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STATEMENT BY

CHRISTOPHER J. WARNER
DEPUTY ASSISTANT SECRETARY
FOR
CONGRESSIONAL, INTERGOVERNMENTAL AND PUBLIC AFFAIRS
U.S. DEPARTMENT OF ENERGY

AND

J. WILLIAM BENNETT
ACTING DIRECTOR
OFFICE OF GEOLOGIC REPOSITORIES
OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT
U.S. DEPARTMENT OF ENERGY

BEFORE THE

SUBCOMMITTEE ON ENERGY AND THE ENVIRONMENT
COMMITTEE ON INTERIOR AND INSULAR AFFAIRS
U.S. HOUSE OF REPRESENTATIVES

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Mr. Chairman and Members of the Subcommittee:

We are pleased to appear before you today to present information about the national program for the management of spent nuclear fuel and high-level radioactive waste and about DOE studies in Utah relating to this program. Ben C. Rusche, Director of the Office of Civilian Radioactive Waste Management asked me to express his regrets that he could not be here. He is currently out of the country.

In our testimony today, we would like to give a brief status of our activities in implementing the Nuclear Waste Policy Act of 1982 (NWPA) and then summarize DOE's position on the specific issues raised in the Subcommittee's letter of September 20, 1984.

Before we begin, however, we would like to express DOE's appreciation for this opportunity to provide information about our program to the Subcommittee as it considers nuclear waste disposal concerns in Utah. We especially appreciate the opportunity to appear before Chairman Udall, since the development and implementation of the Nuclear Waste Policy Act is a direct result of his leadership role.

The management of spent fuel and high-level nuclear waste is a subject of deep concern to all citizens in our country. The Department's objective is to manage the development of a disposal system for this waste in a manner that will protect the health and safety of all citizens, while at the same time safeguarding the environment.

The Nuclear Waste Policy Act of 1982 (the Act), which was signed into law January 1983 -- less than two years ago -- establishes a national policy for the safe storage and disposal of spent nuclear fuel and high-level waste. It establishes a step-by-step process by which the President, the U.S. Congress, the States, affected Indian tribes, DOE, the U.S. Nuclear Regulatory Commission, the U.S. Environmental Protection Agency, and other Federal and State agencies can work together in siting, constructing and operating deep, underground geologic repositories.

The Act lays out a careful and deliberate process for selecting the first repository. DOE is strongly committed to following this process. Not to follow that process would jeopardize our ability to carry out the national policy and goals established by the Act as well as the delicate balance arrived at by the craters of that important legislation.

The intent of the Act is to ensure that an acceptable site is arrived at through close consultation and cooperation with affected States and Indian Tribes.

The part of the Act we are focusing on now is the selection of three sites for characterization. Following selection of three sites for characterization, five years or more of detailed site characterization will be required. The recommendation of a site for construction will not occur until sometime into the 1990's.

As a first step in the mandated process, the Act requires that potentially acceptable sites for the first repository be identified within 90 days of enactment. When the Act became law in January 1983, DOE had under study nine sites for consideration for the first repository. In February 1983, those sites, including two in Utah, one in Washington, one in Nevada, two in Texas, two in Mississippi and one in Louisiana, were formally identified, as being potentially acceptable sites.

The next step mandated by the Act is the development of general guidelines for the recommendation of sites. These Siting Guidelines, as they are called, have been developed through an extensive review process with State, Federal and interested public parties and with concurrence by the U.S. Nuclear Regulatory Commission. The Siting Guidelines establish performance objectives for a geologic repository system, define the basic technical requirements that candidate sites must meet, and specify how DOE will implement its site selection process. The guidelines will be published shortly in the Federal Register and have been made available to States throughout the development process.

The third step required by the Act is to prepare environmental assessments as the basis for nominating sites for site characterization. Because of the importance of the environmental assessments in the site screening process, DOE determined early that these documents would be issued in draft to ensure close scrutiny and careful review by affected States, affected Indian Tribes and other interested parties. During the preparation of draft environmental assessments, preliminary working drafts were provided to States and Federal agencies for review and to receive input.

