Petitioner E&B Natural Resources Management Corporation ("E&B"), pursuant to Water Code §§ 13320 and 12321, hereby submits this Petition and Request for Stay to the State Water Resources Control Board ("State Board") for review of an action of the Central Valley Regional Water Quality Control Board ("Regional Board"). The subject action is an order issued pursuant to Water Code § 13267 by the Regional Board on May 15, 2015 ("Order"). The Order requires E&B to conduct sampling and submit detailed technical reports for each of the following four (4) underground injection wells:

"Section 21" WD 5 (API No. 030-50777)
"Federal" WD 8-1 (API No. 029-59841)
"USL" 2-6 (API No. 029-84583)
"USL" 12-4 (API No. 029-58585)
The Order was issued on grounds the four injection wells pose a potential threat
to human health and potential impacts to water quality. Petitioner objects to the Order
on grounds the injection wells are not injecting into aquifers that are considered
suitable for drinking water supply under either the federal Safe Drinking Water Act
("SDWA") or California's Porter-Cologne Water Quality Control Act ("Porter-Cologne").
Furthermore, given more than 500 feet of vertical separation, and the existence of an
impermeable geologic barrier that isolates the deeper injection zones from the
shallower fresh water aquifer, operation of the four injection wells does not pose a
reasonable threat to the quality of waters currently being used for drinking water supply
or other beneficial use.

This Petition and Request for Stay is intended to present the State Board with
scientific data and other relevant information demonstrating that the four injection wells
do not pose a reasonable threat to existing or potential future sources of drinking water
supply, nor to other beneficial use of state waters. As more thoroughly set forth in this
Petition and Request for Stay, the accompanying Statement of Point and Authorities,
and the Declaration of Burton Ellison in Support of Request for Stay, the requirements
of the Order are unreasonable, unnecessary, and lack evidentiary support.

1. **Petitioner.** E&B is the owner and operator of the four injection wells
subject to the Regional Board’s Order. E&B’s offices are located at 3000 James Road,
Bakersfield, CA 93308. Burton R. Ellison is a registered professional geologist in the
State of California, and the senior geologist overseeing E&B’s underground injection
activities at the Poso Creek Oil Field. Mr. Ellison is the primary contact for E&B. Mr.
Ellison can be reached by telephone at (661) 616-6168, or via email at
bellison@ebresources.com.

2. **Action to Be Reviewed.** E&B seeks review of the Order issued by the
Regional Board on May 15, 2015 pursuant to Water Code § 13267 concerning the four
injection wells identified as API Nos. 029-58585, 029-59841, 029-84583, and 030-
50777. Specifically, E&B seeks relief from the requirements of the Order mandating
that, for each injection well identified in the Order, E&B conduct sampling and submit technical reports with information about (1) the injection wells, (2) the fluids that have been injected into the wells, (3) the quality of the groundwater within the zone(s) where fluids have been injected, and (4) nearby water supply wells.

3. **Date of Regional Board Action.** The Regional Board’s Order was issued by letter to E&B dated May 15, 2015.

4. **Reasons Why The Regional Board’s Action Is Unreasonable.** 

   **Arbitrary, and Lacking in Evidentiary Support.**

   A. **Injection Does Not Pose a Threat to Potential Future Sources of Drinking Water Supply**

(i) The Order was issued on the mistaken grounds that all four of the wells have been injecting fluids produced by oil or gas extraction activities into an aquifer that may not have been properly designated as an “exempt” aquifer under the SDWA (42 U.S.C. § 300f et seq.). The reality is that all four wells are injecting into the Santa Margarita formation where it underlies the Poso Creek Oil Field. The Santa Margarita formation where it underlies the Poso Creek Oil Field is a hydrocarbon producing geologic zone that has been determined by the United States Environmental Protection Agency (“EPA”) to be an administratively “exempt” aquifer for purposes of Class II injection. As a result, the Santa Margarita formation where it underlies the Poso Creek Oil Field is not an “underground source of drinking water” (as defined by 40 CFR § 146.3), it is not subject to protection under the SDWA, and it is not considered a source of water suitable for drinking supply protectable under the Porter-Cologne Act by State Board Resolution No. 88-63.

