



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
Deann Friend
Laboratory Manager

UPSET FLARING EVENT SPECIFIC JUSTIFICATIONS FORM**Facility:** Corral 2S CS**Event Date:** 07/22/2022**Duration of event:** 6 Hours 45 minutes**MCF Flared:** 2975**Start Time:** 06:55 AM**End Time:** 01:40 PM**Cause:** Facility Compression Equipment Malfunction Shutdown > Frozen Fuel Skid > Methanol Pump**Method of Flared Gas Measurement:** Gas Flare Meter

Comments: A compressor mechanic was requested to be dispatched by USA Compression but due to very high demand mechanic service from additional area operators, there was a serious delay in the arrival of a compressor mechanic to resolve/repair the facility's compression issues.

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 or prevented by good design, operation, and preventative maintenance practices. In this case, all four gas compressors at the Corral 2 South automatically shut down on compressor malfunctions due to a fuel skid issue, which then, triggered a flaring event to occur. Oxy field production techs immediately received shutdown compressor malfunction alarm notifications for the Corral 2 South Compressor Station. It was determined that all the gas compressors at the facility had shut down due to the fuel skid had frozen up, which caused a stoppage of fuel gas to all the compressors at the compressor station, and ice plugs to form. Oxy field personnel were unaware that the direct cause of the fuel skid freezing up was due to a malfunctioning methanol pump. The methanol pump for the fuel skid malfunctioned and had to be replaced by a USA compressor mechanic. USA compressor mechanic determined that the methanol pump injector had internal issues (broken plunger) necessitating an immediate replacement. The facility's compression equipment was working normally and in good working operation prior to the compressor malfunctions involving the fuel skid prompted all the compression equipment to automatically shut down. This event could not have been foreseen, avoided or planned for as typical operating equipment design and operations are inherently dynamic and even the smallest alarms, false or true, can be sudden, reasonably unforeseeable and unexpected which can cause malfunctions to occur, cease equipment operations and impact additional process equipment, such as gas compressors, which in turn, prompts unforeseeable or unpredicted shutdowns of a facility. This event is out of OXY's control yet, OXY made every effort to control and minimize emissions as much as possible.

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 inspection 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. Internal OXY procedures ensure that upon gas compressor shutdown, field production technician personnel are promptly notified, and know to assess the issue as soon as possible so that prompt corrective action to minimize emissions are taken. The flare at this facility has a 98%

combustion efficiency in order to lessen emissions as much as possible. In this case, all four gas compressors simultaneously shut down, which then, triggered a flaring event to occur. Oxy field production techs immediately received shutdown compressor malfunction alarm notifications for the facility and responded to such in a quick and efficient manner. Upon arrival, several Oxy production techs began immediate procedures to clear alarm panels and restart the gas compressors. After several unsuccessful attempts, an Oxy production tech called USA Compression to dispatch a compressor mechanic as soon as possible. Due to the high number of requests in the area for a compressor mechanic, the USA Compression dispatcher could only estimate an arrival of a mechanic within a few hours from the time Oxy's request was made. The USA Compression compressor mechanic arrived at the facility around noon and immediately began to troubleshoot the equipment. It was determined that the gas compressors shut down due to the fuel skid had frozen up, resulting from a faulty methanol pump, which caused a stoppage of fuel gas to all the compressors and ice plugs to form. The USA compressor mechanic indicated that the methanol pump injector had internal issues necessitating an immediate replacement, for which he had a spare part with him. Once the compressor mechanic replaced the methanol pump, Oxy production techs assisted by clearing the ice plugs, then assisted the compressor mechanic in restarting the gas compressors. Flaring ceased once all the gas compressors reached their maximized speed and optimization.

The facility's compression equipment was working normally and in good working operation before the fuel skid's faulty methanol pump prompted all the compression equipment to automatically shut down. This event could not have been foreseen, avoided or planned for as typical operating equipment design and operations are inherently dynamic and even the smallest alarms, false or true, can be sudden, reasonably unforeseeable and unexpected which can cause malfunctions to occur, and impact additional process equipment, such as gas compressors, which in turn, prompts unforeseeable shutdowns of a facility. Also, Oxy production techs began calling additional field personnel to shut in a few wells to minimize flaring emissions. It was critical to Oxy's operation safety and start up procedures to allow some gas production to continue, as it was necessary to maintain a minimal amount of gas flow to restart the facility's compression equipment. The minimal amount of gas flow allowed to be produced and routed to flare was done out of necessity to protect personnel and equipment as a safeguard against grave potential issues that could occur when restarting/opening well production flowing to the Corral 2 South compressor station. This event is out of OXY's control yet, OXY made every effort to control and minimize emissions as much as possible. An Oxy production tech remained on site for a period to ensure no additional issues occurred with the fuel skid or the gas compressors.