At the present time, we are nearing completion of a set of nine draft environmental assessments. In accordance with Section 112(b)(1)(E) of the Act, environmental assessments will discuss potential impacts of site characterization, assess regional and local impacts of repository development, describe the decision process, assess site suitability against DOE's Siting Guidelines,

and make a comparative evaluation of all sites under consideration.

Two of the draft environmental assessments being prepared address the potentially acceptable Utah sites in Lavender and Davis Canyons. Upon completion of all nine draft environmental assessments, DOE plans to make them available for a 90-day comment period. During that comment period, public briefings as well as public hearings are planned for Utah. In addition, written comments will be accepted throughout the comment period.

DOE's current plans are to complete and issue the draft environmental assessments by December 20, 1984. After the 90-day comment period ends and after oral and written comments have been reviewed, DOE will prepare final environmental assessments which will provide the basis for nomination of at least five of the nine sites as suitable for site characterization.

Following nomination, the Secretary will recommend to the President three of those nominated sites for site characterization. The current schedule calls for this recommendation to be made in mid-1985. As is apparent from the schedule just outlined, the decision that is before us at this time is not that of selecting a repository, but it is one of determining sites suitable for characterization. After that decision is made, a number of years of additional activity will be necessary prior to recommending a single site for construction.

We would like now to turn to the specific questions submitted to the Secretary of Energy by the Chairman of the Subcommittee and to briefly summarize DOE's response to each.

1. Impacts on Canyonlands National Park and the Colorado River

If a Utah site were selected for site characterization, our preliminary assessment indicates that although during site characterization there may be some temporary and minor impacts on Canyonlands National Park, in our judgment, none of these impacts will be severe with respect to the purpose and use of the park. For example, no activity at either the Davis or Lavender Canyon site would be visible from major overlooks within the park. Preliminary studies, which will be described in the environmental assessments, indicate that the only visible evidence of activity during characterization would be tall structures seen from typically inaccessible regions in a small eastern portion of the park. In addition, sky-glow from night lighting at the site would be perceptible from some locations within the park.

No potential for direct impacts on cultural resources located in the park is expected since no surface disturbing activities are planned within the park. Noise from one or two blasts each day may be heard during the initial two weeks of exploratory shaft construction during site characterization. Thereafter, noise from borehole drilling may be heard on an intermittent basis by a few park visitors who are near the site.

Potential impacts during repository construction and operation would be somewhat greater than those during site characterization. For example, portions of one of the possible railroad access routes could be visible from a distance from parts of the park.

Because no repository construction or operation activities would take place in the park itself, cultural resources would only be indirect due to improved access to the park and a resultant larger number of people in the area.

With regard to impacts to the Colorado River, we expect that projected activities will not significantly alter the salinity or turbidity of the Colorado River. The relatively small water requirements of project activities could be satisfied with current allocations, so downstream water use will be unaffected.

2. The nature of the Department's geological and hydrological technical studies in the Gibson Dome area

Between 1972 and 1974, the U.S. Geological Survey identified 12 areas within the Paradox Basin that had potential for further study. During 1977 and 1978, DOE collected regional geologic data and identified four areas for detailed study. Geologic studies were conducted from 1979 to 1982 to evaluate and compare the four areas in terms of depth, thickness and lateral extent of the salt beds; geohydrology and chemical properties of the salt and surrounding strata; and resource potential. In February 1983, as mentioned earlier, the Davis and Lavender Canyon sites were identified by DOE as being potentially acceptable sites for the first repository.

Data collected by DOE during this more than 10 years of screening and analysis, consisted of two major types: (1) geologic and hydrologic data generated for other purposes, such as that obtained from oil and gas companies, and (2) DOE-generated geologic and hydrologic data.

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The non-DOE-generated data include geophysical data obtained by others from drilling some 730 boreholes, monitoring hundreds of miles of seismic lines and geologic mapping within the Paradox Basin. The DOE-generated data include data obtained from six deep boreholes -- one of which is close to the site -- drilled by DOE at three locations in the Paradox Basin. Extensive state-of-the-art geophysical logging, hydrologic testing and coring were conducted on all DOE boreholes.

3. Preliminary technical investigations on potential impacts on air quality

To assess impacts on air quality, DOE identified equipment to be used during site characterization, construction and operation. How the various equipment will be employed, their timing and period of operation, the amount of earth being moved, and the fuel consumed were used to predict air emissions as a function of time. Modeling was employed to estimate the extent of impacts.

