



Oil Field Surface Expressions

Under strengthened regulations effective April 1, 2019, surface expressions violate state regulations enforced by the Geologic Energy Management Division (CalGEM, formerly DOGGR). A surface expression can occur when steam injected under pressure to produce oil breaks through natural geologic barriers and comes to the surface. The releases in the Cymric, Midway Sunset, and McKittrick oil fields in Kern County are not near population centers or sources of drinking water. All of the expressions are contained and are clustered in a few areas. CalGEM is collaborating with independent experts from the Lawrence Livermore and Sandia National Laboratories to investigate the expressions in the Cymric field.

Refer to the California Office of Emergency Services (CalOES) Spill Report (<https://bit.ly/3ax0HKD>) for additional information on specific surface expressions. Use "Search" to enter the incident number, for example, 19-7291 (numbers available below), for reports.

Chevron Cymric McPhee 36W Area Surface Expressions

- **CalOES Spill Report 19-7291:** Incident began November 13, 2019. Expression inactive since November 14. Recovered volume: 20 barrels water and oil. Located approximately 120 feet west of March 29, 2018 expression in Gauge Setting 5-D area. Chevron posted danger signage and lights. External company monitoring for any gas emissions. Chevron notified of two vertical cracks on hillside and road above. Operator addressing. Environmental cleanup complete and site restored.
 - **CalGEM Response:** Notice of Violation, November 18, 2019
 - <https://bit.ly/37e5q1W>
- **CalOES Spill Report 19-7186:** Discovered November 8, 2019. Expression inactive since December 1. Recovered volume: 5,460 barrels water and oil. Location approximately 112 feet northwest on hill above Gauge Setting 5-D area, uphill of expression reported September 13. External company monitoring for any gas vapors. Environmental cleanup complete and site restored.
 - **CalGEM Response:** Notice of Violation, November 12, 2019
 - <https://bit.ly/3awE752>
- **CalOES Spill Report 19-6580:** Incident began October 13, 2019. Expression inactive since October 14. Recovered volume: 1,931 barrels water and oil. Hillside vent at northern end of Cymric field. Spill area cleaned.
 - **CalGEM Response:** Addendum(3), October 14, 2019, to Notice of Violation
 - <https://bit.ly/36hr7g9>
- **CalOES Spill Report 19-6568:** Vent found inactive October 12, 2019; reactivated with steam and fluid October 15-18; reactivated October 22, intermittently active November 1-11. Expression inactive since November 11. Recovered

volume: 13,160 barrels water and oil. Located 275 feet east of CalOES Spill Report 19-6386 expression and 294 feet north of CalOES Spill Report 19-6221. Chevron contained flow; lights, danger signs, and propane cannon (to deter wildlife) installed. External company monitoring for low (thus far) gas emissions. Environmental cleanup complete and site restored.

- **CalGEM Response:** Addendum(3), October 14, 2019, to Notice of Violation
 - <https://bit.ly/30F1AM0>
- **CalOES Spill Report 19-6386:** Vent found inactive October 3, 2019. Reactivated October 4. Inactive since October 5. Recovered volume: 1,160 barrels water and oil. Location is 320 feet northwest of CalOES Spill Report 19-6221 expression and CalOES Spill Report 19-5263 expression. Environmental cleanup complete and site restored.
 - **CalGEM Response:** Addendum(2), October 3, 2019, to McPhee 36W Notice of Violation
 - <https://bit.ly/2NPauH>
- **CalOES Spill Report 19-6221:** Expression began September 26, 2019. Dormant September 29; reactivated twice; expression inactive since November 18. Recovered volume: 1 barrel water and oil. Fluid contained within berm. Located approximately 180 feet northeast of CalOES Spill Report 19-5263 expression.
 - **CalGEM Response:** Addendum(1), October 1, 2019, to McPhee 36W Notice of Violation
 - <https://bit.ly/3aBMeOf>
- **CalOES Spill Report 19-5407:** Flow began August 21, 2019. Expression inactive since October 15. Volume recovered: 19,925 barrels water and oil. Operator to clean area when safe to do so. Underground injection testing continues.
 - **CalGEM Response:** McPhee 36W Notice of Violation, August 24, 2019
 - <https://bit.ly/38zwtFf>
- **CalOES Spill Report 19-5263:** Expression began June 5, 2019. Inactive since August 30. Volume recovered: 25 barrels water and oil.
 - **CalGEM Response:** McPhee 36W Notice of Violation, June 13, 2019
 - <https://bit.ly/38sK3Kf>