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

Oxy is limited in the corrective actions available to them to eliminate the cause and potential reoccurrence of this type of equipment malfunction as notwithstanding fuel skid and methanol pump design and operations, these types of operating equipment are inherently dynamic and even the smallest alarms, false or true, can be sudden, reasonably unforeseeable and unexpected which can cause malfunctions to occur, cease equipment operations and impact additional process equipment operations, which can in turn, prompt unforeseeable or unpredicted shutdowns of a facility, without warning or advance notice. This event is out of OXY's control yet, OXY made every effort to control and minimize emissions as much as possible.

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 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

Action 131906

DEFINITIONS

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 131906
	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 131906

QUESTIONS

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	Action Number: 131906
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QUESTIONS

Prerequisites	
<i>Any messages presented in this section, will prevent submission of this application. Please resolve these issues before continuing with the rest of the questions.</i>	
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
<i>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.</i>	

Determination of Reporting Requirements	
<i>Answer all questions that apply. The Reason(s) statements are calculated based on your answers and may provide additional guidance.</i>	
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.
<i>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.</i>	
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 within 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 > Facility Compression Equipment Malfunction Shutdown > Frozen Fuel Skid > Methanol Pump

Representative Compositional Analysis of Vented or Flared Natural Gas	
<i>Please provide the mole percent for the percentage questions in this group.</i>	
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
<i>If you are venting and/or flaring because of Pipeline Specification, please provide the required specifications for each gas.</i>	
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 131906

QUESTIONS (continued)

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 131906
	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	07/22/2022
Time vent or flare was discovered or commenced	06:55 AM
Time vent or flare was terminated	01:40 PM
Cumulative hours during this event	7

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: 2,975 Mcf Recovered: 0 Mcf Lost: 2,975 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 or prevented by good design, operation, and preventative maintenance practices. In this case, all four gas compressors at the Corral 2 South automatically shut down on compressor malfunctions due to a fuel skid issue, which then, triggered a flaring event to occur. Oxy field production techs immediately received shutdown compressor malfunction alarm notifications for the Corral 2 South Compressor Station. It was determined that all the gas compressors at the facility had shut down due to the fuel skid had frozen up, which caused a stoppage of fuel gas to all the compressors at the compressor station, and ice plugs to form. Oxy field personnel were unaware that the direct cause of the fuel skid freezing up was due to a malfunctioning methanol pump. The methanol pump for the fuel skid malfunctioned and had to be replaced by a USA compressor mechanic. USA compressor mechanic determined that the methanol pump injector had internal issues (broken plunger) necessitating an immediate replacement. The facility's compression equipment was working normally and in good working operation prior to the compressor malfunctions involving the fuel skid prompted all the compression equipment to automatically shut down. This event could not have been foreseen, avoided or planned for as typical operating equipment design and operations are inherently dynamic and even the smallest alarms, false or true, can be sudden, reasonably unforeseeable and unexpected which can cause malfunctions to occur, cease equipment operations and impact additional process equipment, such as gas compressors, which in turn, prompts unforeseeable or unpredicted shutdowns of a facility.
Steps taken to limit the duration and magnitude of vent or flare	In this case, all four gas compressors simultaneously shut down, which then, triggered a flaring event to occur. Oxy field production techs immediately received shutdown compressor malfunction alarm notifications for the facility and responded to such in a quick and efficient manner. Upon arrival, several Oxy production techs began immediate procedures to clear alarm panels and restart the gas compressors. After several unsuccessful attempts, an Oxy production tech called USA Compression to dispatch a compressor mechanic as soon as possible. Due to the high number of requests in the area for a compressor mechanic, the USA Compression dispatcher could only estimate an arrival of a mechanic within a few hours from the time Oxy's request was made. The USA Compression compressor mechanic arrived at the facility around noon and immediately began to troubleshoot the equipment. It was determined that the gas compressors shut down due to the fuel skid had frozen up, resulting from a faulty methanol pump, which caused a stoppage of fuel gas to all the compressors and ice plugs to form. The USA compressor mechanic indicated that the methanol pump injector had internal issues necessitating an immediate replacement, for which he had a spare part with him. Once the compressor mechanic replaced the methanol pump, Oxy production techs assisted by clearing the ice plugs, then assisted the compressor mechanic in restarting the gas compressors. Flaring ceased once all the gas compressors reached their maximized speed and optimization. The facility's compression equipment was working normally and in good working operation before the fuel skid's faulty methanol pump prompted all the compression equipment to automatically shut down. This event could not have been foreseen, avoided or planned for as typical operating equipment design and operations are inherently dynamic and even the smallest alarms, false or true, can be sudden, reasonably unforeseeable and unexpected.
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ACKNOWLEDGMENTS

Action 131906

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ACKNOWLEDGMENTS

<input checked="" type="checkbox"/>	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.
<input checked="" type="checkbox"/>	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.
<input checked="" type="checkbox"/>	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.
<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 131906

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	Action Number: 131906
	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.	8/6/2022