*Office of the*

**CHURCHILL COUNTY COMMISSIONERS**

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(8)

April 16, 2003

Chief, Rules and Review Directives
U.S. Nuclear Regulatory Commission
Mail Stop T-6-D-59
Washington , DC 20555-0001

Churchill County is one of ten affected units of local government participating in oversight activities of the Yucca Mountain Project. Churchill County has reviewed the Package Performance Study Test Protocols and provide the following comments particularly in response to questions on page xii.

Churchill County encourages the Nuclear Regulatory Commission (NRC) to undertake testing that results in cask failure in order to better understand the performance limits and the likelihood of events leading to cask failure. It appears that speed and fire are two principal elements of concern among the public.

One problem NRC will face is a near limitless number of accident scenarios that can be created for testing purposes. NRC needs to search for test methods and mechanisms that can address the most severe and broadest range of accident conditions.

The goal should be to understand failure conditions more than the successful completion of simulated tests to receive a compliance certification. Although cask testing for the Yucca Mountain program may be more extensive and costly, the duration of the shipping campaign (24 to 48 years), and the limited number of casks likely to be used would justify a more intensive and costly testing program.

NRC should use a combination of full-scale cask testing and simulated tests to achieve a comprehensive analysis of a full range of accident situations. More specifically, NRC should consider then following guidelines as it plans the cask testing program:

1. Full-scale testing and simulated test conditions should reflect realistic (worst case) accident conditions to the extent possible, and use computer models and other secondary methods to support and expand testing conditions and limits.

2. Simulated test conditions should be used to exceed forces occurring under realistic worst-case scenarios.

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3. Tests that can be repeated will build confidence in performance. For example, fire test can be repeated and extended beyond the half hour limit. Page 53 indicates the current fire test simulates about 82 percent of all accident cases. NRC should extend the testing to cover as many cases as possible. The fire test could be extended until cask failure.

4. NRC needs to test a cask that will be similar to the ones used for the repository program to the extent practicable.

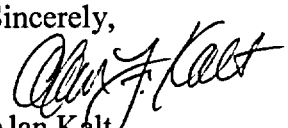
5. NRC should provide recommendations to ensure or enhance cask performance. For example, one simple approach might be to limit speeds for truck and rail shipments. Will failures occur at speeds of sixty miles an hour or lower?

6. NRC should also incorporate realistic puncture tests, particularly for rail shipments. It is possible for rail casks to strike objects that could penetrate cask lining.

NRC needs to pursue testing plans for the fullest possible range of conditions with preference for tests that can be repeated, accurately measured, and creates conditions that approach casks failure.

If you have any questions concerning our comments, please do not hesitate to contact me. Churchill County looks forward to reviewing the detailed test plans and procedures.

Sincerely,



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