December 30, 2016

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**CONCLUSION OF UPDATES TO U.S. EPA REGARDING WATER BOARDS REVIEW OF UIC WELLS THAT MAY POTENTIALLY POSE AN IMMEDIATE THREAT TO WATER SUPPLY WELLS**

Dear Mr. Montgomery:

This letter provides our final update to United States Environmental Protection Agency (U.S. EPA), consistent with the plan submitted on February 6, 2015, summarizing the findings of the State Water Resources Control Board and regional water quality control boards (collectively Water Boards) evaluation of Class II Underground Injection Control (UIC) wells injecting into non-exempt aquifers that may potentially pose an immediate threat to nearby water supply wells.

Water Boards staff have reviewed 6,157 UIC wells determined by Division of Oil, Gas and Geothermal Resources (DOGGR) to be injecting into non-exempt aquifers. UIC wells were screened for proximity to water supply wells or any other indication of risk of impact to drinking water and other beneficial uses. This letter and enclosed table outlines the Water Boards staff review process, actions taken to date, and findings of this evaluation.

**Background**

The production of oil in California yields a large amount of water along with the oil. Generally, produced water is either re-used in oil-field activities or disposed of, primarily through underground injection. Oil-related underground injection (enhanced oil recovery and produced water disposal) is regulated by DOGGR under the UIC program of the federal Safe Drinking Water Act. Injection into an underground source of drinking water (USDW), defined as groundwater containing less than 10,000 milligrams per liter (mg/L) total dissolved solids (TDS), is not allowed unless the aquifer is formally exempt – a process involving DOGGR, the State Water Resources Control Board (State Water Board), and the U.S. EPA. Injection into an aquifer containing more than 10,000 mg/L TDS or an exempt aquifer must be permitted by DOGGR.

In 2015, DOGGR determined that 6,157 UIC wells were injecting into aquifers, or portions of aquifers, that were not exempt. DOGGR, U.S. EPA, and the Water Boards staff jointly

developed a plan to bring California back into compliance with the Safe Drinking Water Act. The plan requires that the aquifers either receive an aquifer exemption or cease injection by February 15, 2017. To receive an aquifer exemption, the operator must submit a detailed aquifer exemption proposal package describing the technical justification for the exemption to DOGGR.

The following federal and state criteria must be met for an aquifer to be considered exempt:

- The aquifer cannot be a current source drinking water;
- The aquifer is unlikely to be a future source of drinking water;
- Injection must not impact current or potential future water of beneficial use; and
- The injected fluids must remain in the proposed exempted area.

If DOGGR determines that the proposed aquifer exemption meets the federal and state criteria, a detailed aquifer exemption proposal package is forwarded it to the Water Boards staff for review. If the State Water Board concurs with the exemption proposal, DOGGR submits the proposal for public comment and holds a joint public hearing with the State Water Board. After responding to public comment, the aquifer exemption proposal is submitted to U.S. EPA for their consideration. The U.S. EPA makes the final determination on the aquifer exemption. Water Boards and DOGGR staff continue to coordinate on the review of aquifer exemption proposals.

**Findings and Review Criteria**

DOGGR identified 6,157 wells that were injecting into non-exempted aquifers. State Water Board staff reviewed the information from these wells to determine if they potentially pose an immediate threat to nearby water supply wells using the following well screening criteria for this evaluation:

- Water disposal UIC well injection depth is less than 1,500 feet below ground surface; or
- UIC well injection depth is within 500 vertical feet and is within 1-mile horizontally of any existing water supply well.

As a result, Water Boards issued California Water Code section 13267 orders (Information Orders) to the operators of 256 UIC wells requesting additional information.

**Summary of Actions by DOGGR and Water Boards**

Using the criteria described above, DOGGR required the immediate shut-in of 23 UIC wells and Water Boards issued 71 Information Orders to the operators of the 256 UIC wells. Operators were required to submit water quality information for injected fluids and injection zones, to identify the location of all water supply wells within one mile of the UIC well(s), and to provide information to demonstrate that the beneficial uses of groundwater within one-mile radius of the UIC wells are protected. Water Boards staff issued 15 Operators one or more Notices of Violation as a result of failing to respond or providing incomplete responses to the Information Orders.

