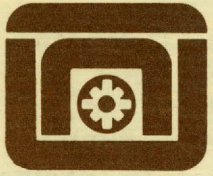


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Low-Level
Radioactive Waste
Disposal Authority

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Site Selection Study

Since December, the Authority has been evaluating three potential low-level radioactive waste disposal siting areas in West Texas. The sites are located on state-owned land in Hudspeth and Culberson counties. The Hudspeth County site is located in a 60,000 acre tract of Public School Fund land approximately 10 miles northeast of Ft. Hancock. Also under consideration is a 1950 acre tract of Public School Fund land located in Culberson County approximately 20 miles southwest of Orla. The remaining siting area, also located in Culberson County, is a tract of approximately 30,000 acres 26 miles southwest of Pine Springs and controlled by the Permanent University Fund. All field investigations at the three sites have been completed and a final report has been prepared by the University of Texas' Bureau of Economic Geology. A limited quantity of the report is available by contacting the Authority's offices in Austin.

Indications show that the Hudspeth County site appears to be suitable for a low-level radioactive waste disposal facility. However, the two potential sites in Culberson County are questionable. The existence of shallow groundwater and potential inability to provide the required long-term stability may disqualify these sites.

The Authority contracted with the Bureau of Economic Geology to evaluate the suitability of these three potential sites. The evaluation consisted of detailed aerial photography of the three areas, geological and hydrological investigations, and sampling of surrounding water wells.

Policymakers Forum Established

The Authority has contracted with the West Texas Council of Governments to establish a policymakers forum to evaluate, analyze, and develop local public policy related to the Authority's activities in West Texas. The forum will bring together influential citizens, elected officials, and recognized experts to assist in developing a rational public policy toward the potential sites in the West Texas area. This forum will provide the opportunity to analyze all technical, socioeconomic, political, and cultural issues related to the proposed sites and, based upon a thorough examination of the issues, will lead to the development of a sound public policy.

The Forum has held several organizational meetings and has established eight subcommittees to review specific areas of the siting process including water, geology, socioeconomics, health, transportation, legal issues, environmental issues, and engineering. Subcommittee members will only be looking at information currently available and will report their findings to the Advisory Committee as a whole.

This review will determine the effectiveness of the state's siting process; what aspects, if any, need additional research; how well the proposed sites in Hudspeth and Culberson counties meet the established criteria not only of the state, but also of the experts in the field; and anything else that will have a direct bearing on how appropriate the sites in West Texas are for a disposal facility.

The report developed by each subcommittee will be incorporated into one report from the Technical Advisory Committee. This report will be submitted to the Public Forum. This Public Forum, composed of elected officials, will use this report as a basis for the development of public policy. This public policy will be submitted to the Authority's Board of Directors, as well as the citizens of West Texas, for review.

Rangeland/Wildlife Site Management Plan

The Texas Low-Level Radioactive Waste Disposal Authority is proposing to develop a rangeland/wildlife management area on a 90,000 acre tract of state-owned land in Hudspeth County. The acreage surrounds a smaller tract that is one of several proposed locations for a low-level radioactive disposal site and is located several miles northeast of Ft. Hancock. The area is ecologically part of the Chihuahuan Desert, and is managed by the Texas General Land Office as part of the Permanent School Fund.

Using income from the disposal site, the management area would be improved to restore once abundant populations of mule deer, pronghorn antelope, and quail. Native plants, lost through years of overgrazing, would be reseeded to provide food and shelter for native wildlife.

The proposed project includes a series of rangeland improvement practices such as fencing, water development, habitat restoration, predator control, and proper grazing management. Jack Bowmer, rangeland ecologist for the Authority, estimates the total cost of the restoration project will be about \$35.00 per acre. "Not all the benefits would be accounted for on a monetary basis," says Bowmer, "This project would prove the wisdom of investing in restoration and management of our land, and that would be the greatest benefit of all."

The project concept is endorsed by the Texas Environmental Coalition, the Texas Chapter of the Wildlife Society, the Texas Section of the Society for Range Management, and the Texas State Soil and Water Conservation Board. Copies of the conceptual plan are available from the Authority's offices in Austin.

Federal Legislation

On December 19, 1985, the United States Congress passed Public Law 99-240, Amendments to the Low-Level Radioactive Waste Policy Act of 1980. Public Law 99-240 is important because it creates a system of incentives and penalties for all states and compacts in order to get the low-level waste siting process off dead center. A transition period is established (January 1, 1986 through December 31, 1992) during which certain milestones must be reached by the states and compacts. The important milestones are as follows:

7/1/86

A state must ratify a compact or indicate its intent to develop a site for locating a low-level radioactive waste facility in the state.

1/1/88

A compact region must select a state to host a disposal site and must select a company to develop the site. The host state must have prepared a plan to provide details on how the site will be developed.

1/1/90

An application for a site operating permit must be filed with the appropriate agencies, or the Governor must certify that the state can provide adequate storage for its waste.

