Two-Stage Compressor

Compressor Skid Piping

Inlet Piping – Station Header to Suction Scrubber

1st Stage Suction Header – Suction Scrubber to Suction Bottle

1st Stage Cooler Discharge – Cooler to Suction Scrubber

2nd Stage Discharge Header – Discharge Bottle to Cooler

Final Compressor Discharge – Cooler to Discharge Block Valve

Pressure Leve	I
	1
	1
	2
	3
	3

Vessels

1st Stage Suction Scrubber 1st Stage Suction Bottle 1st Stage Discharge Bottle 2nd Stage Suction Scrubber 2nd Stage Suction Bottle 2nd Stage Discharge Bottle *Assumes 2:1 Heads

Pressure Level	
1]
1	
2	_
2	_
2	<u>'</u>
3	}

Cooler

Interstage Cooler (IC) Aftercooler (AC)

Pressure	Level
	1
	2

Cylinders

Cylinder 1 Cylinder 2 Cylinder 3 Cylinder 4

Pressure Level	
1	
1	
2	
2	1

Total Volume at 1st Stage Suction Pressure Total Volume at 1st Stage Discharge Pressure Total Volume at 2nd Stage Discharge Pressure Total Skid Volume

Pressure Level	
	1
	2
	3

Actual

Atmospheric Pressure (psia)11.54Standard Pressure (psia)14.696Standard Temp (⁰F)60Compressibility, z at STP1

Purge Volume based on Blowdown Procedure INPUT DATA

PSIG=	10
Atm Press=	11.7
PSIA=	21.7
T (Deg F)=	60
Tr=	520
Z=	0.95
k=	1.32
Diameter=	1.5
Spec. Grav.=	0.55
Ycr=	0.688
	·
CFS=	13.303
CFH=	47889.602
CFD=	1149350.454
Purge Time (sec)	20
Total Purge Volume (SCF)	266.053
	0.266

Count	OD (in)	WT (in)	ID (in)
1	8	0.5	7.625
1			
1			
1			
1			

Count	OD (in) Nominal	WT (in)	Length S/S (in)
1	36	0.625	92
1	25	0.5	86
1	23.5	1.25	192
1	36	0.625	92
1	25	0.5	86
1	23.5	1.25	192

Length (in)	O.D (in)	No. tubes	I.D (in)
			-0.098
			-0.098

Count	Bore ID (in)	Stroke (in)	Volume (ft³)
1			0.000
1			0.000
1			0.000
1			0.000
-	•	•	0.000

0.000

Actual Volume at P&T (ft³)	Pressure (psig)	Compress,	Temp (ºF)
97.301	300	1	60
133.385	489	1	60
41.490	793	1	60
272.176			

0.272 MSCF

Entire Compressor (Single Sta

Purge Volume
Operating Volume
Blowdown + Purge Volume

sec SCF

MSCF

Equation:	
Eq. 3-15 Eq. 3-16	
Eq. 3-16	

^{*}GPSA Engineering Data Bool

Color	Meaning
Light Blue	Input
	Needed
Light Purple	Calculatio
	n

Length (in)	Length (ft)	Volume (ft³)
240.000	20.000	6.342
	0.000	0.000
	0.000	0.000
	0.000	0.000
	0.000	0.000

Nozzle 1 (Inlet)		Nozzle 2	Nozzle 3	
ID (in)	Length (in)	ID (in)	Length (in)	ID (in)
10	9.5	6	8.125	2
6	15	6	13.25	1
7.63	15.5	7.63	15.5	5.76
10	10.125	6	12	2
6	12.25	6	14.625	1
3.44	13.25	3.44	13.25	3.44

Volume per tube (cu.ft)	Total Volume (cu.ft)
0.000	0.000
0.000	0.000

Vol Ratio	Std Volume (scf)
21.199	2062.689
34.060	4543.047
54.746	2271.374
	8877.109