Preliminary analysis indicates that the largest degradation in air quality would occur during the first year of repository construction and, in our judgment, would not be severe. Air quality at that time would be similar to that found around other large site-clearing activities, and the emissions are not projected to be high enough to cause impacts to human health and welfare and visibility.

DOE's effort to comply with state data-gathering requirements crucial to the issuance of state permits was initiated on September 12, 1983, by informal discussions between our prime contractor and the Utah Bureau of Air Quality (UBAQ). An air quality monitoring plan was informally transmitted to UBAQ for review in November 1983. We believe that the present knowledge of air quality data is sufficient to prepare environmental assessments. In the event a Utah site is recommended for characterization and that characterization is allowed to proceed, DOE intends to consult with the UBAQ to determine specific data gathering requirements for State of Utah permitting procedures and to comply with all statutory regulations under the Clean Air Act.

4. Efforts to determine the archaeological sensitivity

Numerous archaeological surveys by DOE and others have been completed. The results and conclusions of these surveys have been reported to the Utah State Historic Preservation Office and will be documented in the draft environmental assessments. These preliminary studies and surveys indicate there are archaeological sites in the vicinity of Davis and Lavender Canyons, but none

that provides reason to preclude consideration of either Utah site for site characterization.

DOE has consulted with the Utah State Historic Preservation Office regarding protection of these archaeological resources and will continue to do so to develop detailed plans to be used in the event a Utah site is recommended for characterization.

On August 10, 1984, DOE, the Bureau of Land Management, the Federal Advisory Council on Historic Preservation and the Utah State Historic Preservation Officer met to continue discussions regarding archaeological concerns. At this meeting, the State of Utah requested negotiation of a Memorandum of Agreement regarding protection of cultural resources. We are currently discussing the feasibility of such an agreement with the Advisory Council.

5. Peer review and quality assurance

DOE has established a formal Quality Assurance Program which meets the Nuclear Regulatory Commission requirements as well as Quality Assurance Program Requirements for Nuclear Facilities published by the American National Standards Institute in conjunction with the American Society of Mechanical Engineers. The program establishes peer reviews as an integral part of DOE activities. Organizations from which peer reviewers are obtained include national laboratories, various consulting firms, universities, state and Federal agencies and DOE field offices. DOE's Quality Assurance Program requires that reviewers selected are professionally qualified to judge the technical work and shall be independent of the work that is being reviewed.

DOE's Salt Repository Project Office has utilized independent reviewers in the development and review of activities related to the potential sites in Utah, and as the Utah sites compare to other salt sites. At DOE headquarters, have conducted extensive reviews and evaluations of each of the nine sites individually and as each compares to one another to ensure consistency and independence of evaluation.

6. Site screening process prior to the NWPA

Before passage of the Act, site screening conducted by DOE evaluated and compared progressively smaller land units according to geologic and other criteria. This process led to the identification of potentially acceptable sites considered for the first repository.

Congress, as evidenced by the Act, apparently did not intend that DOE revisit screening decisions that preceded passage of the Act. Section 116(a) of the Act requires that States containing potentially acceptable sites be identified within 90 days of enactment, but allowed 180 days for issuing the siting guidelines. The Act does require, however, that each nomination will be accompanied by an environmental assessment which will include a detailed evaluation of the site's suitability under the Siting Guidelines developed after the Act was enacted.

Each of the six issues in which the Subcommittee has indicated an interest and which we have discussed briefly today will be dealt with in detail in the draft environmental assessments. Numerous other issues, of course, will also be addressed and documented.

In conclusion, we would like to stress that DOE is fully aware of the deep concerns the people of the State of Utah have regarding the nuclear waste program. We share their concerns and want to work closely with State and local officials and other interested parties to ensure that problems are addressed. DOE is committed to ensuring that the letter as well as the spirit of the Nuclear Waste Policy Act are carried out in an open and cooperative manner while safeguarding the health and safety of all Americans and protecting the environment.

Thank you, Mr. Chairman, for the opportunity to appear before the Subcommittee today. We will be happy to answer any questions you may have at this time.

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