

**Volumetrics Inc.** 

3710 East Rio Grande St, Victoria, TX-77901

Phone: 361-827-4024

**Work Order** Company: OXY USA INC 4000501489 Field/Location: **NMSW** Sampled by: OXY/JE SPOT-CYLINDER

Station Name: CORRAL COMPRESSOR STA 2 SOUTH FUEL SKID OUTLE Sample Type:

Sample Temperature (F): Station Number: NA Sample Pressure (PSIG): Sample Date: 2/23/22 1:30 PM 125 **Analysis Date:** 3/7/22 11:00 AM Flow rate (MCF/Day): NA Instrument: INFICON Ambient Temperature (F): 23

Sampling method: Calibration/Verification Date: 3/7/2022 FILL & EMPTY

Cylinder Number: Heat Trace used: YES 27784

#### **NATURAL GAS ANALYSIS: GPA 2261**

	Un-Normalized	Normalized	GPM	GРM	GPM
Components	Mol%	Mol%	14.650	14.730	15.025
Hydrogen Sulfide	0.0000	0.0000			
Nitrogen	1.3240	1.3598			
Methane	75.6525	77.7008			
Carbon Dioxide	0.1877	0.1928			
Ethane	11.5036	11.8151	3.153	3.170	3.234
Propane	5.8586	6.0172	1.654	1.663	1.696
Isobutane	0.7572	0.7777	0.254	0.255	0.260
N-butane	1.6243	1.6683	0.525	0.528	0.538
Isopentane	0.2101	0.2158	0.079	0.079	0.081
N-Pentane	0.1809	0.1858	0.067	0.068	0.069
Hexanes Plus	0.0650	0.0667	0.029	0.029	0.030
Total	07.2620	400 0000			

Total 97.3638 100.0000

Hexanes plus split (60%-30%-10%)

Physical Properties (Calculated)	14.650 psia	14.730 psia	15.025 psia
Total GPM Ethane+	5.761	5.792	5.908
Total GPM Iso-Pentane+	0.175	0.176	0.179
Compressibility (Z)	0.9965	0.9965	0.9964
Specific Gravity ( Air=1) @ 60 °F	0.7242	0.7242	0.7243
Molecular Weight	20.911	20.911	20.911
Gross Heating Value	14.650 psia	14.730 psia	15.025 psia
Dry, Real (BTU/Ft <sup>3</sup> )	1244.9	1251.8	1276.9
Wet, Real (BTU/Ft <sup>3</sup> )	1223.3	1231.0	1270.9
	.==		_
Dry, Ideal (BTU/Ft <sup>3</sup> )	1240.6	1247.4	1272.3
Wet, Ideal (BTU/Ft <sup>3</sup> )	1219.0	1225.7	1250.2

Temperature base 60 °F

Comment: FIELD H2S =0 PPM

Verified by

Mostaq Ahammad Petroleum Chemist Approved by

Deann Friend Laboratory Manager

#### **UPSET FLARING EVENT SPECIFIC JUSTIFICATIONS FORM**

Facility: Corral 2S CS Flare Date: 10/04/2023

**Duration of Event:** 20 Minutes **MCF Flared:** 243

Start Time: 08:50 PM End Time: 09:10 PM

Cause: Emergency Flare > Compression Equipment Malfunctions > Corral 2 South & Corral Gorge CTB

Method of Flared Gas Measurement: Gas Flare Meter

## 1. Reason why this event was beyond Operator's control:

This emissions event was caused by the unforeseen, unexpected, sudden, and unavoidable breakdown of equipment or process that was beyond the owner/operator's control and did not stem from activity that could have been foreseen and avoided, and could not have been avoided by good design, operation, and preventative maintenance practices. Oxy engages in respectable and good facility operation practices while also maintaining its continuous facility equipment preventative maintenance program. In this case, several gas compressors at the Corral 2 South compressor station and Corral Gorge CTB, simultaneously and unexpectedly malfunctioned, which then prompted an automatic shutdown of the units, which in turn caused the field to pressure up, which then triggered a flaring event. Notwithstanding proper gas compressor design and operation, various forms of mechanical or technical issues can be sudden, reasonably unforeseeable and unexpected which can cause compressor unit malfunctions to occur without warning or advance notice. Compressor engines are designed to operate in a precise manner and when malfunctions occur, it disrupts the gas compressor's operating manner and cuts off engine power, which in turn, prompts an automatic shutdown of the unit. Compression malfunctions occur without warning and therefore, Oxy is unable to predict, avoid or prevent this type of equipment malfunction from occurring. This malfunctioning event is out of OXY's control. OXY made every effort to control and minimize emissions as much as possible. All other compression at the facility was operating as designed and were running normally prior to this event occurring. Though sudden and unexpected malfunctioning compressor issues also occurred at the Corral Gorge CTB, OXY routed the overflow of stranded gas to flare at the Corral 2S compressor station to mitigate emissions for this event as the flare at this location can accommodate a higher volume of gas and to protect equipment, environment, and personnel.

