
State Water Resources Control Board

January 17, 2018

Kenneth A. Harris Jr., State Oil & Gas Supervisor
Department of Conservation
Division of Oil, Gas & Geothermal Resources
801 K Street, MS 18-05
Sacramento, CA 95814-3530
ken.harris@conservation.ca.gov

FINAL CONCURRENCE ON THE AQUIFER EXEMPTION PROPOSAL, BASAL ETCHEGOIN AND CHANAC FORMATIONS, PREMIER AND ENAS AREA AND MCVAN AREA, POSO CREEK OIL FIELD, KERN COUNTY

Dear Mr. Harris:

On February 15, 2017, State Water Resources Control Board (State Water Board) staff issued a letter preliminarily concurring with the Poso Creek Oil Field aquifer exemption proposal provided by the Division of Oil, Gas and Geothermal Resources (DOGGR) on September 7, 2016. DOGGR proposes to expand the exemption of two areas within the Poso Creek Oil Field: (1) the Premier and Enas Area, and (2) the McVan Area. The proposal for the Premier and Enas Area is to expand the existing exemption for the Basal Etchegoin Formation. The proposal for the McVan Area is to expand the existing exemption for the Basal Etchegoin Formation and exempt a portion of the Chanac Formation.

On March 3, 2017, DOGGR provided additional information regarding the proposal that included the newly-identified Pond Poso Creek Fault within the Premier and Enas Area. State Water Board staff, in consultation with Central Valley Regional Water Quality Control Board staff (collectively Water Boards staff), have reviewed and 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 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 concurrence area, DOGGR and Water Boards staff will consider incorporating conditions, as described below, into UIC project approvals.

Public Comment Process

On August 17, 2017, State Water Board staff preliminarily concurred with the revised exemption proposal pending the State's public comment process. On October 30, 2017, DOGGR published notice of the exemption proposal and opened a public comment period. DOGGR and

State Water Board staff held a joint public hearing to receive comments on the exemption proposal on November 29, 2017. The comment period closed on November 29, 2017. DOGGR and State Water Board staff have reviewed and responded in writing to the comments received during the comment period and public hearing.

State and Federal Exemption Criteria

As required by PRC § 3131(a)(1) and 40 CFR § 146.4(a), the proposed exempted areas do not currently serve as sources of drinking water. No water supply wells were identified as being completed within the proposed exempted areas. Two water supply wells were identified north of the proposed exempted areas. Analyses of the two water supply wells indicate that the capture zones of the wells do not extend into the proposed exempted areas.

Consistent with 40 CFR § 146.4(b)(1), the proposed exempted areas will not in the future serve as sources of drinking water because they are hydrocarbon producing and also because high quality groundwater is available in shallower geologic zones. 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 in the proposed exempted areas is not expected to be put to beneficial use because it contains petroleum hydrocarbons and because of the availability of high quality groundwater in shallower geologic zones, and (2) the injected fluids are expected to remain in the proposed exempted areas.

The requirement of PRC § 3131(a)(3) is also satisfied because the injected fluids are expected to remain within the proposed exempted areas due to a combination of geologic conditions and operational controls. In the Premier and Enas Area, vertical containment is provided by the lower permeability, overlying Macoma Claystone and by the lower permeability, underlying shale of the Basal Etchegoin. Lateral containment within the Premier and Enas Area is provided by faults to the north, east, and south and by a production-induced inward-directed hydraulic gradient to the west. The aquifer exemption proposal includes hydrogeological and geochemical data and an analysis that states that the Pond Poso Creek Fault is laterally and vertically sealing where the proposed exempted area is in contact with the stratigraphically-overlying Kern River Formation.

In the McVan Area, vertical confinement is provided by the lower permeability, overlying Macoma Claystone and the lower permeability, underlying Chanac Claystone. Lateral containment is provided by faults to the east and southwest and by a production-induced inward-directed hydraulic gradient to the northwest. The aquifer exemption proposal includes hydrogeological and geochemical data and an analysis that states the East McVan Fault is laterally and vertically sealing where the proposed exempted area is in contact with the stratigraphically-overlying Kern River Formation.

Conditions on UIC Projects

Approval of UIC projects involves a joint review by DOGGR and Water Boards staff. Water Boards staff will seek the inclusion of a monitoring requirement in any injection project within a quarter mile of the Pond Poso Creek and East McVan Faults in order to verify the sealing nature of these faults and to confirm that the injected fluids remain in the exempted areas.

For all UIC projects, DOGGR and Water Boards staff may incorporate conditions into approval letters, as appropriate. Potential conditions include, but are not limited to:

- 1) Collecting groundwater samples from proposed injection project wells to establish existing groundwater quality prior to fluid injection; and
- 2) Requiring monitoring to confirm that injected fluids remain in the proposed exempted areas. If a monitoring requirement is incorporated in a project approval, the operator must submit a 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: Pamela Creedon
Executive Officer
Central Valley Regional Water Quality Control Board
pamela.creedon@waterboards.ca.gov

Bill Bartling
Deputy, Inland District
Department of Conservation
Division of Oil, Gas & Geothermal Resources
bill.bartling@conservation.ca.gov