
Carbon Dioxide	99.74%	0.26%
Nitrogen	99.98%	0.02%
Methane	99.98%	0.02%
Ethane	99.94%	0.06%
Propane	99.87%	0.13%
Isobutane	99.80%	0.20%
n-Butane	99.72%	0.28%
Isopentane	99.68%	0.32%
n-Pentane	99.58%	0.42%
Cyclopentane	98.25%	1.75%
n-Hexane	99.20%	0.80%
Cyclohexane	96.57%	3.43%
Other Hexanes	99.41%	0.59%
Heptanes	98.27%	1.73%
Methylcyclohexane	95.60%	4.40%
Benzene	74.03%	25.97%
Toluene	61.79%	38.21%
Xylenes	37.03%	62.97%
C8+ Heavies	90.44%	9.56%

REGENERATOR

No Stripping Gas used in regenerator.

Component	Remaining in Glycol	Distilled Overhead
Water	48.59%	51.41%
Carbon Dioxide	0.00%	100.00%
Nitrogen	0.00%	100.00%
Methane	0.00%	100.00%
Ethane	0.00%	100.00%
Propane	0.00%	100.00%
Isobutane	0.00%	100.00%

n-Butane	0.00%	100.00%
Isopentane	0.37%	99.63%
n-Pentane	0.40%	99.60%
Cyclopentane	0.47%	99.53%
n-Hexane	0.44%	99.56%
Cyclohexane	3.11%	96.89%
Other Hexanes	0.85%	99.15%
Heptanes	0.47%	99.53%
Methylcyclohexane	3.91%	96.09%
Benzene	4.98%	95.02%
Toluene	7.88%	92.12%
Xylenes	12.88%	87.12%
C8+ Heavies	11.90%	88.10%

STREAM REPORTS:

WET GAS STREAM

Temperature: 85.00 deg. F
Pressure: 374.70 psia
Flow Rate: 8.35e+005 scfh

Component	Conc. (vol%)	Loading (lb/hr)
Water	1.77e-001	7.02e+001
Carbon Dioxide	4.14e+000	4.01e+003
Nitrogen	4.10e-001	2.52e+002
Methane	9.43e+001	3.33e+004
Ethane	5.83e-001	3.86e+002
Propane	2.24e-001	2.17e+002
Isobutane	4.39e-002	5.62e+001
n-Butane	5.59e-002	7.15e+001
Isopentane	2.27e-002	3.60e+001
n-Pentane	1.31e-002	2.08e+001
Cyclopentane	2.00e-004	3.08e-001
n-Hexane	8.98e-004	1.70e+000
Cyclohexane	3.99e-004	7.40e-001
Other Hexanes	2.10e-003	3.98e+000
Heptanes	7.99e-004	1.76e+000
Methylcyclohexane	6.99e-004	1.51e+000
Benzene	2.00e-004	3.43e-001
Toluene	2.99e-004	6.07e-001
Xylenes	9.98e-005	2.33e-001
C8+ Heavies	6.99e-004	2.62e+000
Total Components	100.00	3.84e+004

DRY GAS STREAM

Temperature: 85.00 deg. F
 Pressure: 374.70 psia
 Flow Rate: 8.33e+005 scfh

Component	Conc. (vol%)	Loading (lb/hr)
-----	-----	-----
Water	8.13e-003	3.22e+000
Carbon Dioxide	4.14e+000	4.00e+003
Nitrogen	4.10e-001	2.52e+002
Methane	9.45e+001	3.33e+004
Ethane	5.83e-001	3.85e+002
Propane	2.24e-001	2.17e+002
Isobutane	4.39e-002	5.61e+001
n-Butane	5.59e-002	7.13e+001
Isopentane	2.26e-002	3.59e+001
n-Pentane	1.30e-002	2.07e+001
Cyclopentane	1.97e-004	3.03e-001
n-Hexane	8.93e-004	1.69e+000
Cyclohexane	3.86e-004	7.14e-001
Other Hexanes	2.09e-003	3.95e+000
Heptanes	7.86e-004	1.73e+000
Methylcyclohexane	6.69e-004	1.44e+000
Benzene	1.48e-004	2.54e-001
Toluene	1.85e-004	3.75e-001
Xylenes	3.70e-005	8.64e-002
C8+ Heavies	6.33e-004	2.37e+000
-----	-----	-----
Total Components	100.00	3.83e+004

LEAN GLYCOL STREAM

Temperature: 85.00 deg. F
 Flow Rate: 7.50e+000 gpm

Component	Conc. (wt%)	Loading (lb/hr)
-----	-----	-----
TEG	9.85e+001	4.16e+003
Water	1.50e+000	6.33e+001
Carbon Dioxide	2.42e-011	1.02e-009
Nitrogen	9.68e-014	4.09e-012
Methane	4.18e-018	1.77e-016
Ethane	2.66e-009	1.12e-007
Propane	2.65e-010	1.12e-008
Isobutane	8.08e-011	3.41e-009
n-Butane	1.16e-010	4.89e-009
Isopentane	1.37e-005	5.77e-004
n-Pentane	1.03e-005	4.37e-004
Cyclopentane	6.42e-007	2.71e-005
n-Hexane	1.63e-006	6.86e-005
Cyclohexane	1.98e-005	8.38e-004
Other Hexanes	5.62e-006	2.37e-004
Heptanes	3.63e-006	1.53e-004
Methylcyclohexane	6.55e-005	2.77e-003

Benzene	1.11e-004	4.69e-003
Toluene	4.71e-004	1.99e-002
Xylenes	5.15e-004	2.18e-002
C8+ Heavies	8.10e-004	3.42e-002

Total Components	100.00	4.22e+003

RICH GLYCOL AND PUMP GAS STREAM

Temperature: 85.00 deg. F
 Pressure: 374.70 psia
 Flow Rate: 7.76e+000 gpm
 NOTE: Stream has more than one phase.

Component	Conc. (wt%)	Loading (lb/hr)
-----	-----	-----
TEG	9.57e+001	4.16e+003
Water	3.00e+000	1.30e+002
Carbon Dioxide	3.35e-001	1.45e+001
Nitrogen	7.18e-003	3.12e-001
Methane	9.44e-001	4.10e+001
Ethane	1.50e-002	6.52e-001
Propane	1.17e-002	5.09e-001
Isobutane	4.00e-003	1.74e-001
n-Butane	6.30e-003	2.74e-001
Isopentane	3.54e-003	1.54e-001
n-Pentane	2.52e-003	1.10e-001
Cyclopentane	1.32e-004	5.75e-003
n-Hexane	3.58e-004	1.56e-002
Cyclohexane	6.20e-004	2.70e-002
Other Hexanes	6.44e-004	2.80e-002
Heptanes	7.48e-004	3.25e-002
Methylcyclohexane	1.63e-003	7.08e-002
Benzene	2.17e-003	9.42e-002
Toluene	5.81e-003	2.53e-001
Xylenes	3.88e-003	1.69e-001
C8+ Heavies	6.61e-003	2.87e-001
-----	-----	-----
Total Components	100.00	4.35e+003

REGENERATOR OVERHEADS STREAM

Temperature: 212.00 deg. F
 Pressure: 14.70 psia
 Flow Rate: 2.53e+003 scfh

Component	Conc. (vol%)	Loading (lb/hr)
-----	-----	-----
Water	5.58e+001	6.70e+001
Carbon Dioxide	4.95e+000	1.45e+001
Nitrogen	1.67e-001	3.12e-001
Methane	3.83e+001	4.10e+001

Ethane	3.25e-001	6.52e-001
Propane	1.73e-001	5.09e-001
Isobutane	4.49e-002	1.74e-001
n-Butane	7.06e-002	2.74e-001
Isopentane	3.19e-002	1.53e-001
n-Pentane	2.27e-002	1.09e-001
Cyclopentane	1.22e-003	5.72e-003
n-Hexane	2.69e-003	1.55e-002
Cyclohexane	4.65e-003	2.61e-002
Other Hexanes	4.83e-003	2.78e-002
Heptanes	4.84e-003	3.24e-002
Methylcyclohexane	1.04e-002	6.80e-002
Benzene	1.72e-002	8.95e-002
Toluene	3.78e-002	2.33e-001
Xylenes	2.08e-002	1.47e-001
C8+ Heavies	2.23e-002	2.53e-001
-----	-----	-----
Total Components	100.00	1.26e+002

Dehydrator Reboiler Exhaust Emissions Calculations

Unit Number: 18b, 19b, & 20b

Description: Dehydrator Reboiler (12 MMSCFD)

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

Fuel Consumption

1,208 scf/hr

900 Btu/scf

1.09 MMBtu/hr

8,760 hr/yr

9,524 MMBtu/yr

10.58 MMscf/yr

Hourly fuel consumption

Field gas heating value

Capacity

Annual operating time

Annual fuel consumption

Annual fuel consumption

Mfg. data (InFab)

Nominal heat content

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

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/day	Uncontrolled Emission Rates, pph tpy	
NOX	1.03	4.29E-02	1.88E-01
CO	0.78	3.25E-02	1.42E-01
VOC	0.23	9.58E-03	4.20E-02
SO2	0.02	8.33E-04	3.65E-03

NOX emission factor taken from August 1994 Enertek Letter

CO, TOC and SO2 emission factors taken from July 1998 InFab Letter

50% of TOC emissions are assumed to be VOC emissions, consistent with AP-42, Table 1.4-2

Uncontrolled Emission Rates (pph) = lb/day / 24 hr/day

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

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

Emission factors taken from AP-42, Table 1.4-2

Uncontrolled Emission Rates (pph) = lb/MMscf x (scf/hr / 1,000,000)

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

Exhaust Parameters

600 °F

199.62 cfm

0.83 ft

0.55 ft^2

6.1 fps

19.1 ft

Exhaust temperature

Stack flowrate

Stack diameter

Stack exit area

Stack velocity

Stack height

Mfg. data (Enertek & InFab)

fps x ft^2 x 60 sec/min

Mfg. data (InFab)

3.1416 x ((ft / 2) ^2)

Mfg. data (Enertek & InFab)

Mfg. data (InFab)

Dehydrator Reboiler Exhaust Emissions Calculations

Unit Number: 19d & 20d

Description: Dehydrator Reboiler (20 MMSCFD)

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

Fuel Consumption

1,648 scf/hr

900 Btu/scf

1.48 MMBtu/hr

8,760 hr/yr

12,993 MMBtu/yr

14.44 MMscf/yr

Hourly fuel consumption

Field gas heating value

Capacity

Annual operating time

Annual fuel consumption

Annual fuel consumption

Mfg. data (InFab)

Nominal heat content

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

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/day	Uncontrolled Emission Rates, pph tpy	
NOX	1.03	4.29E-02	1.88E-01
CO	1.07	4.46E-02	1.95E-01
VOC	0.31	1.29E-02	5.66E-02
SO2	0.02	8.33E-04	3.65E-03

NOX emission factor taken from August 1994 Enertek Letter

CO, TOC and SO2 emission factors taken from July 1998 InFab Letter

50% of TOC emissions are assumed to be VOC emissions, consistent with AP-42, Table 1.4-2

Uncontrolled Emission Rates (pph) = lb/day / 24 hr/day

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

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

Emission factors taken from AP-42, Table 1.4-2

Uncontrolled Emission Rates (pph) = lb/MMscf x (scf/hr / 1,000,000)

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

Exhaust Parameters

600 °F

199.62 cfm

0.83 ft

0.55 ft^2

6.1 fps

19.1 ft

Exhaust temperature

Stack flowrate

Stack diameter

Stack exit area

Stack velocity

Stack height

Mfg. data (Enertek & InFab)

fps x ft^2 x 60 sec/min

Mfg. data (InFab)

3.1416 x ((ft / 2) ^2)

Mfg. data (Enertek & InFab)

Mfg. data (InFab)

GRI-HAPCalc® 3.0
External Combustion Devices Report

Facility ID: DECKER JUNCTION
 Operation Type: COMPRESSOR STATION
 Facility Name: DECKER JUNCTION CDP
 User Name: Harvest Four Corners, LLC
 Units of Measure: U.S. STANDARD

Notes:

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

External Combustion Devices

Unit Name: REBOILER#1

Hours of Operation: 8,760 Yearly
 Heat Input: 1.10 MMBtu/hr
 Fuel Type: NATURAL GAS
 Device Type: BOILER
 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			
3-Methylchloranthrene	0.0000	0.0000000018 lb/MMBtu	EPA
7,12-Dimethylbenz(a)anthracene	0.0000	0.0000000157 lb/MMBtu	EPA
Formaldehyde	0.0017	0.0003522500 lb/MMBtu	GRI Field
Methanol	0.0021	0.0004333330 lb/MMBtu	GRI Field
Acetaldehyde	0.0014	0.0002909000 lb/MMBtu	GRI Field
1,3-Butadiene	0.0000	0.0000001830 lb/MMBtu	GRI Field
Benzene	0.0000	0.0000062550 lb/MMBtu	GRI Field
Toluene	0.0000	0.0000053870 lb/MMBtu	GRI Field
Ethylbenzene	0.0000	0.0000000720 lb/MMBtu	GRI Field
Xylenes(m,p,o)	0.0000	0.0000010610 lb/MMBtu	GRI Field
2,2,4-Trimethylpentane	0.0002	0.0000323000 lb/MMBtu	GRI Field
n-Hexane	0.0015	0.0003214790 lb/MMBtu	GRI Field
Phenol	0.0000	0.0000000950 lb/MMBtu	GRI Field
Naphthalene	0.0000	0.0000002950 lb/MMBtu	GRI Field
2-Methylnaphthalene	0.0000	0.0000000700 lb/MMBtu	GRI Field
Acenaphthylene	0.0000	0.0000000550 lb/MMBtu	GRI Field
Biphenyl	0.0000	0.0000011500 lb/MMBtu	GRI Field
Acenaphthene	0.0000	0.0000000800 lb/MMBtu	GRI Field
Fluorene	0.0000	0.0000000700 lb/MMBtu	GRI Field
Anthracene	0.0000	0.0000000750 lb/MMBtu	GRI Field
Phenanthrene	0.0000	0.0000000550 lb/MMBtu	GRI Field
Fluoranthene	0.0000	0.0000000800 lb/MMBtu	GRI Field
Pyrene	0.0000	0.0000000750 lb/MMBtu	GRI Field
Benz(a)anthracene	0.0000	0.0000000750 lb/MMBtu	GRI Field
Chrysene	0.0000	0.0000001000 lb/MMBtu	GRI Field
Benzo(a)pyrene	0.0000	0.0000000600 lb/MMBtu	GRI Field

