Mail Application To:

New Mexico Environment Department Air Quality Bureau Permits Section 525 Camino de los Marquez, Suite 1 Santa Fe, New Mexico, 87505

Phone: (505) 476-4300 Fax: (505) 476-4375 www.env.nm.gov/aqb



AIRS No.:

Universal Air Quality Permit Application

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

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

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

Acknowledgements:

X 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.

S500 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

X I acknowledge the required submittal format for the hard copy application is printed double sided 'head-to-toe', 2-hole punched (except the Sect. 2 landscape tables is printed 'head-to-head'), numbered tab separators. Incl. a copy of the check on a separate page. □ This facility qualifies to receive assistance from the Small Business Environmental Assistance program (SBEAP) and qualifies for 50% of the normal application and permit fees. Enclosed is a check for 50% of the normal application fee which will be verified with the Small Business Certification Form for your company.

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

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

Section 1 – Facility Information

Sec	tion 1-A: Company Infor	mation	Al # if known (see 1st 3 to 5 #s of permit IDEA ID No.): 1168	Updating Permit/NOI #: P029-R4-M1
	Facility Name:		Plant primary SIC Cod	e (4 digits): 1389
1	32-8 #3 Central Delivery Point		Plant NAIC code (6 dig	gits): 213112
а	Facility Street Address (If no facility	street address, provide directions from	n a prominent landmark)	: See Section 1-D.4.
2	Plant Operator Company Name:	Harvest Four Corners, LLC	Phone/Fax: 505-632-4	600 / 505-632-4782
а	Plant Operator Address:	1755 Arroyo Drive, Bloomfield, NM	1 87413	

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Table 2-A: Regulated Emission Sources

