Volumetrics Inc.
3710 East Rio Grande St, Victoria, TX-77901
Phone: 361-827-4024

Company:	OXY USA INC	**Work Order**	4000501489
Field/Location :	NMSW	**Sampled by:**	OXY/JE
Station Name :	CORRAL COMPRESSOR STA 2 SOUTH FUEL SKID OUTLE	**Sample Type :**	SPOT-CYLINDER
Station Number :	NA	**Sample Temperature (F):**	NA
Sample Date:	2/23/22 1:30 PM	**Sample Pressure (PSIG):**	125
Analysis Date:	3/7/22 11:00 AM	**Flow rate (MCF/Day):**	NA
Instrument:	INFICON	**Ambient Temperature (F):**	23
Calibration/Verification Date:	3/7/2022	**Sampling method:**	FILL & EMPTY
Heat Trace used:	YES	**Cylinder Number:**	27784

NATURAL GAS ANALYSIS: GPA 2261

Components	Un-Normalized Mol%	Normalized Mol%	GPM 14.650	GPM 14.730	GPM 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	**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^3)	1244.9	1251.8	1276.9
Wet, Real (BTU/Ft^3)	1223.3	1230.0	1254.7
Dry, Ideal (BTU/Ft^3)	1240.6	1247.4	1272.3
Wet, Ideal (BTU/Ft^3)	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: 12/27/2022

Duration of event: 8 Hours 52 Minutes

MCF Flared: 515

Start Time: 12:00 AM

End Time: 08:52 AM

Cause: Multiple Compression Malfunctions > Extreme Freezing Conditions & Temperatures > Facility Compression Equipment Issues

Method of Flared Gas Measurement: Gas Flare Meter

Comments: This upset event was not caused by any wells associated with the facility.

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

This event was caused by the sudden, 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 maintenance practices. In this case, extreme freezing weather conditions and temperatures were affecting facility compression equipment, which in turn, triggered multiple intermittent flaring occurrences to occur. The facility and its equipment were winterized as part of Oxy's usual operations practices for extreme cold weather, by having its equipment insulated and heat traced. Notwithstanding compressor engine design and operation, compressors are inherently dynamic and even the smallest alarms, false or true, can be sudden, reasonably unforeseeable, and unexpected which can cause compression malfunctions to occur. Gas compressor engines are designed to operate in a precise manner and when any type of malfunction occurs, especially when brought upon by extreme weather conditions, it disrupts the gas compressor's operating manner and cuts off engine power, which in turn, prompts an automatic shutdown of the units. Prior to the simultaneous malfunctions occurring, the compressor units were working as designed and operated normally prior to the sudden and without warning malfunctions due to extreme freezing weather conditions and temperatures, affecting the facility. These intermittent flaring incidents were completely out of OXY's control to prevent from happening yet OXY made every effort to control and minimize emissions as much as possible during this event by working safely and diligently.

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

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, extreme freezing weather conditions and temperatures were affecting facility compression equipment, which in turn, triggered multiple intermittent flaring occurrences to occur. The facility and its equipment were winterized as part of Oxy's usual operations practices for extreme cold weather, by having its equipment insulated

and heat traced. Notwithstanding compressor engine design and operation, compressors are inherently dynamic and even the smallest alarms, false or true, can be sudden, reasonably unforeseeable, and unexpected which can cause compression malfunctions to occur. Gas compressor engines are designed to operate in a precise manner and when any type of malfunction occurs, especially when brought upon by extreme weather conditions, it disrupts the gas compressor's operating manner and cuts off engine power, which in turn, prompts an automatic shutdown of the units. Once the on-call Oxy production technician received flaring and compression equipment malfunction alarms, the production technician drove out the facility to resolve the alarms. Upon arrival to the facility, which took some time, the production technician determined that the extreme freezing weather conditions were affecting the gas compression equipment and prompting freezing and mechanical issues to occur. The Oxy production technician called for a compressor mechanic to be dispatched to the facility to assist him with resolving the malfunctioning compression equipment. The dispatched compressor mechanic took some time to arrive at the facility, due to other calls in the area with the same equipment issues. Flaring occurrences would occur in approximately 10–15-minute intervals, and as soon as flaring began, the facility's optimizer would begin to shut in and choke back several wells, which also took time, and the Oxy production tech would continue to attempt restarting gas compressors units as well. Once the compressor mechanic arrived, both the Oxy production tech and the compression mechanic worked together to thaw out frozen lines and increased methanol injection rates to potentially prevent future freezing events, while also restarting sudden and unexpected malfunctioning compression equipment.

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, even during extreme weather conditions and temperatures. Oxy continually strives to maintain and operate its facility 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 keep continue with its compression equipment preventative maintenance program for this facility and ensure that extra insulation and heat tracers are added to potentially prevent future issues.

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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

DEFINITIONS

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 175321
	Action Type: [C-129] Amend Venting and/or Flaring (C-129A)

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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QUESTIONS

Action 175321

QUESTIONS

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 175321
	Action Type: [C-129] Amend Venting and/or Flaring (C-129A)

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 Operator	**[16696] OXY USA INC**
Incident Type	**Flare**
Incident Status	**Closure Not Approved**
Incident Well	*Unavailable.*
Incident Facility	**[fAPP2126640958] CORRAL #2 SOUTH COMP STATION**
Only valid Vent, Flare or Vent with Flaring incidents (selected above in the Application Details section) that are assigned to your current operator can be amended with this C-129A application.	

