



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:** 07/19/2022**Combined Duration of events:** 6 Hour 50 Minutes**MCF Flared:** 2116**Initial Start Time:** 06:10 AM**End Time:** 01:00 PM**Cause:** 3 Instances of Flaring > Multiple Compressor Malfunctions > Detonation**Method of Flared Gas Measurement:** Gas Flare Meter**Comments:** This upset event was not caused by any wells associated with the facility. Initial start time and end time comprise of the total duration from all the three events, thusly equaling 6.5 hours.

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

In this case, there were three (3) instances of flaring in which several gas compressors at the Corral 2 North compressor station facility and the Corral Gorge CTB facility automatically shut down on detonation malfunctions. Detonation is an internal compressor malfunction and 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 malfunctions can be caused by a number of things, such as fuel quality change, external and internal temperature changes, psi changes, oil issues, plugs and valves failing, etc., yet as it pertains to this event, there were no alarms on the compressors CAT panel, to indicate why several detonation malfunctions kept occurring, although the area was suffering from extreme ambient heat temperatures exceeding 100 degrees. The first flaring event occurred from 06:10 AM to 07:20 AM, the second event occurred from 12:20 PM to 04:30 PM, and the third flaring event occurred from 06:30 PM to 08:00 PM. With three instances of compression equipment shutdown at both the Corral 2 North compressor station as well as the Corral Gorge CTB, there was no gas takeaway, and thus field psi increased until set psi levels were reached which triggered flaring at the Corral 2 South compressor station, during each instance, as a safety measure for operations, facility equipment, and personnel. USA gas compressor units was working as designed and operated normally prior to the sudden and without warning detonation malfunction of the compressor units at each of the facilities several times. This incident was 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 during this event. Though sudden and unexpected issues occurred at the Corral 2 North 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.

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 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 three (3) instances of flaring in which several gas compressors at the Corral 2 North compressor station facility and the Corral Gorge CTB facility automatically shut down on detonation malfunctions triggering flaring events at the Corral 2 South compressor station, as the flare at this location can accommodate a higher volume of gas and to protect equipment, environment, and personnel. During the first flaring event, Oxy productions techs arrived separately at both Corral 2 North compressor station and the Corral Gorge CTB, after receiving compression malfunction alarms, and quickly inspected the units before clearing the alarms, and restarting the units back to normal working operation. Flaring ceased soon after all compression equipment reach its maximized optimization. During the second flaring event, Oxy production techs again received compression malfunction alarms, and took the same actions to restart. Unfortunately, the compression equipment would not restart, and a call was made to USA Compression to dispatch a compressor mechanic. A compressor mechanic was in the area, yet due to the high volume of calls/requests for a compressor mechanic, a delay in arrival by the mechanic would occur. Several wells were choked back to mitigate flaring until a compressor mechanic could arrive to resolve the compressor engines issues. After a few hours, USA Compression's compressor mechanic arrived at the Corral 2 North compressor station facility and began to troubleshoot the malfunctioning compressor engines along with the Oxy production tech to assist before heading over to the Corral Gorge CTB to restart the units. It was determined that more than likely, the extreme ambient heat temperatures, which exceeded 100 degrees, affected the compressor engines and caused them to overheat, internally and externally, and therefore would not re-start. The compressor mechanic and the Oxy production tech, at each of the facilities, were able to re-start the compressor engines and bring them back to working service. Each Oxy production tech remained on-site for a short period of time to monitor the compression equipment. Once all gas compressor units reached their optimized working operation and speed, did flaring cease at Corral 2 South compressor station facility. During the final event of the day, Oxy production techs again received compression malfunction alarms, and took the same actions to restart. Due to the compression alarms were received after hours, it did take some time for the oxy production techs to arrive, reset the alarm panels and restart the compression units. Earlier in the day, the USA Compression mechanic did power wash their cooling towers to assist the compression equipment run cooler and potentially avoid an overheating of the compression equipment, as a result of the extreme ambient heat temperatures affecting the 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. 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 continue with its compression equipment preventative maintenance program for all its facilities and continually work with its compression rental owners during periods of extreme weather temperature conditions affecting facility equipment to resolve those issues, should they occur suddenly and without warning.