**Risk Based Assessment**

State Water Board staff evaluated the potential immediate threat of the UIC wells to water supply wells based on responses to the Information Orders. For this review, a UIC well was not considered a potential immediate threat to nearby water supply wells if the:

- UIC well is either shown to be properly plugged and abandoned, shut-in, idle, or converted to an oil and gas production well,
- UIC well is perforated in an aquifer that is exempt or greater than 10,000 mg/L TDS, or
- Current injection practices demonstrate no impacts to nearby water supply wells.

Of the 256 UIC wells associated with the Information Orders:

- 198 UIC wells were determined not to pose a potential immediate threat.
- To date, operators of 57 UIC wells have submitted insufficient information needed to complete the evaluation. The majority of operators are working with the appropriate regional water quality control board to resolve issues and assemble the required information.
- One UIC well was determined to be a potential risk to a nearby water supply well located in the Jacalitos Oil Field. Available data indicates the water well is a U.S. Geological Survey groundwater monitoring well. The operator is working with Fresno County to properly abandon the monitoring well.

**Closing**

This letter marks the conclusion of the update letters to the U.S. EPA. Water Boards staff, in coordination with DOGGR, will continue to evaluate data received in response to the Information Orders and Notices of Violation to determine if any additional actions are necessary. If additional UIC wells are determined to be potentially impacting groundwater resources, the Water Boards will take any appropriate regulatory action deemed necessary.

If you have any questions regarding this letter, please contact Mr. John Borkovich at (916) 341-5779 or john.borkovich@waterboards.ca.gov.

Sincerely,

Jonathan Bishop
Chief Deputy Director
State Water Resources Control Board

(Enclosure: Underground Injection Control Well Review Table)

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# Underground Injection Control (UIC) Well Review
## State Water Resources Control Board - *Revised 12/29/2016*

