

Texas Natural Resource Conservation Commission

INTEROFFICE MEMORANDUM

To: Commissioners Date: July 7, 2000

Thru: LaDonna Castañuela
Chief Clerk

From: Randolph Wood, Deputy Director
Office of Environmental Policy, Analysis, and Assessment

Subject: **Docket No. 2000-0714-RUL.** Consideration of a petition for rulemaking filed by Baker Botts, LLP on behalf of Secured Environmental Management, Inc. requesting that the commission adopt new rules in 30 TAC Section 331.121, Class I Wells, expanding the scope of the geologic characteristics to be documented and considered in determining geologic suitability in connection with permit applications for salt cavern Class I injection wells.

The proposed amendment modifies Section 331.121(d)(1) and clarifies the type of information needed to demonstrate a thorough geologic characterization.
(Alice Rogers/Beecher Cameron) (Rule Log No. 2000-028-PET-WS)

What the Proposed Rule Would Do:

On June 5, 2000, the agency received a petition for rulemaking from Baker Botts, L.L.P. on behalf of Secured Environmental Management, Inc. The petition contains a request for the revision of 30 TAC §331.121(d)(1) to amend and clarify the criteria to be addressed in the technical report to establish the geologic suitability of a proposed site for a salt cavern Class I injection well.

Both the current rule and the petitioner's proposed rule require a thorough geologic characterization of a salt dome. The proposed revision would essentially rewrite §331.121(d)(1), and would provide clarification of the type of information that is needed in order to demonstrate a thorough geologic characterization. In particular, the proposed rule language would expressly require an applicant to do the following things:

- (1) demonstrate the overall geometry of the salt dome;
- (2) demonstrate the existence of a minimum distance of 500 feet between the proposed salt cavern and the boundaries of the salt stock;
- (3) demonstrate the geologic stability of the cavern location;
- (4) demonstrate the existence or nonexistence of faults in the area of review;
- (5) describe the composition, thickness, and depth of the caprock overlying the salt cavern injection zone;

- (6) describe the top of the salt stock overlying the salt cavern injection zone;
- (7) describe the composition, thickness, and depth of the sedimentary section overlying the salt cavern injection zone; and
- (8) satisfy any other criteria required by the executive director to demonstrate the geologic suitability of the cavern location.

In addition to the above specific requirements, the petitioner's proposed rule language would require that data submitted in support of §331.121(d)(1)(A) include a surface-recorded three-dimensional seismic survey shot over the cavern location.

The petitioner's proposed rule does not include the following requirements stated in the current rule: (1) calculate movement and salt loss rate of the salt stock; (2) image underneath all overhangs; (3) delineate the edge of the salt stock (except as part of the overall geometry of the salt dome); (4) define any other caverns or co-uses of the salt stock; and (5) address any conditions that may result in potential adverse impact on the salt stock.

Also, whereas the current rule states that seismic reflection data submitted must include a surface recorded three-dimensional (3-D) seismic grid survey "sufficient to image underneath all suspected overhangs and to delineate the edge of the stock," the petitioner's proposed rule would require a surface recorded 3-D seismic survey "shot over the cavern location."

Applicable Law:

The petition is submitted under Texas Administrative Procedure Act, §2001.021 and 30 Texas Administrative Code §20.15.

Reason Rules Are Needed:

Baker Botts, LLP, on behalf of Secured Environmental Management, Inc. states that the current rule may prejudice otherwise eligible applicants who are unable to employ a 3-D seismic survey to characterize the salt dome in its entirety. The petitioner points out that salt domes can exceed three miles in diameter, and cites the expense of obtaining a 3-D seismic survey and difficulty in obtaining from land owners surface access to property overlying the dome as factors which may often preclude the measurement necessary to comply with this technical requirement in the current rule. The petitioner agrees that a 3-D seismic survey is appropriate for the areas overlying the cavern location, but claims it is often an inappropriate requirement for the salt dome in its entirety, particularly "where other survey techniques adequately demonstrate geologic suitability. Such characterization may include the integration of data from deep oil and gas exploration wells, gravity surveys, two-dimensional seismic surveys, and offsite 3-D seismic surveys, with data collected at and near the site."

Baker Botts/Secured Environmental Management, Inc. asserts "where Section 331.121(d)(1) is interpreted to require a three-dimensional seismic survey of the entire salt dome, it threatens to render the most suitable sites at the largest salt domes in Texas the most difficult to permit." According to the petitioner, this result would thwart "the legislature's intent to allow underground injection consistent with the operation of existing industry and the economic development of the

state provided it does not threaten to pollute fresh water.” The petitioner contends that the proposed rule concentrates on the geologic suitability rather than the measurement techniques, and that the proposed rule places more comprehensive requirements for characterizing the geology of the salt dome and proposed cavern location.

Recommendation:

The executive director recommends that the petition for rulemaking be granted with an allowance for modifications concerning: (1) the scope of 3-D seismic to be required by the rule; and (2) other factors in the current rule that were replaced by the petitioner’s recommended language in the proposed rule.

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