

October 21, 1999
Department of Energy Public Hearing
Georgia International Convention Center, Atlanta, Georgia

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Re: DOE/EIS-0250D Draft Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nevada

Yucca Mountain is Unsuitable as a Repository

- 1 [The Yucca Mountain Site is unsuitable as a geologic repository for high-level nuclear waste. The graphs included with my comments illustrate the contribution of various elements to waste isolation by evaluating the effect of each on dose to the public. The graphs were prepared by DOE in response to a Nuclear Waste Technical Review Board request.

The charts show that the geologic elements of Yucca Mountain are ineffective relative to the waste package. The principle goal of the repository program has been to select a site at which the geology would be the main element in waste isolation. That goal is defeated by the selection of Yucca Mountain.

The dose to the public without a particular element in the system is compared to the "baseline case" which includes all elements of the system. For example, Graph A shows the projected increase in dosage which would occur without the presence of the waste canister package. This chart reveals that the canister is the most important element in preventing exposure to radiation to the public and that the fuel itself is also important in containment. This is because the fuel is in ceramic form that would be expected to resist degradation.

The Nuclear Regulatory Commission's response to this evidence of geologic unsuitability has been to change the standards which require containment of radiation by the repository itself and replace them with standards which allow the canister to fulfill this function.

- 2 This is not acceptable as it does not adequately safeguard public health. [Because of grave uncertainties with regard to performance over the long term, it is important to build several layers of redundancy into any geologic storage program. For example, not only do analyses show the ineffectiveness of Yucca Mountain's geology in containing waste, serious questions exist as to whether the canister will perform as projected and even whether the performance of the canister can be characterized with any degree of certainty. A DOE peer review panel criticized the canister containment in this 1998 report:

"Alloy C-22 is susceptible to localized corrosion only when wet in a critical temperature range. If C-22 remains passive in this range, its anticipated life, prior to penetration, is thousands of years. If it is not passive, then its life, prior to penetration, is as little as a few tens of years."

Chris Whipple et al Yucca Mountain Total System Performance Assessment
Third Interim Peer Review Panel Report, 1998, pp. 20-22

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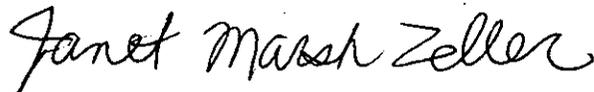
Draft Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nevada

Recommendations

- 3 ◇ Waste should be reclassified to reflect longevity and hazard
- ◇ Wastes that threaten to exacerbate environmental contamination in the short- and medium-term should be stabilized and retrievably stored, pending long-term disposal.
- 4 ◇ Irradiated reactor fuel, TRU waste, and military high-level waste should be stored as safely as possible on-site or as close to the point of generation as possible for an interim period (decades) long enough to allow a management plan to be implemented.
- 5 ◇ The federal government should pay for additional on-site storage necessitated by delays in the repository program but only for wastes covered by existing license periods for presently operating reactors. The funds should come from the Nuclear Waste Fund and not from general taxpayer revenues.
- 6 ◇ A firm commitment should be made against the reprocessing of irradiated/spent fuel.

These recommendations were developed and released in cooperation with the Institute for Energy and Environmental Research in April 1999.

Respectfully submitted,



Janet Marsh Zeller, Executive Director

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