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

Unit					Manufact- urer's Rated	Requested Permitted	Date of Manufacture ²	Controlled by Unit #	Source Classi-		RICE Ignition Type (CI, SI,	Replacing Unit
Number ¹	Source Description	Make	Model #	Serial #	Capacity ³ (Specify Units)	Capacity ³ (Specify Units)	Date of Construction/ Reconstruction ²	Emissions vented to Stack #	fication Code (SCC)	For Each Piece of Equipment, Check One	4SLB, 4SRB, 2SLB) ⁴	No.
	Reciprocating Internal			C-61028/2			4/22/1998	N/A		X Existing (unchanged)		
1	Combustion Engine	Waukesha	7042GL	(Pkg. X00055)	1,478 hp	1,363 hp	1/22/1008	1	20200202	□ New/Additional □ Replacement Unit	4SLB	N/A
							12/15/1080			■ To Be Modified ■ To be Replaced X Existing (unchanged) □ To be Removed		
2	Reciprocating Internal	Waukesha	7042GL	354800 (Diaz X00008)	1,478 hp	1,363 hp	12/15/1980	IN/A	20200202	□ New/Additional □ Replacement Unit	4SLB	N/A
	Combustion Engine			(PKg. A00008)			12/15/1980	2		□ To Be Modified □ To be Replaced		
2	Reciprocating Internal	Waukasha	7042CI	269514	1 478 hr	1 262 hr	9/30/1974	N/A	20200202	X Existing (unchanged) To be Removed	481 D	N/A
3	Combustion Engine	waukesha	70420L	(Pkg. X00073)	1,478 lip	1,505 lip	9/30/1974	3	20200202	□ To Be Modified □ To be Replaced	43LD	IN/A
	Reciprocating Internal			C-11059/2			11/29/1993	N/A		X Existing (unchanged)		
4	Combustion Engine	Waukesha	7042GL	(Pkg. X00017)	1,478 hp	1,363 hp	11/20/1003	4	20200202	□ New/Additional □ Replacement Unit	4SLB	N/A
	5						11/29/1995	7		To Be Modified To be Replaced To be Removed		
5	Reciprocating Internal	Waukesha	7042GL	TBD	1,478 hp	1,363 hp	TBD	N/A	20200202	□ New/Additional □ Replacement Unit	4SLB	N/A
- -	Combustion Engine				, I	, I	TBD	5		□ To Be Modified □ To be Replaced		
	Reciprocating Internal						TBD	N/A		X Existing (unchanged)		
6	Combustion Engine	Waukesha	7042GL	TBD	1,478 hp	1,363 hp	TRD	6	20200202	□ New/Additional □ Replacement Unit	4SLB	N/A
	5						IBD	0		□ To Be Modified □ To be Replaced		
SSM	Compressors &	N/A	N/A	N/A	N/A	N/A	N/A	N/A	31000299	□ New/Additional □ Replacement Unit	N/A	N/A
	Associated Piping (SSM)						N/A	N/A		□ To Be Modified □ To be Replaced		
			J2P12M111		12	12	07/92	NA		X Existing (unchanged)		
7a	Dehydrator Still Vent	Enertek	09	41687	MMSCFD	MMSCFD	07/92	NΔ	31000227	□ New/Additional □ Replacement Unit	N/A	N/A
							07/02	2112		X Existing (unchanged) To be Removed		
7b ⁵	Dehydrator Reboiler	Enertek	J2P12M111	41687	1,208 scfh	1,208 scfh	07/92	NA	31000228	□ New/Additional □ Replacement Unit	N/A	N/A
	-		09		-	-	07/92	7b		□ To Be Modified □ To be Replaced		
	~		J2P12M111	44.004	12	12	01/93	NA		X Existing (unchanged)	27/1	27/1
8a	Dehydrator Still Vent	Enertek	09	41891	MMSCFD	MMSCFD	01/93	N/A	31000227	New/Additional Replacement Unit To be Perplaced	N/A	N/A
			100100 (1111				01/02	NA		X Existing (unchanged)		
8b ⁵	Dehydrator Reboiler	Enertek	J2P12M111	41891	1,208 scfh	1,208 scfh	01/95	INA	31000228	□ New/Additional □ Replacement Unit	N/A	N/A
			09				01/93	8b		□ To Be Modified □ To be Replaced		
0.5	Dahrsdastan Still Vant	D % A	PA-10MM-	4201	10	10	01/93	NA	21000227	X Existing (unchanged)	NI/A	NI/A
9a	Denydrator Still Vent	ΓαΑ	1000-2P	4301	MMSCFD	MMSCFD	01/93	N/A	31000227	To Be Modified To be Replaced	IN/A	IN/A
			DA 10104				01/93	NΔ		X Existing (unchanged)		
9b ⁵	Dehydrator Reboiler	P & A	PA-10MM- 1000-2P	4301	659 scfh	659 scfh	01/02		31000228	□ New/Additional □ Replacement Unit	N/A	N/A
			1000-21				01/93	9b		□ To Be Modified □ To be Replaced		
10a	Debudrator Still Vent	Р <i>&</i> г А	PA-10MM-	4570	10	10	03/91	NA	31000227	X Existing (unchanged) New/Additional Penlacement Unit	N/A	N/A
104	Denyurator Still Vent	I & A	1000-2P	4570	MMSCFD	MMSCFD	03/91	NA	51000227	□ To Be Modified □ To be Replaced	1V/A	11//A
			PA-10MM-				03/91	NA		X Existing (unchanged)		
$10b^{5}$	Dehydrator Reboiler	P & A	1000-2P	4570	659 scfh	659 scfh	02/01	10b	31000228	□ New/Additional □ Replacement Unit	N/A	N/A
							03/91	100		To Be Modified To be Replaced		
C1-C6	Reciptocating Compressor	N/A	N/A	N/A	N/A	N/A	N/A	N/A	31000299	□ New/Additional □ Replacement Unit	N/A	N/A
	Venting	1011	11	1011	1.011		N/A	N/A		□ To Be Modified □ To be Replaced		
PC1 -							N/A	N/A		X Existing (unchanged)		
PC68	Pneumatic Controllers	N/A	N/A	N/A	N/A	N/A	N/A	N/A	31000299	□ New/Additional □ Replacement Unit	N/A	N/A
										□ то ве Modified □ To be Replaced □ Existing (unchanged) X To be Removed	+	
M-1	Malfunctions	N/A	N/A	N/A	N/A	N/A	IN/A	IN/A	31000299	New/Additional Replacement Unit	N/A	N/A
							N/A	N/A		□ To Be Modified □ To be Replaced		

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

² Specify dates required to determine regulatory applicability.

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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

⁵ The previous [Operating Permit P029] application contained typographical errors showing the 'Manufacturer's Rated Capacity' and 'Requested Permitted Capacity' for the unit 7b, 8b, 9b, and 10b dehydrator reboilers as 429 scfh each. With this application, the typos are corrected to match the fuel consumption rates shown in the Section 6 emission calculations. (The reboiler emission rates shown in Table 2-E are unaffected.)

