



Certificate of Analysis

Number: 6030-21120130-003A

Artesia Laboratory

200 E Main St.

Artesia, NM 88210

Phone 575-746-3481

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

Dec. 15, 2021

Field: Red Tank
Station Name: Red Tank 19 CTB Train 2 Check
Station Number: 15622C
Station Location: CTB
Sample Point: Meter
Formation: Monthly
County: Lea, NM
Type of Sample: : Spot-Cylinder
Heat Trace Used: N/A
Sampling Method: : Fill and Purge
Sampling Company: : SPL

Sampled By: Michael Mirabal
Sample Of: Gas Spot
Sample Date: 12/13/2021 10:20
Sample Conditions: 92 psig, @ 76 °F Ambient: 53 °F
Effective Date: 12/13/2021 10:20
Method: GPA-2261M
Cylinder No: 5030-01624
Instrument: 70142339 (Inficon GC-MicroFusion)
Last Inst. Cal.: 12/06/2021 0:00 AM
Analyzed: 12/15/2021 11:24:15 by ERG

Analytical Data

Components	Un-normalized Mol %	Mol. %	Wt. %	GPM at 14.65 psia		
Hydrogen Sulfide	0.000	0.002	0.003		GPM TOTAL C2+	5.984
Nitrogen	2.194	2.201	2.678		GPM TOTAL C3+	3.142
Methane	72.085	72.313	50.388		GPM TOTAL iC5+	0.716
Carbon Dioxide	4.626	4.641	8.872			
Ethane	10.612	10.646	13.905	2.842		
Propane	5.652	5.670	10.860	1.559		
Iso-butane	0.772	0.774	1.954	0.253		
n-Butane	1.944	1.950	4.923	0.614		
Iso-pentane	0.467	0.468	1.467	0.171		
n-Pentane	0.495	0.497	1.558	0.180		
Hexanes Plus	0.835	0.838	3.392	0.365		
	99.682	100.000	100.000	5.984		

Calculated Physical Properties

	Total	C6+
Relative Density Real Gas	0.7978	3.2176
Calculated Molecular Weight	23.02	93.19
Compressibility Factor	0.9960	

GPA 2172 Calculation:

Calculated Gross BTU per ft³ @ 14.65 psia & 60°F

Real Gas Dry BTU	1233	5113
Water Sat. Gas Base BTU	1212	5024
Ideal, Gross HV - Dry at 14.65 psia	1228.0	5113.2
Ideal, Gross HV - Wet	1206.5	5023.7
Net BTU Dry Gas - real gas	1120	
Net BTU Wet Gas - real gas	1101	

Comments: H2S Field Content 20 ppm
Mcf/day 19757

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:** Red Tank 19 CTB**Flare Date:** 11/04/2022**Duration of event:** 30 Minutes**MCF Flared:** 86**Start Time:** 5:50 AM**End Time:** 6:20 AM**Cause:** Third Party Downstream Activity > MARK WEST > Tornado Gas Plant Issues**Method of Flared Gas Measurement:** Gas Flare Meter**Comments:**

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

The emissions event was caused by the unforeseen, unexpected, sudden, and unavoidable interruption, restriction or complete shut-in of a gas pipeline by a third-party pipeline compressor station operator, which impacted Oxy's ability to send gas to them. This interruption, restriction or complete shut-in of the gas pipeline by a third-party pipeline compression station operator is downstream of Oxy's custody transfer point and out of Oxy's control to foresee, avoid or prevent from happening and did not stem from any of Oxy's upstream facility activity that could have been foreseen and avoided, and could not have been avoided by good design, operation, and preventative maintenance practices. In this case, Mark West Gas Purchaser, third party owned, had high liquid issues slugging train 1 of the Tornado gas plant, caused by train 2 plc issue causing them to cut back inflow from Red Tank 26 Boo USA Compressor station to address plant issues, which then instigated a sudden and unexpected restriction of gas flow intake by Mark West Pipeline, which in turn, prompted Oxy's Red Tank 19 CTB facility to pressure up automatically and trigger a flaring event to occur. This event could not have been foreseen, avoided or prevented from happening as this event occurred with no advance notice or warning to Oxy and its field personnel from Mark West. Red Tank 26 Boo compressor station is the first stopping point, where OXY sends its sales gas from its facility, before it is pushed further down the pipeline for further processing at Mark West, a downstream gathering system facility, which is downstream of Oxy's control.

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, that is beyond Oxy's control to avoid, prevent or foresee, to minimize emissions as much as possible as part of the overall steps taken to limit duration and magnitude of flaring. The flare at this facility has a 98% combustion efficiency to lessen emissions as much as possible. In this case, Mark West Gas Purchaser, third party owned, had high liquid issues slugging train 1 of the Tornado gas plant, caused by train 2 plc issue causing them to cut back inflow from Red Tank 26 Boo USA Compressor station to address plant issues, which then instigated a sudden and unexpected restriction of gas flow intake by Mark West Pipeline, which in turn, prompted Oxy's Red Tank 19 CTB facility to pressure up automatically and trigger a flaring event to occur. As soon as the Oxy production tech, who was on-site, saw flaring occur, he began to make phone calls to Mark West personnel to troubleshoot high pipeline pressures. The Oxy production tech then contacted Oxy's flowback personnel to begin making choke changes, so that field pressure would stay below the flare

trigger setpoints of the CPF to cease flaring. This event is out of OXY's control, yet OXY made every effort to control and minimize emissions as much as possible.