(ii) The Order was issued on the mistaken grounds that two of the wells in question, specifically “Section 21” WD 5 (030-50777) and “Federal” WD 8-1 (029-59841), are injecting fluids produced by oil or gas extraction activities into aquifers that may not have been properly designated as “exempt” aquifers under the SDWA. The reality is that “Section 21” WD 5 and “Federal” WD 8-1 have been approved for...
injection by the Department of Conservation, Division of Oil, Gas and Geothermal Resources ("DOGGR") for injection into the Basal Etchegoin and Chanac formations respectively, where these formations underlie the Poso Creek Oil Field. The wells were approved consistent with DOGGR's Underground Injection Control ("UIC") review process and DOGGR's Memorandum of Agreement ("MOA") with EPA. The Basal Etchegoin and Chanac formations where they underlie the Poso Creek Oil Field are hydrocarbon producing reservoirs identified in Volume I of "California Oil and Gas Fields." DOGGR has historically treated these as "exempt" aquifers to the full administrative boundaries of the Poso Creek Oil Field. The past actions by DOGGR, namely the permitting of injection via the wells identified in the Order, indicate the zones are "exempt." Limiting the "exempt" zones exclusively to the shaded areas in Volume I of "California Oil and Gas Fields" is a more recent interpretation of the EPA/DOGGR MOA. The re-interpretation has not been challenged by the oil and gas industry and has not been reviewed by a court of law. E&B believes that judicial review is necessary before the new interpretation can be used to issue orders and other punitive measures such as civil penalties or fines. Pending judicial review, the Basal Etchegoin and Chanac formations where they underlie the Poso Creek Oil Field are not "underground sources of drinking water" (as defined by 40 CFR § 146.3), they are not subject to protection under the SDWA, and they are not formations considered sources of water suitable for drinking supply protectable under the Porter-Cologne Act pursuant to State Board Resolution No. 88-63.

B. Injection Does Not Pose a Water Quality Threat to Existing Sources of Water Supply.

(i) All four of the injection wells identified in the Order operate at injection intervals that are deeper than 1,500 feet. Water wells located within a two mile radius of the surface location of the injection wells are completed in the Kern River or Upper Etchegoin formations. The Kern River formation sits atop the Upper Etchegoin and deeper hydrocarbon bearing Basal Etchegoin, Chanac and Santa Margarita...
formations. At least 500 feet of vertical separation exists between the bottom of the water wells and the top of the uppermost injection interval (Basal Etchegoin formation).

(ii) In addition, the Macoma clay stone exists at the top of the Basal Etchegoin zone, is continuous within the two mile radius of the surface location of the injection wells identified in the Order, and provides a regional geologic barrier to the upward movement of injection fluids. The Macoma clay averages 100' in thickness and consists of low permeability clay stones, silt stones, and sandstones which covers the entire Poso Creek Oil field. This cap rock provides a barrier to upward movement of injected fluids from the deeper hydrocarbon-bearing Basal Etchegoin, Chanac and Santa Margarita formations. The existence of the cap rock effectively eliminates any reasonable threat that injection might pose to beneficial use of the shallower Kern River formation.

C. The Burden of Producing the Information Lacks a Reasonable Relationship to The Need For and/or the Benefits to be Obtained From the Information.

The Regional Board issued the Order without any demonstration, as required by Water Code §13267(b)(1), that the burden of the compliance, including costs, bears a reasonable relationship to the need for the sampling and the benefits to be obtained from it. The Regional Board did not make any findings or identify any evidence supporting its claim that injection of fluids is occurring into aquifers that may be suitable for drinking water supply, or demonstrating how the required sampling and technical reports would protect beneficial uses of state waters. The only written explanation the Regional Board provided justifying the required information was the following unsupported and conclusory statement in its May 15, 2015 order:

"The Central Valley Water Board is concerned about the potential threat to human health and potential impacts to water quality posed by the discharge of waste associated with the injection of fluids into aquifers that may be suitable for drinking water supply and other beneficial uses. The technical information and reports required by this Order are necessary to assess the
potential threat to human health and potential impacts to water quality. The need to understand the potential threat to human health and potential impacts to water quality justifies the need for the information and reports required by this Order. Based on the nature and possible consequences of the discharges of waste, the burden of providing the required information, including reporting costs, bears a reasonable relationship to the need for the report, and the benefits to be obtained."