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	N	Ox	C	20	VO	DC	S	Ox	PI	\mathbf{M}^1	PM	[10 ¹	PM	2.5^{1}	Н	$_{2}S$	Le	ead
Unit No.	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	4.51	19.74	7.96	34.87	3.00	13.16	5.91E-03	2.59E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
2	4.51	19.74	7.96	34.87	3.00	13.16	5.9E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
3	4.51	19.74	7.96	34.87	3.00	13.16	5.91E-03	2.59E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
4	4.51	19.74	7.96	34.87	3.00	13.16	5.91E-03	2.6E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
5	4.51	19.74	7.96	34.87	3.00	13.16	5.91E-03	2.59E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
6	4.51	19.74	7.96	34.87	3.00	13.16	5.91E-03	2.59E-02	0.10	0.44	0.10	0.44	0.10	0.44	-	-	-	-
SSM	-	-	-	-	Not specified	2.36	-	-	-	-	-	-	-	-	-	-	-	-
7a	-	-	-	-	2.50	10.00	-	-	-	-	-	-	-	-	-	-	-	-
7b	4.29E-02	0.19	3.25E-02	0.14	4.79E-03	2.10E-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
8a	-	-	-	-	2.50	10.00	-	-	-	-	-	-	-	-	-	-	-	-
8b	4.29E-02	0.19	3.25E-02	0.14	4.79E-03	2.10E-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
9a	-	-	-	-	2.50	10.00	-	-	-	-	-	-	-	-	-	-	-	-
9b	4.29E-02	0.19	1.79E-02	7.85E-02	2.71E-03	1.19E-02	4.17E-04	1.83E-03	5.01E-03	2.19E-02	5.01E-03	2.19E-02	5.01E-03	2.19E-02	-	-	3.30E-07	1.44E-06
10a	-	-	-	-	2.50	10.00	-	-	-	-	-	-	-	-	-	-	-	-
10b	4.29E-02	0.19	1.79E-02	7.85E-02	2.71E-03	1.19E-02	4.17E-04	1.83E-03	5.01E-03	2.19E-02	5.01E-03	2.19E-02	5.01E-03	2.19E-02	-	-	3.30E-07	1.44E-06
Totals	27.21	119.18	47.87	209.67	28.04	121.38	3.80E-02	0.17	0.63	2.76	0.63	2.76	0.63	2.76	-	-	1.87E-06	8.18E-06

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

Table 2-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 scenduled maintenance are no higher than those listed in Table 2-E and a malfunction emission limit is not already permitted or requested. If you are required to report GHG emissions as described in Section 6a, include any GHG emissions during Startup, Shutdown, and/or Scheduled Maintenance (SSM) in Table 2-P. Provide an explanations of SSM emissions in Section 6 and 6a.

All applications for facilities that have emissions during routine our predictable startup, shutdown or scheduled maintenance (SSM)¹, including NOI applications, must include in this table the Maximum Emissions during routine or predictable startup, shutdown and scheduled maintenance (20.2.7 NMAC, 20.2.72.203.A.3 NMAC, 20.2.73.200.D.2 NMAC). In Section 6 and 6a, provide emissions calculations for all SSM emissions reported in this table. Refer to "Guidance for Submittal of Startup, Shutdown, Maintenance Emissions in Permit Applications (https://www.env.nm.gov/aqb/permit/aqb pol.html) for more detailed instructions. Numbers shall be expressed to at least 2 decimal points (e.g. 0.41, 1.41, or 1.41E-4).

Unit No.	N	Ox	C	0	VC)C	S	Ox	PI	M^2	PM	(10^2)	PM	2.5^{2}	Н	$_2S$	Le	ead
Unit No.	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
SSM	-	-	-	-	not specified	2.36	-	-	-	-	-	-	-	-	-	-	-	-
Totals	-	-	-	-	not specified	2.36	-	-	-	-	-	-	-	-	-	-	-	-

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.

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

Table 2-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	Ben X HAP o	zene or 🗆 TAP	Forma X HAP o	ldehyde or □ TAP	Tolı X HAP o	uene or 🗆 TAP	Xy X HAP (lene or 🗆 TAP	Provide Name HAP c	Pollutant Here or 🗆 TAP						
		lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
1	1	0.5	2.3	-	0.1	0.5	2.2	-	-	-	-								
2	2	0.5	2.3	-	0.1	0.5	2.2	-	-	-	-								
3	3	0.5	2.3	-	0.1	0.5	2.2	-	-	-	-								
4	4	0.5	2.3	-	0.1	0.5	2.2	-	-	-	-								
5	5	0.5	2.3	-	0.1	0.5	2.2	-	-	-	-								
6	6	0.5	2.3	-	0.1	0.5	2.2	-	-	-	-								
SSM	SSM	-	-	-	-	-	-	-	-	-	-								
7a	7a	1.0	4.4	0.3	1.1	-	-	0.4	1.8	0.3	1.4								
7b	7b	-	-	-	-	-	-	-	-	-	-								
8a	8a	1.0	4.4	0.3	1.1	-	-	0.4	1.8	0.3	1.4								
8b	8b	-	-	-	-	-	-	-	-	-	-								
9a	9a	0.9	4.1	0.2	1.1	-	-	0.4	1.7	0.3	1.2								
9b	9b	-	-	-	-	-	-	-	-	-	-								
10a	10a	0.9	4.1	0.2	1.1	-	-	0.4	1.7	0.3	1.2								
10b	10b	-	-	-	-	-	-	-	-	-	-								
T2	T2	-	0.1	-	-	-	-	-	-	-	-								
L1	L1	-	-	-	-	-	-	-	-	-	-								
F1	F1	-	-	-	-	-	-	-	-	-	-								
Totals		7.06	31.0	1.1	4.8	3.0	13.3	1.7	7.3	1.2	5.4								

Table 2-P: Green House Gas Emissions

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

□ By checking this box, the applicant acknowledges the total CO2e emissions are less than 75,000 tons per year.

