



**ASTON'S MINING LAW CASE REVIEWS™
& ENVIRONMENTAL LAW
MONITOR™**

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Aston's Complimentary Case No. 19-02-06

Jurisdiction :Texas/ U.S.

(Tex.App.-Austin)

PROPOSED SALT DOME HAZARDOUS WASTE SITE PERMIT DENIED

The Texas Natural Resource Conservation Commission (NRCC) denied an applicant for 14 permits to construct and operate an hazardous waste storage and processing facility in the North Dayton Salt Dome located northeast of Houston and within a few miles of the Evangeline Aquifer which supplies water to many residents of the area. Initially, hearing examiners for NRCC had approved the applicant's proposed plan, but on review the Commission denied the application. A trial court affirmed the Commission's denial and the applicant appealed.

In *Hunter Industrial Facilities Inc. v. Natural Resources*, 910 S.W.2d 96 (Tex.App.-Austin), the court reviewed the proposed application of Hunter Industrial Facilities, Inc. (HIFI) to construct an hazardous waste facility using ten solution-mined salt caverns and three deep injection wells to dispose of nonhazardous brine created by the solution mining process. The court noted that the proposed process was experimental and had not been previously used in the U.S. HIFI contended that the salt dome technology was not an experimental method because it had been successfully used in Germany for several years. However, an opposing expert witness testified that "it was a new technology in the respect that no one has put waste in a salt cavern and sealed it yet." The German method differs considerably from HIFI's in that German projects involve conventionally mined openings in a salt dome and are accessible for installation of monitoring instrumentation, where as HIFI's proposal involved relatively inaccessible monitorable salt solution-mined caverns.

The Court noted that the Commission is permitted to overturn an underlying finding of fact only if it is “not supported by the great weight of evidence.” In the present case at bar, the Commission rejected four critical areas of the hearing examiners findings and conclusions, viz., (1) that HIFI had adequately characterized the salt dome, (2) HIFI had adequately demonstrated that there exists an urgent public necessity for the hazardous waste injection wells, (3) HIFI had adequately demonstrated how it intends to obtain financing to construct the facility, and (4) HIFI had adequately demonstrated that the underground injection wells are in the public interest.

The court reversed the trial court’s finding on the issue of the project financing in that HIFI had demonstrated sufficient proof of financing. However, the appeals court upheld denial of the application on the other three issues.

Characterization of the Salt Dome Issue:

The hearing examiners had originally concluded that HIFI’s geological data was imprecise. However, they attempted to overcome that imprecision by blending two separate requirements under the Salt Dome Rules: (1) a thorough geological characterization of the salt dome; and (2) the minimum of 500 feet distance between the salt cavern injection zone boundaries and the boundaries of the salt stock. The examiners estimated a margin of error for HIFI’s calculations and determined that 6 of the 10 proposed injection wells should be issued. They also concluded that HIFI could perform post-permit tests to adequately characterize the dome. The Commission rejected the hearing examiners’ blending of the regulations and the Salt Dome Rules and their relaxing of the regulations for post-permit testing. The court stated that if HIFI’s geological characterization of the salt dome had been thorough and precise, post-permit drilling would not be necessary to more accurately determine the location of its outer edge in the vicinity of the solution caverns.

Under the Solid Waste Disposal Act (SWDA), an applicant is required “to utilize well logs, seismic reflection surveys, gravity surveys, and any other appropriate geophysical methods necessary to characterize the salt dome.” The court stated, “Reliance on currently available data may be inadequate if newer geophysical methods are available that provide a more thorough characterization.” The Court supported the Commission’s requirement that HIFI should have conducted a vertical seismic profile (VSP) as one of the methods available. The court noted that “The margin of error without the test is 350 feet, while use of the VSP would have characterized the edge of the dome to within 25 to 75-feet. *** A thorough characterization of the edge of the salt dome is imperative to ensure that hazardous waste will not escape from its protective storage environment.”

With regard to the characterization of the salt dome, the court found that “the Commission did not violate the proscriptions of the SWDA by overturning the examiners’ findings of fact and conclusions of law as they related to a ‘thorough geologic characterization’ of the salt dome.”

Public Necessity and Public Interest Issue:

The Commission found that the hearing examiners had incorrectly assessed the weight of the evidence relative to those two issues, particularly, need and safety. The gross differential between the Commission’s own Needs Assessment and HIFI’s expert of some 780% became an issue which the Commission disregarded. HIFI argued that the Commission’s calculated shortfall of hazardous waste capacity of 1.5 million tons was sufficient to constitute a substantial and obvious need for disposal space without considering the discrepancy of their expert’s greater calculation for need. The court noted that the Commission has the discretion to discount evidence that is not considered credible.

In concluding that HIFI had not met the standard of proof, the Court stated that “the Commission could have considered other factors as the experimental nature of the facility, the adequacy of HIFI’s data, estimates of the waste capacity shortfall, the desire to develop innovative techniques for disposal, and the proximity of the facility to water supplies for a major Texas city, in determining the need for HIFI’s proposed facility. “

With regard to public safety, the overriding concern is in assessing that the proposed facility will comply with the 15,000 year no-escape standard standard of performance. HIFI proposed to accept liquids containing hazardous waste and then solidify them with cement and fly ash to make a solid waste before injection. The Commission determined that this process must be proven to work over time in order to meet the no-escape standard; and, because HIFI’s experimental technology involves the irretrievable disposal of waste, no means exist to allow safe drainage of the caverns if the waste begins to leak. The Commission determined that this process must be proven to work over time in order to meet the no-escape standard. Ensuring that the waste is properly solidified is an overriding concern in this case. The Commission relying on test results included in HIFI’s 1989 and 1992 applications, questioned the efficacy of the solidification process, the classification process, the possibility that gas and pressure would build up in caverns, and the chain-of-custody proof for samples in testing. Because of its concern in these four areas, the Commission concluded that HIFI presented insufficient assurance that (1) the waste will not migrate; (2) the solidification process will work on the full range of wastes and the wastes will remain solidified; (3) gas and

pressure will not build in the caverns; and (4) the caverns would be set a safe distance from the edge of the salt stock.

The Court concluded that because the permits involve an experimental approach to the storage of hazardous waste, HIFI was subjected to rigorous requirements in its application process. The Commission did not err in reversing the examiners' findings on adequate characterization of the salt dome, public necessity and public interest.

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