Artesia Laboratory
200 E Main St.
Artesia, NM 88210
Phone 575-746-3481

Certificate of Analysis

Number: 6030-20110087-001A

Nov. 17, 2020

Chandler Montgomery
Occidental Petroleum
1502 W Commerce Dr.
Carlsbad, NM 88220

Field:	NMSW	Sampled By:	Jesus Escobedo
Station Name:	Corral Compressor Station 2 South	Sample Of:	Gas Spot
Station Number:	N/A	Sample Date:	11/11/2020 01:09
Sample Point:	N/A	Sample Conditions:	1265 psig Ambient: 49 °F
Meter Number:		Effective Date:	11/11/2020 01:09
County:	Eddy	Method:	GPA 2286
Type of Sample:	Spot-Cylinder	Cylinder No:	1111-001162
Heat Trace Used:	N/A	Instrument:	6030_GC2 (Agilent GC-7890B)
Sampling Method:	Fill and Purge	Last Inst. Cal.:	08/25/2020 8:12 AM
Sampling Company:	OXY	Analyzed:	11/17/2020 12:40:16 by PGS

Analytical Data

Components	Un-normalized Mol %	Mol. %	Wt. %	GPM at 14.65 psia		
Hydrogen Sulfide	0.000	0.000	0.000		GPM TOTAL C2+	6.390
Nitrogen	1.332	1.320	1.675		GPM TOTAL C3+	3.359
Methane	76.899	76.201	55.381		GPM TOTAL iC5+	0.805
Carbon Dioxide	0.171	0.169	0.337			
Ethane	11.459	11.355	15.468	3.031		
Propane	5.781	5.728	11.443	1.575		
Iso-butane	0.846	0.838	2.207	0.274		
n-Butane	2.259	2.238	5.893	0.705		
Iso-pentane	0.642	0.636	2.079	0.232		
n-Pentane	0.766	0.759	2.481	0.275		
Hexanes Plus	0.763	0.756	3.036	0.298		
	100.918	100.000	100.000	6.390		

Calculated Physical Properties	Total	C6+
Relative Density Real Gas	0.7649	3.0584
Calculated Molecular Weight	22.07	88.58
Compressibility Factor	0.9960	
GPA 2172 Calculation:		
Calculated Gross BTU per ft³ @ 14.65 psia & 60°F		
Real Gas Dry BTU	1308	4763
Water Sat. Gas Base BTU	1285	4680
Ideal, Gross HV - Dry at 14.65 psia	1302.9	4763.5
Ideal, Gross HV - Wet	1280.1	0.000
Net BTU Dry Gas - real gas	1188	
Net BTU Wet Gas - real gas	1167	

Comments: H2S Field Content 0 ppm

Hydrocarbon Laboratory Manager

Quality Assurance: The above analyses are performed in accordance with ASTM, UOP, GPA guidelines for quality assurance, unless otherwise stated.

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Station Number:	N/A	Sample Date:	11/11/2020 01:09
Sample Point:	N/A	Sample Conditions:	1265 psig
Meter Number:		Method:	GPA 2286
County:	Eddy	Cylinder No:	1111-001162
Type of Sample:	Spot-Cylinder	Analyzed:	11/17/2020 13:21:28 by PGS
Heat Trace Used:	N/A	Sampling Company:	OXY
Sampling Method:	Fill and Purge		

Analytical Data

Components	Mol. %	Wt. %	GPM at 14.65 psia		
Hydrogen Sulfide	NIL	NIL		GPM TOTAL C2+	6.390
Nitrogen	1.320	1.675		GPM TOTAL C3+	3.359
Methane	76.201	55.381		GPM TOTAL iC5+	0.805
Carbon Dioxide	0.169	0.337			
Ethane	11.355	15.468	3.031		
Propane	5.728	11.443	1.575		
Iso-Butane	0.838	2.207	0.274		
n-Butane	2.238	5.893	0.705		
Iso-Pentane	0.636	2.079	0.232		
n-Pentane	0.759	2.481	0.275		
Hexanes	0.374	1.443	0.152		
Heptanes Plus	0.382	1.593	0.146		
	100.000	100.000	6.390		

Calculated Physical Properties	Total	C7+
Relative Density Real Gas	0.7649	3.1738
Calculated Molecular Weight	22.07	91.92
Compressibility Factor	0.9960	
GPA 2172 Calculation:		
Calculated Gross BTU per ft³ @ 14.65 psia & 60°F		
Real Gas Dry BTU	1308	4850
Water Sat. Gas Base BTU	1285	4766
Ideal, Gross HV - Dry at 14.65 psia	1302.9	4850.4
Ideal, Gross HV - Wet	1280.1	NIL

Comments: H2S Field Content 0 ppm

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Meter Number:		Method:	GPA 2286
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Type of Sample:	Spot-Cylinder	Analyzed:	11/17/2020 13:21:28 by PGS
Heat Trace Used:	N/A	Sampling Company:	OXY
Sampling Method:	Fill and Purge		

