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 **Date:** 07/21/2022

Duration of event: 3 Hour 2 Minutes **MCF Flared:** 323

Start Time: 07:38 AM **End Time:** 10:40 AM

Cause: Multiple Compressor Malfunctions > Corral Gorge CTB & Corral 1 South CS > Detonation & Cylinder Temp HIHI

Method of Flared Gas Measurement: Gas Flare Meter

Comments: Start time and end time is a total combined duration of both flaring events with a 24-hour period.

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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, there were two (2) instances of flaring in which compressor malfunctions prompted an automatic shutdown of specific units, which in turn, triggered flaring to occur at the Corral 2 South compressor station as this flare can accommodate a higher volume of gas and to protect equipment, environment and personnel. The first flaring event occurred for five (5) minutes, which lasted from 07:38 AM to 07:43 AM, due to gas compressor unit # 1 at the Corral Gorge CTB, malfunctioned on a detonation alarm. The second flaring event occurred for almost three (3) hours, lasting from 02:03 PM to 05:00 PM, due to gas compressor unit # 10 malfunctioned due to detonation, while gas compressor unit #4 at the Corral 1 South compression station simultaneously malfunctioned on a cylinder temp HIHI alarm. These malfunctioning events are 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 maximized as much as possible to prevent long term flaring. In addition, wells were slowly choked back at the wells heads to minimize excess emissions/flaring during the second event. Though sudden and unexpected issues occurred at the Corral 1 South compressor station and Corral Gorge CTB, OXY routed the overflow of stranded gas to flare at the Corral 2 South 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:

These facilities are typically 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 all 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. 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. The flare at this facility has a 98% combustion efficiency in order to lessen emissions as much as possible. In this case, there were two instances of flaring in which compressor malfunctions prompted an

automatic shutdown of specific units, which in turn, triggered flaring to occur at the Corral 2 South compressor station, as this flare can accommodate a higher volume of gas and to protect equipment, environment and personnel. The first flaring event occurred for five (5) minutes, which lasted from 07:38 AM to 07:43 AM, due to gas compressor unit # 1 at the Corral Gorge CTB, malfunctioned on a detonation alarm. The second flaring event occurred for almost three (3) hours, lasting from 02:03 PM to 05:00 PM, due to gas compressor unit # 10 malfunctioned due to detonation, while gas compressor unit #4 at the Corral 1 South compression station simultaneously malfunctioned on a cylinder temp HIHI alarm. An Oxy production tech was on site at the Corral Gorge CTB, when the first compressor malfunction occurred, which triggered flaring, and immediately began procedures to inspect, determine cause, and restart the compression equipment. Flaring from the first event ceased almost immediately after the Oxy production tech cleared the alarm reset panel and restarted gas compressor unit # 1 successfully. In the case of the second flaring event, the Oxy production techs were conducting their daily facility inspections, when they received the compression malfunction alarms for the Corral Gorge and the Corral 1 South compressor station. After arriving individually to each facility and performing troubleshooting measures on gas compressor unit # 10 at the Corral Gorge CTB and gas compressor unit # 4 at the Corral 1 South compressor station, the units would not stay operational, despite repeated troubleshooting measures. Production techs quickly call USA Compression to send out a compressor mechanic to trouble shoot the units, respectively at each facility, and get them back to working service. Flaring ceased once both gas compressors, at each facility, were brough back to working service and reached maximized operation optimization. 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. More than likely, the extreme ambient heat temperatures, which exceeded 100 degrees, earlier in the day, and over the last few days, affected the compressor engines and caused them to overheat, internally and externally, and therefore prompted malfunctions to occur, such as the cylinder temp sensor to alarm as well as detonation. These malfunctioning events are 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 maximized as much as possible to prevent long term flaring. In addition, wells were slowly choked back at the wells heads to minimize excess emissions/flaring. Once all gas compressor units reached their optimized working operation and speed, did flaring cease at Corral 2 South compressor station facility. OXY made every effort to control and minimize emissions as much as possible during this event by working safely and diligently to resolve the issues.

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 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 all its facilities.

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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: 131631
	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 131631

QUESTIONS

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 131631
	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	*Not answered.*
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	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	Other (Specify)
Additional details for Equipment Involved. Please specify	Emergency Flare > Multiple Compressor Malfunctions > Corral Gorge CTB & Corral 1 South CS > Detonation & Cylinder Temp HIHI

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: 131631
	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	07/21/2022
Time vent or flare was discovered or commenced	07:30 AM
Time vent or flare was terminated	10:40 AM
Cumulative hours during this event	3

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: 323 Mcf | Recovered: 0 Mcf | Lost: 323 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 event and it was beyond this operator's control	True
Please explain reason for why this event was beyond this 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, there were two (2) instances of flaring in which compressor malfunctions prompted an automatic shutdown of specific units, which in turn, triggered flaring to occur at the Corral 2 South compressor station as this flare can accommodate a higher volume of gas and to protect equipment, environment and personnel. The first flaring event occurred for five (5) minutes, which lasted from 07:38 AM to 07:43 AM, due to gas compressor unit # 1 at the Corral Gorge CTB, malfunctioned on a detonation alarm. The second flaring event occurred for almost three (3) hours, lasting from 02:03 PM to 05:00 PM, due to gas compressor unit # 10 malfunctioned due to detonation, while gas compressor unit #4 at the Corral 1 South compression station simultaneously malfunctioned on a cylinder temp HIHI alarm. These malfunctioning events are 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 maximized as much as possible to prevent long term flaring. In addition, wells were slowly choked back at the wells heads to minimize excess emissions/flaring during the second event. Though sudden and unexpected issues occurred at the Corral 1 South compressor station and Corral Gorge CTB, OXY routed the overflow of stranded gas to flare at the Corral 2 South compressor station to mitigate emissions for this event as the flare at this location can accommodate a higher volume of gas.
Steps taken to limit the duration and magnitude of vent or flare	In this case, there were two instances of flaring in which compressor malfunctions prompted an automatic shutdown of specific units, which in turn, triggered flaring to occur at the Corral 2 South compressor station, as this flare can accommodate a higher volume of gas and to protect equipment, environment and personnel. The first flaring event occurred for five (5) minutes, which lasted from 07:38 AM to 07:43 AM, due to gas compressor unit # 1 at the Corral Gorge CTB, malfunctioned on a detonation alarm. The second flaring event occurred for almost three (3) hours, lasting from 02:03 PM to 05:00 PM, due to gas compressor unit # 10 malfunctioned due to detonation, while gas compressor unit #4 at the Corral 1 South compression station simultaneously malfunctioned on a cylinder temp HIHI alarm. An Oxy production tech was on site at the Corral Gorge CTB, when the first compressor malfunction occurred, which triggered flaring, and immediately began procedures to inspect, determine cause, and restart the compression equipment. Flaring from the first event ceased almost immediately after the Oxy production tech cleared the alarm reset panel and restarted gas compressor unit # 1 successfully. In the case of the second flaring event, the Oxy production techs were conducting their daily facility inspections, when they received the compression malfunction alarms for the Corral Gorge and the Corral 1 South compressor station. After arriving individually to each facility and performing troubleshooting measures on gas compressor unit # 10 at the Corral Gorge CTB and gas compressor unit # 4 at the Corral 1 South compressor station, the units would not stay operational, despite repeated troubleshooting measures. Production techs quickly call USA Compression to send out a compressor mechanic to trouble shoot the units, respectively at each facility, and get them back to working service.
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. 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 all its facilities.

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ACKNOWLEDGMENTS

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 131631
	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

Action 131631

CONDITIONS

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 131631
	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.	8/4/2022