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10 **STATE WATER RESOURCES CONTROL BOARD**

11 **E&B NATURAL RESOURCES
12 MANAGEMENT CORPORATION,**

13 **Petitioner.**

14 Case No. **SWRCB/OCC**
15 **FILE _____**

16 **PETITION AND REQUEST FOR STAY**

17 **REVIEW OF WATER CODE § 13267**
18 **ORDER ISSUED BY THE CENTRAL**
19 **VALLEY REGIONAL WATER QUALITY**
20 **CONTROL BOARD MAY 15, 2015**

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

29 "Section 21" WD 5 (API No. 030-50777)

30 "Federal" WD 8-1 (API No. 029-59841)

31 "USL" 2-6 (API No. 029-84583)

32 "USL" 12-4 (API No. 029-58585)

1 The Order was issued on grounds the four injection wells pose a potential threat
2 to human health and potential impacts to water quality. Petitioner objects to the Order
3 on grounds the injection wells are not injecting into aquifers that are considered
4 suitable for drinking water supply under either the federal Safe Drinking Water Act
5 ("SDWA") or California's Porter-Cologne Water Quality Control Act ("Porter-Cologne").
6 Furthermore, given more than 500 feet of vertical separation, and the existence of an
7 impermeable geologic barrier that isolates the deeper injection zones from the
8 shallower fresh water aquifer, operation of the four injection wells does not pose a
9 reasonable threat to the quality of waters currently being used for drinking water supply
10 or other beneficial use.

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

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

25 **2. Action to Be Reviewed.** E&B seeks review of the Order issued by the
26 Regional Board on May 15, 2015 pursuant to Water Code § 13267 concerning the four
27 injection wells identified as API Nos. 029-58585, 029-59841, 029-84583, and 030-
28 50777. Specifically, E&B seeks relief from the requirements of the Order mandating

1 that, for each injection well identified in the Order, E&B conduct sampling and submit
2 technical reports with information about (1) the injection wells, (2) the fluids that have
3 been injected into the wells, (3) the quality of the groundwater within the zone(s) where
4 fluids have been injected, and (4) nearby water supply wells.

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

7 **4. Reasons Why The Regional Board's Action Is Unreasonable,**
8 **Arbitrary, and Lacking in Evidentiary Support.**

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

11 (i) The Order was issued on the mistaken grounds that all four of the wells have
12 been injecting fluids produced by oil or gas extraction activities into an aquifer that may
13 not have been properly designated as an "exempt" aquifer under the SDWA (42 U.S.C.
14 § 300f et seq.). The reality is that all four wells are injecting into the Santa Margarita
15 formation where it underlies the Poso Creek Oil Field. The Santa Margarita formation
16 where it underlies the Poso Creek Oil Field is a hydrocarbon producing geologic zone
17 that has been determined by the United States Environmental Protection Agency
18 ("EPA") to be an administratively "exempt" aquifer for purposes of Class II injection. As
19 a result, the Santa Margarita formation where it underlies the Poso Creek Oil Field is
20 not an "underground source of drinking water" (as defined by 40 CFR § 146.3), it is not
21 subject to protection under the SDWA, and it is not considered a source of water
22 suitable for drinking supply protectable under the Porter-Cologne Act by State Board
23 Resolution No. 88-63.

24 (ii) The Order was issued on the mistaken grounds that two of the wells in
25 question, specifically "Section 21" WD 5 (030-50777) and "Federal" WD 8-1 (029-
26 59841), are injecting fluids produced by oil or gas extraction activities into aquifers that
27 may not have been properly designated as "exempt" aquifers under the SDWA. The
28 reality is that "Section 21" WD 5 and "Federal" WD 8-1 have been approved for

1 injection by the Department of Conservation, Division of Oil, Gas and Geothermal
2 Resources ("DOGGR") for injection into the Basal Etchegoin and Chanac formations
3 respectively, where these formations underlie the Poso Creek Oil Field. The wells were
4 approved consistent with DOGGR's Underground Injection Control ("UIC") review
5 process and DOGGR's Memorandum of Agreement ("MOA") with EPA. The Basal
6 Etchegoin and Chanac formations where they underlie the Poso Creek Oil Field are
7 hydrocarbon producing reservoirs identified in Volume I of "California Oil and Gas
8 Fields." DOGGR has historically treated these as "exempt" aquifers to the full
9 administrative boundaries of the Poso Creek Oil Field. The past actions by DOGGR,
10 namely the permitting of injection via the wells identified in the Order, indicate the
11 zones are "exempt." Limiting the "exempt" zones exclusively to the shaded areas in
12 Volume I of "California Oil and Gas Fields" is a more recent interpretation of the
13 EPA/DOGGR MOA. The re-interpretation has not been challenged by the oil and gas
14 industry and has not been reviewed by a court of law. E&B believes that judicial review
15 is necessary before the new interpretation can be used to issue orders and other
16 punitive measures such as civil penalties or fines. Pending judicial review, the Basal
17 Etchegoin and Chanac formations where they underlie the Poso Creek Oil Field are not
18 "underground sources of drinking water" (as defined by 40 CFR § 146.3), they are not
19 subject to protection under the SDWA, and they are not formations considered sources
20 of water suitable for drinking supply protectable under the Porter-Cologne Act pursuant
21 to State Board Resolution No. 88-63.

