Event Description: SCM to Sales Venting Episode

Event Date and Time:

Start Date & Time	End Date & Time
7/18/24 20:31	7/18/24 20:47

Gas Loss Through a Hole		
Release Duration	0.267	hr
Initial Pressure	1194	psig
Final Pressure	1194	psig
Temperature	115	deg F

Total Release Volume 237,050.88 scf/event 237.05 mscf/event

Component	Molecular Weight	Vent Stream Emissions			Reporting Threshold	
	lb/lb-mole	Mole %	scf/24-hr	lb/24-hr	lb/24-hr	Reportable?
Carbon Dioxide	44.010	1.1160	2645.49	306.89	-	-
Water	18.015	0.0000	0.00	0.00	-	-
Nitrogen	28.013	1.5890	3766.74	278.14	-	-
Hydrogen Sulfide	34.082	0.0017	4.03	0.36	100	No
Methane	16.040	77.9740	184838.06	7,814.86	-	-
Ethane	30.070	9.7970	23223.88	1,840.74	-	-
Propane	44.100	5.0380	11942.62	1,388.24	5,000	No
Isobutane	58.120	0.9120	2161.90	331.20	5,000	No
n-Butane	58.120	1.9210	4553.75	697.62	see above	No
Isopentane	72.150	0.5800	1374.90	261.48	5,000	No
n-Pentane	72.150	0.4440	1052.51	200.16	see above	No
n-Hexane	86.180	0.0000	0.00	0.00	5,000	No
Other Hexanes	86.180	0.6290	1491.05	338.71	see above	No
Heptane	100.200	0.0000	0.00	0.00	100	No
Octanes	114.230	0.0000	0.00	0.00	100	No
Benzene	78.110	0.0000	0.00	0.00	10	No
Toluene	92.140	0.0000	0.00	0.00	100	No
Ethylbenzene	106.170	0.0000	0.00	0.00	100	No
Xylenes	106.160	0.0000	0.00	0.00	100	No
	TOTAL	100.00	237,054.91	13,458.39	-	-
TOTAL VOC				**3,217.40**	**5,000**	**No**
TOTAL HAPs				**0.00**	**-**	**-**

Molar volume conversion @ 60 °F and 1 atm: 1 lb/mole = 379.4 scf

Valve leak emissions are based on valve size and gas pressure, using Engineering Calculation spreadsheet for gas loss through a hole.

Emissions for pipeline and vessel blowdowns are calculated using the equation in 40 CFR Part 98 Subpart W, Equation W-14A for blowdowns to atmospheric pressure.

Emissions are compared to the natural gas reportable quantity in 101.1(89)(B)(iv):

101.1(89)(B)(iv) where natural gas excluding carbon dioxide, water, nitrogen, methane, ethane, noble gases, hydrogen, and oxygen or air emissions from crude oil are known to be in an amount greater than or equal to 5,000 pounds or the associated hydrogen sulfide and mercaptans in a total amount greater than 100 pounds, whichever occurs first;

Gas Loss Through a Hole

Input Fields	
Calculated Fields	
Results Fields	

Type of Hole

Leak Characteristics		
Type of Hole	Round Hole	
Initial Pressure[1]	1194	(psig)
Gas Temperature[1]	115	(^{o}F)
Leak Time[1]	16	(minutes)

Round Hole		
Diameter of Hole	1	(inches)

Rip or Gouge		
Length		inches
Width		inches
Equivalent Diameter	0.00	inches

Gas Specifications		
Gas Molecular Weight (MW)		
Natural Gas	21.59	(lb/lb-mol)

[1] Based off information received from Operations in e-mail.

Calculated Equation Variables		
Area of Hole (HA)	0.785398163	(in^2)
Vessel/Pipe Pressure (P_t)	1208.7	(psia)
Gas Temperature (T_t)	319.26	(K)
[1]Gas Factor (GF)	15.87	
[2]Ratio of Specific Heats (γ)	1.27	

Results		
[3]Gas Mass Leak Rate (QR)	842.96	(lb/min)
[4]Gas Volume Leak Rate	14,815.68	(ft^3/min)
Total Leak Volume	237,050.88	(scf)
Total Leak Mass	13,487.31	(lbs)

Notes

[1]Gas Factor is calculated according to equation D-11 listed below.

[2]Ratio of Specific Heats value used is for natural gas.

[3]Gas Mass Leak Rate (QR) is calculated according to equation D-12 listed below.

