

March 5, 2003

Dr. George M. Hornberger, Chairman  
Advisory Committee on Nuclear Waste  
U. S. Nuclear Regulatory Commission  
Washington, D.C. 20555

SUBJECT: CAPABILITIES OF ENGINEERED AND NATURAL BARRIERS

Dear Dr. Hornberger:

I am responding to your December 6, 2002, letter to the Chairman. In that letter, you provided the views of the Advisory Committee on Nuclear Waste (hereafter, the Committee) on the staff presentation on an approach for providing insights into the capabilities of engineered and natural barriers. The U.S. Nuclear Regulatory Commission (NRC) staff and the Committee have interacted, on a number of occasions, regarding approaches for providing insights into the performance of a potential repository at Yucca Mountain, Nevada. I was pleased to read that the Committee supports the staff's approach to improve its understanding regarding how the barriers perform in relation to specific radionuclides that are important to the radiation dose to the hypothetical receptor.

The Committee's letter also provided suggestions (e.g., trace individual radionuclide mobilization and transport by barrier and process) for the staff to consider, in its approach, for deriving insights from the detailed performance assessment, and has requested that the staff provide the Committee with further briefings as efforts progress. The NRC staff has implemented some of the Committee's suggestions and briefed the Committee during the 138<sup>th</sup> meeting on December 17, 2002. The NRC staff will continue to look for appropriate opportunities to brief the Committee on this subject. I appreciate the Committee's long-standing interest and insights regarding this important area of the high-level waste program and welcome its future observations and recommendations.

Sincerely,

/RA/

William D. Travers  
Executive Director  
for Operations

cc: Chairman Meserve  
Commissioner Dicus  
Commissioner Diaz  
Commissioner McGaffigan  
Commissioner Merrifield  
SECY

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