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

24 (i) All four of the injection wells identified in the Order operate at injection
25 intervals that are deeper than 1,500 feet. Water wells located within a two mile radius
26 of the surface location of the injection wells are completed in the Kern River or Upper
27 Etchegoin formations. The Kern River formation sits atop the Upper Etchegoin and
28 deeper hydrocarbon bearing Basal Etchegoin, Chanac and Santa Margarita

1 formations. At least 500 feet of vertical separation exists between the bottom of the
2 water wells and the top of the uppermost injection interval (Basal Etchegoin formation).

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

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

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

24 *"The Central Valley Water Board is concerned about the potential threat to*
25 *human health and potential impacts to water quality posed by the discharge*
26 *of waste associated with the injection of fluids into aquifers that may be*
27 *suitable for drinking water supply and other beneficial uses. The technical*
28 *information and reports required by this Order are necessary to assess the*

1 *potential threat to human health and potential impacts to water quality. The*
2 *need to understand the potential threat to human health and potential*
3 *impacts to water quality justifies the need for the information and reports*
4 *required by this Order. Based on the nature and possible consequences of*
5 *the discharges of waste, the burden of providing the required information,*
6 *including reporting costs, bears a reasonable relationship to the need for the*
7 *report, and the benefits to be obtained."*

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

13 **5. Manner in Which Petitioner Has Been Aggrieved.**

14 E&B is aggrieved by the following:

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

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

26 (c) The burden, including the costs, of having to produce information
27 regarding injection that does not pose a reasonable threat to existing or potential future
28 sources of drinking water supply.

1 If required to comply with the Regional Board's Order, E&B will incur costs in
2 excess of \$360,000.00 . These costs do not bear a reasonable relationship to the need
3 for the required sampling or the benefits to be obtained from it.

4 **6. Specific Action Requested.**

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

6 (a) With regard to all four injection wells, specifically "Section 21" WD 5
7 (030-50777), "Federal" WD 8-1 (029-59841), "USL" 2-6 (029-84583), and "USL" 12-4
8 (029-58585), set aside requirements that E&B sample and submit technical reports
9 related to injection occurring in the hydrocarbon bearing "exempt" Santa Margarita
10 formation.

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

15 (c) Issue an order for the immediate stay of the Regional Board's May
16 15, 2015 Order pending resolution of the issues raised in this Petition; and

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

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

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

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

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

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

7 The Regional Board's Order requires E&B to sample the quality of groundwater
8 within the zones where fluids have been injected. There are a total of six (6) injection
9 intervals that must be sampled. Retrieval of a representative water quality sample from
10 each injection zone by swabbing with a production rig will cost E&B approximately
11 \$80,000.00 per well for one zone sample, and \$100,000.00 per well for two zone
12 samples. If required to comply with the Regional Board's Order, E&B will incur
13 production rig costs approximating \$360,000.00. Additional costs will be incurred
14 gathering other required data and compiling the required technical reports. These
15 costs, assuming they are incurred, will constitute substantial harm to Petitioner.

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

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

26 Over the decades, the four wells have injected a cumulative volume of produced
27 water in excess of 40.29 million barrels. All four of the injection wells are injecting at
28 intervals deeper than 1,500 feet. Water supply wells located within a two mile radius of

1 the surface location of the injection wells are completed in the shallower Kern River
2 and Upper Etchegoin formations. There has been no evidence of harm to the water
3 supply wells located within a two mile radius of the surface location of the injection
4 wells.

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

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

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

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

15 **11. Request for Hearing.**

16 As provided in 23 CCR § 2050.6(b), E&B requests a hearing for the purpose of
17 presenting testimony, other evidence, and argument with respect to E&B's contentions
18 summarized above. There was no administrative hearing associated with the issuance
19 of the Regional Board's May 15, 2015 Order, and Petitioner was therefore not allowed
20 to present evidence in the context of such a proceeding. Petitioner requests a hearing
21 so that all relevant information can be presented and considered in a proper
22 administrative forum.

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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  _____
Peter L. Candy
Attorneys for Petitioner
E&B Natural Resources
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