| Order ID | Wells in Order | Category | TDS Group | WB Region | Operator Name on Order (current operator) | Field(s) | Information (13267) Order Issued | Technical Justification that the 13267 Order was issued in error | Work Plan or Technical Justification (TJ) Received | Technical Report Received | Notice of Violation Issued | Notice of Violation Reason | Current Injection impacting nearby Water Supply Wells? * |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Wells Determined Not to be Impacting Nearby Water Supply Wells** | | | | | | | | | | | | | |
| 1 | 2 | Category 1 | sub-3,000 | 5 | CMO, Inc. | Chico Martinez | 7/2/2014 | n/a | 7/11/2014<br>7/17/2014 (amended) | 8/1/2014 | 8/15/2014 | TR - Incomplete | NO - WD wells shut-in (2) |
| 2 | 1 | Category 1 | sub-3,000 | 5 | Macpherson Operating Company, L.P. | Mount Poso | 7/2/2014 | n/a | 7/11/2014 | 8/1/2014<br>9/9/2014 (Final) | 8/15/2014 | TR -Incomplete | NO - WD well shut-in (1) |
| 3 | 1 | Category 1 | sub-3,000 | 5 | R&R Resources, LLC | Edison | 7/2/2014 | n/a | 7/11/2014 | 8/1/2014 | 8/15/2014 | TR -Incomplete | NO - WD well shut-in (1) |
| 4 | 1 | Category 1 | sub-3,000 | 5 | Redbank Oil Co. | Edison | 7/2/2014 | n/a | 7/11/2014 | 8/1/2014 | 8/15/2014 | TR -Incomplete | NO - WD well shut-in (1) |
| 5 | 1 | Category 1 | sub-3,000 | 5 | Vintage Production California LLC (California Resources Production Corporation) | Mount Poso | 7/2/2014 | n/a | 7/16/2014 | 7/31/2014 | n/a | n/a | NO - WD well shut-in (1) |
| 6 | 2 | Category 1 | sub-3,000 | 5 | Pace Diversified Corporation | Mount Poso | 7/2/2014<br>(amended 7/15/2014) | n/a | 8/15/2014<br>11/14/2014 (revised)<br>2/26/2015 (resubmitted) | 7/2/2015 | 8/4/2014;<br>9/2/2014 | WP & TR - Late | NO - WD wells shut-in (2) |
| 8 | 1 | Category 1 | sub-3,000 | 5 | Gray Development Co. LLC | Kern River | 8/11/2014 | n/a | 8/25/2014 | 9/4/2014 | 8/22/2014;<br>11/18/2014 | WP & TR - Incomplete | NO - WD well shut-in (1) |
| 9 | 2 | Category 1 | sub-3,000 | 5 | Macpherson Oil Company, L.P. | Round Mountain | 8/11/2014 | n/a | 8/27/2014 | 10/13/2014 | 8/22/2014 | Failed to submit WP | NO - WD wells shut-in (1)<br>NO - WD well Plugged (1) |
| 10 | 1 | Category 1 | sub-3,000 | 5 | Modus, Inc. | Deer Creek | 3/3/2015 | n/a | 3/23/2015 | 6/22/2015 | n/a | n/a | NO - WD well shut-in (1) |
| 11 | 1 | Category 1 | sub-3,000 | 5 | Western States International, Inc. | Kern Front | 3/3/2015 | n/a | PAST DUE | PAST DUE | 3/27/2015;<br>5/29/2015 | Failed to submit WP | NO - WD well shut-in (1) |
| 12 | 3 | Category 1 | sub-3,000 | 5 | California Resources Production Corporation | Mount Poso (1),<br>Kern River (2) | 3/4/2015 | n/a | 3/20/2015 | 8/25/15<br>(progress report) | n/a | n/a | NO - WD wells shut-in (3) |