Analytical Data

Components	Mol. %	Wt. %	GPM at 14.65 psia
Hydrogen Sulfide	NIL	NIL	
Nitrogen	1.320	1.675	
Methane	76.201	55.381	
Carbon Dioxide	0.169	0.337	
Ethane	11.355	15.468	3.031
Propane	5.728	11.443	1.575
Iso-Butane	0.838	2.207	0.274
n-Butane	2.238	5.893	0.705
Iso-Pentane	0.636	2.079	0.232
n-Pentane	0.759	2.481	0.275
i-Hexanes	0.229	0.880	0.092
n-Hexane	0.145	0.563	0.060
Benzene	0.036	0.125	0.010
Cyclohexane	0.091	0.348	0.031
i-Heptanes	0.135	0.566	0.054
n-Heptane	0.027	0.125	0.013
Toluene	0.015	0.065	0.005
i-Octanes	0.065	0.307	0.029
n-Octane	0.003	0.015	0.001
Ethylbenzene	0.001	0.002	NIL
Xylenes	0.003	0.010	0.001
i-Nonanes	0.005	0.025	0.002
n-Nonane	0.001	0.003	NIL
i-Decanes	NIL	NIL	NIL
n-Decane	NIL	0.001	NIL
Undecanes	NIL	0.001	NIL
Dodecanes	NIL	NIL	NIL
Tridecanes	NIL	NIL	NIL
Tetradecanes Plus	NIL	NIL	NIL
	100.000	100.000	6.390

GPM TOTAL C2+ 6.390

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Sample Point:	N/A	Sample Conditions:	1265 psig
Meter Number:		Method:	GPA 2286
County:	Eddy	Cylinder No:	1111-001162
Type of Sample:	Spot-Cylinder	Analyzed:	11/17/2020 13:21:28 by PGS
Heat Trace Used:	N/A	Sampling Company:	OXY
Sampling Method:	Fill and Purge		

Calculated Physical Properties	**Total**
Calculated Molecular Weight	22.073
GPA 2172 Calculation:	
Calculated Gross BTU per ft³ @ 14.65 psia & 60°F	
Real Gas Dry BTU	1308.0
Water Sat. Gas Base BTU	1285.2
Relative Density Real Gas	0.7649
Compressibility Factor	0.9960

Comments: H2S Field Content 0 ppm

Hydrocarbon Laboratory Manager

Quality Assurance: The above analyses are performed in accordance with ASTM, UOP, GPA guidelines for quality assurance, unless otherwise stated.

UPSET FLARING EVENT SPECIFIC JUSTIFICATIONS FORM

Facility: Corral 2S CS **Date:** 06/11/2021

Duration of event: 2 Hours 30 Minutes **MCF Flared:** 820

Event Start Time: 02:40 PM **Event End Time:** 05:10 PM

Cause: Compressor Malfunctions > Methanol Pump Issue

Method of Flared Gas Measurement: Gas Flare Meter

Well API Associated with Facility: 30-015-44507 Corral Fly 02 01 State #021H

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

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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 or prevented 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. 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.

In this case, all the gas compressors at the Corral 1 compressor station shut down on malfunction alarms, due to the fuel skid froze up; which caused a stoppage of fuel gas to all the compressors at the compressor station. The methanol pump for the fuel skid malfunctioned and had to be replaced by a USA compressor mechanic. USA compressor mechanic determined that methanol pump had internal issues (broken plunger) necessitating an immediate replacement, which the compressor mechanic had a spare part with him. The facility's compression equipment was working normally and in good working operation prior to the malfunctions automatically shutting down the compression equipment. The malfunction and replacement of the methanol pump could not have been foreseen, avoided or prevented from happening as equipment, internally and externally, are inherently dynamic and its breakdown and/or malfunction can be sudden, reasonably unforeseeable and unexpected, which impact compression equipment operations and trigger additional malfunctions within the compressors themselves. This event is out of OXY's control yet, OXY made every effort to control and minimize emissions as much as possible. During this period of malfunction and resolvent of this issue, OXY routed all stranded gas to flare to minimize emissions until the units were brought back to working service once the methanol pump was replaced. Though sudden and unexpected malfunctioning compressor issues occurred at Corral 2 North compressor station, OXY routed the overflow of stranded gas to flare at the Corral 2S compressor station in an effort to mitigate emissions for this event as

the flare at this location can accommodate a higher volume of gas and in an effort 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. As stated previously, all the gas compressors at the Corral 1 compressor station shut down on malfunction alarms, due to the fuel skid froze up; which caused a stoppage of fuel gas to all the compression equipment at this compressor station.

