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Kenneth A. Harris Jr., State Oil & Gas Supervisor
Department of Conservation
Division of Oil, Gas & Geothermal Resources
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PRELIMINARY CONCURRENCE ON THE AQUIFER EXEMPTION PROPOSAL, TEMBLOR FORMATION, JACALITOS OIL FIELD AND COALINGA OIL FIELD, FRESNO COUNTY

Dear Mr. Harris:

State Water Resources Control Board (State Water Board) staff, in consultation with Central Valley Regional Water Quality Control Board staff (collectively Water Boards staff), have reviewed the proposal provided by the Division of Oil, Gas and Geothermal Resources (DOGGR) on August 29, 2016 to expand the aquifer exemption for the Temblor Formation in the Jacalitos Oil Field and Coalinga Oil Field. Water Boards staff assessed whether the 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).

Pending the public comment process, State Water Board staff preliminarily concur with the proposal to expand the exemption of the Temblor Formation. In conjunction with the evaluation of current and future Class II UIC projects in the proposed exempted area, DOGGR and Water Boards staff will consider incorporating conditions, described below, into UIC project approvals.

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. Water analyses from the Jacalitos Oil Field and Coalinga Oil Field indicate groundwater in the Temblor Formation contains concentrations of total dissolved solids between 3,068 and 7,285 milligrams per liter. No water supply wells were identified within the proposed exempted area. Water wells have been identified within the boundaries of the oil field in the alluvium (a shallow zone ranging from 30 to 60 feet below ground surface) and the Etchegeoin Formation. As described below, these water wells are geologically and hydraulically separated from the proposed exempted area by a vertical confining feature.
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 § 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 (1) because the groundwater contained in the proposed exempted area is not expected to be put to beneficial use because it contains petroleum hydrocarbons and also contains constituents such as boron and total dissolved solids at concentrations that limit its suitability for agricultural, domestic, and other beneficial uses, (2) because of the availability of higher quality groundwater in shallower geologic zones, and (3) because the injected fluids are expected to remain in the proposed exempted area.

The requirement of PRC § 3131(a)(3) is also satisfied because the injected fluids are expected to remain in the proposed exempted area due to both geologic and operational controls. Vertical containment of the proposed exempted area is provided by the overlying low permeability Reef Ridge/McLure Shale or the Etchegoin Formation, and the underlying low permeability shale of the Kreyenhagen Formation. Lateral containment in the proposed exempted area is provided by a geologic pinchout (on the west) and production-induced inward hydraulic gradient.

**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, requiring monitoring, such as pressure or fluid level monitoring, to confirm that injected fluids remain in the proposed exempted area. If a monitoring requirement is incorporated in a UIC project approval, the operator must submit a work plan to the Central Valley Regional Water Quality Control Board for consideration.

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

Sincerely,

Jonathan Bishop
Chief Deputy Director

cc: Patrick Pulupa
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