Benzo(b)fluoranthene	0.0000	0.0000001350	lb/MMBtu	GRI Field
Benzo(k)fluoranthene	0.0000	0.0000004400	lb/MMBtu	GRI Field
Benzo(g,h,i)perylene	0.0000	0.0000001500	lb/MMBtu	GRI Field
Indeno(1,2,3-c,d)pyrene	0.0000	0.0000001000	lb/MMBtu	GRI Field
Dibenz(a,h)anthracene	0.0000	0.0000000950	lb/MMBtu	GRI Field
Lead	0.0000	0.0000004902	lb/MMBtu	EPA

Total	0.0069			
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Criteria Pollutants

VOC	0.0260	0.0053921569	lb/MMBtu	EPA
PM	0.0359	0.0074509804	lb/MMBtu	EPA
PM, Condensable	0.0269	0.0055882353	lb/MMBtu	EPA
PM, Filterable	0.0090	0.0018627451	lb/MMBtu	EPA
CO	0.1480	0.0307275000	lb/MMBtu	GRI Field
NMHC	0.0411	0.0085294118	lb/MMBtu	EPA
NOx	0.4252	0.0882553330	lb/MMBtu	GRI Field
SO2	0.0028	0.0005880000	lb/MMBtu	EPA

Other Pollutants

Dichlorobenzene	0.0000	0.0000011765	lb/MMBtu	EPA
Methane	0.0283	0.0058790650	lb/MMBtu	GRI Field
Acetylene	0.0257	0.0053314000	lb/MMBtu	GRI Field
Ethylene	0.0025	0.0005264000	lb/MMBtu	GRI Field
Ethane	0.0081	0.0016804650	lb/MMBtu	GRI Field
Propylene	0.0045	0.0009333330	lb/MMBtu	GRI Field
Propane	0.0058	0.0012019050	lb/MMBtu	GRI Field
Butane	0.0067	0.0013866350	lb/MMBtu	GRI Field
Cyclopentane	0.0002	0.0000405000	lb/MMBtu	GRI Field
Pentane	0.0100	0.0020656400	lb/MMBtu	GRI Field
n-Pentane	0.0096	0.0020000000	lb/MMBtu	GRI Field
Cyclohexane	0.0002	0.0000451000	lb/MMBtu	GRI Field
Methylcyclohexane	0.0008	0.0001691000	lb/MMBtu	GRI Field
n-Octane	0.0002	0.0000506000	lb/MMBtu	GRI Field
n-Nonane	0.0000	0.0000050000	lb/MMBtu	GRI Field
CO2	566.8235	117.6470588235	lb/MMBtu	EPA

Unit Name: REBOILER#2

Hours of Operation: 8,760 Yearly
Heat Input: 1.50 MMBtu/hr
Fuel Type: NATURAL GAS
Device Type: BOILER
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			
3-Methylchloranthrene	0.0000	0.0000000018	lb/MMBtu EPA
7,12-Dimethylbenz(a)anthracene	0.0000	0.0000000157	lb/MMBtu EPA
Formaldehyde	0.0023	0.0003522500	lb/MMBtu GRI Field
Methanol	0.0028	0.0004333330	lb/MMBtu GRI Field

Acetaldehyde	0.0019	0.0002909000	lb/MMBtu	GRI Field
1,3-Butadiene	0.0000	0.0000001830	lb/MMBtu	GRI Field
Benzene	0.0000	0.0000062550	lb/MMBtu	GRI Field
Toluene	0.0000	0.0000053870	lb/MMBtu	GRI Field
Ethylbenzene	0.0000	0.0000000720	lb/MMBtu	GRI Field
Xylenes(m,p,o)	0.0000	0.0000010610	lb/MMBtu	GRI Field
2,2,4-Trimethylpentane	0.0002	0.0000323000	lb/MMBtu	GRI Field
n-Hexane	0.0021	0.0003214790	lb/MMBtu	GRI Field
Phenol	0.0000	0.0000000950	lb/MMBtu	GRI Field
Naphthalene	0.0000	0.0000002950	lb/MMBtu	GRI Field
2-Methylnaphthalene	0.0000	0.0000000700	lb/MMBtu	GRI Field
Acenaphthylene	0.0000	0.0000000550	lb/MMBtu	GRI Field
Biphenyl	0.0000	0.0000011500	lb/MMBtu	GRI Field
Acenaphthene	0.0000	0.0000000800	lb/MMBtu	GRI Field
Fluorene	0.0000	0.0000000700	lb/MMBtu	GRI Field
Anthracene	0.0000	0.0000000750	lb/MMBtu	GRI Field
Phenanthrene	0.0000	0.0000000550	lb/MMBtu	GRI Field
Fluoranthene	0.0000	0.0000000800	lb/MMBtu	GRI Field
Pyrene	0.0000	0.0000000750	lb/MMBtu	GRI Field
Benz(a)anthracene	0.0000	0.0000000750	lb/MMBtu	GRI Field
Chrysene	0.0000	0.0000001000	lb/MMBtu	GRI Field
Benzo(a)pyrene	0.0000	0.0000000600	lb/MMBtu	GRI Field
Benzo(b)fluoranthene	0.0000	0.0000001350	lb/MMBtu	GRI Field
Benzo(k)fluoranthene	0.0000	0.0000004400	lb/MMBtu	GRI Field
Benzo(g,h,i)perylene	0.0000	0.0000001500	lb/MMBtu	GRI Field
Indeno(1,2,3-c,d)pyrene	0.0000	0.0000001000	lb/MMBtu	GRI Field
Dibenz(a,h)anthracene	0.0000	0.0000000950	lb/MMBtu	GRI Field
Lead	0.0000	0.0000004902	lb/MMBtu	EPA

Total	0.0093			
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Criteria Pollutants

VOC	0.0354	0.0053921569	lb/MMBtu	EPA
PM	0.0490	0.0074509804	lb/MMBtu	EPA
PM, Condensable	0.0367	0.0055882353	lb/MMBtu	EPA
PM, Filterable	0.0122	0.0018627451	lb/MMBtu	EPA
CO	0.2019	0.0307275000	lb/MMBtu	GRI Field
NMHC	0.0560	0.0085294118	lb/MMBtu	EPA
NOx	0.5798	0.0882553330	lb/MMBtu	GRI Field
SO2	0.0039	0.0005880000	lb/MMBtu	EPA

Other Pollutants

Dichlorobenzene	0.0000	0.0000011765	lb/MMBtu	EPA
Methane	0.0386	0.0058790650	lb/MMBtu	GRI Field
Acetylene	0.0350	0.0053314000	lb/MMBtu	GRI Field
Ethylene	0.0035	0.0005264000	lb/MMBtu	GRI Field
Ethane	0.0110	0.0016804650	lb/MMBtu	GRI Field
Propylene	0.0061	0.0009333330	lb/MMBtu	GRI Field
Propane	0.0079	0.0012019050	lb/MMBtu	GRI Field
Butane	0.0091	0.0013866350	lb/MMBtu	GRI Field
Cyclopentane	0.0003	0.0000405000	lb/MMBtu	GRI Field
Pentane	0.0136	0.0020656400	lb/MMBtu	GRI Field
n-Pentane	0.0131	0.0020000000	lb/MMBtu	GRI Field
Cyclohexane	0.0003	0.0000451000	lb/MMBtu	GRI Field
Methylcyclohexane	0.0011	0.0001691000	lb/MMBtu	GRI Field

n-Octane	0.0003	0.0000506000	lb/MMBtu	GRI Field
n-Nonane	0.0000	0.0000050000	lb/MMBtu	GRI Field
CO2	772.9412	117.6470588235	lb/MMBtu	EPA

Compressor Blowdown Emissions Calculations

Unit Number: **SSM/M**

Description: Compressor & Piping Associated With Station

Throughput

5 # of units
418 events/yr/unit
6,442 scf/event
 13,463,780 scf/yr

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

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

Emission Rates

Pollutants	Emission Factors, lb/scf	Uncontrolled, Emission Rates, tpy
VOC	2.050E-03	13.80
Benzene	3.706E-06	2.49E-02
Ethylbenzene	5.597E-07	3.77E-03
n-Hexane	2.998E-05	2.02E-01
Isooctane	1.849E-06	1.24E-02
Toluene	1.044E-05	7.03E-02
Xylene	6.716E-06	4.52E-02

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	13.9188	44.01	1.615E-02
Hydrogen sulfide	0.0000	34.07	0.000E+00
Nitrogen	0.2587	28.01	1.910E-04
Methane	81.6613	16.04	3.452E-02
Ethane	2.6833	30.07	2.127E-03
Propane	0.9264	44.09	1.077E-03
Isobutane	0.1584	58.12	2.427E-04
n-Butane	0.1802	58.12	2.760E-04
Isopentane	0.0703	72.15	1.337E-04
n-Pentane	0.0493	72.15	9.375E-05
Cyclopentane	0.0019	70.14	3.513E-06
n-Hexane	0.0132	86.17	2.998E-05
Cyclohexane	0.0040	84.16	8.873E-06
Other hexanes	0.0296	86.18	6.724E-05
Heptanes	0.0123	100.20	3.248E-05
Methylcyclohexane	0.0119	98.19	3.080E-05
Isooctane	0.0007	100.21	1.849E-06
Benzene	0.0018	78.11	3.706E-06
Toluene	0.0043	92.14	1.044E-05
Ethylbenzene	0.0002	106.17	5.597E-07
Xylenes	0.0024	106.17	6.716E-06
C8+ Heavies	0.0109	110.00	3.160E-05
Total	99.9999		
Total VOC			2.050E-03

Gas stream composition obtained from **Decker Junction CDP** extended gas analysis dated **9/27/2024**

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 Emission Rates,	
				pph	tpy
Valves	558	0.0045	0.0099	5.52	24.20
Connectors	551	0.0002	0.0004	0.24	1.06
Pump Seals	6	0.0024	0.0053	0.03	0.14
Compressor Seals	44	0.0088	0.0194	0.85	3.73
Pressure Relief Valves	46	0.0088	0.0194	0.89	3.90
Open-Ended Lines	160	0.0020	0.0044	0.70	3.08
Total				8.24	36.11

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 %	Uncontrolled Emission Rates,	
					pph	tpy
Carbon dioxide	13.9188	44.010	6.126	29.331	2.42E+00	1.06E+01
Hydrogen sulfide	0.0000	34.070	0.000	0.000	0.00E+00	0.00E+00
Nitrogen	0.2587	28.013	0.072	0.347	2.86E-02	1.25E-01
Methane	81.6613	16.043	13.101	62.730	5.17E+00	2.27E+01
Ethane	2.6833	30.070	0.807	3.863	3.19E-01	1.40E+00
Propane	0.9264	44.097	0.409	1.956	1.61E-01	7.06E-01
Isobutane	0.1584	58.123	0.092	0.441	3.63E-02	1.59E-01
n-Butane	0.1802	58.123	0.105	0.502	4.13E-02	1.81E-01
Isopentane	0.0703	72.150	0.051	0.243	2.00E-02	8.77E-02
n-Pentane	0.0493	72.150	0.036	0.170	1.40E-02	6.15E-02
Cyclopentane	0.0019	70.134	0.001	0.006	5.26E-04	2.30E-03
n-Hexane	0.0132	86.177	0.011	0.054	4.49E-03	1.97E-02
Cyclohexane	0.0040	84.161	0.003	0.016	1.33E-03	5.82E-03
Other hexanes	0.0296	86.177	0.026	0.122	1.01E-02	4.41E-02
Heptanes	0.0123	100.204	0.012	0.059	4.87E-03	2.13E-02
Methylcyclohexane	0.0119	98.188	0.012	0.056	4.61E-03	2.02E-02
Isooctane	0.0007	114.231	0.001	0.004	3.16E-04	1.38E-03
Benzene	0.0018	78.114	0.001	0.007	5.55E-04	2.43E-03
Toluene	0.0043	92.141	0.004	0.019	1.56E-03	6.85E-03
Ethylbenzene	0.0002	106.167	0.000	0.001	8.38E-05	3.67E-04
Xylenes	0.0024	106.167	0.003	0.012	1.01E-03	4.41E-03
C8+ Heavies	0.0109	114.231	0.012	0.060	4.92E-03	2.15E-02
Total	99.9999		20.885			
Total VOC				3.728	3.07E-01	1.35

Gas stream composition obtained from **Decker Junction CDP** extended gas analysis dated **9/27/2024**

Component Weights (lb/lb-mole) = (% / 100) * Molecular Weights (lb/lb-mole)

Weight Percent (%) = 100 x Component Weights (lb/lb-mole) / Total Component Weight (lb/lb-mole)

Uncontrolled Emission Rates (pph) = Total Uncontrolled Emission Rate (from Table 1 above) (pph) x (% / 100)

Uncontrolled Emission Rates (tpy) = Total Uncontrolled Emission Rate (from Table 1 above) (tpy) x (% / 100)

Equipment Leaks Emissions Calculations

Unit Number: **F1**

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

Component Count

Number of Compressors at the Facility: **5**Number of Dehydrators at the Facility: **3**

Process Equipment Description	Equipment Count						Instrument Count		
	Valves	Connectors	Pump Seals	Compressor Seals	Pressure Relief Valves	Open-End	Flow	Level	Pressure
Station inlet, meter run to pulsation dampener	17	14	0	0	1	13	3	0	3
Pulsation dampener	12	8	0	0	0	2	0	4	1
Compressor suction header	7	4	0	0	0	3	0	0	1
Suction header feed to instrument gas header	3	1	0	0	0	1	0	0	0
Compressor discharge header and bypass to station discharge	6	5	0	0	0	3	0	1	1
Compressor discharge header and suction header bypass lines	4	2	0	0	0	2	0	0	1
Fuel gas header	2	2	0	0	1	2	0	0	1
Instrument gas header	2	2	0	0	1	2	0	0	0
Station discharge header	9	5	0	0	1	6	0	0	2
Fuel gas recovery header	2	2	0	0	1	2	0	0	0
Fuel gas feed and filter loop	15	9	0	0	0	1	0	4	1
Instrument gas feed and filter loop	9	11	0	0	0	3	0	0	0
Produced water storage tank	1	0	0	0	0	1	0	1	0
ESD panel	12	0	0	0	0	0	0	0	0
Starting gas header	6	2	0	0	1	3	0	0	0
Hot gas header	2	2	0	0	0	2	0	0	0
Volume bottle lop	12	4	0	24	1	2	0	0	1
Components from Compressors	220	295	0	20	30	55	0	20	45
Components from dehydrators	18	30	6	0	9	18	0	9	12
Total	359	398	6	44	46	121	3	39	69
Adjusted Total	558	551	6	44	46	160			

