



Occidental Permian Ltd.
Hobbs Field - Subpart RR Annual Report
Reporting Period: 1/1/2021 – 12/31/2021

Annual Report: 40 C.F.R. 98.446 (Subpart RR)

Company Name: Occidental Permian Ltd.
Company Address: 5 Greenway Plaza, Suite 110, Houston, TX 77046
GHGRP ID: 562897
Facility Name: Hobbs Field
Facility Address: 1017 West Stanolind Road, Hobbs, NM 88240
Reporting Period: January 1, 2022 – December 31, 2022
Date of Submittal: March 31, 2023

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Certification by Designated Representative:

Based on information and belief formed after reasonable inquiry, the statements and information in this report are true, accurate, and complete.

Designated Representative:

Margrethe Berge, Air Quality Director

1) Executive Summary:

Occidental Permian Ltd. (Oxy) began monitoring efforts pursuant to the final Hobbs Field Monitoring, Reporting and Verification (MRV) Plan on May 1, 2017, for the MRV plan Specified Period. Monitoring continued through the 2021 reporting period. The final MRV Plan was approved by EPA on January 17, 2017. The MRV plan identification number is 1009647-1.

2) Summary Table of Monitoring Activities:

The below table summarizes Oxy's Response Plan for CO₂ Loss and associated monitoring activities during the 2021 reporting period. The summary table includes potential leakage scenarios, the monitoring activities designed to detect those leaks, and Oxy's standard response.



Risk	Monitoring Plan	Response Plan	Parallel Reporting (if any)
Loss of Well Control			
Tubing Leak	Monitor changes in annulus pressure; MIT for injectors	Workover crews respond within days	NMOCD
Casing Leak	Routine Field inspection; MIT for injectors; extra attention to high risk wells	Workover crews respond within days	NMOCD
Wellhead Leak	Routine Field inspection	Workover crews respond within days	NMOCD
Loss of Bottom-hole pressure control	Blowout during well operations	Maintain well kill procedures	NMOCD
Unplanned wells drilled through San Andres	Routine Field inspection to prevent unapproved drilling; compliance with NMOCD permitting for planned wells.	Assure compliance with NMOCD regulations	NMOCD Permitting
Loss of seal in abandoned wells	Reservoir pressure in WAG headers; high pressure found in new wells	Re-enter and reseal abandoned wells	NMOCD
Leaks in Surface Facilities			
Pumps, valves, etc.	Routine Field inspection	Workover crews respond within days	Subpart W
Subsurface Leaks			
Leakage along faults	Reservoir pressure in WAG headers; high pressure found in new wells	Shut in injectors near faults	-
Overfill beyond spill points	Reservoir pressure in WAG headers; high pressure found in new wells	Fluid management along lease lines	-
Leakage through induced fractures	Reservoir pressure in WAG headers; high pressure found in new wells	Comply with rules for keeping pressures below parting pressure	-
Leakage due to seismic event	Reservoir pressure in WAG headers; high pressure found in new wells	Shut in injectors near seismic event	-

3) Narrative History of the Monitoring Effort Conducted:

The multi-layered, risk-based monitoring program for event-driven issues in section (2) was designed to meet two objectives, in accordance with the leakage risk assessment conducted for the MRV Plan:

- 1) To detect anomalies before CO₂ leaked to the surface (mitigate surface leakage¹); and

¹ 'Surface leakage' is defined as subsurface leakage into the atmosphere



2) To detect and quantify leaks if they occur.

As part of its ongoing operations, Oxy collected flow, pressure, and gas composition data from the Hobbs Unit. Flow and pressure data were monitored through hourly scans by centralized data management systems. Oxy monitored wells through continual, automated pressure monitoring in the injection zone, monitoring of the annular pressure in wellheads, and routine maintenance and inspection.

Commercial custody transfer meters were used to measure the volume and concentration of CO₂ that was received, recycled, injected, and produced at the Hobbs Unit. The custody transfer meters generated volumetric flow rate data for use in the mass balance equations in 40 CFR §98.443. Meters measured flow rate continually.

Metering protocols used by Oxy followed the prevailing industry standard(s) for custody transfer as currently promulgated by the API, the American Gas Association (AGA), and the Gas Processors Association (GPA), as appropriate. These meters were maintained routinely, operated continually, and fed data directly to the centralized data collection systems. The meters met the industry standard for custody transfer meter accuracy and calibration frequency.

Oxy used 40 C.F.R. Part 98 Subpart W and engineering estimates to calculate emissions from equipment leaks² from the surface equipment at the Hobbs Unit. Oxy calculated vented emissions³ through event-specific inspections and processes, and applied engineering estimates to quantify potential CO₂ emissions. As such, both these emissions calculations, are included in the mass balance equation under Equation RR-11 as follows:

- 1) CO_{2FI} equipment leaks and vented emissions from equipment located on the surface between the flow meter used to measure injection quantity and the injection wellhead; and
- 2) CO_{2FP}, equipment leaks and vented emissions associated with equipment located on the surface between the production wellhead and the flow meter used to measure production quantity.

4) Non-Material Changes to EPA-Approved MRV Plan:

There are no non-material changes to Oxy's EPA-approved MRV Plan for the 2022 reporting period.

² Equipment leak means those emissions that could not reasonably pass through a stack, chimney, vent, or other functionally-equivalent opening. (40 CFR Part §98.449 (Equipment_leak))

³ Vented emissions means intentional or designed releases of CH₄ or CO₂ containing natural gas or hydrocarbon gas (not including stationary combustion flue gas), including process designed flow to the atmosphere through seals or vent pipes, equipment blowdown for maintenance, and direct venting of gas used to power equipment (such as pneumatic devices). (40 CFR Part §98.449((Vented_emissions))



5) Narrative History of Monitoring Anomalies Found:

Oxy monitored both injection into and production from the reservoir as a means of early identification of potential anomalies that could indicate leakage from the subsurface.

For the 2022 reporting period, there was no surface leakage at the Hobbs Unit and no monitoring anomalies were found.

6) Description of Surface Leakage:

Field personnel routinely visited surface facilities and conducted visual inspections at the Hobbs Unit during the reporting period. These inspections included review of tank level, equipment status, lube oil levels, pressures and flow rates in the facility, valve leaks, ensured that injectors were on the proper WAG schedule, and also a general observation of the facility for visible CO₂ or fluid line leaks.

If problems were detected, field personnel investigate and if maintenance was required, generated a work order in the maintenance system, which was tracked through completion. In addition to these visual inspections, Oxy used the results of the personal H₂S monitors worn by field personnel as a supplement for smaller leaks that may escape visual detection.

For the 2022 reporting period there was no surface leakage at the Hobbs Unit and no monitoring anomalies were found.