# Certificate of Analysis

Number: 6030-21110261-001A

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

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

Dec. 01, 2021

| | | | |
|---|---|---|---|
| Field: | Sand Dunes | Sampled By: | Scott Beasely |
| Station Name: | Sand Dunes CTB Production 2 | Sample Of: | Gas Spot |
| Station Number: | 17012P | Sample Date: | 11/23/2021 10:21 |
| Station Location: | CTB | Sample Conditions: | 77.7 psig, @ 62.5 °F Ambient: 61 °F |
| Sample Point: | Meter | Effective Date: | 11/23/2021 10:21 |
| Formation: | Monthly | Method: | GPA-2261M |
| County: | Eddy, NM | Cylinder No: | 1111-002678 |
| Type of Sample: : | Spot-Cylinder | Instrument: | 70142339 (Inficon GC-MicroFusion) |
| Heat Trace Used: | No | Last Inst. Cal.: | 11/15/2021 0:00 AM |
| Sampling Method: : | Fill and Purge | Analyzed: | 12/01/2021 14:47:44 by ERG |
| Sampling Company: : | SPL | | |

## Analytical Data

| Components | Un-normalized Mol % | Mol. % | Wt. % | GPM at 14.65 psia |
|---|---|---|---|---|
| Hydrogen Sulfide | NIL | NIL | NIL | |
| Nitrogen | 1.720 | 1.73503 | 2.237 | |
| Carbon Dioxide | 1.746 | 1.76105 | 3.568 | |
| Methane | 75.250 | 75.89815 | 56.047 | |
| Ethane | 11.338 | 11.43562 | 15.828 | 3.052 |
| Propane | 5.503 | 5.55083 | 11.267 | 1.526 |
| Iso-Butane | 0.699 | 0.70513 | 1.887 | 0.230 |
| n-Butane | 1.672 | 1.68661 | 4.512 | 0.531 |
| Iso-Pentane | 0.353 | 0.35584 | 1.182 | 0.130 |
| n-Pentane | 0.377 | 0.38035 | 1.263 | 0.138 |
| Hexanes | 0.214 | 0.21574 | 0.856 | 0.089 |
| Heptanes | 0.170 | 0.17177 | 0.792 | 0.079 |
| Octanes | 0.080 | 0.08109 | 0.426 | 0.041 |
| Nonanes Plus | 0.023 | 0.02279 | 0.135 | 0.013 |
| | 99.145 | 100.00000 | 100.000 | 5.829 |

| Calculated Physical Properties | Total | C9+ |
|---|---|---|
| Calculated Molecular Weight | 21.72 | 128.26 |
| Compressibility Factor | 0.9963 | |
| Relative Density Real Gas | 0.7526 | 4.4283 |
| **GPA 2172 Calculation:** | | |
| **Calculated Gross BTU per ft³ @ 14.65 psia & 60°F** | | |
| Real Gas Dry BTU | 1243.1 | 6974.4 |
| Water Sat. Gas Base BTU | 1221.9 | 6852.4 |
| Ideal, Gross HV - Dry at 14.65 psia | 1238.5 | 6974.4 |
| Ideal, Gross HV - Wet | 1216.9 | 6852.4 |

**Comments:** H2S Field Content 0 ppm
Mcf/day 24561.39

Jesus Escobedo

Hydrocarbon Laboratory Manager

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

# UPSET VENTING EVENT SPECIFIC JUSTIFICATIONS FORM

**Facility:** Silver 33 CTB

**Vent Date:** 05/16/2024

**Duration of Event:** 24 Hours

**MCF Vented:** 74

**Start Time:** 12:00 AM

**End Time:** 11:59 PM

**Cause:** Venting Leak > Underground Pipeline > Corrosion

**Method of Vented Gas Measurement:** Allocation

**Comments:** An external flyover report received by Oxy in September 2024 indicated that this event meets the C-129 reporting guidelines, as the estimated daily venting surpasses NMOCD's threshold of 50 MCF/D and may have started earlier than Oxy was aware.

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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 by good design, operation, and preventative maintenance practices. 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. Recently, OXY received an external flyover report and found that venting observations made during an internal flyover conducted May 2024, indicated that venting from the gas injection line might have potentially commenced on or about May 14th, 2024.

This exceedance of NMOCD's threshold of 50 MCF/D was not known to OXY and its operations personnel until an external flyover report was received in September 2024. This submittal is in response to the findings provided to Oxy during the September 2024 flyover. Previously in May 2024, Oxy operations had performed their own internal area flyover, which in turn, prompted an OXY emissions technician to physically verify the finding with a FLIR camera and found that the gas injection line was indeed venting, from underground. The affected section of the gas injection line was then isolated, and the appropriate wells were shut down to facilitate immediate repairs. It was determined that the sudden, unforeseen failure of the gas injection line, had developed a small hole due to corrosion, which caused the venting leak. The venting leak was isolated, repaired, and thoroughly tested to ensure it did not recur. Based on the May 2024 vent leak investigation, Oxy initially estimated that the gas released was below the NMOCD threshold of 50 MCF/D. After reviewing the findings of the September 2024 flyover report, it was determined that the initial estimated volume of vented gas was incorrect and 74 MCF is the correct volume of gas emitted. This venting circumstance was beyond OXY's control, yet, OXY took all possible measures to reduce emissions effectively.