| 13 | 3 | Category 1 | sub-3,000 | 5 | Chevron U.S.A. Inc. | McKittrick (2),<br>Kern River (1) | 3/4/2015 | n/a | 3/23/2015 | 5/21/2015 | n/a | n/a | NO - WD wells shut-in (1)<br>NO - WD wells P&A (2) |
| 14 | 2 | Category 1 | sub-3,000 | 5 | E & B Natural Resources Management Corporation | Poso Creek | 3/4/2015 | n/a | 3/23/2015<br>4/6/2015 (revised) | 9/29/2015 | none | n/a | NO - WD wells shut-in (2) |
| 15 | 3 | Category 1 | sub-3,000 | 5 | Linn Operating, Inc. | McKittrick | 3/4/2015 | n/a | 3/24/2015 | 5/21/2015 | none | n/a | NO - WD wells shut-in (3) |
| 16 | 12 | Category 1 | sub-3,000 | 3 | Freeport-McMoRan Oil & Gas LLC | Arroyo Grande | 5/14/2015 | n/a | 6/9/2015 | 6/25/2015 | none | n/a | NO - WD wells current OG (3)<br>NO - WD wells not impacting WSWs (9) |
| 17 | 1 | Category 1 | sub-3,000 | 5 | Arthur McAdams | Round Mountain | 5/15/2015 | n/a | 6/2/2015 | 7/31/2015 | 7/7/2015 | WP -Incomplete | NO - WD well shut-in (1) |
| 18 | 1 | Category 1 | sub-3,000 | 5 | Badger Creek Ltd. | Kern Front | 5/15/2015 | n/a | 5/29/2015 | 7/30/2015 | n/a | n/a | NO - not impacting WSWs (1) |
| 19 | 1 | Category 1 | sub-3,000 | 5 | Bellaire Oil Co. | Kern Front | 5/15/2015 | n/a | 6/1/2015 | 7/30/2015 | n/a | n/a | NO - not impacting WSWs (1) |
| 20 | 1 | Category 1 | sub-3,000 | 5 | Bennett Petroleum, Inc. | Mountain View | 5/15/2015 | n/a | 6/3/2015 | 8/10/2015 (partial) | n/a | n/a | NO - WD well Exempt and idle (1) |
| 22 | 15 | Category 1 | sub-3,000 | 5 | Chevron U.S.A. Inc. | Kern River | 5/15/2015 | n/a | 6/3/2015<br>7/22/2015 (revised) | 9/15/15<br>8/3/2015<br>(interim report) | n/a | n/a | NO - WD wells current OG (3)<br>NO - WD wells not impacting WSWs (12) |
| 23 | 4 | Category 1 | sub-3,000 | 5 | E & B Natural Resources Management Corporation | Poso Creek | 5/15/2015 | n/a | 8/20/2015 | PAST DUE | n/a | n/a | NO - WD wells Exempt (1)<br>NO - WD wells shut-in (3) |
| 24 | 1 | Category 1 | sub-3,000 | 5 | Gordon Dole | Fruitvale | 5/15/2015 | n/a | 6/10/2015<br>7/6/2015 (revised) | PAST DUE | 6/22/2015<br>12/29/15 | WP -Incomplete<br>TR - Incomplete | NO - WD well shut-in (1) |
| 25 | 1 | Category 1 | sub-3,000 | 5 | Hathaway LLC | Jasmin | 5/15/2015 | n/a | PAST DUE | 6/1/2015 | n/a | n/a | NO - WD well idle (1) |
| 26 | 6 | Category 1 | sub-3,000 | 5 | Kern River Holdings, Inc. | Kern River | 5/15/2015 | n/a | 6/3/2015<br>7/10/15 (revised) | 8/4/2015 (partial)<br>1/5/2016 (final) | 12/30/2015 | TR - Incomplete | NO - not impacting WSWs (6) |
| 27 | 3 | Category 1 | sub-3,000 | 5 | Longbow, LLC | Kern Front (2),<br>Deer Creek (1) | 5/15/2015 | n/a | n/a | n/a | n/a | n/a | NO - WD wells current OG (3) |
| 28 | 29 | Category 1 | sub-3,000 | 5 | Macpherson Oil Company | Round Mountain | 5/15/2015 | n/a | 6/8/2015 | 2/5/2016 | 11/9/2015 | TR - Late | NO - WD well Exempt & shut-in (1)<br>NO - WD wells shut-in (6)<br>NO - not impacting WSWs (22) |