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 personnel. Internal OXY procedures ensure that upon gas compressor unit and/or multiple unit shutdown alarms, production techs are promptly notified, and are instructed to assess the issue as soon as possible in order to take prompt corrective action and minimize emissions. Oxy production techs must assess whether compressor unit or multiple unit shutdown is due to damage and repair is needed, or whether there are other reasons for its cause. In this case, The Oxy production tech responded to the malfunction alarms and arrived at the Corral 1 compressor station, as quickly and safely as possible. After inspecting all the compressor units, the production quickly inspected additional areas and determined that the methanol pump for the fuel skid was not working properly and called USA Compression to send out a compressor mechanic to the facility to resolve the issue. Once the USA compressor mechanic arrived at the facility, and did his inspections, it was determined that the methanol pump to the fuel skid had internal issues (broken plunger) necessitating an immediate replacement, which the compressor mechanic had a spare part with him. Once the methanol pump was replaced, the Oxy production tech and the compressor mechanic began procedures to that the fuel skid and restart all the compressor units. Oxy production techs remained on-site until they were assured that no further issues would occur with the facility's compression equipment. Though sudden and unexpected malfunctioning compressor issues occurred at Corral 1 compressor station, OXY routed the overflow of stranded gas to flare at Corral 2S compressor station in an effort to mitigate emissions for this event as the flare at this location can accommodate a higher volume of gas and as a safety measure effort to protect equipment, environment, and personnel.

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

In this specific case, the corrective actions taken to eliminate the cause and reoccurrence of flaring for this cause, was to replace an equipment part by the compression owner's compressor mechanic. Overall, Oxy cannot take any corrective actions to eliminate the cause and potential reoccurrence of a methanol pump breaking down or malfunctioning as this type of cause is beyond Oxy's control to foresee, avoid or prevent from happening again. Facility equipment, in any operational function, either internally and externally, are inherently dynamic and its breakdown and/or malfunction can be sudden, reasonably unforeseeable and unexpected, which impact additional facility operations, despite good design, operation, and preventative maintenance program practices. Oxy engages in respectable and good facility operation practices while also maintaining its continuous facility equipment preventative maintenance program.

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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

QUESTIONS

Action 49075

QUESTIONS

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 49075
	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	**[30-015-44507] CORRAL FLY 02 01 STATE #021H**
Incident Facility	*Not answered.*

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 or is this venting and/or flaring caused by an emergency or malfunction	Yes
Did or will this venting and/or flaring last eight hours or more cumulatively within any 24-hour period from a single event	No
Is this considered a submission for a venting and/or flaring 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 or will there be **at least 50 MCF** of natural gas vented and/or flared during this event	Yes
Did this venting and/or flaring 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 venting and/or flaring 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 > Compressor Malfunctions > Methanol Pump Issue

Representative Compositional Analysis of Vented or Flared Natural Gas	
Please provide the mole percent for the percentage questions in this group.	
Methane (CH4) percentage	76
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.*

Date(s) and Time(s)	
Date venting and/or flaring was discovered or commenced	07/05/2021
Time venting and/or flaring was discovered or commenced	02:40 PM
Time venting and/or flaring was terminated	05:10 PM
Cumulative hours during this event	2

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: 820 Mcf | Recovered: 0 Mcf | Lost: 820 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 or is this venting and/or flaring a result of downstream activity	No
Was notification of downstream activity received by you or your operator	*Not answered.*
Downstream OGRID that should have notified you or your operator	*Not answered.*
Date notified of downstream activity requiring this venting and/or flaring	*Not answered.*
Time notified of downstream activity requiring this venting and/or flaring	*Not answered.*

Steps and Actions to Prevent Waste	
For this event, the operator could not have reasonably anticipated the current event and it was beyond the operator's control.	True
Please explain reason for why this event was beyond your operator's control	See Justification Form > 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. Oxy engages in respectable and good facility operation practices while also maintaining its continuous facility equipment preventative maintenance program. 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.
Steps taken to limit the duration and magnitude of venting and/or flaring	See Justification Form > 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 personnel. Internal OXY procedures ensure that upon gas compressor unit and/or multiple unit shutdown alarms, production techs are promptly notified, and are instructed to assess the issue as soon as possible in order to take prompt corrective action and minimize emissions. Oxy production techs must assess whether compressor unit or multiple unit shutdown is due to damage and repair is needed, or whether there are other reasons for its cause.
Corrective actions taken to eliminate the cause and reoccurrence of venting and/or flaring	See Justification Form > In this specific case, the corrective actions taken to eliminate the cause and reoccurrence of flaring for this cause, was to replace an equipment part by the compression owner's compressor mechanic. Overall, Oxy cannot take any corrective actions to eliminate the cause and potential reoccurrence of a methanol pump breaking down or malfunctioning as this type of cause is beyond Oxy's control to foresee, avoid or prevent from happening again. Facility equipment, in any operational function, either internally and externally, are inherently dynamic and its breakdown and/or malfunction can be sudden, reasonably unforeseeable and unexpected, which impact additional facility operations, despite good design, operation, and preventative maintenance program practices. Oxy engages in respectable and good facility operation practices while also maintaining its continuous facility equipment preventative maintenance program.

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CONDITIONS

Action 49075

CONDITIONS

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 49075
	Action Type: [C-129] Venting and/or Flaring (C-129)

CONDITIONS

Created By	Condition	Condition Date
marialuna	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.	9/15/2021