# 2. Steps Taken to limit duration and magnitude of venting or flaring:

This facility is unmanned, except when Oxy production techs are gathering data daily or conducting daily walk-throughs to ensure that there are no problems, circumstances and/or assist other personnel on-site for maintenance purposes. It is OXY's policy to route its stranded gas to a flare during an unforeseen and unavoidable emergency or malfunction, as the part of the overall process or steps to take to limit duration and magnitude of flaring. Oxy personnel are in the field 24/7 and can physically see when we are flaring which in turn are communicated to additional Oxy field personnel. Internal OXY procedures ensure that upon notice of flaring, malfunction gas compressor unit and/or multiple unit shutdown alarms, increased sensor line pressure alarms, etc., field production technician personnel are promptly notified, and are instructed to assess the issue as soon as possible to take prompt corrective action and minimize emissions. Oxy production technicians must assess whether the issue or circumstance is due to damage and repair is needed, or whether there are other reasons for

its cause. In this case, several gas compressors at the Corral 2 South compressor station and Corral Gorge CTB, simultaneously and unexpectedly malfunctioned, which then prompted an automatic shutdown of the units, which in turn caused the field to pressure up, which then triggered a flaring event. As soon as flaring began, the facility's mitigation optimizer adjusted injection rates and shut in several wells to minimize emissions and cease flaring. Once Oxy production techs arrived on-site, to both the Corral 2 South compressor station and Corral Gorge CTB, they were able to clear the alarm panels and restart compression equipment. OXY made every effort to control and minimize emissions as much as possible during this event.

# 3. Corrective Actions taken to eliminate the cause and reoccurrence of venting or flaring:

Oxy is limited in the corrective actions to eliminate this type of cause and potential reoccurrence of flaring as notwithstanding proper gas compressor design and operation, various forms of mechanical or technical issues can be sudden, reasonably unforeseeable and unexpected which can cause compressor unit malfunctions to occur without warning or advance notice. Oxy continually strives to maintain and operate all its facility locations equipment in a manner consistent with good practices for minimizing emissions and reducing the number of emission events. Oxy has a strong and positive compression equipment preventative maintenance program in place. The only actions that Oxy can take and handle that is within its control, is to continue with its compression equipment preventative maintenance program for all its facilities and continually work with its compression rental owners to resolve those issues in a timely manner, should they occur suddenly and without warning.

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

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

Action 277575

#### **DEFINITIONS**

Operator:	OGRID:
OXY USA INC	16696
P.O. Box 4294	Action Number:
Houston, TX 772104294	277575
	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.

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

QUESTIONS

Action 277575

ρ	UESTIONS	
Operator:	323113113	OGRID:
OXY USA INC		16696
P.O. Box 4294 Houston, TX 772104294		Action Number: 277575
		Action Type: [C-129] Venting and/or Flaring (C-129)
QUESTIONS		[o 120] Tolking distant having (o 120)
Prerequisites		
Any messages presented in this section, will prevent submission of this application. Please resolve	these issues before continuing wit	h the rest of the questions.
Incident Well	Unavailable.	
Incident Facility	[fAPP2126640958] CORRA	L #2 SOUTH COMP STATION
Determination of Reporting Requirements		
Answer all questions that apply. The Reason(s) statements are calculated based on your answers are	nd mav provide addional quidance	
Was this vent or flare caused by an emergency or malfunction	Yes	
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 v		
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 <b>ANY</b> 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	Other (Specify)	
Additional details for Equipment Involved. Please specify	Emergency Flare > Compre CTB	ession Equipment Malfunctions > Corral 2 South & Corral Gorge
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	1	
Hydrogen Sulfide (H2S) PPM, rounded up	0	
Carbon Dioxide (C02) percentage, if greater than one percent	0	
Oxygen (02) percentage, if greater than one percent	0	
Oxygen (62) percentage, it greater than one percent	°	
If you are venting and/or flaring because of Pipeline Specification, please provide the required spec	ifications for each gas.	
Methane (CH4) percentage quality requirement	Not answered.	
Nitrogen (N2) percentage quality requirement	Not answered.	
Hydrogen Sufide (H2S) PPM quality requirement	Not answered.	
Carbon Dioxide (C02) percentage quality requirement	Not answered.	
Oxygen (02) percentage quality requirement	Not answered.	