# Underground Injection Control (UIC) Well Review
## State Water Resources Control Board (continued)

| Order ID | Wells in Order | Category | TDS Group | WB Region | Operator Name on Order (current operator) | Field(s) | Information (13267) Order Issued | Technical Justification that the 13267 Order was issued in error | Work Plan or Technical Justification (TJ) Received | Technical Report Received | Notice of Violation Issued | Notice of Violation Reason | Current Injection impacting nearby Water Supply Wells? * |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Wells Determined Not to be Impacting Nearby Water Supply Wells (continued)** | | | | | | | | | | | | | |
| 29 | 2 | Category 1 | sub-3,000 | 5 | Macpherson Operating Company, L.P. | Mount Poso | 5/15/2015 | n/a | 6/8/2015 | 2/25/2016 | 11/9/2015 | TR - Late | NO - not impacting WSWs (2) |
| 30 | 2 | Category 1 | sub-3,000 | 5 | Pace Diversified Corporation | Round Mountain (1),<br>Mount Poso (1) | 5/15/2015 | n/a | 6/2/2015 | 8/1/2015 | n/a | n/a | NO - not impacting WSWs (1)<br>NO - not impacting WSWs & shut-in (1) |
| 31 | 3 | Category 1 | sub-3,000 | 5 | Trio Petroleum LLC | Union Avenue | 5/15/2015 | n/a | 6/2/2015<br>6/16/2015 (revised)<br>1/15/2016 (final) | na<br>(exempt zones) | 11/25/2015 | TR - Late | NO - WD wells shut-in (1)<br>NO - WD well current OG (1)<br>NO - WD well Exempt (1) |
| 32 | 6 | Category 1 | sub-3,000 | 5 | SOC Resources Inc. (Vintage Production California LLC) | Mount Poso | 5/15/2015<br>(revised 6/26/15) | n/a | 7/20/2015 | 9/18/15<br>(initial report) | n/a | n/a | NO - WD wells shut-in (3)<br>NO - not impacting WSWs (2)<br>NO- WD well current OG & not impacting WSWs (1) |
| 33 | 3 | Category 1 | sub-3,000 | 5 | Western States International, Inc. | Kern Front | 5/15/2015 | n/a | PAST DUE | PAST DUE | 6/22/2015 | WP - Late | NO - WD well current OG (1)<br>NO - WD wells Idle. Most recent injection Dec. 1984 (2) |
| 40 | 1 | Category 1 | sub-3,000 | 4 | Watt Mineral Holdings LLC | Newhall | 8/20/2015 | n/a | 9/25/2015 received<br>1/5/2016 approved | n/a | n/a | n/a | NO - WD well shut-in (1) |
| 7 | 16 | Category 1 | sub-3000<br>3,000 to 10,000<br>(see notes**) | 5 | Chevron U.S.A. Inc. | Kern River | 8/11/2014 | n/a | 8/18/2014 | 2/6/2015 | n/a | n/a | NO - WD wells shut-in (2)<br>NO - WD well current OG (1)<br>NO - WD wells not impacting WSWs (13) |
| 34 | 3 | Category 1 | 3,000 to 10,000 | 5 | California Resources Elk Hills LLC | Elk Hills | 8/17/2015 (received by operator 11/17/15) | WD wells injecting into air sands and a saturated zone in excess of 10,000 TDS | 12/2/2015<br>Technical Justification<br>(Preliminary staff review on 2/10/2016) | n/a | n/a | n/a | NO - Not a USDW, above 10000 TDS (3) (preliminary review) |
