



Certificate of Analysis

Number: 6030-20090208-001A

Artesia Laboratory

200 E Main St.

Artesia, NM 88210

Phone 575-746-3481

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

Sep. 25, 2020

Field: N/A
Station Name: Amoco 21 Fed 1 Prod
Station Number: 14637P
Station Location: OXY
Sample Point: Meter Run
Formation: Annual
County: Lea
Type of Sample: : Spot-Cylinder
Heat Trace Used: N/A
Sampling Method: : Fill and Purge
Sampling Company: : SPL

Sampled By: Javier Lazo
Sample Of: Gas Spot
Sample Date: 09/24/2020 09:10
Sample Conditions: 84.77 psia, @ 74.35 °F Ambient: 68 °F
Effective Date: 09/24/2020 09:10
Method: GPA-2261M
Cylinder No: 5030-03274
Instrument: 70104124 (Inficon GC-MicroFusion)
Last Inst. Cal.: 09/15/2020 0:00 AM
Analyzed: 09/25/2020 12:41:50 by PGS

Analytical Data

Components	Un-normalized Mol %	Mol. %	Wt. %	GPM at 14.65 psia
Nitrogen	4.113	4.10956	4.902	
Carbon Dioxide	0.162	0.16228	0.304	
Methane	68.542	68.49131	46.783	
Ethane	13.402	13.39189	17.146	3.577
Propane	8.284	8.27807	15.542	2.277
Iso-Butane	1.078	1.07760	2.667	0.352
n-Butane	2.776	2.77385	6.865	0.873
Iso-Pentane	0.573	0.57218	1.758	0.209
n-Pentane	0.546	0.54520	1.675	0.197
Hexanes	0.279	0.27899	1.024	0.115
Heptanes	0.221	0.22074	0.942	0.102
Octanes	0.081	0.08054	0.392	0.041
Nonanes Plus	0.018	0.01779	NIL	NIL
	100.075	100.00000	100.000	7.743

Calculated Physical Properties

Calculated Molecular Weight	Total	C9+
Compressibility Factor	23.49	NIL
Relative Density Real Gas	0.9957	
	0.8141	NIL

GPA 2172 Calculation:

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

Real Gas Dry BTU	1339.4	NIL
Water Sat. Gas Base BTU	1316.5	NIL
Ideal, Gross HV - Dry at 14.65 psia	1333.6	NIL
Ideal, Gross HV - Wet	1310.2	NIL

Comments: H2S Field Content 0 ppm
Mcf/day 156.60

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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EVENT SPECIFIC JUSTIFICATIONS FORM**Facility:** Amoco 21 Fed 1H CTB**Start Date:** 06/02/2021 @ 12:00 PM**End Date:** 06/02/2021 @ 03:00 PM**Cause:** Downstream Activity Issue > Enterprise Chaparral Plant high line pressure issues**Duration of event:** 3 hours**Method of Flared Gas Measurement:** Flare Meter 6881701

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 operator, which impacted Oxy's ability to send gas to a third-party gas pipeline. This interruption, restriction or complete shut-in of the gas pipeline by a third-party pipeline operator is downstream of Oxy's custody transfer point and out of Oxy's control to 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. It is Oxy's policy to route all stranded sales gas to a flare during an unforeseen and unavoidable emergency or malfunction, in order to minimize emissions as much as possible. The flare at this facility has a 98% combustion efficiency in order to lessen emissions as much as possible. The flare is regularly monitored to ensure flame is lit and meeting opacity requirements.

In this case, this sudden and unexpected flaring event occurred due to third party pipeline operator, Enterprise, whose Enterprise Chaparral Plant, was having downstream facility issues that greatly impacted the gas flow from Oxy's upstream facility to them. As a result of Enterprise's downstream facility incapability of handling the volume of gas being sent to them, a spike in their line pressure occurred. The high line pressure spike in Enterprise's pipeline impacted Oxy's ability to send gas to their plant, as their downstream facility compression equipment was unable to handle the gas loads sent to them. Until Enterprise's Chaparral plant facility equipment was able to handle the volume of gas sent to them, the spike in line pressure forced Oxy's upstream facility to route all its stranded gas to a flare, as it was not able to push all its gas into Enterprise's gas pipeline. The flare at this facility has a 98% combustion efficiency in order to lessen emissions as much as possible. During this sudden and unexpected flaring event, OXY personnel continually monitored the Enterprise line pressure in order to make necessary adjustments to its own compression equipment, when warranted, until Enterprise's Chaparral plant was able to begin taking all the gas Oxy sent their way, and their line pressure was back to normal. In addition, in effort to reduce flaring, production techs started choking back wells with the pressure control valve on the flowlines. Prior to the spike in Enterprise's pipeline pressure, which impacted Oxy's ability to send all its gas to them, Oxy's compression equipment was running and operating at maximized optimization. Flaring did not occur until Enterprise's downstream

facility was unable to handle the volume of loads sent to them. This incident was completely out of Oxy's control to prevent from happening. OXY made every effort to control and minimize emissions as much as possible during this event.

2. Steps Taken to limit duration and magnitude of venting or flaring:

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 operator, which impacted Oxy's ability to send gas to a third-party gas pipeline. This interruption, restriction or complete shut-in of the gas pipeline by a third-party pipeline operator is downstream of Oxy's custody transfer point and out of Oxy's control to 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. It is Oxy's policy to route all stranded sales gas to a flare during an unforeseen and unavoidable emergency or malfunction, in order to minimize emissions as much as possible. The flare at this facility has a 98% combustion efficiency in order to lessen emissions as much as possible. The flare is regularly monitored to the ensure flame is lit and meeting opacity requirements.