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

Oxy cannot take any corrective actions to eliminate the cause and potential reoccurrence of a third-party owned and operated compressor station's sudden and unexpected gas flow intake restriction or shut-in, as this control issue is downstream of Oxy's custody transfer point and out of Oxy's control to foresee, avoid, prevent from happening or reoccur. Third-party downstream gas plant or compression station owner operators may have equipment issues, which will reoccur from time to time, which in turn, directly impacts Oxy's ability to send its sales gas to them, and potentially triggering a flaring event. OXY makes every effort to control and minimize emissions as much as possible. The only actions that Oxy can take and handle that is within its control, is to continually communicate with Mark West and USA Compression personnel, who own and operate the compressor station, pipeline and their gas plants, when possible, during these types of circumstances.

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District IV
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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

Action 162379

DEFINITIONS

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 162379
	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 162379

QUESTIONS

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 162379
	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	Unavailable.
Incident Facility	[fAPP2127031815] RED TANK 19 CTB

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, 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 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 > Third Party Downstream Activity > MARK WEST > Tornado Gas Plant 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	72
Nitrogen (N2) percentage, if greater than one percent	2
Hydrogen Sulfide (H2S) PPM, rounded up	20
Carbon Dioxide (CO2) percentage, if greater than one percent	5
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 162379

QUESTIONS (continued)

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	Action Type: [C-129] Venting and/or Flaring (C-129)

QUESTIONS

Date(s) and Time(s)	
Date vent or flare was discovered or commenced	11/04/2022
Time vent or flare was discovered or commenced	05:50 AM
Time vent or flare was terminated	06:20 AM
Cumulative hours during this event	1

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: 86 Mcf Recovered: 0 Mcf Lost: 86 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	Yes
Was notification of downstream activity received by this operator	No
Downstream OGRID that should have notified this operator	[258315] MARKWEST ENERGY OPERATING CO LLC
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	The emissions event was caused by the unforeseen, unexpected, sudden, and unavoidable interruption, restriction or complete shut-in of a gas pipeline by a third-party pipeline compressor station operator, which impacted Oxy's ability to send gas to them. This interruption, restriction or complete shut-in of the gas pipeline by a third-party pipeline compression station operator is downstream of Oxy's custody transfer point and out of Oxy's control to foresee, avoid or prevent from happening and did not stem from any of Oxy's upstream facility activity that could have been foreseen and avoided, and could not have been avoided by good design, operation, and preventative maintenance practices. In this case, Mark West Gas Purchaser, third party owned, had high liquid issues slugging train 1 of the Tornado gas plant, caused by train 2 plc issue causing them to cut back inflow from Red Tank 26 Boo USA Compressor station to address plant issues, which then instigated a sudden and unexpected restriction of gas flow intake by Mark West Pipeline, which in turn, prompted Oxy's Red Tank 19 CTB facility to pressure up automatically and trigger a flaring event to occur. This event could not have been foreseen, avoided or prevented from happening as this event occurred with no advance notice or warning to Oxy and its field personnel from Mark West. Red Tank 26 Boo compressor station is the first stopping point, where OXY sends its sales gas from its facility, before it is pushed further down the pipeline for further processing at Mark West, a downstream gathering system facility, which is downstream of Oxy's control.
Steps taken to limit the duration and magnitude of vent or flare	It is OXY's policy to route its stranded gas to a flare during an unforeseen and unavoidable emergency or malfunction, that is beyond Oxy's control to avoid, prevent or foresee, to minimize emissions as much as possible as part of the overall steps taken to limit duration and magnitude of flaring. The flare at this facility has a 98% combustion efficiency to lessen emissions as much as possible. In this case, Mark West Gas Purchaser, third party owned, had high liquid issues slugging train 1 of the Tornado gas plant, caused by train 2 plc issue causing them to cut back inflow from Red Tank 26 Boo USA Compressor station to address plant issues, which then instigated a sudden and unexpected restriction of gas flow intake by Mark West Pipeline, which in turn, prompted Oxy's Red Tank 19 CTB facility to pressure up automatically and trigger a flaring event to occur. As soon as the Oxy production tech, who was on-site, saw flaring occur, he began to make phone calls to Mark West personnel to troubleshoot high pipeline pressures. The Oxy production tech then contacted Oxy's flowback personnel to begin making choke changes, so that field pressure would stay below the flare trigger setpoints of the CPF to cease flaring. This event is out of OXY's control, yet OXY made every effort to control and minimize emissions as much as possible.
Corrective actions taken to eliminate the cause and reoccurrence of vent or flare	Oxy cannot take any corrective actions to eliminate the cause and potential reoccurrence of a third-party owned and operated compressor station's sudden and unexpected gas flow intake restriction or shut-in, as this control issue is downstream of Oxy's custody transfer point and out of Oxy's control to foresee, avoid, prevent from happening or reoccur. Third-party downstream gas plant or compression station owner operators may have equipment issues, which will reoccur from time to time, which in turn, directly impacts Oxy's ability to send its sales gas to them, and potentially triggering a flaring event. OXY makes every effort to control and minimize emissions as much as possible. The only actions that Oxy can take and handle that is within its control, is to continually communicate with Mark West and USA Compression personnel, who own and operate the compressor station, pipeline and their gas plants, when possible, during these types of circumstances.

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ACKNOWLEDGMENTS

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	Action Number: 162379
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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

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	Action Number: 162379
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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.	11/30/2022