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

It is OXY's policy to route all stranded gas to a flare rather than vent 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 venting or flaring. Recently, OXY received an external flyover report and found that venting observations made during an internal flyover conducted May 2024, indicated that venting from the gas injection line might have potentially commenced on or about May 14th, 2024.

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

OXY's ability to address and prevent recurrence of vent leaks from injection lines due to corrosion is limited as these types of vent leaks can be sudden, unpredictable, and happen without any prior warning. OXY cannot predict or foresee when vent leaks will occur in underground gas injection pipelines, but OXY is committed to detecting, isolating, and halting such vent emissions whenever possible and when identified. The limited actions that OXY can do in these types of circumstances is to resolve the vent leak issues, should they occur, in a timely manner and continue with its area flyover surveying as part of its overall positive operation and maintenance programs.

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**District III**
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**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

| | |
|---|---|
| Operator:<br>OXY USA INC<br>P.O. Box 4294<br>Houston, TX 772104294 | OGRID:<br>16696 |
| | Action Number:<br>386859 |
| | Action Type:<br>[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 386859

## QUESTIONS

| | |
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**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 ID (n#) | *Unavailable.* |
| Incident Name | *Unavailable.* |
| Incident Type | **Vent** |
| Incident Status | *Unavailable.* |
| Incident Facility | **[fAPP2213360538] SILVER NC 33 & 26 OGS** |
| *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.* | |

| **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 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 | Yes |
| 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 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 | Venting Leak > Underground Pipeline > Corrosion |

| **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 | 2 |
| Hydrogen Sulfide (H2S) PPM, rounded up | 0 |
| Carbon Dioxide (C02) percentage, if greater than one percent | 2 |
| 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 | 0 |
| Nitrogen (N2) percentage quality requirement | 0 |
| Hydrogen Sufide (H2S) PPM quality requirement | 0 |
| Carbon Dioxide (C02) percentage quality requirement | 0 |
| Oxygen (02) percentage quality requirement | 0 |

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## QUESTIONS (continued)

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**QUESTIONS**

| **Date(s) and Time(s)** | |
|---|---|
| Date vent or flare was discovered or commenced | 05/16/2024 |
| Time vent or flare was discovered or commenced | 12:00 AM |
| Time vent or flare was terminated | 11:59 PM |
| Cumulative hours during this event | 24 |

| **Measured or Estimated Volume of Vented or Flared Natural Gas** | |
|---|---|
| Natural Gas Vented (Mcf) Details | Cause: Other \| Other (Specify) \| Natural Gas Vented \| Released: 74 MCF \| Recovered: 0 MCF \| Lost: 74 MCF. |
| Natural Gas Flared (Mcf) Details | *Not answered.* |
| Other Released Details | *Not answered.* |
| Additional details for Measured or Estimated Volume(s). Please specify | Allocation |
| 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 | No |
| Downstream OGRID that should have notified this operator | 0 |
| Date notified of downstream activity requiring this vent or flare | |
| 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 by good design, operation, and preventative maintenance practices. 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. Recently, OXY received an external flyover report and found that venting observations made during an internal flyover conducted May 2024, indicated that venting from the gas injection line might have potentially commenced on or about May 14th, 2024. This exceedance of NMOCD’s threshold of 50 MCF/D was not known to OXY and its operations personnel until an external flyover report was received in September 2024. This submittal is in response to the findings provided to Oxy during the September 2024 flyover. Previously in May 2024, Oxy operations had performed their own internal area flyover, which in turn, prompted an OXY emissions technician to physically verify the finding with a FLIR camera and found that the gas injection line was indeed venting, from underground. The affected section of the gas injection line was then isolated, and the appropriate wells were shut down to facilitate immediate repairs. It was determined that the sudden, unforeseen failure of the gas injection line, had developed a small hole due to corrosion, which caused the venting leak. The venting leak was isolated, repaired, and thoroughly tested to ensure it did not recur. Based on the May 2024 vent leak investigation, |

| | |
|---|---|
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| Corrective actions taken to eliminate the cause and reoccurrence of vent or flare | OXY's ability to address and prevent recurrence of vent leaks from injection lines due to corrosion is limited as these types of vent leaks can be sudden, unpredictable, and happen without any prior warning. OXY cannot predict or foresee when vent leaks will occur in underground gas injection pipelines, but OXY is committed to detecting, isolating, and halting such vent emissions whenever possible and when identified. The limited actions that OXY can do in these types of circumstances is to resolve the vent leak issues, should they occur, in a timely manner and continue with its area flyover surveying as part of its overall positive operation and maintenance programs. |

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## ACKNOWLEDGMENTS

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**ACKNOWLEDGMENTS**

| | |
|---|---|
| ☑ | 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. |
| ☑ | 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. |
| ☑ | 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. |
| ☑ | 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. |
| ☑ | 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 386859

## CONDITIONS

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**CONDITIONS**

| Created By | Condition | Condition Date |
|---|---|---|
| shelbyschoepf | 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. | 9/25/2024 |