1/1/92

This is the absolute deadline date by which a state must have filed an application for an operating license.

1/1/93

If a state is unable to provide disposal capacity, the state must, upon request of a generator, take title and assume all liability for the generator's waste.

This is the end of the transition period, and the sited compacts have the right to prohibit the import or export of waste into or out of their regions.

Texas has met the first milestone and will meet the 1/1/88 milestone within a few months.

FEDERAL MILESTONE & SURCHARGE SCHEDULE

Date	Milestone	Status	Projected Texas Waste Volume (ft ³)	Shipped Out-of-State (ft ³)	Exceeding Allocation (ft ³) ¹	Annual Cost to Texas w/o ₂ Penalties (\$)	Annual Cost to Texas w/ ₃ Penalties (\$)
July 1, 1986	Must enact legislation giving intent to develop a waste disposal site	In compliance	11,000	11,000	0	110,000	220,000
1987	---	In compliance	29,000	22,000	7,000	808,000	May be Denied Access
Jan. 1, 1988	Must develop a siting plan and delegate authority to carry out the plan	Compliance anticipated	32,000	11,000	21,000	1,984,000	2,204,000
July 1, 1988	---	Compliance anticipated	32,000	11,000	21,000	1,984,000	2,644,000
1989	---	Compliance anticipated	83,000	36,807	46,193	4,616,352	May be Denied Access
Jan. 1, 1990	Must complete license application and submit to appropriate regulatory agencies, or certify by the Governor that management capability is available	Compliance in jeopardy if a site is not selected by 8/1/87	110,000	52,140	57,860	6,945,840	May be Denied Access
1991	---	---	120,000	54,880	65,120	7,665,280	May Be Denied Access
Jan. 1, 1992	Absolute deadline for submitting a license application to the appropriate regulatory authority	---	120,000	54,880	65,120	7,665,280	12,055,680
Jan. 1, 1993	Must have an operating disposal site	If a state cannot dispose of waste by 1993, waste generators may deliver the waste to the state, which must take possession and be liable to the generators for damages	120,000	0	120,000	10,080,000 to store waste	---
1996	---	---	120,000	0	120,000	---	---

¹This column is the difference between the amount of projected waste volume and the amount of that waste volume that can be shipped to out-of-state sites under existing statutory allocations. This amount must be stored on-site at Texas facilities for ultimate disposal in Texas.

²This column is the sum of the surcharge assessed on waste shipped out-of-state plus the cost of on-site storage of waste exceeding the waste allocation volume. On-site storage cost in 1988 dollars is \$84/ft³, based on Tennessee Valley Authority experience at the Sequoyah Nuclear Power Plant.

³This column indicates penalty fees and denial of access to out-of-state sites that will be imposed if milestones are missed.

Alternative Disposal Technologies

In February, the Authority contracted with the firm of Rogers and Associates Engineering Corporation to conduct an analysis of selected disposal technologies and to prepare conceptual designs, economic analyses, and radiological performance assessments for three technologies selected by the Authority's Board of Directors.

The position taken by the Board of Directors of the Authority and by the Texas Legislature has virtually eliminated conventional shallow land disposal for use in Texas. The three operating sites in Barnwell, South Carolina; Beatty, Nevada; and Hanford, Washington use conventional shallow land disposal.

In April, and again in May, the Authority staff met with engineers from Rogers and Associates Engineering Corporation, members of the Authority's Citizens Advisory Panel, and citizens selected from the Hudspeth County area to evaluate the disposal options and to recommend the three best suited for Texas.

Two separate panels were used to evaluate disposal options. One panel was made up of technical experts and the other was a citizens panel. Each panel worked independently.

The citizens panel examined the factors involved in the establishment of a low-level radioactive waste disposal facility in Texas. These included such issues as radiation safety to the general public, worker safety, economics - both costs and benefits - long-term stability of the facility, remedial action, protection against scavengers, etc. These factors were ranked based on their importance to the panel members.

While the citizens panel was working on this, the technical panel rated each disposal technology as to how well it met the technical requirements.

Upon completion of these tasks by both panels, the assessments were combined and each disposal technology could then

be ranked by its ability to meet the requirements of both the citizens and technical panels.

Based on these results, the staff of the Authority recommended to the Board of Directors that aboveground vaults, modular concrete canisters, and below ground vaults be the three technologies considered for further evaluation.

A final report detailing these three options will be completed by early fall.

Disposal of Short-Lived Wastes

The Authority has completed the technical report, "Disposal of Short-Lived Radionuclide Wastes in a Sanitary Landfill." The study which was funded by the Texas Hospital Association, Texas A&M University, the University of Texas, and Halliburton Corporation sets out criteria for landfill disposal of short-lived radionuclides. The guideline values in the report were set to keep exposures to the most exposed individual below 1 mrem per year. Short-lived radionuclides are defined in the report as radioactive material with a half-life less than 300 days.

The Authority received extensive comments on the draft technical report, including comments from the Texas Bureau of Radiation Control and the U.S. Nuclear Regulatory Commission.