Operating 8.877 MSCF

ge) Blowdown Volume

0.266	MSCF
8.877	MSCF
9.143	MSCF

Q=578400 x d^2 x Ycr x (1/(Tf x G))^.5 x P

 $Ycr = ((k/Z) \times (2/(k+1))^{(k+1)/(k-1)))^{.5}$

Q= CFD

P= Absolute Pressure

Tf= Absolute Flowing Temperature (R)

G= Specific Gravity

Z= Z @ Flowing Conditions

k= Ratio of Specific Heats

c, 14th Edition – Section 3: Measurement, Orifice Well Test (Page 3-10)

	Shell Volume (ft³)	Head Volume (ft³)*	Nozzles Volume (ft³)	Total Vessel Volume (ft³)
Length (in)				
7.25	50.494	6.358	0.578	63.787
13.25	22.515	2.094	0.468	27.172
16.25	38.485	1.403	1.065	42.356
7.25	50.494	6.358	0.670	63.879
14.625	22.515	2.094	0.446	27.150
10.5	38.485	1.403	0.199	41.490

	OD (in.)	Wall	Dia (f	t)	Radius	Length	Std Vol (ft3 Pr	ess (psig Za	avg
Suction header	20)	0.5	1.58	0.79	210	413.48	300	0.9971
Discharge header	16	0.3	375	1.27	0.64	210	266.37	793	0.9925

Note: interconnection piping was calculated with the compressors

Act Vol (ft3) 11.05 18.46

29.51

OD (in.) Wall Dia (ft) Radius Length Std Vol (ft3) Press (psig) Zavg V-101 42 0.5 3.42 1.71 12 110.02 300 0.9971

Act Vol (ft3)

2.94

Compressors	3 units	26.63 Mcf
Vessels		2.94 Mcf
Piping		29.51 Mcf

Total Loss 59.08 Mcf

Sante Fe Main Office Phone: (505) 476-3441 General Information

Phone: (505) 629-6116
Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division 1220 S. St Francis Dr. Santa Fe, NM 87505

QUESTIONS

Action 467368

QUESTIONS

Operator:	OGRID:
Harvest Four Corners, LLC	373888
1755 Arroyo Dr	Action Number:
Bloomfield, NM 87413	467368
	Action Type:
	[C-141] Initial C-141 (C-141-v-Initial)

QUESTIONS

Prerequisites		
Incident ID (n#)	nAPP2513829456	
Incident Name	NAPP2513829456 GOBERNADOR COMPRESSOR STATION @ 0	
Incident Type	Natural Gas Release	
Incident Status	Initial C-141 Received	
Incident Facility	[fCS0000000015] GOBERNADOR CS	

Location of Release Source	
Please answer all the questions in this group.	
Site Name	GOBERNADOR COMPRESSOR STATION
Date Release Discovered	05/17/2025
Surface Owner	Private

Incident Details		
Please answer all the questions in this group.		
Incident Type	Natural Gas Release	
Did this release result in a fire or is the result of a fire	Yes	
Did this release result in any injuries	No	
Has this release reached or does it have a reasonable probability of reaching a watercourse	No	
Has this release endangered or does it have a reasonable probability of endangering public health	No	
Has this release substantially damaged or will it substantially damage property or the environment	No	
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No	

Nature and Volume of Release		
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.		
Crude Oil Released (bbls) Details	Not answered.	
Produced Water Released (bbls) Details	Not answered.	
Is the concentration of chloride in the produced water >10,000 mg/l	Not answered.	
Condensate Released (bbls) Details	Not answered.	
Natural Gas Vented (Mcf) Details	Cause: Equipment Failure Other (Specify) Natural Gas Vented Released: 59 Mcf (Unknown Released Amount) Recovered: 0 Mcf Lost: 59 Mcf.	
Natural Gas Flared (Mcf) Details	Not answered.	
Other Released Details	Cause: Fire Other (Specify) Natural Gas Vented Released: 59 Mcf Recovered: 0 Mcf Lost: 59 Mcf.	
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	Fuel Supply line failed resulting in a fire, station shut down on fire eye detection as soon as fire was detected. Fuel to the fire was stopped when station went down so fire was stopped immediately. The fire did not cause any damage.	

