



**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, 2017 – December 31, 2017  
 Date of Submittal: March 30, 2018

For information regarding this report, please contact the following:

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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.*

Alternate Designated Representative:  
 William D. Calhoun, Environmental Manager

**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 2017 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 CO<sub>2</sub> Loss and associated monitoring activities during the 2017 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) |
|-----------------------------|--|------------------------------------|-----------------------------|
| <b>Loss of Well Control</b> |  |                                    |                             |
| 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            |
| <b>Leaks in Surface Facilities</b>         |  |  |                  |
| Pumps, valves, etc.                        | Routine Field inspection   | Workover crews respond within days                             | Subpart W        |
| <b>Subsurface Leaks</b>                    |  |  |                  |
| 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:

As part of its ongoing operations, Oxy collected flow, pressure, and gas composition data from the Hobbs Field. Flow and pressure data was 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 CO<sub>2</sub> that was received, recycled, injected, and produced at the Hobbs Field. The custody transfer meters generated volumetric flow rate data for use in the mass balance equations in §98.443. Meters measured flow rate continually. Fluid composition was determined, at a minimum, quarterly, consistent with EPA GHGRP's Subpart RR, section 98.447(a). 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 estimate surface leakage, emissions from equipment leaks, and vented emissions from surface equipment at the Hobbs Field. In addition to the factor-driven approach to estimate equipment leakage in Subpart W, Oxy used an event-driven process to assess, address, track, and if applicable quantify potential CO<sub>2</sub> leakage. The multi-layered, risk-based monitoring program for event-driven issues was designed to meet two objectives, in accordance with the leakage risk assessment conducted for the MRV Plan: 1) to detect anomalies before CO<sub>2</sub> leaked to the surface; and 2) to detect and quantify any leaks that did occur. For the 2017 reporting period there was no surface leakage at the Hobbs Field and no monitoring anomalies were found.

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

There are no non-material changes to Oxy's EPA-approved MRV Plan for the 2017 reporting period.

**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. This year, there was no surface leakage at the Hobbs Field and no monitoring anomalies were found.

**6) Description of Surface Leakage:**

There was no surface leakage at the Hobbs Field for the 2017 reporting period. Field personnel routinely visited surface facilities and conducted visual inspections at the Hobbs Field 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 CO<sub>2</sub> or fluid line leaks. If problems were detected, field personnel investigated then, 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 H<sub>2</sub>S monitors worn by field personnel as a supplement for smaller leaks that may escape visual detection. Equipment leaks and vented emissions from surface equipment were assessed, tracked, and estimated for each event throughout the reporting period. These estimates were included in the mass balance equation.