This statement, in the absence of findings and evidence demonstrating that injection of fluids is occurring into aquifers that may be suitable for drinking water supply, and demonstrating how the required sampling and technical reports would protect beneficial uses of other state waters, is insufficient to meet the Regional Board’s burden under Water Code §13267(b)(1).

5. Manner in Which Petitioner Has Been Aggrieved.

E&B is aggrieved by the following:

(a) The burden, including the costs, of having to produce information regarding injection into the Santa Margarita formation, a hydrocarbon bearing geologic zone that has been determined administratively "exempt" for purposes of Class II injection under the SDWA, and thus is not considered suitable for drinking water supply under either the SDWA or Porter-Cologne Act;

(b) The burden, including the costs, of having to produce information regarding injection into the Basal Etchegoin and Chanac formations, both hydrocarbon-bearing geologic zones that have been mischaracterized as "non-exempt" aquifers for purposes of Class II injection under the SDWA, but which are in fact "exempt" aquifers, and thus are not considered suitable for drinking water supply under either the SDWA or Porter-Cologne Act; and

(c) The burden, including the costs, of having to produce information regarding injection that does not pose a reasonable threat to existing or potential future sources of drinking water supply.
If required to comply with the Regional Board’s Order, E&B will incur costs in excess of $360,000.00. These costs do not bear a reasonable relationship to the need for the required sampling or the benefits to be obtained from it.

6. **Specific Action Requested.**

Petitioner respectfully requests that the State Board take the following action:

(a) With regard to all four injection wells, specifically “Section 21” WD 5 (030-50777), “Federal” WD 8-1 (029-59841), “USL” 2-6 (029-84583), and “USL” 12-4 (029-58585), set aside requirements that E&B sample and submit technical reports related to injection occurring in the hydrocarbon bearing “exempt” Santa Margarita formation.

(b) With regard to injection wells “Section 21” WD 5 (030-50777) and “Federal” WD 8-1 (029-59841), set aside requirements that E&B sample and submit technical reports related to injection occurring in the hydrocarbon-bearing “exempt” Basal Etchegoin and Chanac formations;

(c) Issue an order for the immediate stay of the Regional Board’s May 15, 2015 Order pending resolution of the issues raised in this Petition; and

(d) As provided in 23 CCR § 2050.6(b), conduct a hearing for the purpose of allowing E&B to present testimony, other evidence, and argument with respect to Petitioner’s contentions summarized above.

7. **Statement of Points & Authorities.** A Statement of Points and Authorities is being filed together with this Petition.

8. **Copy of Petition Sent to Regional Board.** A copy of this Petition has been sent to the Regional Board.

9. **Statement Concerning Substantive Issues.** E&B was not afforded an opportunity to raise the issues and objections set forth in this Petition before the Regional Board. There was no administrative hearing associated with the issuance of the Regional Board’s May 15, 2015 Order. The Regional Board did not provide E&B
notice or an opportunity to object to the substance of the Order prior to issuing the Order.

10. **Request for Stay.** E&B alleges the following in support of its Request for Stay:

A. **There Will Be Substantial Harm to the Petitioner If a Stay Is Not Granted.**

The Regional Board’s Order requires E&B to sample the quality of groundwater within the zones where fluids have been injected. There are a total of six (6) injection intervals that must be sampled. Retrieval of a representative water quality sample from each injection zone by swabbing with a production rig will cost E&B approximately $80,000.00 per well for one zone sample, and $100,000.00 per well for two zone samples. If required to comply with the Regional Board’s Order, E&B will incur production rig costs approximating $360,000.00. Additional costs will be incurred gathering other required data and compiling the required technical reports. These costs, assuming they are incurred, will constitute substantial harm to Petitioner.