| 35 | 3 | Category 1 | 3,000 to 10,000 | 5 | California Resources Production Corporation | Buena Vista (1),<br>South Belridge (2) | 8/17/2015 | WD well is injecting into an exempt aquifer or a non-USDW aquifer | 9/4/2015<br>Technical Justification<br>(Preliminary staff review on 2/10/2016) | n/a | n/a | n/a | NO - WD well is exempt (1) (preliminary review)<br>NO - WD wells injecting into a non-USDW (greater than 10000 TDS) and idle. Most recent inject July 2012. (2) (preliminary review) |
| 36 | 3 | Category 1 | 3,000 to 10,000 | 5 | Chevron U.S.A. Inc. | Cymric (2),<br>Monument Junction (1) | 8/17/2015 | n/a | 8/26/2015 (request for time extention) | 8/26/2015 (request for time extention)<br>9/14/15 (received) | n/a | n/a | NO - not impacting WSWs (3) |
| 39 | 1 | Category 1 | 3,000 to 10,000 | 5 | Valley Water Management Company | Midway-Sunset | 8/17/2015 | WD well is injecting into air sands | 9/3/2015<br>Technical Justification<br>(Preliminary staff review on 2/10/2016) | n/a | n/a | n/a | NO - WD well is Idle. Last injection Nov. 2003 (1) |
| 41 | 14 | Category 1 | 3,000 to 10,000 | 3 | Chevron U.S.A. Inc. | San Ardo | 10/23/2015 | n/a | 1/27/2016 | 4/1/2016 | n/a | n/a | NO - WD well plugged & abandoned (3)<br>NO - not impacting WSWs (11) |
| 42 | 1 | Category 1 | 3,000 to 10,000 | 8 | Linn Operating, Inc. | Brea-Olinda | 10/26/2015 | WD well injecting into an Exempt Aquifer | 11/16/2015<br>Technical Justification<br>(Response sent to operaotr on 1/17/2016) | n/a | n/a | n/a | NO - WD well Exempt (1) |
| 43 | 3 | Category 1 | 3,000 to 10,000 | 5 | Chevron U.S.A. Inc. | Kern River | 10/30/2015 | WD wells are/were injecting into exempt and non-USDW aquifers or demonstrated not to be impacting WSWs. | 11/16/2015<br>Technical Justification<br>Order held in Abeyance until 11/30/17<br>(Preliminary staff review on 2/10/2016) | 13267 Order held in Abeyance until 11/30/17 | n/a | n/a | NO - WD well plugged & abandoned (1)<br>NO - WD well is shut-in, exempt, and not a USDW. Last injection Mar. 2002 (1)<br>NO - not impacting WSWs (1) |
| 44 | 7 | Category 1 | 3,000 to 10,000 | 5 | Chevron U.S.A. Inc. | Lost Hills | 10/30/2015 | 1/4/16 & 3/8/16 | 1/4/16 & 3/8/16 | 3/2/2016 | n/a | n/a | NO - WD well plugged & abandoned (1)<br>NO - Not a USDW, above 10000 TDS (6) (preliminary review) |
| 47 | 1 | Category 1 | 3,000 to 10,000 | 5 | Jaco Production Company | Midway-Sunset | 10/30/2015 | n/a | 11/12/2015 | n/a | 1/13/2016 | WP - Late | NO - not impacting WSWs and WD well is Idle. Last injection May 1998 (1) |
| 48 | 1 | Category 1 | 3,000 to 10,000 | 5 | E & B Natural Resources Management Corporation | Poso Creek | 10/30/2015 | WD well is injecting into an exempt aquifer | 1/5/2016<br>Technical Justification<br>(Preliminary staff review on 2/6/2016) | n/a | n/a | na | NO - WD well exempt (1) (preliminary review) |
| 49 | 3 | Category 1 | 3,000 to 10,000 | 4 | California Resources Production Corporation | Timber Canyon (1)<br>Torrey Canyon (2) | 11/16/2015 | UNK | 12/17/2015<br>Technical Justification<br>(have not reviewed) | n/a | n/a | n/a | NO - WD wells currently idle (3). Most recent injection August 1998. |