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 the evaluation of a comparable facility (Sim Mesa Central Delivery Point)

Pneumatic Pump Emissions Calculations

Unit Number: **PP1-PP4**
 Description: Pneumatic Pumps

Throughput

17,162,278 scf/yr

Annual gas loss

Harvest Four Corners, LLC

Emission Rates

Pollutants	Emission Factors, lb/scf	Uncontrolled, Emission Rates, tpy
VOC	2.050E-03	17.60
Benzene	3.706E-06	3.18E-02
Ethylbenzene	5.597E-07	4.80E-03
n-Hexane	2.998E-05	2.57E-01
Isooctane	1.849E-06	1.59E-02
Toluene	1.044E-05	8.96E-02
Xylene	6.716E-06	5.76E-02

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	13.9188	44.01	1.615E-02
Hydrogen sulfide	0.0000	34.07	0.000E+00
Nitrogen	0.2587	28.01	1.910E-04
Methane	81.6613	16.04	3.452E-02
Ethane	2.6833	30.07	2.127E-03
Propane	0.9264	44.09	1.077E-03
Isobutane	0.1584	58.12	2.427E-04
n-Butane	0.1802	58.12	2.760E-04
Isopentane	0.0703	72.15	1.337E-04
n-Pentane	0.0493	72.15	9.375E-05
Cyclopentane	0.0019	70.14	3.513E-06
n-Hexane	0.0132	86.17	2.998E-05
Cyclohexane	0.0040	84.16	8.873E-06
Other hexanes	0.0296	86.18	6.724E-05
Heptanes	0.0123	100.20	3.248E-05
Methylcyclohexane	0.0119	98.19	3.080E-05
Isooctane	0.0007	100.21	1.849E-06
Benzene	0.0018	78.11	3.706E-06
Toluene	0.0043	92.14	1.044E-05
Ethylbenzene	0.0002	106.17	5.597E-07
Xylenes	0.0024	106.17	6.716E-06
C8+ Heavies	0.0109	110.00	3.160E-05
Total	99.9999		
Total VOC			2.050E-03

Gas stream composition obtained from **Decker Junction CDP** extended gas analysis dated **9/27/2024**

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

Storage Tank Emissions Calculations

Unit Number: **T46 & T52**

Description: Produced Water Storage Tank

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

Throughput

300 bbl/turnover**15** turnover/yr

4,500 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	5.90E-01
Benzene	0.007	1.58E-02
Ethylbenzene	0.0007	1.58E-03
n-Hexane	0.022	4.95E-02
Toluene	0.009	2.03E-02
Xylene	0.006	1.35E-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

Pneumatic Controller Emissions Calculations

Unit Number: **PC1-PC14**

Description: Pneumatic Controllers (Exempt Sources)

Throughput

201,442 scf/yr

Annual gas loss

Harvest Four Corners, LLC

Emission Rates

Pollutants	Emission Factors, lb/scf	Uncontrolled, Emission Rates, tpy
VOC	2.050E-03	2.07E-01
Benzene	3.706E-06	3.73E-04
Ethylbenzene	5.597E-07	5.64E-05
n-Hexane	2.998E-05	3.02E-03
Isooctane	1.849E-06	1.86E-04
Toluene	1.044E-05	1.05E-03
Xylene	6.716E-06	6.76E-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	13.9188	44.01	1.615E-02
Hydrogen sulfide	0.0000	34.07	0.000E+00
Nitrogen	0.2587	28.01	1.910E-04
Methane	81.6613	16.04	3.452E-02
Ethane	2.6833	30.07	2.127E-03
Propane	0.9264	44.09	1.077E-03
Isobutane	0.1584	58.12	2.427E-04
n-Butane	0.1802	58.12	2.760E-04
Isopentane	0.0703	72.15	1.337E-04
n-Pentane	0.0493	72.15	9.375E-05
Cyclopentane	0.0019	70.14	3.513E-06
n-Hexane	0.0132	86.17	2.998E-05
Cyclohexane	0.0040	84.16	8.873E-06
Other hexanes	0.0296	86.18	6.724E-05
Heptanes	0.0123	100.20	3.248E-05
Methylcyclohexane	0.0119	98.19	3.080E-05
Isooctane	0.0007	100.21	1.849E-06
Benzene	0.0018	78.11	3.706E-06
Toluene	0.0043	92.14	1.044E-05
Ethylbenzene	0.0002	106.17	5.597E-07
Xylenes	0.0024	106.17	6.716E-06
C8+ Heavies	0.0109	110.00	3.160E-05
Total	99.9999		
Total VOC			2.050E-03

Gas stream composition obtained from **Decker Junction CDP** extended gas analysis dated **9/27/2024**

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

Truck Loading (Produced Water) Emissions Calculations

Unit Number: L1
Description: Truck Loading (Exempt Source)

Emission Factor

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

Production Rate

8.40 10 ³ gal/hr	Maximum hourly production rate	Harvest Four Corners, LLC
1,050.00 10 ³ gal/yr	Maximum annual production rate	Harvest Four Corners, LLC

Steady-State Emission Rates

Pollutant	Uncontrolled Emission Rates,	
	pph	tpy
VOC	9.66E-01	4.11E-02

The short-term emission rates are calculated using the maximum true vapor pressure and maximum temperature of the liquid
The annual emission rates are calculated using the average true vapor pressure and average temperature of the liquid
Uncontrolled Emission Rate (pph) = lb/10³ gal x 10³ gal/hr
Uncontrolled 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	2.58E-04	1.10E-05
Ethylbenzene	0.0027	2.58E-05	1.10E-06
n-Hexane	0.0840	8.11E-04	3.45E-05
Toluene	0.0344	3.32E-04	1.41E-05
m-Xylene	0.0229	2.21E-04	9.40E-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

Truck Loading (Produced Water) Emissions Calculations

Unit Number: L1
Description: Truck Loading (Exempt Source)

Vapor Pressure of Produced Water:

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

Maximum:

Temperature = 77 °F

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

A = 8.07131

B = 1730.63

C = 233.426

T = 25.00 °C

P = mmHg

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

P = 23.69 mmHg

P = 0.4581 psi

Average:

Temperature = 65 °F

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

A = 8.07131

B = 1730.63

C = 233.426

T = 18.33 °C

P = mmHg

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

P = 15.75 mmHg

P = 0.3045 psi

Note: 760 mmHg = 14.7 psia

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

Identification

User Identification:	Decker Junction T-51 (Corrosion Inhibitor)
City:	Bloomfield
State:	New Mexico
Company:	Williams Four Corners LLC
Type of Tank:	Horizontal Tank
Description:	170 Gallon Corrosion Inhibitor Tank

Tank Dimensions

Shell Length (ft):	5.00
Diameter (ft):	3.00
Volume (gallons):	170.00
Turnovers:	12.00
Net Throughput(gal/yr):	2,040.00
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**

Decker Junction T-51 (Corrosion Inhibitor) - 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.					
Corrosion Inhibitor	All	64.94	53.24	76.64	58.39	1.2076	0.8487	1.6762	41.4257			68.87	
1,2,3-Trimethylbenzene									120.2000	0.0450	0.0000	120.20	
1,2,4-Trimethylbenzene						0.0248	0.0155	0.0388	120.1900	0.2700	0.0092	120.19	Option 2: A=7.04383, B=1573.267, C=208.56
1,3,5-Trimethylbenzene									120.2000	0.0900	0.0000	120.20	
1-Dodecanethiol									202.4100	0.0100	0.0000	202.41	
Jet naphtha (JP-4)						1.4482	1.0972	1.7992	80.0000	0.2700	0.3589	120.00	Option 1: VP60 = 1.3 VP70 = 1.6
Methyl alcohol						1.6820	1.1617	2.3895	32.0400	0.2700	0.6252	32.04	Option 2: A=7.897, B=1474.08, C=229.13
Xylene (-m)						0.1073	0.0710	0.1586	106.1700	0.0450	0.0066	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)

Decker Junction T-51 (Corrosion Inhibitor) - Horizontal Tank Bloomfield, New Mexico

Annual Emission Calculations

Standing Losses (lb):	10.6147
Vapor Space Volume (cu ft):	22.5114
Vapor Density (lb/cu ft):	0.0089
Vapor Space Expansion Factor:	0.1593
Vented Vapor Saturation Factor:	0.9124

Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	22.5114
Tank Diameter (ft):	3.0000
Effective Diameter (ft):	4.3713
Vapor Space Outage (ft):	1.5000
Tank Shell Length (ft):	5.0000

Vapor Density	
Vapor Density (lb/cu ft):	0.0089
Vapor Molecular Weight (lb/lb-mole):	41.4257
Vapor Pressure at Daily Average Liquid	
Surface Temperature (psia):	1.2076
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
Daily Total Solar Insulation	
Factor (Btu/sqft day):	1,765.3167

Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.1593
Daily Vapor Temperature Range (deg. R):	46.7976
Daily Vapor Pressure Range (psia):	0.8275
Breather Vent Press. Setting Range (psia):	0.0600
Vapor Pressure at Daily Average Liquid	
Surface Temperature (psia):	1.2076
Vapor Pressure at Daily Minimum Liquid	
Surface Temperature (psia):	0.8487
Vapor Pressure at Daily Maximum Liquid	
Surface Temperature (psia):	1.6762
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:	0.9124
Vapor Pressure at Daily Average Liquid:	
Surface Temperature (psia):	1.2076
Vapor Space Outage (ft):	1.5000

Working Losses (lb):	2.4297
Vapor Molecular Weight (lb/lb-mole):	41.4257
Vapor Pressure at Daily Average Liquid	
Surface Temperature (psia):	1.2076
Annual Net Throughput (gal/yr.):	2,040.0000

Annual Turnovers:	12.0000
Turnover Factor:	1.0000
Tank Diameter (ft):	3.0000
Working Loss Product Factor:	1.0000

Total Losses (lb):	13.0445
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TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

Decker Junction T-51 (Corrosion Inhibitor) - Horizontal Tank
Bloomfield, New Mexico

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Corrosion Inhibitor	2.43	10.61	13.04
1-Dodecanethiol	0.00	0.00	0.00
Jet naphtha (JP-4)	0.87	3.81	4.68
1,2,4-Trimethylbenzene	0.02	0.10	0.12
1,2,3-Trimethylbenzene	0.00	0.00	0.00
1,3,5-Trimethylbenzene	0.00	0.00	0.00
Xylene (-m)	0.02	0.07	0.09
Methyl alcohol	1.52	6.64	8.16

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 1-3, 6, 7, 18b, 19b, 19d, 20b & 20d) were calculated using emission factors from the 40 Code of Federal Regulations (CFR), Part C, Tables C-1 & C-2 and the reciprocating engine and reboiler higher heating value (HHV) design heat rates.

The GHG emissions from blowdowns of the compressors and piping (Units SSM/M) were 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 was determined by HFC engineering. The composition of the gas was determined from an extended gas analysis. For each unit, the annual number of blowdown events was estimated based on historical operations. A safety factor was 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 reciprocating compressor venting (blowdown valve leakage, oil degassing vents, and isolation valve leakage) were calculated in accordance with the applicable Subpart W methodology. The facility CO₂ and CH₄ contents were taken from an extended gas analysis. Since the combined blowdown valve leakage and oil degassing vent emissions (when the compressors are in operation) were greater than the isolation valve leakage (when the compressors are not in operation), potential emissions were calculated assuming the compressors operate 8,760 hours per year (in other words, isolation valve leakage occurs 0 hours per year).

GHG emissions from the dehydrators were calculated using GRI-GLYCalc 4.0.

GHG emissions from valves, connectors, open-ended lines and pressure relief valves (Unit F1) were calculated using the Subpart W methodology applicable to these source types. The component count was 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 were obtained from Table W-1A of Subpart W (Western U.S. – Gas Service). The facility CO₂ and CH₄ contents were taken from an extended gas analysis. Emissions were calculated assuming the equipment operates 8,760 hours per year.

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

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	30,052.26	5.66E-01	5.66E-02	30,052.89	30,083.30
SSM Blowdowns	108.69	232.41	--	341.10	5,919.01
Reciprocating Compressor Venting	123.96	265.48	--	389.44	6,760.89
Dehydrators (Total ¹)	89.09	252.32	--	341.41	6,397.02
Dehydrators (Total ²)	122.90	347.88	--	470.79	8,819.98
Dehydrators (Total ³)	156.72	443.45	--	600.17	11,242.93
Reboiler Exhaust (Total ¹)	1,852.90	3.49E-02	3.49E-03	1,852.94	1,854.81
Reboiler Exhaust (Total ²)	2,077.87	3.92E-02	3.92E-03	2,077.91	2,080.01
Reboiler Exhaust (Total ³)	2,302.83	4.34E-02	4.34E-03	2,302.88	2,305.21
Equipment Leaks	6.41	13.74	--	20.15	349.80
Natural Gas Driven Pneumatic Pump Venting	3.76	8.04	--	11.80	204.70
Total ¹	32237.09	772.58	6.01E-02	33,009.73	51,569.55
Total ²	32495.87	868.15	6.06E-02	33,364.08	54,217.70
Total ³	32,754.64	963.72	6.10E-02	33,718.43	56,865.85

¹ Total facility worst-case emissions if Units 19a/b and 20a/b are installed and operated onsite (i.e., both units are 12 mmcf dehydrators).

² Total facility worst-case emissions if any combination including Unit 19a/b & 20c/d, or 19c/d & 20a/b (i.e., if one 12 mmcf and one 20 mmcf dehydrator) is installed and operated onsite.

³ Total facility worst-case emissions if Units 19c/d and 20c/d are installed and operated onsite (i.e., both units are 20 mmcf dehydrators).