Based on the report, the South Texas Chapter of the Health Physics Society, The University of Texas System, Texas A&M University, and the Petroleum Equipment Suppliers Association have requested that the Texas Department of Health consider a rule change to allow the sanitary landfill disposal of short-lived wastes.

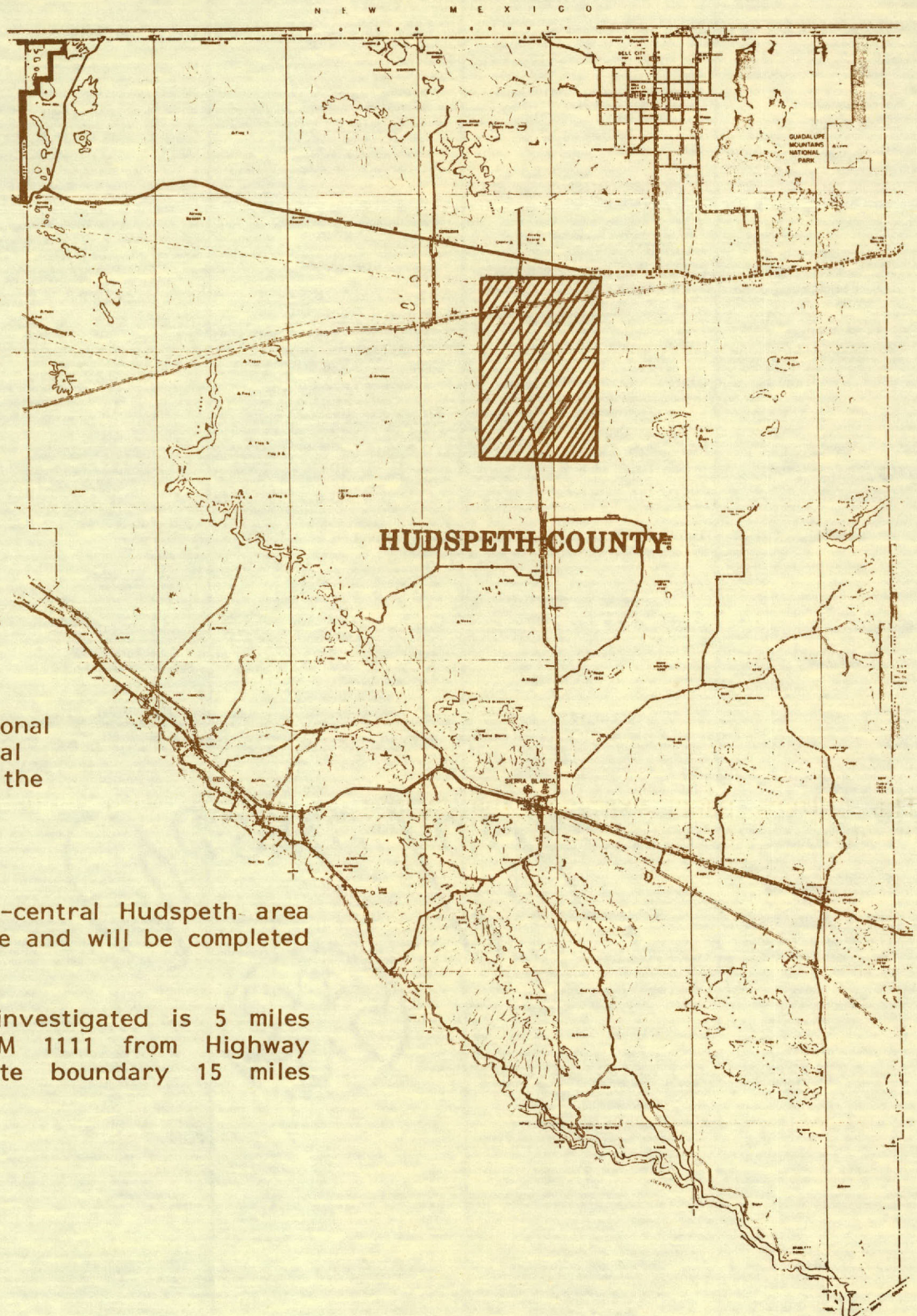
Additional Siting Work in Hudspeth County

At the May Board meeting, the staff was authorized to contract with the Bureau of Economic Geology at the University of Texas to conduct additional site analyses in the north-central Hudspeth County siting area.

During the earlier phases of the Authority's siting effort, nine potential sites on University of Texas land in north central Hudspeth County were evaluated. At that time, the Authority was considering sites for conventional shallow land disposal. Recent actions by the Texas Legislature, the Authority's Board of Directors, and a West Texas citizens panel on disposal technologies, have led the Authority away from conventional shallow land disposal and have required the use of engineered technologies.

Work in the north-central Hudspeth area started in mid-June and will be completed by October 1986.

The area to be investigated is 5 miles either side of FM 1111 from Highway 62-180 to the site boundary 15 miles south.





Waste Lab

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