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QUESTIONS, Page 2

Action 467368

Santa i e, ivivi or 303		
QUESTI	ONS (continued)	
Operator: Harvest Four Corners, LLC 1755 Arroyo Dr Bloomfield, NM 87413	OGRID: 373888 Action Number: 467368 Action Type:	
QUESTIONS	[C-141] Initial C-141 (C-141-v-Initial)	
Nature and Volume of Release (continued)		
Is this a gas only submission (i.e. only significant Mcf values reported)	Yes, according to supplied volumes this appears to be a "gas only" report.	
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	Yes	
Reasons why this would be considered a submission for a notification of a major release	From paragraph A. "Major release" determine using: (2) an unauthorized release of a volume that: (a) results in a fire or is the result of a fire; (3) an unauthorized release of gases exceeding 500 MCF.	
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e.	e. gas only) are to be submitted on the C-129 form.	
Initial Response The responsible party must undertake the following actions immediately unless they could create a s The source of the release has been stopped	afety hazard that would result in injury. True	
The impacted area has been secured to protect human health and the	Title	
environment	True	
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True	
All free liquids and recoverable materials have been removed and managed appropriately	True	
If all the actions described above have not been undertaken, explain why	Not answered.	
	I ation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative led or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of valuation in the follow-up C-141 submission.	
to report and/or file certain release notifications and perform corrective actions for releathe OCD does not relieve the operator of liability should their operations have failed to a	knowledge and understand that pursuant to OCD rules and regulations all operators are require asses which may endanger public health or the environment. The acceptance of a C-141 report by adequately investigate and remediate contamination that pose a threat to groundwater, surface t does not relieve the operator of responsibility for compliance with any other federal, state, or	
I hereby agree and sign off to the above statement	Name: Chad Snell Title: Environmental Specialist Email: chad.snell@harvestmidstream.com Date: 05/27/2025	

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QUESTIONS, Page 3

Action 467368

QUESTIONS (continued)

Operator:	OGRID:
Harvest Four Corners, LLC	373888
1755 Arroyo Dr	Action Number:
Bloomfield, NM 87413	467368
	Action Type:
	[C-141] Initial C-141 (C-141-v-Initial)

QUESTIONS Site Characterization Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the What is the shallowest depth to groundwater beneath the area affected by the Not answered. release in feet below ground surface (ft bgs) What method was used to determine the depth to ground water Not answered. Did this release impact groundwater or surface water Not answered What is the minimum distance, between the closest lateral extents of the release and the following surface areas: A continuously flowing watercourse or any other significant watercourse Not answered Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark) Not answered. An occupied permanent residence, school, hospital, institution, or church Not answered. A spring or a private domestic fresh water well used by less than five households Not answered. for domestic or stock watering purposes Any other fresh water well or spring Not answered. Incorporated municipal boundaries or a defined municipal fresh water well field Not answered. Not answered. A subsurface mine Not answered. An (non-karst) unstable area Not answered. Categorize the risk of this well / site being in a karst geology A 100-year floodplain Not answered. Did the release impact areas not on an exploration, development, production, or Not answered. storage site

Remediation Plan		
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.		
Requesting a remediation plan approval with this submission	No	
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.		

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CONDITIONS

Action 467368

CONDITIONS

Operator:	OGRID:
Harvest Four Corners, LLC	373888
1755 Аггоуо Dr	Action Number:
Bloomfield, NM 87413	467368
	Action Type:
	[C-141] Initial C-141 (C-141-v-Initial)

CONDITIONS

Created By		Condition Date
michael.buchanan	Natural gas release calculations have been accepted for the record. App ID: 467368	5/29/2025