

Dr. B. John Garrick, Chairman
Advisory Committee on Nuclear Waste
U.S. Nuclear Regulatory Commission
Washington, DC 20555

March 14, 2001

SUBJECT: RESPONSE TO ADVISORY COMMITTEE ON NUCLEAR WASTE LETTER
DATED FEBRUARY 7, 2001, PROVIDING COMMENTS ON IMPROVEMENTS
IN THE U.S. NUCLEAR REGULATORY COMMISSION STAFF'S CAPABILITY
IN PERFORMANCE ASSESSMENT

Dear Dr. Garrick:

I am responding to your letter, dated February 7, 2001, providing the Advisory Committee on Nuclear Waste's (ACNW's) comments on the improvements in the performance assessment capabilities of the U.S. Nuclear Regulatory Commission (NRC) staff. I would like to thank the ACNW for its continuing assessment of the staff's capabilities in this area. Performance assessment is an important component of our efforts to use risk-informed and performance-based regulation for the geologic disposal of radioactive waste. Therefore, the staff is committed to continue its efforts to improve its performance assessment capabilities, which will contribute to a more effective and efficient review of any license application for the geologic disposal of radioactive waste.

In your letter, you had indicated that the staff has made a major effort to address ACNW's recommendations and that many are still "works in progress." The staff will continue the work on these recommendations and will periodically update the ACNW on its progress. In addition, the staff has begun work on two additional activities: (1) planning for updating the Total-system Performance Assessment (TPA) code (Version 5) in preparation for a potential license application; and (2) using DOE's GOLDSIM computer code, along with DOE's input data, to understand DOE's Total System Performance Assessment for the site recommendation.

In particular, you identified the importance of the staff's peer review of the TPA code. The staff continues to assess the peer review comments and will brief the ACNW on the final disposition of these comments later this year. I would also point out that the staff is considering chairing a session on performance assessment at the December 2001 annual meeting of the Society for Risk Analysis. This would provide another opportunity for the staff to present its performance assessment tool to the scientific community for comment.

I would like to stress that DOE has responsibility for conducting a performance assessment to support any license application that it may submit and the staff will review that performance assessment using available tools (mainly the Yucca Mountain Review Plan, supported by the staff's performance assessment code) and its performance assessment experience. Although the results of the NRC staff's performance assessment calculations may help it conduct the review (e.g., develop risk insights, risk-inform its review, probe the DOE performance

assessment), these calculations are not a substitute for either DOE performance assessment calculations or other information that DOE would need to provide in support of its license application. Also, it is the results of the staff's evaluation of DOE's license application that will form the basis for the staff's conclusion as to whether a license should be issued. The staff's performance assessment calculations are confirmatory audit calculations that support the staff's technical review.

In summary, we appreciate the ACNW comments and anticipate further interaction with the ACNW on this topic. I encourage the ACNW to continue to recommend: (1) ways for the staff to use its performance assessment tools and capabilities effectively and efficiently in its review of the DOE's performance assessments; and (2) areas of improvement in the performance assessment tools that could improve the staff's technical review or enhance public confidence through increased transparency.

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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