[4]Gas Volume Leak Rate is calculated by dividing the Gas Mass Leak Rate (QR) by the Gas Molecular Weight (MW) and dividing by the universal gas law constant 379.48 scf/lb-mol.

Source

Equation for gas loss through a hole comes from "Risk Management Program Guidance For Offsite Consequence Analysis", U.S. EPA publication EPA-550-B-99-009, April 1999. Guidance for Offsite Consequence Analysis.

To derive the equation presented in the guidance, all the chemical-specific properties, constants, and appropriate conversion factors were combined into the "Gas Factor" (GF). The discharge coefficient was assumed to have a value of 0.8, based on the screening value recommended in EPA's *Workbook of Screening Techniques for Assessing Impacts of Toxic Air Pollutants*. The GF was derived as follows:

$$GF = 132.2 \times 6{,}895 \times 6.4516\times10^{-4} \times 0.8\sqrt{\gamma\left(\frac{2}{\gamma+1}\right)^{\frac{\gamma+1}{\gamma-1}}}\sqrt{\frac{MW}{8314}} \qquad \textbf{(D-11)}$$

where:

132.2	=	Conversion factor for lbs/min to kg/s
6,895	=	Conversion factor for psi to Pascals (p_0)
6.4516×10^{-4}	=	Conversion factor for square inches to square meters (A_h)

GF values were calculated for all gases regulated under CAA section 112(r) and are listed in Appendix B, Exhibit B-1, for toxic gases and Appendix C, Exhibit C-2, for flammable gases.

From the equation for choked flow above and the equation for the GF above, the initial release rate for a gas from a hole in a tank can be written as:

$$QR = HA \times P_t \times \frac{1}{\sqrt{T_t}} \times GF \qquad \textbf{(D-12)}$$

where:

QR	=	Release rate (pounds per minute)
HA	=	Hole area (square inches)
P_t	=	Tank pressure (psia)
T_t	=	Tank temperature (K)

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

DEFINITIONS

Operator: Pinon Midstream LLC 757 N. Eldridge Pkwy Houston, TX 77079	OGRID: 330718
	Action Number: 366693
	Action Type: [C-129] Venting and/or Flaring (C-129)

DEFINITIONS

For the sake of brevity and completeness, please allow for the following in all groups of questions and for the rest of this application:

- this application's operator, hereinafter "this operator";
- venting and/or flaring, hereinafter "vent or flare";
- any notification or report(s) of the C-129 form family, hereinafter "any C-129 forms";
- the statements in (and/or attached to) this, hereinafter "the statements in this";
- and the past tense will be used in lieu of mixed past/present tense questions and statements.

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

QUESTIONS

Action 366693

QUESTIONS

Operator: Pinon Midstream LLC 757 N. Eldridge Pkwy Houston, TX 77079	OGRID: 330718
	Action Number: 366693
	Action Type: [C-129] Venting and/or Flaring (C-129)

QUESTIONS

Prerequisites	
Any messages presented in this section, will prevent submission of this application. Please resolve these issues before continuing with the rest of the questions.	
Incident Well	*Unavailable.*
Incident Facility	**[fAPP2206937962] Pinon Midstream**

Determination of Reporting Requirements	
Answer all questions that apply. The Reason(s) statements are calculated based on your answers and may provide addional guidance.	
Was this vent or flare caused by an emergency or malfunction	No
Did this vent or flare last eight hours or more cumulatively within any 24-hour period from a single event	No
Is this considered a submission for a vent or flare event	**Yes, minor venting and/or flaring of natural gas.**
An operator shall file a form C-141 instead of a form C-129 for a release that, includes liquid during venting and/or flaring that is or may be a major or minor release under 19.15.29.7 NMAC.	
Was there **at least 50 MCF** of natural gas vented and/or flared during this event	Yes
Did this vent or flare result in the release of **ANY** liquids (not fully and/or completely flared) that reached (or has a chance of reaching) the ground, a surface, a watercourse, or otherwise, with reasonable probability, endanger public health, the environment or fresh water	No
Was the vent or flare within an incorporated municipal boundary or withing 300 feet from an occupied permanent residence, school, hospital, institution or church in existence	No

Equipment Involved	
Primary Equipment Involved	Pipeline (Any)
Additional details for Equipment Involved. Please specify	*Not answered.*