Unit No.		CO ₂ ton/yr	N2O ton/yr	CH ₄ ton/yr	SF ₆ ton/yr	PFC/HFC ton/yr ²					Total GHG Mass Basis ton/yr ⁴	Total CO₂e ton/yr ⁵
Unit No.	GWPs ¹	1	298	25	22,800	footnote 3						
1	mass GHG	6010.45	0.011	0.11							6010.6	-
1	CO ₂ e	6010.45	3.4	2.8							-	6016.7
2	mass GHG	6010.45	0.011	0.11							6010.6	-
2	CO ₂ e	6010.45	3.4	2.8							-	6016.7
-	mass GHG	6010.45	0.011	0.11							6010.6	-
3	CO ₂ e	6010.45	3.4	2.8							-	6016.7
	mass GHG	6010.45	0.011	0.11							6010.6	-
4	CO ₂ e	6010.45	3.4	2.8							-	6016.7
_	mass GHG	6010.45	0.011	0.11							6010.6	-
5	CO ₂ e	6010.45	3.4	2.8							-	6016.7
	mass GHG	6010.45	0.011	0.11							6010.6	-
6	CO ₂ e	6010.45	3.4	2.8							-	6016.7
COM	mass GHG	76.4	-	111.0							187.4	-
35111	CO ₂ e	76.39	-	2775.8							-	2852.2
7.	mass GHG	36.7	-	1.7							38.4	-
/a	CO ₂ e	36.7	-	41.4							-	78.1
7h	mass GHG	617.6	0.001	0.012							617.6	-
70	CO ₂ e	617.6	0.347	0.291							-	618.3
80	mass GHG	36.7	-	1.7							38.4	-
oa	CO ₂ e	36.7	-	41.4							-	78.1
8h	mass GHG	617.6	0.001	0.012							617.6	-
80	CO ₂ e	617.6	0.347	0.291							-	618.3
92	mass GHG	36.8	-	1.7							38.4	-
<i>7</i> a	CO ₂ e	36.8	-	41.5							-	78.2
015	mass GHG	336.9	0.001	0.006							336.9	-
90	CO ₂ e	336.9	0.189	0.159							-	337.3

Unit No.		CO ₂ ton/yr	N ₂ O ton/yr	CH ₄ ton/yr	SF ₆ ton/yr	PFC/HFC ton/yr ²					Total GHG Mass Basis ton/yr ⁴	Total CO₂e ton/yr ⁵
Unit No.	GWPs ¹	1	298	25	22,800	footnote 3						
10a	mass GHG	36.8	-	1.7							38.4	-
104	CO ₂ e	36.8	-	41.5							-	78.2
10b	mass GHG	336.9	0.001	0.006							336.9	-
100	CO ₂ e	336.9	0.189	0.159							-	337.3
F1	mass GHG	8.1	-	16.1							24.2	-
1.1	CO ₂ e	8.1	-	402.2							-	410.3
т2	mass GHG	0.0	-	0.0							0.0	-
12	CO ₂ e	0.0	-	0.0							-	0.0
т 1	mass GHG	0.0	-	0.0							0.0	-
LI	CO ₂ e	0.0	-	0.0							-	0.0
C1-C6	mass GHG	163.5	-	323.5							487.0	-
01-00	CO ₂ e	163.5	-	8087.1							-	8250.6
Pneum Dev	mass GHG	41.0	-	81.0							122.0	-
Venting	CO ₂ e	41.0	-	2024.6							-	2065.6
Pneum	mass GHG	1.0	-	2.0							3.1	-
Venting	CO ₂ e	1.0	-	51.0							-	52.0
	mass GHG										0.0	-
	CO ₂ e										-	0.0
	mass GHG										0.0	-
	CO ₂ e										-	0.0
T-4-16	mass GHG	38,408.9	0.07	540.97							38,950	-
Total	CO ₂ e	38,408.9	21.3	13,524.3							-	51,954.5

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.

⁶ The increase in mass GHG and CO2e compared to previous permit applications is based on higher methane and lower VOC content of the updated gas sample. (The gas GHG content fluctuates over time.)