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<u>District IV</u> 1220 S. St Francis Dr., Santa Fe, NM 87505 State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

QUESTIONS, Page 2

Action 277575

Phone:(505) 476-3470 Fax:(505) 476-3462	
QUES	TIONS (continued)
Operator: OXY USA INC	OGRID: 16696
P.O. Box 4294	Action Number:
Houston, TX 772104294	277575
	Action Type: [C-129] Venting and/or Flaring (C-129)
QUESTIONS	
Date(s) and Time(s)	
Date vent or flare was discovered or commenced	10/04/2023
Time vent or flare was discovered or commenced	08:50 PM
Time vent or flare was terminated	09:10 PM
Cumulative hours during this event	0
Measured or Estimated Volume of Vented or Flared Natural Gas	
Measured or Estimated Volume of Vented or Flared Natural Gas	
Natural Gas Vented (Mcf) Details	Not answered.
Natural Gas Flared (Mcf) Details	Cause: Other   Other (Specify)   Natural Gas Flared   Released: 243 Mcf   Recovered: 0 Mcf   Lost: 243 Mcf.
Other Released Details	Not answered.
Additional details for Measured or Estimated Volume(s). Please specify	Gas Flare Meter
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 ever and it was beyond this operator's control.	t True
	This emissions event was caused by the unforeseen, unexpected, sudden, and unavoidable breakdown of equipment or process that was beyond the owner/operator's control and did not stem from activity that could have been foreseen and avoided, and could not have been overlied by good docing, constating and expectation maintaneous practices. Own process in

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Please explain reason for why this event was beyond this operator's control

	Gorge CTB.
Steps taken to limit the duration and magnitude of vent or flare	This facility is unmanned, except when Oxy production techs are gathering data daily or conducting daily walk-throughs to ensure that there are no problems, circumstances and/or assist other personnel on-site for maintenance purposes. It is OXY's policy to route its stranded gas to a flare during an unforeseen and unavoidable emergency or malfunction, as the part of the overall process or steps to take to limit duration and magnitude of flaring. Oxy personnel are in the field 24/7 and can physically see when we are flaring which in turn are communicated to additional Oxy field personnel. Internal OXY procedures ensure that upon notice of flaring, malfunction gas compressor unit and/or multiple unit shutdown alarms, increased sensor line pressure alarms, etc., field production technician personnel are promptly notified, and are instructed to assess the issue as soon as possible to take prompt corrective action and minimize emissions. Oxy production technicians must assess whether the issue or circumstance is due to damage and repair is needed, or whether there are other reasons for its cause. In this case, several gas compressors at the Corral 2 South compressor station and Corral Gorge CTB, simultaneously and unexpectedly malfunctioned, which then prompted an automatic shutdown of the units, which in turn caused the field to pressure up, which then triggered a flaring event. As soon as flaring began, the facility's mitigation optimizer adjusted injection rates and shut in several wells to minimize emissions and cease flaring. Once Oxy production techs arrived on-site, to both the Corral 2 South compressor station and Corral Gorge CTB, they were able to clear the alarm panels and restart compression equipment. OXY made every effort to control and minimize emissions as much as possible during this event.
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# **State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division** 1220 S. St Francis Dr. **Santa Fe, NM 87505**

ACKNOWLEDGMENTS

Action 277575

#### **ACKNOWLEDGMENTS**

Operator:	OGRID:
OXY USA INC	16696
P.O. Box 4294	Action Number:
Houston, TX 772104294	277575
	Action Type:
	[C-129] Venting and/or Flaring (C-129)

#### **ACKNOWLEDGMENTS**

V	I acknowledge that I am authorized to submit a <i>Venting and/or Flaring</i> (C-129) report on behalf of this operator and understand that this report can be <b>a complete</b> C-129 submission per 19.15.27.8 and 19.15.28.8 NMAC.
V	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.
V	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.
V	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.
V	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.

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CONDITIONS

Action 277575

### **CONDITIONS**

Operator:	OGRID:
OXY USA INC	16696
P.O. Box 4294	Action Number:
Houston, TX 772104294	277575
	Action Type:
	[C-129] Venting and/or Flaring (C-129)

#### CONDITIONS

С	reated By	Condition	Condition Date
ı	marialuna2	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.	10/19/2023