

November 2, 2005

Dr. Michael T. Ryan, Chairman
Advisory Committee on Nuclear Waste
U.S. Nuclear Regulatory Commission
Washington, DC 20555

SUBJECT : REVIEW OF STAFF'S PRECLOSURE REVIEW PREPARATIONS FOR THE
POTENTIAL YUCCA MOUNTAIN REPOSITORY

Dear Dr. Ryan:

I am responding to your letter of September 29, 2005, in which you provided observations and recommendations on the U.S. Nuclear Regulatory Commission (NRC) staff preparations for the preclosure review of the potential Yucca Mountain Repository.

We are pleased that the Committee concurs with the staff's initial list of risk-informed review topics. The staff agrees with the Committee's recommendation to formally document the risk-informed process used by the staff to identify and assess safety-significant preclosure topics. In 2004, the staff developed an internal report to record why the topics were selected for review during the pre-licensing phase and what review work should be performed. The report uses a risk-informed and performance-based approach to identify topics through past and current licensing, engineering, and operational experience. To support this work, the staff is performing a limited-scope preclosure safety analysis (as defined in 10 CFR Part 63) to identify new topics that the staff may elect to assess.

The report provides a discussion of how the work relates to the Yucca Mountain Review Plan and the regulatory findings required by 10 CFR Part 63. There is flexibility in the report to allow topics to be added and removed based on their safety significance. Current topics include an assessment of how the U.S. Department of Energy (DOE) proposes to address human reliability and reliability targets that DOE proposes for systems, structures, and components (SSCs) important to safety during the preclosure period, as recommended by the Committee. The staff will assess the extent to which it should review fire protection at the facility and other technical topics once DOE makes more information available. The staff intends to finalize the report, and make it publicly available after completion. Once completed, the report will be maintained as a living document to ensure it reflects the most current design and analysis of Yucca Mountain preclosure facilities.

As your letter acknowledged, the efficiency and effectiveness of the staff's pre-licensing efforts on preclosure activities has been challenged by a lack of information and analysis regarding SSCs important to safety required to support DOE's preclosure safety analysis. The Committee recommended that the staff continue to pursue interactions with DOE. As described

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in our September 9, 2005, letter to DOE, the staff is pursuing several public interactions with DOE on preclosure topics as analysis and design information becomes available.

The NRC staff appreciates the Committee's continued interest in this area, and will be available to present on these issues in the future.

Sincerely,

/RA Martin J. Virgilio Acting For/

Luis A. Reyes
Executive Director
for Operations

cc: Chairman Diaz
Commissioner McGaffigan
Commissioner Merrifield
Commissioner Jaczko
Commissioner Lyons
SECY

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