# Underground Injection Control (UIC) Well Review
## State Water Resources Control Board (continued)

| Order ID | Wells in Order | Category | TDS Group | WB Region | Operator Name on Order (current operator) | Field(s) | Information (13267) Order Issued | Technical Justification that the 13267 Order was issued in error | Work Plan or Technical Justification (TJ) Received | Technical Report Received | Notice of Violation Issued | Notice of Violation Reason | Current Injection impacting nearby Water Supply Wells? * |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Wells Determined Not to be Impacting Nearby Water Supply Wells (continued)** | | | | | | | | | | | | | |
| 50 | 4 | Category 1 | 3,000 to 10,000 | 4 | Seneca Resources Corporation | Sespe | 11/16/2015 | n/a | 12/18/2015 | 3/21/2016 | n/a | n/a | NO - WD well shut-in (1)<br>NO - WD well is Idle. Last Injection Mar. 1997 (1)<br>NO - not impacting WSWs (2) |
| 51 | 1 | Category 1 | 3,000 to 10,000 | 4 | TEG Oil and Gas USA Inc. | Eureka Canyon | 11/16/2015 | n/a | 2/7/2016<br>6/23/16 (revised) | 10/3/2016 | n/a | n/a | NO - not impacting WSWs (1) |
| 53 | 1 | Category 1 | 3,000 to 10,000 | 4 | Patriot Resources | Tapo, North | 11/16/2015 | WD wells are injecting into a non-USDW aquifer | 1/5/2016<br>Technical Justification<br>(Preliminary staff review on 2/6/2016) | n/a | n/a | n/a | NO - Not a USDW, above 10000 TDS (1) (preliminary review) |
| 54 | 1 | Category 1 | 3,000 to 10,000 | 4 | Vaquero Energy, Inc. | Bardsdale | 11/18/2015 | n/a | Received<br>Water Board responed on 12/7/15 | n/a | n/a | n/a | NO - WD well is exempt (1) |
| 56 | 2 | Category 1 | 3,000 to 10,000 | 3 | Calif. Oil Independents | Monroe Swell | 11/20/2015 (Returned to Sender - Unclaimed, unable to forward) | n/a | Order never delivered | Order never delivered | n/a | n/a | NO - WD wells currently Idle (2). Most recent injection August 2012. |
| 57 | 2 | Category 1 | 3,000 to 10,000 | 3 | California Resources Production Corporation | San Ardo | 11/20/2015 | WD wells are shut-in and perforated in exempt aquifers | 1/15/2016<br>Technical Justification<br>(Preliminary staff review on 2/6/2016) | n/a | n/a | n/a | NO - WD wells shut-in and Exempt (2) (preliminary review) |
| 59 | 5 | Category 1 | 3,000 to 10,000 | 3 | ERG Operating Company, LLC | Casmalia | 11/20/2015 | WD well is injecting into an exempt aquifer or a non-USDW aquifer | 1/11/2016<br>Technical Justification<br>(Preliminary staff review on 2/6/2016) | n/a | n/a | n/a | NO - WD well exempt (1) (preliminary review)<br>NO - WD wells injecting into a non-USDW (greater than 10000 TDS) (4) (preliminary review) |
| 60 | 1 | Category 1 | 3,000 to 10,000 | 3 | Fred Cagle | McCool Ranch | 11/20/2015 (Returned to Sender - Unclaimed, unable to forward) | n/a | Order never delivered | Order never delivered | n/a | n/a | NO - WD well Idle (1). Last injection May 1984. |
| 61 | 3 | Category 1 | 3,000 to 10,000 | 3 | Freeport-McMoRan Oil & Gas LLC | Lompoc | 11/20/2015 | n/a | 1/19/2015 | 5/5/2016 | n/a | n/a | NO - WD well is Idle. Never Injected (1)<br>NO - not impacting WSWs (2) |
| 62 | 1 | Category 1 | 3,000 to 10,000 | 3 | Pyramid Oil Company | Cat Canyon | 11/20/2015 | WD well never injected | 1/19/2016<br>Technical Justification<br>(Preliminary staff review on 2/6/2016) | n/a | n/a | n/a | NO - WD well is Idle. Never injected. (1) |
| 63 | 1 | Category 1 | 3,000 to 10,000 | 3 | Sierra Resources, Inc. | Barham Ranch | 11/20/2015 | WD well is injecting into an HC-exempt aquifer and the zone is greater than 10000 TDS. | 1/18/2016<br>Technical Justification<br>(Preliminary staff review on 2/6/2016) | n/a | n/a | n/a | NO - WD well exempt (1) (preliminary review) |
| 64 | 1 | Category 1 | 3,000 to 10,000 | 3 | Venoco, Inc. | Elwood | 11/20/2015 | WD well is injecting into an exempt aquifer or a non-USDW aquifer | 1/20/2016<br>Technical Justification<br>(Preliminary staff review on 2/6/2016) | n/a | n/a | n/a | NO - WD well is Idle. Last injection Sept. 1994. Not a USDW, above 10000 TDS (1) (preliminary review) |
| 66 | 1 | Category 1 | 3,000 to 10,000 | 5 | California Resources Production Corporation | Buena Vista | 10/30/2015 | WD well injecting into an exempt aquifer | 11/16/2015<br>Technical Justification<br>(Preliminary staff review on 7/7/2016) | n/a | n/a | n/a | NO - WD well is exempt (1) |
| 67 | 2 | Category 1 | 3,000 to 10,000 | 5 | Freeport-McMoRan Oil & Gas LLC | Midway-Sunset | 10/30/2015 | | 11/30/15<br>3/15/16 (revised) | 6/22/2016 | n/a | n/a | NO - not impacting WSWs (2) |
| **Wells Potentially Impacting Nearby Water Supply Wells** | | | | | | | | | | | | | |
| 21 | 26 | Category 1 | sub-3,000 | 5 | California Resources Production Corporation | Kern Front (11),<br>Mount Poso (12),<br>Tejon (3) | 5/15/2015 | na | 6/3/2015<br>8/25/2015 (revised) | 8/3/15 (initial report)<br>11/23/15 (received) | none | n/a | NO - WD wells shut-in (13)<br>NO - WD wells Idle. Most recent injection Aug. 2009 (3)<br>NO - not impacting WSWs (3)<br>UNK - Missing Information (7) |
| 38 | 1 | Category 1 | 3,000 to 10,000 | 5 | Naftex Operating Company | Edison | 8/17/2015 | n/a | PAST DUE | PAST DUE | 1/22/2016 | Failed to submit WP and TR | UNK - Missing Information (1) |
| 45 | 1 | Category 1 | 3,000 to 10,000 | 5 | Griffin Resources, LLC | McKittrick | 10/30/2015 | No viable justification provided in their request | 1/18/2016<br>Technical Justification<br>(Preliminary staff review on 2/6/2016) | n/a | n/a | n/a | UNK - Missing Information (1) |
| 46 | 1 | Category 1 | 3,000 to 10,000 | 5 | Freedom Oil Company LLC | Rosedale Ranch | 10/30/2015 | n/a | 11/30/2015 (informal work plan)<br>5/6/16 (formal work plan)<br>7/10/2016 (final work plan) | n/a | 12/30/2015 | WP-Incomplete | UNK - Missing Information (1) |

