

May 1, 1995

0387

Mr. Lake Barrett, Deputy Director  
Office of Civilian Radioactive  
Waste Management  
Department of Energy  
Washington, DC 20585

Dear Mr. Barrett:

This is in response to your letter dated March 10, 1995, that enclosed several Los Alamos National Laboratory (LANL) documents related to the potential for criticality from deep geologic disposal of fissile material. I have set up a review team with Dr. Michael J. Bell, Chief, Engineering and Geosciences Branch, Division of Waste Management, as the Team Leader. The team is to be made up of representatives of my office and the Office of Nuclear Regulatory Research, with additional individuals from the Center for Nuclear Waste Regulatory Analyses.

The team will review the LANL reports, as well as a related report by scientists at the Savannah River Laboratory, for their merits. It is likely that a series of comments, questions, and issues will be developed as a result of the review team's efforts. Inasmuch as the U.S. Department of Energy (DOE) has primary responsibility for resolution of issues related to disposition of high-enriched spent fuels and excess fissile materials in a geologic repository, we intend to forward the review comments, questions, and issues to DOE for consideration, disposition, or resolution. We are planning to complete our review in June 1995, to provide DOE ample time to consider the staff's input well in advance of currently planned DOE repository program activities and milestones that support submittal of the license application.

In this regard, in a letter dated February 3, 1995, from S. Rousso to me, DOE provided an updated schedule for submittal of documents related to burnup credit and criticality control. Included in that schedule is a planned "Report on Criticality Control for Disposal of Spent Nuclear Fuel" in September 1996. You may want to consider broadening the scope of this report to address criticality control issues raised in the LANL report related to disposal of the types of fissile materials expected at Yucca Mountain, if licensed to receive waste.

If there are any questions related to this subject, please contact me on (301) 415-7800 or Dr. Michael Bell on (301) 415-7286.

Sincerely,

Original signed by  
Michael E. Knapp

Carl J. Paperiello, Director  
Office of Nuclear Material Safety  
and Safeguards

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cc: See next page

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