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## State Water Resources Control Board

May 22, 2018

Kenneth A. Harris Jr.  
State Oil & Gas Supervisor  
Department of Conservation  
Division of Oil, Gas & Geothermal Resources  
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### **FINAL CONCURRENCE ON THE REVISED AQUIFER EXEMPTION PROPOSAL, DOLLIE SANDS, PISMO FORMATION, ARROYO GRANDE OIL FIELD, SAN LUIS OBISPO COUNTY**

Dear Mr. Harris:

State Water Resources Control Board (State Water Board) staff, in consultation with Central Coast Regional Water Quality Control Board staff (collectively Water Boards), have reviewed the revised aquifer exemption proposal provided by the Division of Oil, Gas, and Geothermal Resources (DOGGR) on November 8, 2017. As described below, the revised proposal slightly reduces the area of the proposed expansion of the aquifer exemption for the Dollie Sands member of the Pismo Formation in the Arroyo Grande Oil Field.

Water Boards staff assessed whether the revised proposal meets the criteria set forth in California Public Resources Code (PRC) section (§) 3131 and § 146.4 of Title 40 of the Code of Federal Regulations (CFR) and considered comments received during the supplemental public comment process. Based on this review, State Water Board staff concur with the revised exemption proposal. In conjunction with the evaluation of current and future Class II underground injection control (UIC) projects in the proposed exempted area, DOGGR and Water Boards staff will consider incorporating conditions, described below, into project approvals.

#### **Summary of Events and Revised Proposal**

On July 2, 2015, DOGGR provided the original proposal to expand the exemption of the Dollie Sands member of the Pismo Formation. After a technical evaluation, State Water Board staff issued a letter on August 7, 2015 preliminarily concurring with that proposal. On August 20, 2015, DOGGR published notice of the proposal and opened a public comment period that closed at the conclusion of a joint public hearing held by DOGGR and the State Water Board on

September 21, 2015. On December 2, 2015, DOGGR opened a supplemental public comment period that closed on December 16, 2015.

DOGGR and the State Water Board reviewed and responded in writing to comments received during these two comment periods and public hearing. On February 8, 2016, State Water Board staff issued a final concurrence letter on the exemption proposal. DOGGR provided the US Environmental Protection Agency (US EPA) with the proposal for a final determination on February 8, 2016.

Based on US EPA comments, additional information, and additional analysis, DOGGR has made a minor revision to the proposal. Specifically, DOGGR has removed an approximately 500 foot by 800 foot portion from the northeast corner of the area originally proposed to be exempted. This change is based on a groundwater capture zone analysis surrounding a domestic supply well in proximity to that portion of the proposed exempted area.

On November 28, 2017, State Water Board staff preliminarily concurred with the revised exemption proposal pending the State's public comment process. On December 8, 2017, DOGGR published notice of the revised exemption proposal and opened a supplemental public comment period. The comment period closed on December 22, 2017. DOGGR and State Water Board staff have reviewed and responded in writing to the comments received during the supplemental comment period.

### **State and Federal Exemption Criteria**

As required by PRC § 3131(a)(1) and 40 CFR § 146.4(a), the proposed exempted area does not currently serve as a source of drinking water. Consistent with 40 CFR § 146.4(b)(1), the proposed exempted area will not in the future serve as a source of drinking water because it is hydrocarbon producing. In addition, as per PRC section 3131(a)(2), the injected fluids are not expected to affect the quality of water that is, or may reasonably be, used for any beneficial use because (1) the groundwater contained in the proposed exempted area is not expected to be put to beneficial use because it contains petroleum hydrocarbons, and (2) the injected fluids are expected to remain in the proposed exempted area.

The requirement of PRC section 3131(a)(3) is also satisfied because a detailed technical demonstration has been made that the injected fluids are expected to remain in the proposed exempted area due to a combination of geologic conditions and hydraulic controls. Geologic features include a synclinal structure, a fault barrier on the north side of the proposed exempted area (Arroyo Grande fault), and stratigraphic conditions on the south side of the proposed exempted area (decreasing permeability and transmissivity from the Dollie Sands transition into Miguelito member of the Pismo Formation). Injected fluids in the proposed exempted area should also be contained hydraulically, both vertically and laterally, due to the inward hydraulic gradient created by oil field dewatering activities in the proposed exempted area.

### **Conditions on UIC Projects**

Approval of Class II UIC projects involves a joint review by DOGGR and Water Boards staff. DOGGR and Water Boards staff will consider incorporating conditions into approvals of Class II injection projects. Potential conditions include, but are not limited to, the following:

1. Use of sentry groundwater monitoring wells on the boundaries of the proposed exempted area where groundwater is currently or could potentially be of beneficial use. The quantity, spacing, and location of these wells would be designed to ensure early detection of any change in water quality outside of the proposed exempted area due to UIC activities. If a groundwater monitoring requirement is incorporated in a project approval, the operator must submit a plan to the Central Coast Regional Water Quality Control Board for consideration.
2. Creation of a buffer zone between the location of Class II UIC wells and the boundary of the proposed exempted area such that the injected fluids remain within the proposed exempted area.
3. Monitoring and maintenance of formation pressure and monitoring of groundwater elevations in the proposed exempted area to ensure that groundwater elevations within the exempted area do not exceed the synclinal structural containment feature.

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

Sincerely,



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Chief Deputy Director

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