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 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

Compressor Blowdown Emissions Calculations

Unit Number: SSM

Description: Compressors & Piping Associated With Station

Throughput

6	# of units	Number of units
197	events/yr/unit	Blowdowns per year per unit
5,680	scf/event	Gas loss per blowdown
6,713,760	scf/yr	Annual gas loss

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

Emission Rates

		Uncontrolled,
	Emission	Emission
Pollutants	Factors,	Rates,
	lb/scf	tpy
VOC	7.044E-04	2.36
Benzene	4.118E-07	1.38E-03
Ethylbenzene	5.597E-07	1.88E-03
n-Hexane	2.271E-06	7.62E-03
2,2,4-Trimethlypentane (Isooctane)	2.641E-07	8.87E-04
Toluene	1.214E-06	4.08E-03
Xylene	0.000E+00	0.00E+00

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

Gas Composition

	Mole	Molecular	Emission
Components	Percents,	Weights,	Factors,
	%	lb/lb-mole	lb/scf
Carbon dioxide	19.6169	44.01	2.276E-02
Hydrogen sulfide	0.0000	34.07	0.000E+00
Nitrogen	0.0554	28.01	4.090E-05
Methane	78.2352	16.04	3.308E-02
Ethane	1.5372	30.07	1.218E-03
Propane	0.4304	44.09	5.002E-04
Isobutane	0.0598	58.12	9.161E-05
n-Butane	0.0426	58.12	6.526E-05
Isopentane	0.0106	72.15	2.016E-05
n-Pentane	0.0038	72.15	7.226E-06
Cyclopentane	0.0002	70.14	3.697E-07
n-Hexane	0.0010	86.17	2.271E-06
Cyclohexane	0.0004	84.16	8.873E-07
Other hexanes	0.0026	86.18	5.906E-06
Heptanes	0.0008	100.20	2.113E-06
Methylcyclohexane	0.0012	98.19	3.106E-06
2,2,4-Trimethlypentane (Isooctane)	0.0001	100.21	2.641E-07
Benzene	0.0002	78.11	4.118E-07
Toluene	0.0005	92.14	1.214E-06
Ethylbenzene	0.0002	106.17	5.597E-07
Xylenes	0.0000	106.17	0.000E+00
C8+ Heavies	0.0010	110.00	2.899E-06
Total	100.0001		
Total VOC			7.044E-04

Gas stream composition obtained from the 32-8 #3 CDP extended gas analysis dated April 3, 2023. Emission Factors (lb/scf) = (% / 100) x lb/lb-mole / 379.4 scf/lb-mole 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.

Engines

The NO₂, CO, and VOC emissions from the engines were calculated from manufacturer's data. The SO₂ and particulate emissions were calculated using AP-42 emission factors from Table 3.2-2. HAP emissions were calculated using GRI-HAPCalc 3.01. All emissions were calculated assuming each engine operates at full site capacity for 8,760 hours per year.

The engines startup with no load and a rich fuel mixture. As a result, emissions are minimized. Because the engines take only minutes to reach operating temperature, emissions during startup are not expected to exceed the steady-state allowable limits. Similarly, emissions during shutdown do not exceed the steadystate 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.

No modifications are being made to the engines or their operation. Permitted criteria pollutant and HAP emissions are carried forward and not revised.

SSM Emissions

SSM blowdown emissions from the compressors and piping associated with the facility occur when high pressure gas is used to purge air from the system prior to startup. Also, after shutdowns, high pressure gas is released to atmosphere as a safety precaution.

VOC and HAP emissions from blowdowns of the compressors and piping associated with the station 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 Harvest engineering. The composition of the gas was determined from a recent extended gas analysis. For each unit, the annual number of blowdown events were estimated based on historical operations. A safety factor was incorporated 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. Use of the safety factor is also designed to ensure an adequate emissions limit, which includes emissions from other miscellaneous startup, shutdown and maintenance activities.

The SSM emissions identified in this application are routine or predictable startup/shutdown and scheduled maintenance, and do not include malfunctions or upsets.

The SSM emissions have been increased from 1.9 tpy to 2.4 tpy VOC.

Dehydrator Still Vents

VOC and HAP emissions from the dehydrator still vents were calculated using GRI-GLYCalc 4.0. The emission calculations assume each dehydrator operates at full capacity for 8,760 hours per year. To allow for variability in the composition of the inlet gas stream, the dehydrator still vent VOC emission rates identified on the application forms (Table 2-E) are higher than the calculated emission rates in this section.

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

No modifications are being made to the dehydrators or their operation. The currently permitted VOC emission rates are carried forward and not revised.