Chevron Cymric Gauge Setting 5 Area Surface Expressions

- **CalOES Spill Report 18-2037:** Began September 13, 2019. Expression inactive since September 15. Recovered volume: 1,290 barrels water and oil. Hillside vent in Gauge Setting 5-D area. Area cleaned. Containment remains in place. Seep believed to be reactivation of March 29, 2018 expression. Environmental cleanup complete and site restored.
 - **CalGEM Response:** Addendum(1), September 13, 2019, to GS-5 Notice of Violation
 - <https://bit.ly/2TRuk3D>

- **CalOES Spill Report 19-5865:** Began September 10, 2019. Expression inactive since September 18. Recovered volume: 350 barrels water and oil. Expression located in in Gauge Setting 5-C area. Expression reactivation of January 4, 2018 seep. Environmental cleanup complete and site restored.
 - **CalGEM Response:**
 - 3357 Letter re: Cymric Oil Field Surface Expressions Data, September 10, 2019
 - <https://bit.ly/30FdzKg>
 - Addendum(1), September 13, 2019, to GS-5 Notice of Violation
 - <https://bit.ly/2NPnFTs>

Chevron Cymric 1Y Area Surface Expressions

- **CalOES Spill Report 19-3668:** Expression reported June 8, 2019. Ceased June 12; reactivated June 18. Release from other vent in the vicinity reported June 23. The fluid flowed into a dry streambed. All vents inactive since August 1. Recovered volume: 31,798 barrels water and oil. Per Cal Spill Watch (<https://bit.ly/2Gb27MX>), site cleanup completed October 11.
 - **CalGEM Response:**
 - Order to Chevron to Pay Civil Penalty, October 2, 2019
 - <https://bit.ly/2GenbSW>
 - GS-5 Notice of Violation, August 23, 2019 - Also addresses series of surface expressions from 2018 and earlier that are directed into Gauge Setting 5 Separation Plant
 - <https://bit.ly/38qQxtD>
 - Addendum(2), July 17, 2019, to 1Y Notice of Violation
 - <https://bit.ly/2vczWen>
 - Order to Perform 1Y Remedial Work, July 12, 2019
 - <https://bit.ly/3apXDjo>
 - Addendum(1), July 1, 2019, to 1Y Notice of Violation
 - <https://bit.ly/2TNfdb5>
 - 1Y Notice of Violation, June 13, 2019
 - <https://bit.ly/37gXOf4>
- **CalOES Spill Report 19-3040:** Expression reported May 10, 2019. Expression inactive same day May 10. Volume recovered: 105 barrels water and oil. High energy expression near Gauge Setting 5 area. Release affected dry, seasonal streambed. Release contained and area cleaned.
 - **CalGEM Response:** 1Y Notice of Violation, May 20, 2019
 - <https://bit.ly/3axjGEY>

Sentinel Peak Resources Cymric Star Fee Surface Expression

- **CalOES Spill Report 19-5656:** Reported September 1, 2019. Expression stopped same day and inactive September 1. Volume recovered: 10 barrels water and oil.
 - **CalGEM Response:** Star Fee Notice of Violation, September 10, 2019
 - <https://bit.ly/36elBuH>

Sentinel Peak Resources Midway Sunset Keane Surface Expressions

- **CalOES Spill Report 19-4957:** Began August 1, 2019. Expression active. Volume recovered: 3,790 barrels water and oil.
 - **CalGEM Response:** Addendum(1), August 6, 2019, to Keane Notice of Violation
 - <https://bit.ly/2NPPXgJ>
- Began June 5, 2019. Expression inactive since June 30. Volume recovered: 29 barrels water and oil.
 - **CalGEM Response:** Keane Notice of Violation, June 20, 2019
 - <https://bit.ly/30HWv6a>

Sentinel Peak Resources Midway Sunset Reardon Surface Expression

- Reported May 16, 2019. Expression stopped same day and inactive May 16. Volume recovered: 15 barrels water and oil.
 - **CalGEM Response:** Midway Sunset Reardon Notice of Violation, October 1, 2019
 - <https://bit.ly/3auLNoc>

Sentinel Peak Resources McKittrick Richfield Surface Expression

- Reported May 28, 2019. Expression stopped same day and inactive May 28. Volume recovered: 1 barrel water and oil.
 - **CalGEM Response:** McKittrick Richfield Notice of Violation, October 15, 2019
 - <https://bit.ly/38ssxpx>