B. **No Substantial Harm Will Result to Other Interested Persons Or To The Public Interest If a Stay Is Granted**

The wells subject to the Regional Board’s Order have been injecting produced water into the Basal Etchegoin, Chanac and Santa Margarita formations for decades. These formations, where they underlie the Poso Creek Oil Field, are hydrocarbon-bearing and support no beneficial use other than enhanced oil recovery (“EOR”) and produced water disposal. The earliest well (“USL” 12-4) was approved by the Department of Conservation, Division of Oil, Gas & Geothermal Resources (“DOGGR”) for injection in December 1982. The most recent well (“Section 21” WD 5) was approved by DOGGR in April 2013.

Over the decades, the four wells have injected a cumulative volume of produced water in excess of 40.29 million barrels. All four of the injection wells are injecting at intervals deeper than 1,500 feet. Water supply wells located within a two mile radius of
the surface location of the injection wells are completed in the shallower Kern River
and Upper Etchegoin formations. There has been no evidence of harm to the water
supply wells located within a two mile radius of the surface location of the injection
wells.

The Kern River formation sits atop the Upper Etchegoin and the deeper
hydrocarbon bearing Basal Etchegoin, Chanac and Santa Margarita formations. At
least 500 feet of vertical separation exists between the bottom of the water wells and
the top of the uppermost injection interval (Basal Etchegoin formation). In addition, the
Macoma clay stone exists at the top of the Basal Etchegoin zone, is continuous within
the two mile radius of the surface location of the injection wells identified in the Order,
and provides a regional geologic barrier to the upward movement of injection fluids.
The Macoma clay averages 100' in thickness and consists of low permeability clay
stones, silt stones, and sandstones which covers the entire Poso Creek Oil field. This
cap rock provides a barrier to upward movement of injected fluids from the deeper
hydrocarbon-bearing Basal Etchegoin, Chanac and Santa Margarita formations. The
existence of the cap rock effectively eliminates any reasonable threat that injection
might pose to beneficial use of the shallower Kern River formation.

If a stay were granted, it would place on hold the sampling and reporting
requirements set forth in the Regional Board’s Order pending resolution of the issues
raised in the Petition. It would not affect ongoing use of the wells for purposes of Class
Il injection. Several of these injection wells have been operating for decades. Given the
lack of any evidence of damage, and the lack of any reasonable threat to existing and
potential future sources of drinking water supply, neither the public interest nor any
interested persons will be harmed if a stay of the Order’s sampling and reporting
requirements is granted.

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C. There are Substantial Questions of Fact or Law Regarding the Disputed Action.

Substantial questions of fact or law exist regarding the disputed action, including (1) the mistaken assumption that all four of the wells have been injecting fluids produced by oil or gas extraction activities into aquifers that may not have been properly designated as an “exempt” aquifer under the SDWA; (2) the mischaracterization of the Basal Etchegoin and Chanac formations as being “non-exempt” where they underlie the Poso Creek Oil Field; (3) the more than 500 feet of vertical separation that exists between the bottom of the deepest water supply well and the top of the uppermost injection interval (Etchegoin formation); (4) the existence of the Macoma clay stone which provides a geologic barrier to the upward movement of injection fluids; and (5) whether, in light of the foregoing factors, the burden of producing the information required by the Order bears a reasonable relationship to the need for and/or the benefits to be obtained from the information.

11. Request for Hearing.

As provided in 23 CCR § 2050.6(b), E&B requests a hearing for the purpose of presenting testimony, other evidence, and argument with respect to E&B’s contentions summarized above. There was no administrative hearing associated with the issuance of the Regional Board’s May 15, 2015 Order, and Petitioner was therefore not allowed to present evidence in the context of such a proceeding. Petitioner requests a hearing so that all relevant information can be presented and considered in a proper administrative forum.
FOR THE FOREGOING REASONS, E&B requests that the State Board set aside the requirements of the Regional Board’s May 15, 2015 Order and, in the meantime, pending a resolution of the issues raised in this Petition, grant E&B’s Request for Stay.

Dated: June 15, 2015

Respectfully submitted,

HOLLISTER & BRACE

By

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Attorneys for Petitioner
E&B Natural Resources Management Corporation