Dehydrator Reboilers

The NO_X and CO emission factors for the reboiler emission calculations are from an Enertek letter dated August 19, 1994. The VOC and SO₂ emission factors are 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 3.01. All emissions were calculated assuming each reboiler operates 8,760 hours per year.

The dehydrator reboilers 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, resulting in the continued formation of NO_X . Even so, with no natural gas fuel the 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.

No modifications are being made to the dehydrator reboilers or their operation. Permitted criteria pollutant and HAP emissions are carried forward and not revised.

Storage Tanks

The produced water tank Potential To Emit (PTE) for VOC and HAP was calculated using the maximum throughput and emission factors from the Colorado Department of Public Health and Environment (CDPHE) and the Texas Commission on Environmental Quality (TCEQ). As the VOC emission rate Form-Section 6 last revised: 5/3/16 Section 6, Page 3 Saved Date: 5/26/2023

from the produced water storage tank is less than 0.5 tpy, the produced water storage tank is an NSR exempt source in accordance with 20.2.72.202.B(5) NMAC, and an insignificant source under the Title V Insignificant Activity list, Item #1.

For the remaining tanks, the following assumptions were made:

- Residual oil #6 was used as an estimate for lubrication oil. As the vapor pressure of residual oil #6 is less than 0.2 psia, the tanks containing lubrication oil are NSR exempt sources under 20.2.72.202.B(2) NMAC, and insignificant sources under Title V Insignificant Activity list Item #5; and
- The wastewater storage tank liquid composition is assumed to be 99% water and 1% residual oil. As the vapor pressure of residual oil is less than 0.2 psia, the wastewater storage tank is an exempt source under 20.2.72.202.B(2) NMAC, and an insignificant source under Title V Insignificant Activity list Item #5.
- As the vapor pressure of triethlyene glycol (TEG) is less than 0.2 psia, the TEG storage tanks are each an exempt source under 20.2.72.202.B(2) NMAC, and insignificant sources under Title V Insignificant Activity List Item #5;
- The anti-freeze is an inhibited ethylene glycol (EG) coolant containing 50 percent EG and 50 percent water. As the vapor pressure of EG is less than 0.2 psia, the antifreeze storage tanks are exempt sources under 20.2.72.202.B(2) NMAC, and insignificant sources in accordance with the Title V Insignificant Activity List Item #5.

Due to the nature of operations, startup and shutdown emissions from the storage tanks are assumed to be accounted for in the calculations discussed above. Emissions due to maintenance are negligible as the units are not in operation during maintenance.

No changes are being made to the storage tanks or their operation. Emissions from the tanks are carried forward and not revised.

Truck Loading - Produced Water

The VOC emissions from truck loading of produced water 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; therefore, there are no SSM emissions associated with truck loading. No SSM maintenance activities are performed during the truck loading.

Based on calculated PTE, 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.

Equipment Leaks - Fugitive Emissions

Fugitive VOC and HAP emissions from equipment leaks were calculated using emission factors from Table 2.4 of the 1995 Protocol for Equipment Leak Emission Estimates published by the Environmental Protection Agency (EPA) and the gas stream composition obtained from a recent extended gas analysis. 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 the equipment are accounted for in the calculations.

Based on the calculated PTE, fugitive emissions from equipment leaks are 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.

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 <u>Mandatory Greenhouse Gas Reporting</u>.

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 <u>short</u> 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 \Box 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 <u>Mandatory Green House Gas Reporting</u> except that tons should be reported in short tons rather than in metric tons for the purpose of PSD applicability.

• API Compendium of Greenhouse Gas Emissions Methodologies for the Oil and Natural Gas Industry. August 2009 or most recent version.

• Sources listed on EPA's NSR Resources for Estimating GHG Emissions at http://www.epa.gov/nsr/clean-air-act-permitting-greenhouse-gases:

Global Warming Potentials (GWP):

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

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

Metric to Short Ton Conversion:

Short tons for GHGs and other regulated pollutants are the standard unit of measure for PSD and title V permitting programs. 40 CFR 98 <u>Mandatory Greenhouse Reporting</u> requires metric tons.

1 metric ton = 1.10231 short tons (per Table A-2 to Subpart A of Part 98 – Units of Measure Conversions)

CO₂, CH₄, and N₂O stack exhaust emissions for combustion sources were calculated using emission factors from 40 Code of Federal Regulations (CFR), Part C, Tables C-1 & C-2 and the combustion source higher heating value (HHV) design heat rates.

The SSM CO₂ and CH₄ emissions from blowdown events were calculated from the annual blowdown volumes and gas composition.

 CO_2 and CH_4 emissions from each of the dehydrators is based on the regenerator and flash gas stream data and still vent emission data in the GLYCalc output file.