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District III
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District IV
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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 130761

DEFINITIONS

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 130761
	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: <ul style="list-style-type: none">• 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 130761

QUESTIONS

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID:	16696
	Action Number:	130761
	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	Not answered.
Incident Facility	[fAPP2126640958] CORRAL #2 SOUTH COMP STATION

Determination of Reporting Requirements

Answer all questions that apply. The Reason(s) statements are calculated based on your answers and may provide additional 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, 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 Flare > 3 Instances of Flaring > Multiple Compressor Malfunctions > Detonation

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 (CO2) percentage, if greater than one percent	0
Oxygen (O2) 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 Sulfide (H2S) PPM quality requirement	Not answered.
Carbon Dioxide (CO2) percentage quality requirement	Not answered.
Oxygen (O2) percentage quality requirement	Not answered.

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QUESTIONS, Page 2

Action 130761

QUESTIONS (continued)

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 130761
	Action Type: [C-129] Venting and/or Flaring (C-129)

QUESTIONS

Date(s) and Time(s)	
Date vent or flare was discovered or commenced	07/19/2022
Time vent or flare was discovered or commenced	06:10 AM
Time vent or flare was terminated	01:00 PM
Cumulative hours during this event	6

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: 2,116 Mcf Recovered: 0 Mcf Lost: 2,116 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	In this case, there were three (3) instances of flaring in which several gas compressors at the Corral 2 North compressor station facility and the Corral Gorge CTB facility automatically shut down on detonation malfunctions. Detonation is an internal compressor malfunction and 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 malfunctions can be caused by a number of things, such as fuel quality change, external and internal temperature changes, psi changes, oil issues, plugs and valves failing, etc., yet as it pertains to this event, there were no alarms on the compressors CAT panel, to indicate why several detonation malfunctions kept occurring, although the area was suffering from extreme ambient heat temperatures exceeding 100 degrees. The first flaring event occurred from 06:10 AM to 07:20 AM, the second event occurred from 12:20 PM to 04:30 PM, and the third flaring event occurred from 06:30 PM to 08:00 PM. With three instances of compression equipment shutdown at both the Corral 2 North compressor station as well as the Corral Gorge CTB, there was no gas takeaway, and thus field psi increased until set psi levels were reached which triggered flaring at the Corral 2 South compressor station, during each instance, as a safety measure for operations, facility equipment, and personnel. USA gas compressor units was working as designed and operated normally prior to the sudden and without warning detonation malfunction of the compressor units at each of the facilities several times. This incident was 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 during this event.
Steps taken to limit the duration and magnitude of vent or flare	In this case, there were three (3) instances of flaring in which several gas compressors at the Corral 2 North compressor station facility and the Corral Gorge CTB facility automatically shut down on detonation malfunctions triggering flaring events at the Corral 2 South compressor station, as the flare at this location can accommodate a higher volume of gas and to protect equipment, environment, and personnel. During the first flaring event, Oxy productions techs arrived separately at both Corral 2 North compressor station and the Corral Gorge CTB, after receiving compression malfunction alarms, and quickly inspected the units before clearing the alarms, and restarting the units back to normal working operation. Flaring ceased soon after all compression equipment reach its maximized optimization. During the second flaring event, Oxy production techs again received compression malfunction alarms, and took the same actions to restart. Unfortunately, the compression equipment would not restart, and a call was made to USA Compression to dispatch a compressor mechanic. A compressor mechanic was in the area, yet due to the high volume of calls/requests for a compressor mechanic, a delay in arrival by the mechanic would occur. Several wells were choked back to mitigate flaring until a compressor mechanic could arrive to resolve the compressor engines issues. After a few hours, USA Compression's compressor mechanic arrived at the Corral 2 North compressor station facility and began to troubleshoot the malfunctioning compressor engines along with the Oxy production tech to assist before heading over to the Corral Gorge CTB to restart the units. It was determined that more than likely, the extreme ambient heat temperatures, which exceeded 100 degrees, affected the compressor engines and caused them to overheat, internally and externally, and therefore would not re-start.
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 continue with its compression equipment preventative maintenance program for all its facilities and continually work with its compression rental owners during periods of extreme weather temperature conditions affecting facility equipment to resolve those issues, should they occur suddenly and without warning.

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ACKNOWLEDGMENTS

Action 130761

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Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 130761
	Action Type: [C-129] Venting and/or Flaring (C-129)

ACKNOWLEDGMENTS

<input checked="" type="checkbox"/>	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 a complete C-129 submission per 19.15.27.8 and 19.15.28.8 NMAC.
<input checked="" type="checkbox"/>	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.
<input checked="" type="checkbox"/>	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.
<input checked="" type="checkbox"/>	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.
<input checked="" type="checkbox"/>	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 130761

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Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 130761
	Action Type: [C-129] Venting and/or Flaring (C-129)

CONDITIONS

Created By	Condition	Condition Date
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.	8/2/2022