In this case, the steps taken to limit duration and magnitude of flaring was for Oxy production techs to quickly start choking back wells with the pressure control valves on the flowlines until flaring was reduced and enough gas would be able to pushed into the Enterprise gas pipeline. In addition, OXY personnel continually monitored the Enterprise line pressure in order to make necessary adjustments to its own compression equipment, when warranted, until Enterprise's Chaparral plant was able to begin taking all the gas Oxy sent their way, and their gas line pressure was back to normal. Once the Enterprise gas line pressure was back to normal and Enterprise was taking all the gas Oxy sent them, production techs ensured flaring had ceased and gradually re-opened wells and adjusted their compression equipment to maximized optimization in a safe and diligent manner.

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

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 operator, which impacted Oxy's ability to send gas to a third-party gas pipeline. This interruption, restriction or complete shut-in of the gas pipeline by a third-party pipeline operator is downstream of Oxy's custody transfer point and out of Oxy's control to 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. It is Oxy's policy to route all stranded sales gas to a flare during an unforeseen and unavoidable emergency or malfunction, in order to minimize emissions as much as possible. The flare at this facility has a 98% combustion efficiency in order to lessen emissions as much as possible. The flare is regularly monitored to the ensure flame is lit and meeting opacity requirements.

Oxy cannot take any corrective actions to eliminate the cause and potential reoccurrence of an Enterprise Chaparral plant high gas line pressure issue, as this issue is downstream of Oxy's custody transfer point and out of Oxy's control to avoid or prevent from happening or reoccurring. Enterprise's Chaparral plant's downstream issues will re-occur from time to time and may trigger a spike in their gas line pressure, which in turn, directly impacts Oxy's ability to send gas to them. When Enterprise's downstream facility equipment has issues or greatly struggles to handle the volume of gas being sent to them by Oxy, Enterprise then restricts Oxy's ability to send gas, which then initiates Oxy to route all of its stranded gas not pushed into the Enterprise gas pipeline, to flare. 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 keep continually communicate with Enterprise personnel during these types of circumstances.

District I

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

QUESTIONS

Action 36081

QUESTIONS

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 36081
	Action Type: [C-129] Venting and/or Flaring (C-129)

QUESTIONS**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 or is this venting or flaring caused by an emergency or malfunction	Yes
Did or will this venting 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 notification of a major venting or flaring	Yes, minor venting or flaring of natural gas.
The operator shall file a form C-141 instead of a form C-129 for a release that includes liquid during venting or flaring that is or may be a major or minor release under 19.13.297 NMAC.	
Was there or will there be at least 50 MCF of natural gas vented or flared during this event	Yes
Did this venting 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

Unregistered Facility Site

Please provide the facility details, if the venting or flaring occurred or is occurring at a facility that does not have an Facility ID (##) yet.

Facility or Site Name	Amoco 21 Fed 1H CTB
Facility Type	Tank Battery - (TB)

Equipment Involved

Primary Equipment Involved	Other (Specify)
Additional details for Equipment Involved. Please specify	Emergency Flare>Downstream Activity Issue > Enterprise Chaparral Plant high line pressure 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	68
Nitrogen (N2) percentage, if greater than one percent	4
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.

Date(s) and Time(s)

Date venting or flaring was discovered or commenced	06/02/2021
Time venting or flaring was discovered or commenced	12:00 PM
Is the venting or flaring event complete	Yes
Date venting or flaring was terminated	06/02/2021
Time venting or flaring was terminated	03:00 PM
Total duration of venting or flaring in hours, if venting or flaring has terminated	3
Longest duration of cumulative hours within any 24-hour period 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 Spilled: 55 Mcf Recovered: 0 Mcf Lost: 55 Mcf]
Other Released Details	Not answered.
Additional details for Measured or Estimated Volume(s). Please specify	Flare Meter 6881701
Is this a gas only submission (i.e. only 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 or flaring a result of downstream activity	Yes
Date notified of downstream activity requiring this venting or flaring	Not answered.
Time notified of downstream activity requiring this venting 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 >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 operator, which impacted Oxy's ability to send gas to a third-party gas pipeline.
Steps taken to limit the duration and magnitude of venting or flaring	See Justification Form > In this case, the steps taken to limit duration and magnitude of flaring was for Oxy production techs to quickly start choking back wells with the pressure control valves on the flowlines until flaring was reduced and enough gas would be able to pushed into the Enterprise gas pipeline. In addition, OXY personnel continually monitored the Enterprise line pressure in order to make necessary adjustments to its own compression equipment, when warranted, until Enterprise's Chaparral plant was able to begin taking all the gas Oxy sent their way, and their gas line pressure was back to normal. Once the Enterprise gas line pressure was back to normal and Enterprise was taking all the gas Oxy sent them, production techs ensured flaring had ceased and gradually re-opened wells and adjusted their compression equipment to maximized optimization in a safe and diligent manner.
Corrective actions taken to eliminate the cause and reoccurrence of venting or flaring	See Justification Form >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 operator, which impacted Oxy's ability to send gas to a third-party gas pipeline.

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CONDITIONS

Action 36081

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Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 36081
	Action Type: [C-129] Venting and/or Flaring (C-129)

CONDITIONS

Created By	Condition	Condition Date
system	If the information provided in this report requires an amendment, submit a [C-129] Request to Amend Venting and/or Flaring Incident, utilizing your incident number from this event.	7/12/2021