

**STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONVERSION DIVISION**

2015 NOV 24 P 4: 21
RECEIVED OCC

**APPLICATION OF LIGHTNING DOCK GEOTHERMAL
HI-01 LLC (FORMS G-112) FOR APPROVAL TO INJECT
INTO A GEOTHERMAL AQUIFER THROUGH THREE
PROPOSED GEOTHERMAL INJECTION WELLS AT
THE SITE OF THE LIGHTNING DOCK GEOTHERMAL
POWER PLANT, HIDALGO COUNTY, NEW MEXICO.**

CASE NO. 15357

**APPLICATION OF LIGHTNING DOCK
GEOTHERMAL HI-01, LLC TO PLACE WELL
NO. 63A-7 ON INJECTION-GEOTHERMAL
RESOURCES AREA, HIDALGO COUNTY, NEW
MEXICO**

CASE NO. 15365

APPLICATION FOR REHEARING

In accordance with NMSA §70-2-25 and NMAC 19.14.131.8, AmeriCulture, Inc. hereby submits its Application for Rehearing regarding Cases Nos. 15357 and 15365.

(1) This Application for Rehearing concerns the November 5, 2015 Order of the Commission, Order No. R-14021-D.

(2) The Protestant AmeriCulture requests rehearing on a limited basis, to address the following issues on which AmeriCulture believes the Commission's decision is erroneous:

A. AmeriCulture believes the OCC's decision (Finding ¶ 55) that "the diverted ground water will be reinjected into the same ground water source from which it was diverted" is erroneous, not based upon evidence presented at hearing and beyond the scope of the issues presented for hearing (which were correlative rights, waste, and protection of underground sources of drinking water). The determination that the groundwater will return to the same source is speculative; it is not possible to ascertain whether the injected water is returning to the same source without chemical analysis of the produced waters and the waters existing at the proposed injection sites. The Applicant failed to provide

the most current water chemistry data from its required monitoring program. Without this data, and data from the yet-to-be drilled wells, there is no evidence to support the OCC's conclusion.

B. The OCC's decision (Finding ¶43) states, "The current injection of geothermal water by LDG at minimum depths of 1050 feet below ground surface will reinject the geothermal water back into the same geothermal reservoir from which it was produced." This cannot possibly be known until more data is available, as the OCC recognizes is necessary in this same paragraph. AmeriCulture agrees that some of the water injected into well 55-7 may be returning to the geothermal reservoir from which it is produced, but not all of it. This paragraph mistakenly finds that all of the geothermal water is returning to the geothermal reservoir from which it is produced, which is clearly not the case as shown by the effects of the injection on AmeriCulture's shallow "non-geothermal" well.

C. The OCC's decision (Finding ¶39) states that "the hottest portion of the geothermal system, as shown by temperatures at 100 foot depth, is located in the northeast quarter of Section 7, T25S, R19W (See LDG Exh. 13 Attached)." This is incorrect. LDG Exh. 13 shows the hottest portion of the geothermal system extending well into the southeast quarter of Section 7, T25S, R19W. Furthermore, as testified to at hearing, the two hottest production wells, LDG 55-7 and 45-7, are both outside of the northeast quarter of Section 7, T25S, R19W. The geographical description of the hottest portion of the geothermal system in the Order should be modified to become the eastern three-quarters of Section 7, T25S, R19W, and the OCC's "Ordered" paragraph 7 should be changed accordingly for OCC to reserve jurisdiction over the eastern three-quarters of Section 7.

D. The OCC's decision (Finding ¶42) states "the mounding is an expression of the upwelling from the depth of the geothermal system but does not indicate that more geothermal water is leaving the system." It appears this sentence is a continuation of Shomaker's testimony and should be corrected accordingly and not presented as a finding of fact.

E. The OCC's decision (Finding ¶51) states "the AmeriCulture power development proposal, while speculative, is not impaired by the injection approved under the terms of

this Order.” Since the impact of the proposed injection on shallow geothermal temperatures is unknown, it is impossible to determine what the effects of the proposed injection will be on AmeriCulture’s power development proposal.

F. The OCC’s decision (Finding ¶52) states “LDG’s reinjection of spent geothermal waters back into the Lightning Dock Geothermal System as provided in this Order will prevent waste.” Whether or not waste will result cannot be determined until after data is collected. More importantly, the impacts of the depression cones to be formed at production wells were not presented in testimony. The creation of head difference between the geothermal resource and surrounding cold ground water could result in the encroachment of cold water into the geothermal resource, thus “quenching” the shallow geothermal resource. Such encroachment is prohibited in the GRCA and the Commission is charged with the prevention of cold water intrusion under NSMA §71-5-8(D). There was no evidence presented on the impact of depression cones around the current and proposed production wells upon water encroachment upon AmeriCulture’s water resources. Such encroachment would result in improper dissipation of reservoir energy and would thus constitute waste.

G. The OCC’s decision (Ordered ¶7) is in violation of New Mexico law. The wording affirmatively overrides the ability of AmeriCulture (or any other property owner) to protest any application submitted by LDG, contrary to NMAC 19.14.112.8.

(3) The Protestant AmeriCulture requests clarification on a limited basis, to address the following issues which AmeriCulture believes the language set forth in the Order is not determinative:

A. The OCC’s decision (Ordered ¶5) states: “All water quality data submitted to OCD shall be public and not held confidential.” On 10/21/15, AmeriCulture requested supplement to its IPRA request to obtain the 6/30/2015 water quality data following the OCC’s verbal pronouncement at the end of hearing on October 9, 2015. AmeriCulture was informed by Susan Sita, Esq. via e-mail on 10/28/15 that “the order regarding water quality data was prospective. Therefore, the documents requested still remain confidential

pursuant to NMSA 1978, § 71-2-8.” The OCC’s Order clearly states “all water quality data submitted.” AmeriCulture believes the OCD’s interpretation of the OCC’s Order as relayed by Ms. Sita is incorrect. “All data” should be interpreted as “all data,” not data submitted subsequent to the November 5, 2015 Order.

B. The OCC’s decision (Ordered ¶6) states: “The OCD is authorized to approve a fourth LDG geothermal injection well if such well is located within that portion of Section 7 (T25S, R19W), which is south of current geothermal well LDG 55-7 and the well complies with the terms and conditions imposed by this Order on the other LDG injection wells.” On November 11, LDG submitted an application for a fourth geothermal well, well 75-7, which is to be sited 1 foot south and 1299 feet east of well 55-7 and on the road between two of the greenhouses belonging to the surface owner, Rosette. AmeriCulture does not believe that this location constitutes what the OCC intended by its “south of” specification.

LDG has also applied for an additional location (17A-7) which is clearly situated outside of the geothermal reservoir as shown in LDG’s Exhibit 13. Injection into this well will result in waters not being returned to the geothermal source. This well was applied for before hearing, and not addressed at hearing. In its August 10, 2015 IPRA request, AmeriCulture requested “All Oil Conservation Division (“OCD”) G-form filings together with all attachments to said G-forms filings, filed by LDG or their agents.” The IPRA documents resulting from this request did not produce the already existing G-forms for well 17A-7. It appears that paragraphs 6 and 7 permit LDG to drill any number of additional wells carte blanche without providing any oversight or protection of any property owner’s legal rights. This should not be allowed.

Respectfully submitted,
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CERTIFICATE OF SERVICE


I, Charles N. Lakins, do hereby certify that on November 24, 2015 I served a true and correct copy of this Application for Rehearing to:

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