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	Waukesha L7042GL	53.06	1.00E-03	1.00E-04	6,010.45	1.13E-01	1.13E-02
2	Waukesha L7042GL	53.06	1.00E-03	1.00E-04	6,010.45	1.13E-01	1.13E-02
3	Waukesha L7042GL	53.06	1.00E-03	1.00E-04	6,010.45	1.13E-01	1.13E-02
4	Waukesha L7042GL	53.06	1.00E-03	1.00E-04	6,010.45	1.13E-01	1.13E-02
5	Waukesha L7042GL	53.06	1.00E-03	1.00E-04	6,010.45	1.13E-01	1.13E-02
	Total				30,052.26	5.66E-01	5.66E-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	Waukesha L7042GL	Nat. Gas	8,760	10.58	11.76	102,979
2	Waukesha L7042GL	Nat. Gas	8,760	10.58	11.76	102,979
3	Waukesha L7042GL	Nat. Gas	8,760	10.58	11.76	102,979
4	Waukesha L7042GL	Nat. Gas	8,760	10.58	11.76	102,979
5	Waukesha L7042GL	Nat. Gas	8,760	10.58	11.76	102,979

The fuel types and operating times are provided by Harvest

The LHV design heat rates are taken from manufacturers data

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

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

Green House Gas Emissions Data and Calculations

SSM Blowdown Emissions

Unit Numbers	Description	Total Gas Losses, scf/yr	CO2 Emission Factors, lb/scf	CH4 Emission Factors, lb/scf	Emission Rates	
					CO2, tpy	CH4, tpy
SSM	SSM Blowdowns	13,463,780	0.0161	0.0345	108.69	232.41

The annual blowdown volumes are calculated from data provided by Harvest

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

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

Reciprocating Compressor Venting Emissions

Unit Numbers	Description	Emission Rates	
		CO2, tpy	CH4, tpy
NA	Blowdown Valve Leakage	11.84	25.36
NA	Rod Packing Emissions	112.12	240.12
NA	Isolation Valve Leakage	0.00E+00	0.00E+00
	Total	123.96	265.48

Operating or standby mode - includes blowdown valve leakage through blowdown vent stack

Operating mode - includes rod packing emissions

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

Rod packing gas emissions assume 4 cylinders per compressor

A combination of equations W-26 & W-36 (Subpart W) is used to calculate reciprocating compressor emissions

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

CO2 Emission Rates (tpy) = # x scf/hr x hr/yr x (CO2 Mole Percent (%) / 100) x CO2 Density (kg/scf)
x (2,204.6 lb/tonne / 2,000 lb/ton) / 1,000 kg/tonne

CH4 Emission Rates (tpy) = # x scf/hr x hr/yr x (CH4 Mole Percent (%) / 100) x CH4 Density (kg/scf)
x (2,204.6 lb/tonne / 2,000 lb/ton) / 1,000 kg/tonne

Unit Numbers	Description	Number of Compressors #	Gas Emissions, scf/hr	Operating Times, hr/yr	CO2 Mole Percents, %	CH4 Mole Percents, %	CO2 Density, kg/scf	CH4 Density, kg/scf
NA	Blowdown Valve Leakage	5	33.5	8,760	13.92	81.66	0.0526	0.0192
NA	Rod Packing Emissions	5	317.2	8,760	13.92	81.66	0.0526	0.0192
NA	Isolation Valve Leakage	5	10.5	0	13.92	81.66	0.0526	0.0192

The number of compressors is provided by Harvest

Blowdown valve leakage (33.5 scf/hr) and rod packing emissions occur in operating mode

Blowdown valve leakage (10.5 scf/hr) occurs in standby pressurized mode

Emission factors are the three year rolling average (2012-2014) of all measurements in the Williams Field Services, LLC compressor fleet located at natural gas processing plants

The operating times (the average operating times for all station compressors combined) are provided by Harvest

The facility CO2 and CH4 contents are taken from the facility extended gas analysis

The CO2 & CH4 densities (kg/scf) are taken from Subpart W, Paragraph 98.233(v)

Green House Gas Emissions Data and Calculations

Dehydrator Emissions

Unit Numbers	Description	Emission Rates	
		CO ₂ , tpy	CH ₄ , tpy
18a	Dehydrator (12 MMSCFD)	29.70	84.11
19a	Dehydrator (12 MMSCFD)	29.70	84.11
20a	Dehydrator (12 MMSCFD)	29.70	84.11
19c	Dehydrator (20 MMSCFD)	63.51	179.67
20c	Dehydrator (20 MMSCFD)	63.51	179.67
	Total ¹	89.09	252.32
	Total ²	122.90	347.88
	Total ³	156.72	443.45

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

¹ Total facility worst-case emissions if Units 19a/b and 20a/b are installed and operated onsite (i.e., both units are 12 mmcf dehydrators).

² Total facility worst-case emissions if any combination including Unit 19a/b & 20c/d, or 19c/d & 20a/b (i.e., if one 12 mmcf and one 20 mmcf dehydrator) is installed and operated onsite.

³ Total facility worst-case emissions if Units 19c/d and 20c/d are installed and operated onsite (i.e., both units are 20 mmcf dehydrators).

Reboiler 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
18b	Reboiler (12 MMSCFD)	53.06	1.00E-03	1.00E-04	617.63	1.16E-02	1.16E-03
19b	Reboiler (12 MMSCFD)	53.06	1.00E-03	1.00E-04	617.63	1.16E-02	1.16E-03
20b	Reboiler (12 MMSCFD)	53.06	1.00E-03	1.00E-04	617.63	1.16E-02	1.16E-03
19d	Reboiler (20 MMSCFD)	53.06	1.00E-03	1.00E-04	842.60	1.59E-02	1.59E-03
20d	Reboiler (20 MMSCFD)	53.06	1.00E-03	1.00E-04	842.60	1.59E-02	1.59E-03
	Total ¹				1,852.90	3.49E-02	3.49E-03
	Total ²				2,077.87	3.92E-02	3.92E-03
	Total ³				2,302.83	4.34E-02	4.34E-03

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

¹ Total facility worst-case emissions if Units 19a/b and 20a/b are installed and operated onsite (i.e., both units are 12 mmcf dehydrators).

² Total facility worst-case emissions if any combination including Unit 19a/b & 20c/d, or 19c/d & 20a/b (i.e., if one 12 mmcf and one 20 mmcf dehydrator) is installed and operated onsite.

³ Total facility worst-case emissions if Units 19c/d and 20c/d are installed and operated onsite (i.e., both units are 20 mmcf dehydrators).

Unit Numbers	Description	Fuel Types	Operating Times hr/yr	LHV			HHV	
				Fuel Usages, scf/hr	Fuel Heat Contents, Btu/scf	Fuel Usages, MMBtu/hr	Fuel Usages, MMBtu/hr	Fuel Usages, MMBtu/yr
18b	Reboiler (12 MMSCFD)	Nat. Gas	8,760	1,208	900	1.09	1.21	10,582
19b	Reboiler (12 MMSCFD)	Nat. Gas	8,760	1,208	900	1.09	1.21	10,582
20b	Reboiler (12 MMSCFD)	Nat. Gas	8,760	1,208	900	1.09	1.21	10,582
19d	Reboiler (20 MMSCFD)	Nat. Gas	8,760	1,648	900	1.48	1.65	14,436
20d	Reboiler (20 MMSCFD)	Nat. Gas	8,760	1,648	900	1.48	1.65	14,436

The fuel types and operating times are provided by Harvest

The LHV fuel usages (scf/hr) are taken from manufacturer's data

The LHV fuel heat contents are estimated based on the value typically used by manufacturers

LHV Fuel Usages (MMBtu/hr) = LHV Fuel Usages (scf/hr) x Btu/scf / 1,000,000 Btu/MMBtu

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

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

Green House Gas Emissions Data and Calculations

Equipment Leaks Emissions

Unit Numbers	Description	Emission Rates	
		CO ₂ , tpy	CH ₄ , tpy
NA	Valves	4.77	10.22
NA	Connectors	6.62E-01	1.42
NA	Open-Ended Lines	3.51E-01	7.51E-01
NA	Pressure Relief Valves	6.28E-01	1.34
	Total	6.41	13.74

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

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

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

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

Unit Numbers	Description	Number of Components, #	Emission Factors, scf/hr /component	CO ₂ Contents, mole %	CH ₄ Contents, mole %	Operating Times, hr/yr	CO ₂ Density, kg/scf	CH ₄ Density, kg/scf
NA	Valves	558	0.121	13.92	81.66	8,760	0.0526	0.0192
NA	Connectors	551	0.017	13.92	81.66	8,760	0.0526	0.0192
NA	Open-Ended Lines	160	0.031	13.92	81.66	8,760	0.0526	0.0192
NA	Pressure Relief Valves	46	0.193	13.92	81.66	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)

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	
					CO ₂ , tpy	CH ₄ , tpy
PP1-PP4	Pneumatic Pump Venting	4	13.3	8,760	3.76	8.04

The number of pumps is provided by Harvest

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

The operating time is provided by Harvest (default is the entire year)

Equation W-2 (Subpart W) is used to calculate CO₂ & CH₄ emissions

As the NMED requires CO₂ & CH₄ emissions in addition to CO₂e emissions, it is necessary to divide by the global warming potentials

CO₂ Emission Rate (tpy) = # x scf/hr/pump x (CO₂ Content (mole %) / 100) x CO₂ Conversion Factor (tonne CO₂e/scf) x hr/yr
x (2,204.6 lb/tonne / 2,000 lb/ton) / CO₂ Global Warming Potentials (tonne CO₂e/tonne CO₂)

CH₄ Emission Rate (tpy) = # x scf/hr/pump x (CH₄ Content (mole %) / 100) x CH₄ Conversion Factor (tonne CO₂e/scf) x hr/yr
x (2,204.6 lb/tonne / 2,000 lb/ton) / CH₄ Global Warming Potentials (tonne CO₂e/tonne CH₄)

Unit Number	Description	CO ₂ Content, mole %	CH ₄ Content, mole %	CO ₂ Conversion Factor, tonne CO ₂ e /scf	CH ₄ Conversion Factor, tonne CO ₂ e /scf	CO ₂ Global Warming Potential, tonne CO ₂ e /tonne CO ₂	CH ₄ Global Warming Potential, tonne CO ₂ e /tonne CH ₄
PP1-PP4	Pneumatic Pump Venting	13.92	81.66	5.262E-05	4.790E-04	1	25

The facility CO₂ and CH₄ contents are taken from the facility extended gas analysis

The conversion factors are taken from Subpart W, Paragraph 98.233(a)

The operating time is provided by Harvest (the default is the entire year)

The global warming potentials are taken from 40 CFR Part 98, Table A-1

Green House Gas Emissions Data and Calculations

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	13.9188	44.01	6.13	29.3355	0.0161
Hydrogen Sulfide	0.0000	34.07	0.00	0.0000	0.0000
Nitrogen	0.2587	28.01	0.07	0.3470	0.0002
Methane	81.6613	16.04	13.10	62.7279	0.0345
Ethane	2.6833	30.07	0.81	3.8641	0.0021
Propane	0.9264	44.09	0.41	1.9560	0.0011
IsoButane	0.1584	58.12	0.09	0.4409	0.0002
Normal Butane	0.1802	58.12	0.10	0.5016	0.0003
IsoPentane	0.0703	72.15	0.05	0.2429	0.0001
Normal Pentane	0.0493	72.15	0.04	0.1703	0.0001
Cyclopentane	0.0019	70.14	0.00	0.0064	0.0000
n-Hexane	0.0132	86.17	0.01	0.0545	0.0000
Cyclohexane	0.0040	84.16	0.00	0.0161	0.0000
Other Hexanes	0.0296	86.18	0.03	0.1222	0.0001
Heptanes	0.0123	100.20	0.01	0.0590	0.0000
Methylcyclohexane	0.0119	98.19	0.01	0.0560	0.0000
2,2,4-Trimethylpentane	0.0007	100.21	0.00	0.0034	0.0000
Benzene	0.0018	78.11	0.00	0.0067	0.0000
Toluene	0.0043	92.14	0.00	0.0190	0.0000
Ethylbenzene	0.0002	106.17	0.00	0.0010	0.0000
Xylenes	0.0024	106.17	0.00	0.0122	0.0000
C8+ heavies	0.0109	110.00	0.01	0.0574	0.0000
Total	99.9999		20.88	100.0000	0.0550
VOC			0.78	--	0.0021

Gas stream composition obtained from **Decker Junction CDP** extended gas analysis dated **9/27/2024**

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

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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.
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Please see the following pages.

STANDARD EQUIPMENT

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

BARRING DEVICE – Manual.

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

BEARINGS – Heavy duty, replaceable, precision type.

BREATHER – Self regulating, closed system.

CONNECTING RODS – Drop forged steel, rifle drilled.

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

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

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

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

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

ENGINE ROTATION – Counterclockwise when facing flywheel.

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

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

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

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

FLYWHEEL HOUSING – No. 00 SAE.

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

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

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

INTERCOOLER – Air-to-water.

LEVELING BOLTS

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

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

MANIFOLDS – Exhaust, (2) water cooled.

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

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

PAINT – Oilfield orange primer.

PISTONS – Aluminum with floating pin. Oil cooled.

SHIPPING SKID – For domestic truck or rail.

TURBOCHARGERS – Two, dry type. Wastegate controlled.

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

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

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

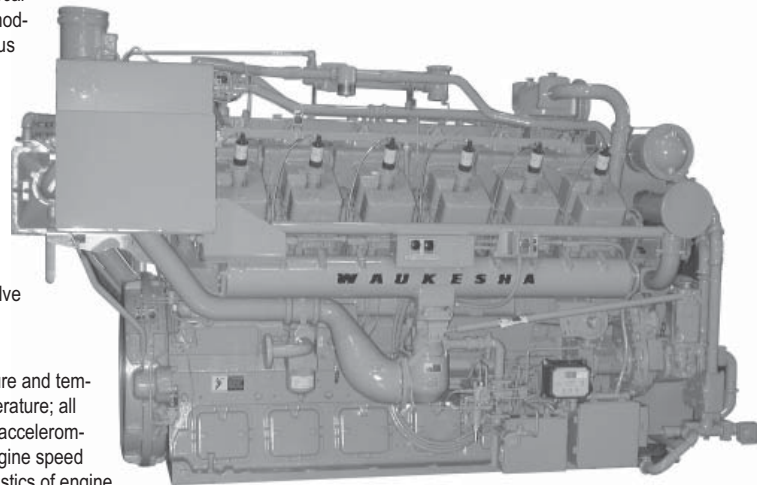


Waukesha

POWERING PERFORMANCE

L7042GL

VHP® Gas Engine
886 - 1547 BHP



Engine shown without Extender Series Features.