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	Yes
Did this vent or flare last eight hours or more cumulatively within any 24-hour period from a single event	Yes
Is this considered a submission for a vent or flare event	**Yes, major 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	Other (Specify)
Additional details for Equipment Involved. Please specify	Emergency Flaring > Multiple Compression Malfunctions > Extreme Freezing Conditions & Temperatures > Facility Compression Equipment Issues

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
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	*Not answered.*
Carbon Dioxide (C02) percentage quality requirement	*Not answered.*
Oxygen (02) percentage quality requirement	*Not answered.*

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QUESTIONS (continued)

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 175321
	Action Type: [C-129] Amend Venting and/or Flaring (C-129A)

QUESTIONS

Date(s) and Time(s)	
Date vent or flare was discovered or commenced	12/27/2022
Time vent or flare was discovered or commenced	12:00 AM
Time vent or flare was terminated	08:52 AM
Cumulative hours during this event	9

Measured or Estimated Volume of Vented or Flared Natural Gas	
Natural Gas Vented (Mcf) Details	*Not answered.*
Natural Gas Flared (Mcf) Details	Cause: Freeze | Other (Specify) | Natural Gas Flared | Released: 515 Mcf | Recovered: 0 Mcf | Lost: 515 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	
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	True
Please explain reason for why this event was beyond this operator's control	This event was caused by the sudden, 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 maintenance practices. In this case, extreme freezing weather conditions and temperatures were affecting facility compression equipment, which in turn, triggered multiple intermittent flaring occurrences to occur. The facility and its equipment were winterized as part of Oxy's usual operations practices for extreme cold weather, by having its equipment insulated and heat traced. Notwithstanding compressor engine design and operation, compressors are inherently dynamic and even the smallest alarms, false or true, can be sudden, reasonably unforeseeable, and unexpected which can cause compression malfunctions to occur. Gas compressor engines are designed to operate in a precise manner and when any type of malfunction occurs, especially when brought upon by extreme weather conditions, it disrupts the gas compressor's operating manner and cuts off engine power, which in turn, prompts an automatic shutdown of the units. Prior to the simultaneous malfunctions occurring, the compressor units were working as designed and operated normally prior to the sudden and without warning malfunctions due to extreme freezing weather conditions and temperatures, affecting the facility. These intermittent flaring incidents were completely out of OXY's control to prevent from happening yet OXY made every effort to control and minimize emissions as much as possible during this event by working safely and diligently.
Steps taken to limit the duration and magnitude of vent or flare	In this case, extreme freezing weather conditions and temperatures were affecting facility compression equipment, which in turn, triggered multiple intermittent flaring occurrences to occur. The facility and its equipment were winterized as part of Oxy's usual operations practices for extreme cold weather, by having its equipment insulated and heat traced. Notwithstanding compressor engine design and operation, compressors are inherently dynamic and even the smallest alarms, false or true, can be sudden, reasonably unforeseeable, and unexpected which can cause compression malfunctions to occur. Gas compressor engines are designed to operate in a precise manner and when any type of malfunction occurs, especially when brought upon by extreme weather conditions, it disrupts the gas compressor's operating manner and cuts off engine power, which in turn, prompts an automatic shutdown of the units. Once the on-call Oxy production technician received flaring and compression equipment malfunction alarms, the production technician drove out the facility to resolve the alarms. Upon arrival to the facility, which took some time, the production technician determined that the extreme freezing weather conditions were affecting the gas compression equipment and prompting freezing and mechanical issues to occur. The Oxy production technician called for a compressor mechanic to be dispatched to the facility to assist him with resolving the malfunctioning compression equipment. The dispatched compressor mechanic took some time to arrive at the facility, due to other calls in the area with the same equipment issues. Flaring occurrences would occur in approximately 10–15-minute intervals, and as soon as flaring began, the facility's optimizer would begin to shut in and choke back several wells, which also took time, and the Oxy production tech would continue to attempt restarting gas compressors units as well.
Corrective actions taken to eliminate the cause and reoccurrence of vent or flare	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, even during extreme weather conditions and temperatures. Oxy continually strives to maintain and operate its facility 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 keep continue with its compression equipment preventative maintenance program for this facility and ensure that extra insulation and heat tracers are added to potentially prevent future issues.

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ACKNOWLEDGMENTS

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 175321
	Action Type: [C-129] Amend Venting and/or Flaring (C-129A)

ACKNOWLEDGMENTS

☑	I acknowledge that with this application I will be amending an existing incident file (assigned to this operator) for a vent or flare event, pursuant to 19.15.27 and 19.15.28 NMAC.
☑	I acknowledge that amending an incident file does not replace original submitted application(s) or information and understand that any C-129 forms submitted to the OCD will be logged and stored as public record.
☑	I hereby certify the statements in this amending 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.

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CONDITIONS

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 175321
	Action Type: [C-129] Amend Venting and/or Flaring (C-129A)

CONDITIONS

Created By	Condition	Condition Date
marialuna2	If the information provided in this report requires further amendment(s), submit a [C-129] Amend Venting and/or Flaring Incident (C-129A), utilizing your incident number from this event.	1/11/2023