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April 23, 2008

The Honorable Dale E. Klein
Chairman
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

SUBJECT: THE NRC SHOULD NOT ACCEPT DOE'S YUCCA MOUNTAIN APPLICATION IF IT LACKS A WORKABLE PLAN FOR RETRIEVAL OF SPENT FUEL AS REQUIRED BY LAW

Dear Chairman Klein:

From the documents released by the Department of Energy a picture is emerging of parts of their forthcoming Yucca Mountain license application. On April 15 I wrote you that the NRC should reject the application because its claimed compliance with the EPA safety standard rests on the highly implausible proposition that one hundred years from now DOE's successors will install thousands of 5-ton titanium drip shields over the waste containers.

That is not, however, the only make-believe element in DOE's expected application that dictates rejection. Unless DOE comes up with something very different from what is contained in its supporting documents, it appears that the Department has no plausible or workable plan, as is required by law, to retrieve spent fuel should it become necessary.

1. To have the capability to retrieve spent fuel long after it has been emplaced in underground tunnels, DOE would have to maintain the tunnels and remotely operated underground railway system, as well as the necessary cameras and sensing systems. There is no realistic DOE plan for such maintenance for years after waste emplacement in the face of a harsh underground environment subject to drift collapse and rock-falls, and in the presence of an intense radiation field. Nor is there a description of a detailed plan for retrieval beyond the assertion that it would simply be the reverse of emplacement.

DOE does acknowledge a remote possibility of off-normal retrieval scenarios, but its planning for solutions is lacking in substance.

2. To make an informed decision about retrieval DOE would have to know whether the underground packages are corroding. DOE's own calculations show that hot waste canisters are susceptible to corrosion if water drips on them. DOE has various proposals — as discussed in the November 2004 Performance Confirmation Plan (3.3.4) — for estimating the waste canister corrosion after emplacement. Insofar as we have been able to determine, these proposals are all in the preliminary stage, and none of them involve monitoring corrosion on the actual waste canisters as is specified by the Commission's staff in their Yucca Mountain Review Plan (NUREG 1804). There is not even an indication of how this might be done, as it would require remote microscopic examination of the different parts of the waste canisters deep underground in a difficult environment. Furthermore, it is not only the integrity of the canisters that determines retrievability. Equally important is the integrity of other equipment and services within the repository environment.

3. Most telling of all - DOE is just going through the motions when it comes to a retrieval capability. The Department does not have, at least in any published documents that we are aware of, any decision criteria for waste retrieval.

NRC should not accept a DOE license application that does not take seriously the legal requirement for waste retrieval. In addition to requiring a repository equipment design that allows NRC and Nevada to evaluate whether it might actually work, NRC should demand that the license application include a detailed description of a workable plan for maintenance of the underground transport system so that retrieval would be feasible if necessary; a detailed description of plans for post-emplacement surface corrosion monitoring of the waste canisters themselves to provide the needed data; and specific criteria for triggering waste retrieval. In dealing with new technology and unprecedented circumstances, "we'll come up with something when we get there" is not good enough to protect public health and safety.

Finally, a license application cannot be "complete and accurate in all material respects," 10 C.F.R. § 63.10(a), when one of the fundamental tenets of the repository system is barely paid lip service.

Sincerely,



Robert Loux
Executive Director

cc: Governor Gibbons

Attorney General Cortez-Masto

Nevada Congressional Delegation

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Ward Sproat, DOE