There are no GHG emissions associated with the produced water storage tank or its associated truck loading operations.

Emissions of CO₂ and CH₄ from equipment leaks were calculated using the TOC emission factors and the facility gas stream composition.

The reciprocating compressor CO₂ and CH₄ emissions were calculated using a combination of equations W-26 & W-36 (from Subpart W).

CH₄ gas-driven pneumatic device emissions were calculated from the facility CH₄ gas stream composition using the emission factors and baseline CH₄ content from the API Compendium, Section 5.6.1, Table 5-15. CO₂ gas-driven pneumatic device emissions and non-routine emissions were calculated from the CH₄ emissions and facility gas stream CO₂ composition.

Green House Gas Emissions Data and Calculations

		Faci	lity Total Emiss	sions	
Sources	CO2,	N2O,	CH4,	GHG,	CO2e,
	tpy	tpy	tpy	tpy	tpy
Engine & Turbine Exhaust	36,062.72	0.068	0.680	36,063.5	36099.96
SSM Blowdowns	76.39		111.03	187.42	2852.17
Reciprocating Compressor Venting	163.47		323.48	486.96	8250.58
Dehydrators	147.01		6.63	153.64	312.72
Reboiler Exhaust	1,909.14	3.60E-03	3.60E-02	1,909.18	1911.11
Equipment Leaks	8.13		16.09	24.22	410.28
Natural Gas Pneumatic Device Venting	41.03		80.98	122.01	2065.65
Natural Gas Driven Pneumatic Pump Venting	1.03		2.04	3.07	52.04
Separators & Storage Tanks (Flash Emissions)	0.00		0.00	0.00	0.00
Total	38,408.92	7.16E-02	540.97	38,949.96	51,954.51

Engine & Turbine Exhaust Emissions

Unit		E	Emission Factor	rs in the second se		Emission Rates	3
Numbers	Description	CO2,	N2O,	CH4,	CO2,	N2O,	CH4,
		kg/MMBtu	kg/MMBtu	kg/MMBtu	tpy	tpy	tpy
1	Engine	53.06	1.00E-04	1.00E-03	6,010.45	0.011	0.113
2	Engine	53.06	1.00E-04	1.00E-03	6,010.45	0.011	0.113
3	Engine	53.06	1.00E-04	1.00E-03	6,010.45	0.011	0.113
4	Engine	53.06	1.00E-04	1.00E-03	6,010.45	0.011	0.113
5	Engine	53.06	1.00E-04	1.00E-03	6,010.45	0.011	0.113
6	Engine	53.06	1.00E-04	1.00E-03	6,010.45	0.011	0.113
	Total				36 062 72	0.068	0.680

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

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

The fuel types and operating times are provided by Harvest

The LHV design heat rates are taken from manufacturers data

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

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

SSM Blowdown Emissions

Unit		CO2 Total Emission	CH4 Emission	Emission Rates			
Numbers	Description	Gas Losses,	Factors,	Factors,	CO2,	N2O,	CH4,
		scf/yr	lb/scf	lb/scf	tpy	tpy	tpy
SSM	SSM Blowdowns	6,713,760	0.0228	0.0331	76.39	-	111.03

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

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 <u>and</u> 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.
- X If an EPA document or other material is referenced, include a complete copy.
- □ Fuel specifications sheet.
- ☑ If computer models are used to estimate emissions, include an input summary (if available) and a detailed report, and a disk containing the input file(s) used to run the model. For tank-flashing emissions, include a discussion of the method used to estimate tank-flashing emissions, relative thresholds (i.e., permit or major source (NSPS, PSD or Title V)), accuracy of the model, the input and output from simulation models and software, all calculations, documentation of any assumptions used, descriptions of sampling methods and conditions, copies of any lab sample analysis.

Please see the following pages.

Description:	32-8 #3 CDP		Company:	HARVEST MIDSTREAM
Field:			WorkOrder:	
Meter Number:			GPA Method:	GPA 2286
Analysis Date/Time:	4/4/2023	12:58:35	Sampled By:	DANIEL LOVATO
Date Sampled:	4/3/2023		Analyst Initials:	EM
Sample Temperature:	81		Instrument:	SRI 8610
Sample Pressure:	840			