Model L7042GL with ESM®

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

SPECIFICATIONS

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



POWER RATINGS: L7042GL VHP® GAS ENGINES

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

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

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

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

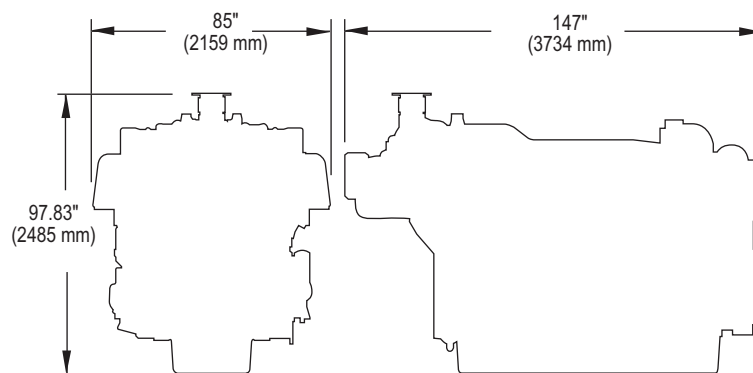
For conditions or fuels other than standard, contact the Waukesha Engine Sales Engineering Department.

PERFORMANCE: L7042GL VHP® GAS ENGINES

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

NOTES:

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



Waukesha

**WAUKESHA ENGINE
DRESSER, INC.**

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

Bulletin 7005 0107

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

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

Pollutant	Emission Factor (lb/MMBtu) ^b (fuel input)	Emission Factor Rating
Criteria Pollutants and Greenhouse Gases		
NO _x ^c 90 - 105% Load	4.08 E+00	B
NO _x ^c <90% Load	8.47 E-01	B
CO ^c 90 - 105% Load	3.17 E-01	C
CO ^c <90% Load	5.57 E-01	B
CO ₂ ^d	1.10 E+02	A
SO ₂ ^e	5.88 E-04	A
TOC ^f	1.47 E+00	A
Methane ^g	1.25 E+00	C
VOC ^h	1.18 E-01	C
PM10 (filterable) ⁱ	7.71 E-05	D
PM2.5 (filterable) ⁱ	7.71 E-05	D
PM Condensable ^j	9.91 E-03	D
Trace Organic Compounds		
1,1,2,2-Tetrachloroethane ^k	<4.00 E-05	E
1,1,2-Trichloroethane ^k	<3.18 E-05	E
1,1-Dichloroethane	<2.36 E-05	E
1,2,3-Trimethylbenzene	2.30 E-05	D
1,2,4-Trimethylbenzene	1.43 E-05	C
1,2-Dichloroethane	<2.36 E-05	E
1,2-Dichloropropane	<2.69 E-05	E
1,3,5-Trimethylbenzene	3.38 E-05	D
1,3-Butadiene ^k	2.67E-04	D
1,3-Dichloropropene ^k	<2.64 E-05	E
2-Methylnaphthalene ^k	3.32 E-05	C
2,2,4-Trimethylpentane ^k	2.50 E-04	C
Acenaphthene ^k	1.25 E-06	C

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)

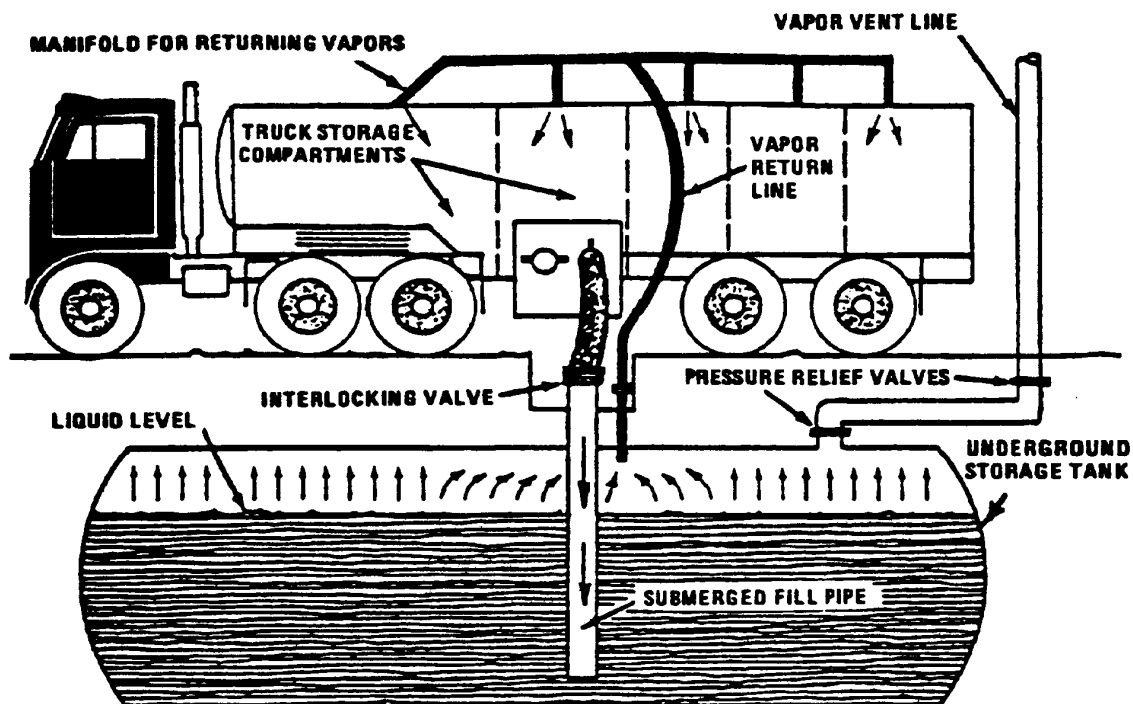


Figure 5.2-5. Tank truck unloading into a service station underground storage tank and practicing "vapor balance" form of emission control.

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.

The saturation factor, S, represents the expelled vapor's fractional approach to saturation, and it accounts for the variations observed in emission rates from the different unloading and loading methods. Table 5.2-1 lists suggested saturation factors.

Emissions from controlled loading operations can be calculated by multiplying the uncontrolled emission rate calculated in Equation 1 by an overall reduction efficiency term:

$$\left(1 - \frac{\text{eff}}{100} \right)$$

The overall reduction efficiency should account for the capture efficiency of the collection system as well as both the control efficiency and any downtime of the control device. Measures to reduce loading emissions include selection of alternate loading methods and application of vapor recovery equipment. The latter captures organic vapors displaced during loading operations and recovers the vapors by the use of refrigeration, absorption, adsorption, and/or compression. The recovered product is piped back to storage. Vapors can also be controlled through combustion in a thermal oxidation unit, with no product recovery. Figure 5.2-6 demonstrates the recovery of gasoline vapors from tank trucks during loading operations at bulk terminals. Control efficiencies for the recovery units range from 90 to over 99 percent, depending on both the nature of the vapors and the type of control equipment used.⁵⁻⁶ However, not all of the displaced vapors reach the control device, because of leakage from both the tank truck and collection system. The collection efficiency should be assumed to be 99.2 percent for tanker trucks passing the MACT-level annual leak test (not more than 1 inch water column pressure change in 5 minutes after pressurizing to 18 inches water followed by pulling a vacuum of 6 inches water).⁷ A collection efficiency of 98.7 percent (a 1.3 percent leakage rate) should be assumed for trucks passing the NSPS-level annual test (3 inches pressure change). A collection efficiency of 70 percent should be assumed for trucks not passing one of these annual leak tests⁶.

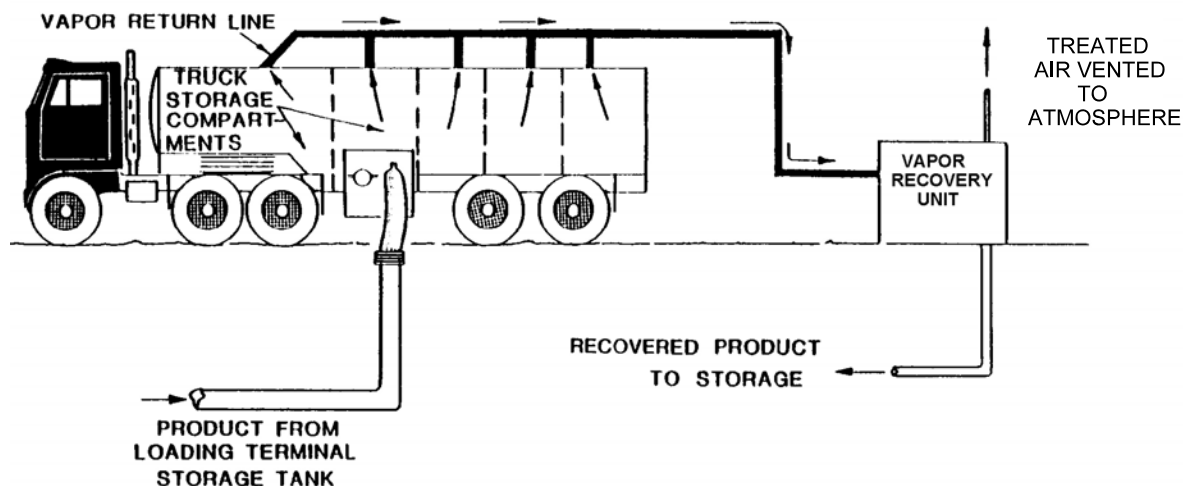


Figure 5.2-6. Tank truck loading with vapor recovery.



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

Analysis No: HM20240077
Cust No: 33700-12150

Well/Lease Information

Customer Name: HARVEST MIDSTREAM
Well Name: Decker CDP Inlet
County/State:
Location:
Lease/PA/CA:
Formation:
Cust. Stn. No.:

Source: Suction
Well Flowing: Y
Pressure: 95 PSIG
Flow Temp: 84 DEG. F
Ambient Temp: 8 DEG. F
Flow Rate: 6.8 MCF/D
Sample Method: Purge & Fill
Sample Date: 09/27/2024
Sample Time: 12.45 PM
Sampled By: Rocky Mcpherson
Sampled by (CO):

Heat Trace:

Remarks: Calculated Molecular Weight: 20.8892

Analysis

Component:	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.2587	0.2562	0.0290	0.00	0.0025
CO2	13.9188	13.7840	2.3810	0.00	0.2115
Methane	81.6613	80.8704	13.8780	824.78	0.4523
Ethane	2.6833	2.6573	0.7190	47.49	0.0279
Propane	0.9264	0.9174	0.2560	23.31	0.0141
Iso-Butane	0.1584	0.1569	0.0520	5.15	0.0032
N-Butane	0.1802	0.1785	0.0570	5.88	0.0036
Neopentane 2,2 dmc3	0.0000	0.0000	0.0000	0.00	0.0000
I-Pentane	0.0703	0.0696	0.0260	2.81	0.0018
N-Pentane	0.0493	0.0488	0.0180	1.98	0.0012
Neohexane	0.0015	N/R	0.0010	0.07	0.0000
2-3-Dimethylbutane	0.0018	N/R	0.0010	0.09	0.0001
Cyclopentane	0.0019	N/R	0.0010	0.07	0.0000
2-Methylpentane	0.0120	N/R	0.0050	0.57	0.0004
3-Methylpentane	0.0047	N/R	0.0020	0.22	0.0001
C6	0.0132	0.0924	0.0050	0.63	0.0004
Methylcyclopentane	0.0096	N/R	0.0030	0.43	0.0003
Benzene	0.0018	N/R	0.0010	0.07	0.0000
Cyclohexane	0.0040	N/R	0.0010	0.18	0.0001
2-Methylhexane	0.0022	N/R	0.0010	0.12	0.0001
3-Methylhexane	0.0022	N/R	0.0010	0.12	0.0001
2-2-4-Trimethylpentane	0.0007	N/R	0.0000	0.04	0.0000
i-heptanes	0.0015	N/R	0.0010	0.08	0.0001
Heptane	0.0064	N/R	0.0030	0.35	0.0002

Methylcyclohexane	0.0119	N/R	0.0050	0.62	0.0004
Toluene	0.0043	N/R	0.0010	0.19	0.0001
2-Methylheptane	0.0026	N/R	0.0010	0.16	0.0001
4-Methylheptane	0.0013	N/R	0.0010	0.08	0.0001
i-Octanes	0.0016	N/R	0.0010	0.10	0.0001
Octane	0.0035	N/R	0.0020	0.22	0.0001
Ethylbenzene	0.0002	N/R	0.0000	0.01	0.0000
m, p Xylene	0.0022	N/R	0.0010	0.11	0.0001
o Xylene (& 2,2,4 tmc7)	0.0002	N/R	0.0000	0.01	0.0000
i-C9	0.0006	N/R	0.0000	0.04	0.0000
C9	0.0009	N/R	0.0010	0.06	0.0000
i-C10	0.0003	N/R	0.0000	0.02	0.0000
C10	0.0001	N/R	0.0000	0.01	0.0000
i-C11	0.0000	N/R	0.0000	0.00	0.0000
C11	0.0000	N/R	0.0000	0.00	0.0000
C12P	0.0000	N/R	0.0000	0.00	0.0000
Total	100.00	99.031	17.455	916.07	0.7211

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z):	1.0027
BTU/CU.FT IDEAL:	918.2
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	920.7
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	904.7
DRY BTU @ 15.025:	939.1
REAL SPECIFIC GRAVITY:	0.7227

CYLINDER #:	08
CYLINDER PRESSURE:	93 PSIG
ANALYSIS DATE:	10/02/2024
ANALYSIS TIME:	01:49:34 AM
ANALYSIS RUN BY:	ELAINE MORRISON

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: 10/04/2024

GC Method: C12+BTEX Gas

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



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

August 19, 1994

Mr. Leo Bauerle
 Williams Field Services
 Salt Lake City, UT

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

Dehydrator	NO _x #/Day	CO #/Day	Fuel \$/CEH	Total Stack Gas \$/CEH	Stack Ht. Ft	Stack Dia Inches	Stack Temp. F	Stack Velocity FPM
J2P10M11109	0.86	0.17	357	10010	18'-8"	8	600	5.1
J2P10M749	1.03	0.21	429	12012	19'-1"	10	600	6.1
J2P12M11109	0.86	0.17	357	10010	18'-8"	8	600	5.1
J2P12M749	1.03	0.21	429	12012	19'-1"	10	600	6.1
J2P20M11109	1.03	0.21	429	12012	19'-1"	10	600	6.1

Please call me if you need additional information.