# Underground Injection Control (UIC) Well Review
## State Water Resources Control Board (continued)

| Order ID | Wells in Order | Category | TDS Group | WB Region | Operator Name on Order (current operator) | Field(s) | Information (13267) Order Issued | Technical Justification that the 13267 Order was issued in error | Work Plan or Technical Justification (TJ) Received | Technical Report Received | Notice of Violation Issued | Notice of Violation Reason | Current Injection impacting nearby Water Supply Wells? * |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Wells Potentially Impacting Nearby Water Supply Wells (continued)** | | | | | | | | | | | | | |
| 52 | 2 | Category 1 | 3,000 to 10,000 | 4 | Mirada Petroleum Inc. | Holser | 11/16/2015 | WD wells are injecting into exempt aquifers | 12/28/2015<br>Technical Justification<br>(Preliminary staff review on 2/6/2016) | n/a | none | n/a | NO - WD well is exempt (1)<br>UNK - Missing Information (1) |
| 55 | 13 | Category 1 | 3,000 to 10,000 | 3 | Aera Energy LLC | San Ardo | 11/20/2015 | WD wells are injecting into exempt aquifers | 1/6/2016<br>Technical Justification<br>(Preliminary staff review on 2/6/2016) | n/a | none | n/a | NO - WD wells exempt (5) (preliminary review)<br>UNK - Missing Information (8) |
| 58 | 3 | Category 1 | 3,000 to 10,000 | 3 | Eagle Petroleum, LLC | Lynch Canyon | 11/20/2015 | WD wells are injecting into a non-USDW aquifer | 1/21/2016<br>Technical Justification<br>(Preliminary staff review on 2/6/2016) | n/a | none | na | UNK - Missing Information (3) |
| 65 | 2 | Category 1 | 3,000 to 10,000 | 5 | California Resources Production Corporation | Midway-Sunset | 10/30/2015 | n/a | PAST DUE | n/a | 2/10/2016 | WP - Late | UNK - Missing Information (2) |
| 68 | 5 | Category 1 | 3,000 to 10,000 | 5 | Holmes Western Oil Corporation | Midway-Sunset | 10/30/2015 | n/a | 12/7/2015<br>2/10/2016 (revised) | PAST DUE<br>work plan approved<br>10/5/16 | UNK | UNK | UNK - Missing Information (5) |
| 69 | 1 | Category 2 | 3,000 to 10,000 | 3 | Vaquero Energy | Cat Canyon | 4/18/2016 | n/a | UNK | UNK | UNK | UNK | UNK - Missing Information (1) |
| 70 | 1 | Category 2 *** | 3,000 to 10,000 | 4 | Mirada Petroleum Inc. | Ojai | 9/15/2016 | n/a | n/a | n/a | n/a | n/a | UNK - Missing Information (1) |
| 71 | 1 | Category 2 *** | 3,000 to 10,000 | 5 | Valley Water Management Company | Monument Junction | 10/10/2016 | n/a | n/a | n/a | n/a | n/a | UNK - Missing Information (1) |
| **Wells Determined to be Impacting Nearby Water Supply Wells** | | | | | | | | | | | | | |
| 37 | 1 | Category 1 | 3,000 to 10,000 | 5 | Holmes Western Oil Corporation | Jacalitos | 8/17/2015 | n/a | 10/26/2015<br>11/23/15 (revised) | 3/25/2016 | n/a | n/a | YES - Water supply well screened within injection zone (1). However, available water well data indicates it is a US Geological Survey monitoring well. |

**Summary**

71 information (13267) orders issued to the operators of 256 UIC wells
15 operators received one or more Notice of Violation (NOV) letters
198 UIC wells were found not to be a potential risk to nearby water supply wells
57 UIC wells with insufficient information; regional water boards staff working with operators
1 UIC well was determined to be a potential risk to a nearby water supply well. The water well has been identified as a US Geological Survey monitoring well. The operator is working with the County to properly abandon the well.

**Notes**

TDS = total dissolved solids in milligrams per liter (mg/l)
Category 1 = Class II water disposal wells injecting into non-exempt, non-hydrocarbon-bearing aquifers or the 11 aquifers historically treated as exempt.
Category 1a = Category 1 wells permitted to inject into less than 3,000 TDS aquifers.
Category 1b = Category 1 wells permitted to inject into 3,000 to 10,000 TDS aquifers.
WP = work plan
TR = technical report
WD = water disposal
WSWs = water supply wells (domestic, municipal, irrigation, industrial)
NOV = Notice of Violation letter
WB = Water Board
Central Valley Water Board = Central Valley Regional Water Qualtiy Control Board (WB Region 5)
n/a = not applicable
UNK = unknown
*** These UIC wells were originally identified by DOGGR as Category 2 wells. These wells are water disposal wells (Category 1 wells).



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