



February 8, 2016

Mr. Michael Montgomery  
United States Environmental Protection Agency – Region IX  
75 Hawthorne Street  
San Francisco, CA 94105-3901

Dear Mr. Montgomery:

Pursuant to Title 40 of the Code of Federal Regulations, sections 144.7 and 146.4, the California Department of Conservation, Division of Oil, Gas, and Geothermal Resources (Division), with concurrence from the State Water Resources Control Board (State Water Board), requests that the United States Environmental Protection Agency (US EPA) approve an expansion of the aquifer exemption for the Dollie Sands of the Pismo Formation in the Arroyo Grande oil field. Data and analyses supporting this request are included in the attached proposal.

The proposed aquifer exemption area is an expansion of the existing aquifer exemption area that was approved in 1983 in conjunction with the US EPA granting the State of California primacy for regulation of Class II injection. Maps of the proposed aquifer exemption area and the existing aquifer exemption are included in the attached proposal.

Pursuant to California Public Resources Code, section 3131, prior to submission of this proposal, the Division consulted with the State Water Board and the Central Coast Regional Water Quality Control Board concerning the conformity of the proposal with all of the following:

- Criteria set forth in Title 40 of the Code of Federal Regulations, section 146.4.
- The injection of fluids will not affect the quality of water that is, or may reasonably be, used for any beneficial use.
- The injected fluid will remain in the aquifer or portion of the aquifer that would be exempted.

Based on the information in the attached proposal, the Division and the State Water Board have determined that the area proposed for aquifer exemption meets the exemption criteria specified in Title 40 of the Code of Federal Regulations, section 146.4, because (1) it does not currently serve as a source of drinking water, and (2) will not serve as a source of drinking water because it is hydrocarbon producing and has been demonstrated to contain hydrocarbons that considering their quantity and location are expected to be commercially producible. Data demonstrating that the area proposed for exemption is a hydrocarbon-producing zone include:

- Historic hydrocarbon production data in the proposed area;
- Geophysical well logging indicating the presence of hydrocarbons and cross section interpretations;
- Mud log (detailed subsurface soil and rock descriptions) indicating the presence of hydrocarbons; and
- Lithologic core analysis showing current and residual hydrocarbons in the formation.

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In addition, of the sixteen existing water disposal wells in the proposed aquifer exemption area, twelve have historically produced hydrocarbons (oil). From those twelve wells, more than 91,000 barrels of oil were produced from 1977 to 1982. The total oil produced over the productive life of these twelve wells to date is greater than 172,000 barrels. Data from the remaining four water disposal wells indicate the presence of oil within the area proposed for exemption. There are 122 wells currently producing oil within the expanded area proposed for aquifer exemption.

Based on the information in the attached proposal, the Division and the State Water Board have determined that the injection of fluids into the area proposed for exemption (Dollie Sands) will not affect the quality of water that is, or may reasonably be, used for any beneficial use due to the geologic and hydrologic controls present at the site. The Division and the State Water Board have determined that there are no water supply wells located in the existing exempted area or in the proposed area of expansion and that the injected fluid will remain in the area proposed for exemption.

As an added precaution, the Division and the State Water Board will consider incorporating the following conditions into project approvals and permits to provide assurances that the injected fluid will remain in the proposed exempted area: (1) the 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; (2) the creation of a buffer zone between the location of injection wells and the boundary of the proposed exempted area such that the injected fluids remain within the proposed exempted area; and (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.

Prior to submitting this request to the US EPA, the Division and the State Water Board jointly conducted a public participation process to solicit input on the aquifer exemption proposal. Following publication of notice in a local newspaper, and mailing or emailing notice to interested parties, public comments on the proposal were accepted from August 20, 2015 through September 21, 2015. On September 21, the Division and the State Water Board jointly conducted a public comment hearing in San Luis Obispo. Subsequently, the Division and the State Water Board added additional explanatory materials to the aquifer exemption proposal, and once again, accepted public comments on the proposal from December 2, 2015 through December 16, 2015. Included in the attached proposal is a summary of all of the comments received from the public together with the Division's and State Water Board's responses. Copies of all of the comments received are also included in the attached proposal.

Sincerely,



Kenneth A. Harris Jr.

State Oil and Gas Supervisor

Division of oil, Gas, and Geothermal Resources

Attachment