
State Water Resources Control Board

December 7, 2018

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, HOLSER-NUEVO ZONE OF THE MODELO FORMATION, HOLSER OIL FIELD, VENTURA COUNTY

Dear Mr. Harris:

State Water Resources Control Board (State Water Board) staff, in consultation with Los Angeles 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 April 20, 2018 to expand the aquifer exemption for the Holser-Nuevo Zone of the Modelo Formation in the Holser 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 for the Holser-Nuevo Zone of the Modelo Formation in the Holser Oil Field. 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 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. No water supply wells were identified as being completed within the proposed exempted area. While water supply wells have been identified within one mile of the proposed exempted area, these wells are completed in the alluvium (perforated intervals range from 10 to 300 feet below ground surface) and are separated from the proposed exempted area by over a thousand feet of confining geologic units.

Consistent with 40 CFR § 146.4(b)(1), the proposed exempted area cannot now and will not in the future serve as a source of drinking water because it is, or is expected to be, capable of commercial hydrocarbon production. 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 because (1) the groundwater contained in the proposed exempted area contains petroleum hydrocarbons and constituents such as radionuclides and total dissolved solids at concentrations that limit its suitability for agricultural, domestic, and other beneficial uses, (2) higher quality groundwater is available in shallower geologic zones, and (3) injected fluids are expected to remain in the proposed exempted area. Water analyses from the Holser Oil Field indicate that groundwater in the Holser-Nuevo Zone contains concentrations of total dissolved solids between 8,530 and 8,970 milligrams per liter (mg/L).

The requirement of PRC § 3131(a)(3) is also satisfied because the injected fluids are expected to remain in the proposed exempted area. This is due to both geologic and operational controls. Vertical containment of injected fluids in the proposed exempted area is provided by the overlying and underlying low permeability siliceous shales of the Modelo Formation. Lateral containment of injected fluids in the proposed exempted area is provided by a lower permeability zone on the western margin of the proposed exempted area and a 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 groundwater monitoring requirement is incorporated in a UIC project approval, the operator must submit a work plan to the Los Angeles Regional Water Quality Control Board for review.

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

Sincerely,

A handwritten signature in blue ink, appearing to read "Jonathan Bishop".

Jonathan Bishop
Chief Deputy Director

cc: Renee Purdy
Acting Executive Officer
Los Angeles Regional Water Quality Control Board
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