Sincerely,

Frosty Heath

FH/nb

5928 U.S. Highway 64
Farmington, NM 87401

InFab

INDUSTRIAL FABRICATION

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

July 22, 1998

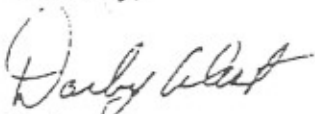
Mr. Bobby Myers
Williams Field Services
Environmental Affairs
295 Chipeta Way
P O Box 58900
Salt Lake City, UT 84158-0900

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

Unit Description	SO lb/day	NO _x lb/Day	CO lb/Day	Fuel SCFH	Total Organic Comp. Lb/d	Stack Ht. Ft.	Stack Dia inches	Stack Temp °F	Stack Velocity
10 MM LP	.01	.27	.43	659	.13	10'	8	600	5.1
10 MM HP	.01	.27	.43	659	.13	10'	10	600	6.1
12 MM LP	.02	.49	.78	1208	.23	10'	8	600	5.1
12 MM HP	.02	.49	.78	1208	.23	10'	10	600	6.1
15 MM	.02	.54	.85	1318	.25	10'	8	600	5.1
20 MM LP	.02	.67	1.07	1648	.31	10'	8	600	5.1
20 MM HP	.02	.67	1.07	1648	.31	10'	12	600	6.1

If you need any additional information please call me.

Sincerely,



Darby West
VP Engineering

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.

PS Memo 09-02

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

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

Revision History

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

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3. EMISSION FACTORS AND SITE SPECIFIC SAMPLING Q&A

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

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

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

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

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

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

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

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

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

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

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

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

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

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



Emission Factor
Determination for Produced
Water Storage Tanks

TCEQ Project 2010-29

Prepared for:
Texas Commission on Environmental Quality
Austin, Texas

Prepared by:
ENVIRON International Corporation
Novato, California

Date:
August 2010

ENVIRON Project Number:
06-17477T

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Executive Summary

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

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

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

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

Table ES-1. Recommended Emission Factors and Comparative Data

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



Baker Petrolite

Material Safety Data Sheet

Section 1. Chemical Product and Company Identification

Product Name	CGO49 CORROSION INHIBITOR	Code	CGO49
Supplier	Baker Petrolite A Baker Hughes Company 12645 W. Airport Blvd. (77478) P.O. Box 5050 Sugar Land, TX 77487-5050 For Product Information/MSDSs Call: 800-231-3606 (8:00 a.m. - 5:00 p.m. cst, Monday - Friday) 281-276-5400	Version	4.0
Material Uses	Corrosion Inhibitor	Effective Date	6/10/2004
24 Hour Emergency Numbers	CHEMTREC 800-424-9300 (U.S. 24 hour) Baker Petrolite 800-231-3606 (001)281-276-5400 CANUTEC 613-996-6666 (Canada 24 hours) CHEMTREC Int'l 01-703-527-3887 (International 24 hour)	Print Date	6/10/2004
National Fire Protection Association (U.S.A.) Flammability Reactivity Specific Hazard			

Section 2. Composition and Information on Ingredients

Name	CAS #	% by Weight	Exposure Limits
1-Dodecanethiol	112-55-0	0.1-1	ACGIH TLV (United States, 2004). Sensitizer skin TWA: 0.1 ppm 8 hour(s).
Light aromatic naphtha	64742-95-6	10-30	Not available.
1,2,4-Trimethylbenzene	95-63-6	10-30	Not available.
1,2,3-Trimethylbenzene	526-73-8	1-5	Not available.
1,3,5-Trimethylbenzene	108-67-8	5-10	Not available.
Xylene	1330-20-7	1-5	ACGIH (United States). TWA: 434 mg/m ³ STEL: 651 mg/m ³ TWA: 100 ppm STEL: 150 ppm OSHA (United States). TWA: 100 ppm STEL: 150 ppm TWA: 435 mg/m ³ STEL: 655 mg/m ³
Methanol	67-56-1	10-30	ACGIH (United States). Skin TWA: 262 mg/m ³ 8 hour(s). STEL: 328 mg/m ³ 15 minute(s). TWA: 200 ppm 8 hour(s). STEL: 250 ppm 15 minute(s).

Continued on Next Page

OSHA (United States). Skin
 TWA: 200 ppm 8 hour(s).
 STEL: 250 ppm 15 minute(s).
 TWA: 260 mg/m³ 8 hour(s).
 STEL: 325 mg/m³ 15 minute(s).

While 1,2,4-trimethylbenzene does not have exposure limits, trimethylbenzene (mixed isomers)(CAS No. 25551-13-7) has TWA value of 25 ppm for both ACGIH and OSHA (revoked limit).

Section 3. Hazards Identification

Physical State and Appearance State: Liquid., Color: Light Amber., Odor: Mercaptan.

CERCLA Reportable Quantity Xylene 1007 gal.
Methanol 2586 gal.

Hazard Summary WARNING. May cause chronic effects. Flammable liquid. Vapors can form an ignitable or explosive mixture with air. Can form explosive mixtures at temperatures at or above the flash point. Vapors can flow along surfaces to a distant ignition source and flash back. Static discharges can cause ignition or explosion when container is not bonded. May be irritating to eyes, skin and respiratory tract. May be toxic by skin absorption. May cause central nervous system (CNS) effects if inhaled.

Routes of Exposure Skin (Permeator), Skin (Contact), Eyes, Inhalation.

Potential Acute Health Effects

Eyes May be severely irritating to the eyes.

Skin May be severely irritating to the skin. May cause burns on prolonged contact. May be toxic if absorbed through the skin.

Inhalation May cause central nervous system (CNS) effects if inhaled. May be severely irritating to the lungs.

Ingestion Not considered a likely route of exposure, however, may be toxic if swallowed.

Medical Conditions aggravated by Exposure Exposure to this product may aggravate medical conditions involving the following: blood system, kidneys, nervous system, liver, gastrointestinal tract, respiratory tract, skin/epithelium, eyes.

See Toxicological Information (section 11)

Additional Hazard Identification Remarks May be harmful if ingested. This product may be aspirated into the lungs during swallowing or vomiting of swallowed material. Aspiration into the lungs may produce chemical pneumonitis, pulmonary edema, and hemorrhaging. Repeated or prolonged contact may cause dermatitis (inflammation) and defatting of the skin (dryness). Draize Test Eye (Rabbit): Moderate Irritant. Draize Test Skin (Rabbit): Extreme Irritant.

Section 4. First Aid Measures

Eye Contact Flush eyes with plenty of water for 15 minutes, occasionally lifting upper and lower eyelids. Get medical attention immediately.

Skin Contact Remove contaminated clothing and shoes immediately. Wash affected area with soap and mild detergent and large amounts of lukewarm, gently flowing water until no evidence of chemical remains (for at least 20-60 minutes). Get medical attention if irritation occurs.

Inhalation Remove to fresh air. Oxygen may be administered if breathing is difficult. If not breathing, administer artificial respiration and seek medical attention. Get medical attention if symptoms appear.

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Ingestion	Get medical attention immediately. If swallowed, do not induce vomiting unless directed to do so by medical personnel. Wash out mouth with water if person is conscious. Never induce vomiting or give anything by mouth to a victim who is unconscious or having convulsions.
Notes to Physician	Not available.
Additional First Aid Remarks	Not available.

Section 5. Fire Fighting Measures

Flammability of the Product	Flammable liquid. Vapors can form an ignitable or explosive mixture with air. Can form explosive mixtures at temperatures at or above the flash point. Vapors can flow along surfaces to a distant ignition source and flash back. Static discharges can cause ignition or explosion when container is not bonded.
OSHA Flammability Class	IB
Autoignition temperature	Not available.
Flash Points	Closed cup: 11°C (51.8°F). (SFCC)
Flammable Limits	L.E.L. Not available. U.E.L. Not available.
Products of Combustion	These products are carbon oxides (CO, CO2) nitrogen oxides (NO, NO2...) Sulfur oxides (SO2, SO3...).
Fire Hazards in Presence of Various Substances	Open Flames/Sparks/Static. Heat.
Fire Fighting Media and Instructions	In case of fire, use foam, dry chemicals, or CO2 fire extinguishers. Evacuate area and fight fire from a safe distance. Water spray may be used to keep fire-exposed containers cool. Keep water run off out of sewers and public waterways. Note that flammable vapors may form an ignitable mixture with air. Vapors may travel considerable distances and flash back if ignited.
Protective Clothing (Fire)	Do not enter fire area without proper personal protective equipment, including NIOSH approved self-contained breathing apparatus.
Special Remarks on Fire Hazards	Not available.

Section 6. Accidental Release Measures

Spill	Put on appropriate personal protective equipment. Keep personnel removed and upwind of spill. Shut off all ignition sources; no flares, smoking, or flames in hazard area. Approach release from upwind. Shut off leak if it can be done safely. Contain spilled material. Keep out of waterways. Dike large spills and use a non-sparking or explosion-proof means to transfer material to an appropriate container for disposal. For small spills add absorbent (soil may be used in the absence of other suitable materials) scoop up material and place in a sealed, liquid-proof container. Note that flammable vapors may form an ignitable mixture with air. Vapors may travel considerable distances from spill and flash back, if ignited. Waste must be disposed of in accordance with federal, state and local environmental control regulations.
Other Statements	If RQ (Reportable Quantity) is exceeded, report to National Spill Response Office at 1-800-424-8802.
Additional Accidental Release Measures Remarks	Not available.

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Section 7. Handling and Storage

Handling and Storage Put on appropriate personal protective equipment. Avoid contact with eyes, skin, and clothing. Avoid breathing vapors or spray mists. Use only with adequate ventilation. Store in a dry, cool and well ventilated area. Keep away from heat, sparks and flame. Keep away from incompatibles. Keep container tightly closed and dry. To avoid fire or explosion, ground container equipment and personnel before handling product.

Additional Handling and Storage Remarks Not available.

Section 8. Exposure Controls/Personal Protection

Engineering Controls Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors or particles below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection

Personal Protective Equipment recommendations are based on anticipated known manufacturing and use conditions. These conditions are expected to result in only incidental exposure. A thorough review of the job tasks and conditions by a safety professional is recommended to determine the level of personal protective equipment appropriate for these job tasks and conditions.

Eyes Chemical safety goggles.

Body Wear long sleeves to prevent repeated or prolonged skin contact.

Respiratory Respirator use is not expected to be necessary under normal conditions of use. In poorly ventilated areas, emergency situations or if exposure levels are exceeded, use NIOSH approved full face respirator.

Hands Chemical resistant gloves.

Feet Chemical resistant boots or overshoes.

Other information Nitrile or neoprene gloves.

Additional Exposure Control Remarks Not available.

Section 9. Typical Physical and Chemical Properties

Physical State and Appearance	Liquid.	Odor	Mercaptan.
pH	Not available.	Color	Light Amber.
Specific gravity	0.854 - 0.866 @ 16°C (60°F)		
Density	7.11 - 7.21 lbs/gal @ 16°C (60°F)		
Vapor Density	>1 (Air = 1)		
Vapor Pressure	142.2 - mmHg @ 22°C (72°F)		
Evaporation Rate	Not Available or Not Applicable for Solids.		
VOC	Not available.		
Viscosity	7 - 8 cps @ 16°C (61°F)		
Pour Point	-40°C (-40°F)		
Solubility (Water)	Dispersible		
Boiling Point	Not available.		
Physical Chemical Comments	Not available.		

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Section 10. Stability and Reactivity

Stability and Reactivity	The product is stable.
Conditions of Instability	Not available.
Incompatibility with Various Substances	Oxidizing material.
Hazardous Decomposition Products	Not applicable.
Hazardous Polymerization	Hazardous polymerization is not expected to occur.
Special Stability & Reactivity Remarks	Not available.

Section 11. Toxicological Information**Component Toxicological Information****Acute Animal Toxicity**

1-Dodecanethiol	Not available.
Light aromatic naphtha	ORAL (LD50): Acute: 2900 mg/kg [Rat]. 8400 mg/kg [Rat].
1,2,4-Trimethylbenzene	ORAL (LD50): Acute: 5000 mg/kg [Rat]. VAPOR (LC50): Acute: 18000 mg/m ³ 4 hour(s) [Rat].
1,2,3-Trimethylbenzene	Not available.
1,3,5-Trimethylbenzene	VAPOR (LC50): Acute: 24000 mg/m ³ 4 hour(s) [Rat].
Xylene	ORAL (LD50): Acute: 4300 mg/kg [Rat]. 3523 mg/kg [Male rat]. DERMAL (LD50): Acute: >1700 mg/kg [Rabbit]. VAPOR (LC50): Acute: 5000 ppm 4 hour(s) [Rat].
Methanol	ORAL (LD50): Acute: 5628 mg/kg [Rat]. 7300 mg/kg [Mouse]. DERMAL (LD50): Acute: 15800 mg/kg [Rabbit]. VAPOR (LC50): Acute: 64000 ppm 4 hour(s) [Rat].

Chronic Toxicity Data

1) 1-Dodecanethiol

1-Dodecanetriol is a component of this product. Workers exposed to a mixture of 1-dodecanethiol with polychloroprene latexes have shown a significant increase in frequency of chromosomal aberrations in the peripheral blood. [HSDB]

2) Light aromatic naphtha

Solvent naphtha (petroleum), light aromatic is a component of this product. Solvent naphtha (petroleum), light aromatic may cause damage to the peripheral nerves, resulting in numbness or tingling of the extremities with chronic (long term) exposure to high concentrations. (Micromedex) Rats exposed for 4 months to 1700 ppm of a solvent similar to this product showed evidence of mild damage to the liver, lungs and kidneys. These effects were not seen in rats exposed for one year to 350 ppm of another similar solvent. Rats exposed to vapors of a similar solvent during pregnancy showed embryo/fetotoxicity at concentrations producing maternal toxicity.

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In response to a TSCA test rule, several studies of a solvent similar to this product were completed. Mutagenicity studies and a rat inhalation neurotoxicity study were negative. In a mouse developmental effects study, reduced fetal body weight was seen but no teratogenicity. A rat reproductive effects study demonstrated toxicity but little effect on reproductive parameters. (Vendor MSDS)

3) 1,2,4-Trimethylbenzene

Not available.