Representative Compositional Analysis of Vented or Flared Natural Gas	
Please provide the mole percent for the percentage questions in this group.	
Methane (CH4) percentage	78
Nitrogen (N2) percentage, if greater than one percent	2
Hydrogen Sulfide (H2S) PPM, rounded up	17
Carbon Dioxide (C02) percentage, if greater than one percent	1
Oxygen (02) percentage, if greater than one percent	0
If you are venting and/or flaring because of Pipeline Specification, please provide the required specifications for each gas.	
Methane (CH4) percentage quality requirement	*Not answered.*
Nitrogen (N2) percentage quality requirement	*Not answered.*
Hydrogen Sufide (H2S) PPM quality requirement	4
Carbon Dioxide (C02) percentage quality requirement	*Not answered.*
Oxygen (02) percentage quality requirement	*Not answered.*

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

QUESTIONS (continued)

Operator: Pinon Midstream LLC 757 N. Eldridge Pkwy Houston, TX 77079	OGRID: 330718
	Action Number: 366693
	Action Type: [C-129] Venting and/or Flaring (C-129)

QUESTIONS

Date(s) and Time(s)	
Date vent or flare was discovered or commenced	07/18/2024
Time vent or flare was discovered or commenced	08:31 PM
Time vent or flare was terminated	08:47 PM
Cumulative hours during this event	0

Measured or Estimated Volume of Vented or Flared Natural Gas	
Natural Gas Vented (Mcf) Details	Cause: Pipeline Quality Specifications | Pipeline (Any) | Natural Gas Vented | Released: 237 Mcf | Recovered: 0 Mcf | Lost: 237 Mcf.
Natural Gas Flared (Mcf) Details	*Not answered.*
Other Released Details	*Not answered.*
Additional details for Measured or Estimated Volume(s). Please specify	*Not answered.*
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.**

Venting or Flaring Resulting from Downstream Activity	
Was this vent or flare a result of downstream activity	No
Was notification of downstream activity received by this operator	*Not answered.*
Downstream OGRID that should have notified this operator	*Not answered.*
Date notified of downstream activity requiring this vent or flare	*Not answered.*
Time notified of downstream activity requiring this vent or flare	*Not answered.*

Steps and Actions to Prevent Waste	
For this event, this operator could not have reasonably anticipated the current event and it was beyond this operator's control.	False
Please explain reason for why this event was beyond this operator's control	*Not answered.*
Steps taken to limit the duration and magnitude of vent or flare	The event was completed quickly and controlled to the best of the operator's ability to limit the quantity of gas vented.
Corrective actions taken to eliminate the cause and reoccurrence of vent or flare	Cause is not a common event and occurs when required for safety or proper normal operations. Events of this nature will be documented and monitored to ensure limitations on recurrence.

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

ACKNOWLEDGMENTS

Operator: Pinon Midstream LLC 757 N. Eldridge Pkwy Houston, TX 77079	OGRID: 330718
	Action Number: 366693
	Action Type: [C-129] Venting and/or Flaring (C-129)

ACKNOWLEDGMENTS

☑	I acknowledge that I am authorized to submit a *Venting and/or Flaring* (C-129) report on behalf of this operator and understand that this report can be **a complete** C-129 submission per 19.15.27.8 and 19.15.28.8 NMAC.
☑	I acknowledge that upon submitting this application, I will be creating a new incident file (assigned to this operator) to track any C-129 forms, pursuant to 19.15.27.7 and 19.15.28.8 NMAC and understand that this submission meets the notification requirements of Paragraph (1) of Subsection G and F respectively.
☑	I hereby certify the statements in this report are true and correct to the best of my knowledge and acknowledge that any false statement may be subject to civil and criminal penalties under the Oil and Gas Act.
☑	I acknowledge that the acceptance of any C-129 forms by the OCD does not relieve this operator of liability should their operations have failed to adequately investigate, report, and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment.
☑	I acknowledge that OCD acceptance of any C-129 forms does not relieve this operator of responsibility for compliance with any other applicable federal, state, or local laws and/or regulations.

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 366693

CONDITIONS

Operator: Pinon Midstream LLC 757 N. Eldridge Pkwy Houston, TX 77079	OGRID: 330718
	Action Number: 366693
	Action Type: [C-129] Venting and/or Flaring (C-129)

CONDITIONS

Created By	Condition	Condition Date
klopez	If the information provided in this report requires an amendment, submit a [C-129] Amend Venting and/or Flaring Incident (C-129A), utilizing your incident number from this event.	7/26/2024