GRI GlyCalc Information

Component	Mol%	Normalized Weight %
Carbon Dioxide	19.6169	39.3677
Hydrogen Sulfide	N/R	0
Nitrogen	0.0554	0.0708
Methane	78.2352	57.2329
Ethane	1.5372	2.1078
Propane	0.4304	0.8654
lso-Butane	0.0598	0.1585
n-Butane	0.0426	0.1129
Iso-Pentane	0.0106	0.0349
n-Pentane	0.0038	0.0125
Cyclopentane	0.0002	0.0006
n-Hexane	0.001	0.0041
Cyclohexane	0.0004	0.0015
Other Hexanes	0.0026	0.0119
Heptanes	0.0008	0.0037
Methylcyclohexane	0.0012	0.0054
2 2 4 Trimethylpentane	0.0001	0.0005
Benzene	0.0002	0.0007
Toluene	0.0005	0.0021
Ethylbenzene	0.0002	0.001
Xylenes	0	0
C8+ Heavies	0.001	0.0052
Subtotal	100.0001	
Oxygen	N/R	
Subtotal	100.0001	100
Calculated Molecular Weight	t	21.9302

Section 13

Determination of State & Federal Air Quality Regulations

This section lists each state and federal air quality regulation that may apply to your facility and/or equipment that are stationary sources of regulated air pollutants. Not all state and federal air quality regulations are included in this list. Go to the Code of Federal Regulations (CFR) or to the Air Quality Bureau's regulation page to see the full set of air quality regulations.

Required Information for Specific Equipment:

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

Required Information for Regulations that Apply to the Entire Facility:

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

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

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

Regulatory Citations for Emission Standards:

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

Federally Enforceable Conditions:

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

INCLUDE ANY OTHER INFORMATION NEEDED TO COMPLETE AN APPLICABILITY DETERMINATION OR THAT IS RELEVENT TO YOUR FACILITY'S NOTICE OF INTENT OR PERMIT.

EPA Applicability Determination Index for 40 CFR 60, 61, 63, etc: http://cfpub.epa.gov/adi/

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.

STATE REGU- LATIONS CITATION	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).

Table for STATE REGULATIONS:

STATE REGU- LATIONS CITATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
20.2.50 NMAC	Oil and Gas Sector – Ozone Precursor Pollutants	Yes	Engines 1-6; Reciprocating compressor seals; F1 Fugitive emissions; Glycol dehydrators 7-10; Pneumatic controllers & pumps	This regulation establishes emission standards for volatile organic compounds (VOC) and oxides of nitrogen (NOx) for oil and gas production, processing, compression, and transmission sources. 20.2.50 NMAC subparts: 113 – Engines and Turbines 114 – Compressor Seals 115 – Control Devices and Closed Vent Systems 116 – Equipment Leaks and Fugitive Emissions 117 – Natural Gas Well Liquid Unloading 118 – Glycol Dehydrators 119 – Heaters 120 – Hydrocarbon Liquid Transfers 121 – Pig Launching and Receiving 122 – Pneumatic Controllers and Pumps 123 – Storage Vessels 124 – Well Workovers 125 – Small Business Facilities 126 – Produced Water Management Units 127 – Flowback Vessels and Preproduction Operations This regulation is applicable because the facility is equipped with affected equipment as defined by the regulation, including engines, reciprocating compressor seals, equipment leaks and fugitive emissions, glycol dehydrators, and pneumatic controllers & pumps.
20.2.61.109 NMAC	Smoke & Visible Emissions	Yes	TEG dehy reboilers 7b- 10b; and RICE 1-6	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 NO _X , CO and VOC 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 not a PSD major 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, potentially	Potentially applicable to RICE 5 & 6	This regulation adopts by reference the federal NSPS codified in 40 CFR 60 (see 20.2.77.6 NMAC). The facility is potentially subject to 40 CFR 60, subparts A and JJJJ.
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.

STATE REGU- LATIONS CITATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
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	TEG dehydrators 7a/b-10a/b, and Potentially applicable to RICE 5 & 6	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 TEG dehydrators are subject to 40 CFR 63, subparts A and HH: and the RICE units 5 and 6 are potentially subject to 40 CFR 63, subparts A and ZZZZ.

Section 20

Other Relevant Information

<u>Other relevant information</u>. 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* required for all permit applications submitted on or after October 24, 2022.



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 Da	Expected Application Submittal Date					
Harvest Four Corners, LLC								
Permit	ttee/Company Contact	Email	Email					
Oakley	Oakley Hayes 505-632-4421 Oakley.Hayes@harvestmidstream.cd							
Withir	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?								
2	2 Refused to disclose information required by the provisions of the New Mexico Air Quality Control Act?							
3	Been convicted of a felony related to env	ironmental crime in any	court of any state or the United States?	🗆 Yes 🖂 No				
4	Been convicted of a crime defined by stat price fixing, bribery, or fraud in any court	e or federal statute as in of any state or the Unit	nvolving or being in restraint of trade, ed States?	🗆 Yes 🖂 No				
5a	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?							
5bIf "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.							
6	5 Had any permit revoked or permanently suspended for cause under the environmental laws of any state or the United States?							
7	For each "yes" answer, please provide an	explanation and docum	entation.					