4) 1,2,3-Trimethylbenzene

Not available.

5) 1,3,5-Trimethylbenzene

1,3,5-Trimethylbenzene (Mesitylene) is a component of this product. Chronic asthmatic-like bronchitis may be a delayed chronic hazard (EPA, 1985; Laham, 1987; HSDB, 1997). Nervousness, tension, and anxiety have been noted in chronically exposed workers with exposure to a mixture of solvents including mesitylene (HSDB, 1997). Elevated alkaline phosphates and SGOT(liver enzymes) levels have been noted in chronic animal inhalation studies (Clayton & Clayton, 1994). These effects have not been reported in exposed humans. (Reprotext)

Thrombocytopenia (a lack of platelets in the blood) with bleeding from the gums and nose and mild anemia may occur with chronic exposure to mesitylene as a component of the commercial solvent mixture, "Fleet-X-DV-99" (Plunkett, 1976; Finkel, 1983; HSDB, 1997). Coagulation (clotting of the blood) times were delayed by about 40% in a group of workers chronically exposed to a mixture of solvents containing about 30% mesitylene (Laham, 1987). These hematological disorders may have been due to a contaminant, such as benzene (Hathaway et al, 1996). Thrombocytosis (an increase of platelets in the blood) and thrombocytopenia have been noted in rabbits (Clayton & Clayton, 1994). (Reprotext)

1,3,5-Trimethylbenzene has been positive in a mutagenicity assay (Lewis, 1992). (Reprotext)

6) Xylene

Xylene (mixed isomers) is a component of this product. Effects of chronic exposure to xylene are similar to those of acute exposure, but may be more severe. Chronic inhalation reportedly was associated with headache, tremors, apprehension, memory loss, weakness, dizziness, loss of appetite, nausea, ringing in the ears, irritability, thirst, anemia, mucosal bleeding, enlarged liver, and hyperplasia, but not destruction of the bone marrow (Clayton & Clayton, 1994; ILO, 1983). Some earlier reports of effects of chronic exposure to xylene have been questioned, as exposures were not limited to xylene alone.

Effects on the blood have been reported from chronic exposure to as little as 50 mg/m³ (Pap & Varga, 1987). Repeated exposure can damage bone marrow, causing low blood cell count and can damage the liver and kidneys (NJ Department of Health, Hazardous Substance Fact Sheet). Chronic xylene exposure (usually mixed with other solvents) has produced irreversible damage to the CNS (ILO, 1983). CNS effects may be exacerbated by ethanol abuse (Savolainen, 1980). Xylene may damage hearing or enhance sensitivity to noise in chronic occupational exposures (Morata et al, 1994), probably from neurotoxic mechanism. Tolerance to xylene can occur over the work week and disappear over the weekend. (ACGIH, 1992).

Inhalation exposure has produced fetotoxicity and postnatal developmental toxicity in laboratory animals. (API, 1978, Kensington, MD, EPA/OTS Document No. 878210350 and Hass, U., et al, 1995, Neurotoxicology and Teratology 17: 341-349 and 1997, Neurotoxicology 18: 547-552)

7) Methanol

Methanol is a component of this product. Because methanol is eliminated from the body more slowly than ethanol, it can have cumulative toxicity with repeated exposures (ACGIH, 1992).

Acute dermal, oral, and inhalation exposure to methanol can cause optic nerve effects, diminished vision, and brain effects (necrosis and hemorrhaging). (Bennett, I.L. et al, 1953)

Ingestion of methanol can cause Central Nervous System depression, blurred vision and blindness, and gastrointestinal effects. (Clayton, G.D. and Clayton, F.E., 1982, Patty's Industrial Hygiene and Toxicology, Vol2C) Dermal exposure to methanol can cause Central Nervous System depression, blurred vision, and gastrointestinal effects. (Downie, A et al, 1992, Occupational Medicine, 42, pp 47-9) Chronic inhalation of methanol can cause Central Nervous System depression, blurred vision, and gastrointestinal effects. (Frederick, L.J. et al, 1984, AIHA Journal, 45, pp 51-5)

Methanol has produced in vivo mutagenicity in animal studies. (Pereira, M.A. et al, 1982) and (Ward, J. B. et al, 1983)

Methanol was mutagenic in yeast (RTECS). Methanol has caused chromosome aberrations in yeast (RTECS) and grasshoppers (Saha & Khudabaksh, 1974).

Methanol has caused birth defects in rats exposed by the oral (Infurna et al, 1981) and inhalation (Nelson et al, 1984; Nelson et al, 1985) routes. Exencephaly (a defect in the skull bone structure that leaves the brain exposed) and cleft palate (a fissure or unformed bone structure in the roof of the mouth (palate), lip, or facial area, occurring during the embryonic stage of development) were increased in fetal mice exposed to methanol at an airborne concentration of 5,000 ppm or higher for 7 hours/day on days 6 to 15 of gestation.

Embryotoxicity and fetotoxicity were seen with maternal exposure to airborne concentrations of 7,500 ppm and above, and reduced fetal weights with concentrations of 10,000 ppm or greater. The NOAEL was 1,000 ppm. Effects similar to those seen in the 10,000 ppm dosage group were also seen in offspring of mice given a dose of 4 g/kg orally (Rogers et al, 1993).

Product Toxicological Information

Acute Animal Toxicity ORAL (LD50): Acute: 10600 mg/kg [Rat]. DERMAL (LD50): Acute: >2000 mg/kg [Rabbit].

Target Organs blood system, kidneys, nervous system, liver, gastrointestinal tract, respiratory tract, skin/epithelium, eyes.

Other Adverse Effects Not available.

Section 12. Ecological Information

Ecotoxicity Not available.

BOD5 and COD Not available.

Biodegradable/OECD Not available.

Toxicity of the Products of Biodegradation Not available.

Special Remarks Not available.

Section 13. Disposal Considerations

Responsibility for proper waste disposal rests with the generator of the waste. Dispose of any waste material in accordance with all applicable federal, state and local regulations. Note that these regulations may also apply to empty containers, liners and rinsate. Processing, use, dilution or contamination of this product may cause its physical and chemical properties to change.

Additional Waste Remarks Not available.

Section 14. Transport Information

DOT Classification	FLAMMABLE LIQUID, N.O.S. (Contains: Methanol, Light aromatic naphtha), 3, UN1993, II	
DOT Reportable Quantity	Xylene 1007 gal. Methanol 2586 gal.	
Marine Pollutant	Not applicable.	
Additional DOT information	Not available.	
Emergency Response Guide Page Number	128	

Section 15. Regulatory Information

HCS Classification	Target organ effects. Flammable liquid. Irritant.	
U.S. Federal Regulations	Environmental Regulations Extremely Hazardous Substances: Not applicable to any components in this product. SARA 313 Toxic Chemical Notification and Release Reporting: 1,2,4-Trimethylbenzene; Xylene; Methanol; SARA 302/304 Emergency Planning and Notification substances: Not applicable to any components in this product. Hazardous Substances (CERCLA 302): Xylene 1007 gal.; Methanol 2586 gal.; SARA 311/312 MSDS distribution - chemical inventory - hazard identification: fire; immediate health hazard; delayed health hazard; Clean Water Act (CWA) 307 Priority Pollutants: Not applicable to any components in this product. Clean Water Act (CWA) 311 Hazardous Substances: Xylene; Clean Air Act (CAA) 112(r) Accidental Release Prevention Substances: Not applicable to any components in this product. Threshold Planning Quantity (TPQ) Not applicable. TSCA Inventory Status All components are included or are exempted from listing on the US Toxic Substances Control Act Inventory. This product contains the following components that are subject to the reporting requirements of TSCA Section 12(b) if exported from the United States: Xylene; Naphthalene.	
State Regulations	State specific information is available upon request from Baker Petrolite.	
International Regulations	Canada Not all components are included on the Canadian Domestic Substances List. WHMIS (Canada) B-2, D-1B, D-2A, D-2B European Union Not all components are included on the European Inventory of Existing Commercial Chemical Substances or the European List of Notified Chemical Substances.	

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International inventory status information is available upon request from Baker Petrolite for the following countries: Australia, China, Korea (TCCL), Philippines (RA6969), or Japan.

Harmonized Tariff Code Not available.

Other Regulatory Information No further regulatory information is available.

Section 16. Other Information

Other Special Considerations 123
10/10/02 - Changes to Sections 2 and 9.
04/28/04 - Changes to Sections 2 and 15.
06/10/04 - Changes to Sections 8 and 15.

Baker Petrolite Disclaimer

NOTE: The information on this MSDS is based on data which is considered to be accurate. Baker Petrolite, however, makes no guarantees or warranty, either expressed or implied of the accuracy or completeness of this information.

The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of this product.

This MSDS was prepared and is to be used for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

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.”

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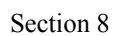
Section 8

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 topographic map of the area around the facility is provided in this section. Please see the following page.



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, since this is a Title V application.

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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 Decker Junction CDP compresses and dehydrates pipeline quality natural gas for pipeline transmission using natural gas-fired reciprocating engines.

Natural gas is received from independent producers and is metered as it enters the facility. The natural gas stream typically contains produced water, which is separated from the gas stream via an inlet separator. The natural gas is then compressed for pipeline transmission using compressors driven by the natural gas-fired reciprocating internal combustion engines, Units 1, 2, 3, 6 and 7.

The gas stream is then routed to up to three (3) triethylene glycol (TEG) dehydrators (Units 18a/b, and 19a/b or 19c/d, and 20a/b or 20c/d) which further dehydrate the gas stream. The TEG solution comes into contact with the natural gas and removes the water and some of the hydrocarbons. The rich TEG solution is regenerated by boiling off the water and hydrocarbons and reclaiming the glycol. The resulting produced water is stored in above ground storage tanks. The produced water is periodically removed by truck.

The compressor engine operation is determined by market and pipeline conditions. The compressor engines may be shutdown and restarted to respond to changing pipeline pressures, or for routine equipment maintenance.

Other emission sources at the facility include storage tanks, fugitive emissions from process piping (valves, flanges, seals, etc.), truck loading, and compressor blowdowns.

The facility operates continuously, 24-hours a day, year-round.

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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):

Decker Junction CDP (production field natural gas gathering and boosting 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):

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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 12.B

Special Requirements for a PSD Application (Submitting under 20.2.74 NMAC)

Prior to Submitting a PSD application, the permittee shall:

- ☐ Submit the BACT analysis for review prior to submittal of the application. No application will be ruled complete until the final determination regarding BACT is made, as this determination can ultimately affect information to be provided in the application. A pre-application meeting is recommended to discuss the requirements of the BACT analysis.
- ☐ Submit a modeling protocol prior to submitting the permit application. **[Except for GHG]**
- ☐ Submit the monitoring exemption analysis protocol prior to submitting the application. **[Except for GHG]**

For PSD applications, the permittee shall also include the following:

- ☐ Documentation containing an analysis on the impact on visibility. **[Except for GHG]**
 - ☐ Documentation containing an analysis on the impact on soil. **[Except for GHG]**
 - ☐ Documentation containing an analysis on the impact on vegetation, including state and federal threatened and endangered species. **[Except for GHG]**
 - ☐ Documentation containing an analysis on the impact on water consumption and quality. **[Except for GHG]**
 - ☐ Documentation that the federal land manager of a Class I area within 100 km of the site has been notified and provided a copy of the application, including the BACT and modeling results. The name of any Class I Federal area located within one hundred (100) kilometers of the facility.
-

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/>

State Regulations

Applicable state requirements are embodied in the New Mexico SIP, the New Mexico Administrative Code (NMAC), and the terms and conditions of any preconstruction permits issued pursuant to regulations promulgated through rulemaking under Title I of the CAA.

Table for STATE REGULATIONS:

<u>STATE REGU- LATIONS CITATION</u>	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
20.2.1 NMAC	General Provisions	Yes	Facility	This regulation is applicable because it establishes procedures for protecting confidential information, procedures for seeking a variance, NMAQB's authority to require sampling equipment, severability, and the effective date for conformance with the NMACs, and prohibits the violation of other requirements in attempting to comply with the NMACs. Although this regulation is applicable, it does not impose any specific requirements.
20.2.3 NMAC	Ambient Air Quality Standards NMAAQS	Yes	Facility	This is a State Implementation Plan (SIP) approved regulation that limits the maximum allowable concentrations of Total Suspended Particulates, Sulfur Compounds, Carbon Monoxide and Nitrogen Dioxide.
20.2.7 NMAC	Excess Emissions	Yes	Facility	This regulation is applicable because it prohibits excess emissions unless proper notification procedures are followed.
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.
20.2.14 NMAC	Particulate Emissions from Coal Burning Equipment	No	N/A	This regulation is not applicable because the facility does not burn coal (see 20.2.14.5 NMAC).
20.2.18 NMAC	Oil Burning Equipment - Particulate Matter	No	N/A	This regulation is not applicable because the facility does not burn oil (see 20.2.18.5 NMAC).
20.2.31 NMAC	Coal Burning Equipment – Sulfur Dioxide	No	N/A	This regulation is not applicable because the facility does not burn coal (see 20.2.31.6 NMAC).
20.2.32 NMAC	Coal Burning Equipment – Nitrogen Dioxide,	No	N/A	This regulation is not applicable because the facility does not burn coal (see 20.2.32.6 NMAC).
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).

<u>STATE REGU- LATIONS CITATION</u>	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
20.2.50 NMAC	Oil and Gas Sector – Ozone Precursor Pollutants	Yes	1-3, 6, 7, RP1-3, RP6, RP7, 18a &b, 19a-d, 20a-d, F1, PP1-4 & PC1-14	This regulation is applicable because it establishes emission standards for volatile organic compounds (VOC) and oxides of nitrogen (NOx) for oil and gas production, processing, compression, and transmission sources. The regulation is applicable to the following sources: Engines, Reciprocating Compressors, Dehydrators, Equipment Leaks and Fugitive Emissions, and Pneumatic Controllers and Pumps.
20.2.61.109 NMAC	Smoke & Visible Emissions	Yes	1-3, 6, 7, 18b, 19b, 19d, 20b, 20d	This regulation is applicable because the facility is equipped with stationary combustion sources. Emissions from these combustion sources are limited to less than 20% opacity (see 20.2.61.109 NMAC). The regulation is not applicable to Title V insignificant heaters (see 20.2.61.111.D NMAC).
20.2.70 NMAC	Operating Permits	Yes	Facility	This regulation is applicable because the facility is a major source of NO2, CO, VOC, and HAP emissions (see 20.2.70.200 NMAC).
20.2.71 NMAC	Operating Permit Fees	Yes	Facility	This regulation is applicable because the facility is subject to 20.2.70 NMAC (see 20.2.71.6 NMAC).
20.2.72 NMAC	Construction Permits	Yes	Facility	This regulation is applicable because the facility has potential emission rates (PER) greater than 10 pph or 25 tpy for pollutants subject to a state or federal ambient air quality standards (does not include VOCs or HAPs).
20.2.73 NMAC	NOI & Emissions Inventory Requirements	Yes	Facility	The Notice of Intent requirements of this regulation were fulfilled with the construction permit application. The emissions inventory portion of this regulation is applicable since the facility is a Title V major source (see 20.2.73.300.B(1) & (2)).
20.2.74 NMAC	Permits – Prevention of Significant Deterioration (PSD)	No	N/A	This regulation is not applicable because the facility is a PSD minor source.
20.2.75 NMAC	Construction Permit Fees	Yes	Facility	This regulation is applicable because the facility is subject to 20.2.72 NMAC and it establishes the fee schedule associated with the filing of construction permits (see 20.2.75.6 NMAC).
20.2.77 NMAC	New Source Performance	Yes	Fugitive equipment components	This regulation adopts by reference the federal NSPS codified in 40 CFR 60 (see 20.2.77.6 NMAC). The facility is subject to 40 CFR 60 subparts A and OOOOa. Also, the regulation is potentially applicable to subparts JJJJ and OOOOb.
20.2.78 NMAC	Emission Standards for HAPS	No	N/A	This regulation is not applicable because it incorporates by reference the NESHAPs codified under 40 CFR 61 (see 20.2.78.6 NMAC). The facility is not subject to 40 CFR 61.
20.2.79 NMAC	Permits – Nonattainment Areas	No	N/A	This regulation is not applicable because the facility is neither located in nor has a significant impact on a nonattainment area (see 20.2.79.6 NMAC).
20.2.80 NMAC	Stack Heights	No	N/A	This regulation is not applicable because it establishes guidelines for the selection of an appropriate stack height for the purpose of atmospheric dispersion modeling (see 20.2.80.6 NMAC); however, it only imposes those requirements when modeling is required as a part of the application. This application does not require modeling.
20.2.82 NMAC	MACT Standards for Source Categories of HAPS	Yes	1-3, 6, 7, 18a, 19a, 19c, 20a & 20c	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, HH, and ZZZZ.

Federal Regulations

Federal standards and requirements are embodied in Title 40 (Protection of the Environment), Subchapter C (Air Programs) of the CFR, Parts 50 through 99.

FEDERAL REGULATIONS APPLICABILITY CHECKLIST

<u>FEDERAL REGU- LATIONS CITATION</u>	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
40 CFR 50	NAAQS	Yes	Facility	This regulation is applicable because it applies to all sources in the state of New Mexico.
40 CFR 52	Approval and Promulgation of Implementation Plans	No	N/A	40 CFR 52.21 <i>Prevention of Significant Deterioration of Air Quality</i> is applicable because the facility is 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	Fugitive equipment components	This regulation is applicable because 40 CFR 60 subpart OOOOa applies. Subparts JJJJ and OOOOb potentially apply.
NSPS 40 CFR 60 Subpart GG	Standards of Performance for Stationary Gas Turbines	No	N/A	This regulation is not applicable because there are no turbines at the facility.
NSPS 40 CFR 60, Subpart K	Standards of Performance for Storage Vessels for Petroleum Liquids for which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978	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 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 storage tanks at the facility have capacities less than the minimum applicability threshold capacity of 40,000 gallons (see §60.110a(a)).

<u>FEDERAL REGU- LATIONS</u> CITATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
NSPS 40 CFR 60, Subpart Kb	Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984	No	N/A	This regulation is not applicable because all storage tanks at the facility have capacities less than the minimum applicability threshold capacity of 75 cubic meters (19,812 gallons), or they have a capacity between 75 and 151 cubic meters (40,000 gallons) and store a liquid with a maximum true vapor pressure less than 15.0 kPa (2.2 psi) (see §60.110b(a) & §60.110b(b)).
NSPS 40 CFR 60, Subpart KKK	Standards of Performance for Equipment Leaks of VOC from Onshore Gas Plants	No	N/A	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 60, Subpart LLL	Standards of Performance for Onshore Natural Gas Processing: SO ₂ Emissions	No	N/A	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	N/A	This regulation is not applicable because the facility is not equipped with stationary compression ignition (CI) internal combustion engines (ICE) that commenced construction after July 11, 2005 and were manufactured after April 1, 2006 (see §60.4200(a)(2)(i)). For the purpose of this subpart, construction commences on the date the engine is ordered by the owner or operator (see §60.4200(a)).
NSPS 40 CFR 60, Subpart JJJJ	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines	Yes	Potentially 2, 3, 6 & 7	This regulation is potentially applicable to the stationary SI ICE at the station.

<u>FEDERAL REGU- LATIONS CITATION</u>	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
NSPS 40 CFR 60, Subpart OOOO	Standards of Performance for Crude Oil and Natural Gas Production, Transmission, and Distribution for which Construction, Modification or Reconstruction Commenced After August 23, 2011 and On or Before September 18, 2015	No	N/A	This regulation is not applicable because the facility is not equipped with “affected” sources that commenced construction, modification or reconstruction after August 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). “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 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	Yes	Fugitive emissions components	The regulation is applicable because the facility is equipped with one or more “affected” sources that commenced construction, modification or reconstruction after September 18, 2015 and on or before December 6, 2022: gas wells, centrifugal or reciprocating compressors, pneumatic controllers, storage vessels, pneumatic pumps, and equipment leaks (see §60.5365a). In general, this regulation may apply if existing affected equipment is replaced or new affected equipment is installed. Affected sources at the facility were permitted and installed after the September 18, 2015 regulatory applicability date; therefore, the applicability of the subpart was triggered. The applicability of the regulation includes the fugitive emissions components at the facility. For the purpose of the fugitive components monitoring requirements specified by the regulation, “modification” of a compressor station includes the addition of (or replacement of) a compressor with a larger unit (greater total horsepower) (see §60.5365a(j)). 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 60, Subpart OOOOb	Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After December 6, 2022	Potentially Applicable	Fugitive emissions components	The regulation is potentially applicable because the facility is permitted for the following “affected” sources: reciprocating compressors, pneumatic controllers, storage vessels, pneumatic controllers and pumps, and equipment leaks (see §60.5365a). In general, this regulation may apply if existing affected equipment is replaced or new affected equipment is installed. The applicability of the regulation includes the fugitive emissions components at the facility. For the purpose of the fugitive components monitoring requirements specified by the regulation, “modification” of a compressor station includes the addition of (or replacement of) a compressor with a larger unit (greater total horsepower) (see §60.5365b(i)(3)).
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)).

<u>FEDERAL REGU- LATIONS CITATION</u>	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
NESHAP 40 CFR 61, Subpart V	National Emission Standards for Equipment Leaks (Fugitive Emission Sources)	No	N/A	This regulation is not applicable because none of the listed equipment at the facility is in VHAP service. 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	1-3, 6, 7, 18a, 19a, 19c, 20a & 20c	This regulation is applicable because 40 CFR 63, subparts HH and ZZZZ apply.
MACT 40 CFR 63, Subpart HH	National Emission Standards for Hazardous Air Pollutants For Oil and Natural Gas Production Facilities	Yes	18a, 19a, 19c, 20a & 20c	This regulation is applicable because the facility is equipped with dehydrators. It is not equipped with 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 Decker Junction 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 Decker Junction facility is an area 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. The dehydrators are exempt in accordance with §63.764(e)(1)(ii). An affected area source dehydrator with actual annual average benzene emissions of less than 0.90 megagrams per year (≈1 tpy) is exempt from the operational, recordkeeping, and notification requirements of §63.764(d), provided documentation of the exemption determination is maintained as required by §63.764(d)(1).

<u>FEDERAL REGU- LATIONS CITATION</u>	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
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)).
MACT 40 CFR 63, Subpart YYYY	National Emission Standards for Hazardous Air Pollutants From Stationary Combustion Turbines	No	N/A	This regulation is not applicable because the facility is not equipped with turbines.
MACT 40 CFR 63, Subpart ZZZZ	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE MACT)	Yes	1-3, 6 & 7	40 CFR 63, Subpart ZZZZ establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from existing, new, modified and reconstructed stationary reciprocating internal combustion engines (RICE) located at both major and area sources of HAP, including provisions for initial and continuous compliance demonstration. As defined at §63.6585(b), the station is a major source of HAP emissions. Under §63.6590(a)(1)(i), a stationary RICE greater than 500 horsepower (hp) located at a major source of HAP is considered an “existing” unit if construction or reconstruction commenced before December 19, 2002. (“Construction” does not include the reinstallation of an existing unit at another location.) Each of the engines that have been installed at the facility are an “existing” engine, as defined under the regulation. Under §63.6590(b)(3)(ii), existing 4SLB stationary RICE with site rating of more than 500 hp, located at a major source of HAP do not have to meet the requirements of the subpart and of subpart A, including initial notification requirements. Therefore, the subpart is not currently applicable to the installed RICE.
MACT 40 CFR 63, Subpart YYYY	National Emission Standards for Hazardous Air Pollutants From Stationary Combustion Turbines	No	N/A	This regulation is not applicable because the facility is not equipped with turbines.
MACT 40 CFR 63, Subpart DDDDD	National Emission Standards for Hazardous Air Pollutants for Major Industrial, Commercial, and Institutional Boilers & Process Heaters	No	N/A	This regulation is not applicable both because the facility is an area HAP source as defined by the subpart (see §63.7480) and is not equipped with boilers and process heaters. For natural gas production facilities, only HAP emissions from dehydrators and storage vessels with the potential for flash emissions are aggregated for a major source determination (see §63.7575).
MACT 40 CFR 63, Subpart JJJJJ	National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers at Area Sources	No	N/A	This regulation is not applicable because the facility is not equipped with industrial, commercial, or institutional boilers.

<u>FEDERAL REGU- LATIONS</u> CITATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
40 CFR 64	Compliance Assurance Monitoring	No	N/A	This regulation is not applicable because none of the 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.
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).

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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: https://www.env.nm.gov/aqb/permit/aqb_pol.html. Compliance with standards must be maintained during construction, which should not usually be a problem unless simultaneous operation of old and new equipment is requested.

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

HFC is permitted to install Unit 19a & 19b (a 12 MMSCFD dehydrator) **OR** Unit 19c & 19d (a 20 MMSCFD dehydrator). HFC is also permitted to install Unit 20a & 20b (a 12 MMSCFD dehydrator) **OR** Unit 20c & 20d (a 20 MMSCFD dehydrator).

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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.

Dispersion modeling was submitted in the permit application for PSD-NM-1228-M2. Since then, the facility has been downsized.

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Section 17

Compliance Test History

(Submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

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

Compliance Test History Table

Unit No.	Test Description	Test Date
1	NOX and CO testing with a portable analyzer.	9/27/23
2	NOX and CO testing with a portable analyzer.	8/7/23
3	NOX and CO testing with a portable analyzer.	TBD
6	NOX and CO testing with a portable analyzer.	TBD
7	NOX and CO testing with a portable analyzer.	TBD

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Section 18

Addendum for Streamline Applications

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

Not applicable, as this is not a Streamline Application.

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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 <http://www.env.nm.gov/aqb/index.html>. Sources that are subject to both the Title V and Acid Rain regulations are encouraged to submit both applications simultaneously.
 - * Any source in a source category designated by the EPA Administrator ("Administrator"), in whole or in part, by regulation, after notice and comment.
-

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

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

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

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

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

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

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

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

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

19.5 - Stratospheric Ozone and Climate Protection

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

1. Does your facility have any air conditioners or refrigeration equipment that uses CFCs, HCFCs or other ozone-depleting substances? ☐ Yes ☒ No
 2. Does any air conditioner(s) or any piece(s) of refrigeration equipment contain a refrigeration charge greater than 50 lbs? ☐ Yes ☒ No
(If the answer is yes, describe the type of equipment and how many units are at the facility.)
 3. Do your facility personnel maintain, service, repair, or dispose of any motor vehicle air conditioners (MVACs) or appliances ("appliance" and "MVAC" as defined at 82. 152)? ☐ Yes ☒ No
 4. Cite and describe which Title VI requirements are applicable to your facility (i.e. 40 CFR Part 82, Subpart A through G). **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 <http://www.env.nm.gov/aqb/index.html>. Sources that are subject to both the Title V and Acid Rain regulations are **encouraged** to submit both applications **simultaneously**.

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

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

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

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

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

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

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

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

The Decker Junction CDP is located within 50 miles of the following states, local pollution control programs, Indian tribes and pueblos:

Colorado (3.6 miles)
Southern Ute Tribe Reservation (3.6 miles)
Navajo Nation Reservation (≈20 miles)
Jicarilla Apache Tribe Reservation (≈31 miles)
Ute Mountain Tribe Reservation (≈19 miles)

19.9 - Responsible Official

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

The responsible official for the Decker Junction CDP is Michelle McCracken.

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.

This section contains the NMAQB *Compliance History Disclosure Form*.



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		December 2024
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.	

Section 21

Addendum for Landfill Applications

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

EPA Background Information for MSW Landfill Air Quality Regulations:

<https://www3.epa.gov/airtoxics/landfill/landflpg.html>

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

Not applicable, as the facility is not a landfill.

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Section 22**Certification**Company Name: Harvest Four Corners, LLC

I, Michelle McCracken, 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 10 day of Dec, 2024, upon my oath or affirmation, before a notary of the State of New Mexico.

Michelle McCracken
*Signature

12-10-24
Date

Michelle McCracken
Printed Name

Sr. Enviro Mgr
Title

Scribed and sworn before me on this 10 day of December, 2024.

My authorization as a notary of the State of New Mexico expires on the 27 day of December, 2025.

Monica Smith
Notary's Signature

Dec. 10, 2024
Date

Monica Smith
Notary's Printed Name

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

STATE OF NEW MEXICO
NOTARY PUBLIC
MONICA SMITH
COMMISSION # 1061356
COMMISSION EXPIRES 12/27/2025

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