

SUMMARY HIGHLIGHTS OF THE JANUARY 23, 2001, U.S. DEPARTMENT OF ENERGY/  
U.S. NUCLEAR REGULATORY COMMISSION TECHNICAL EXCHANGE  
ON THE YUCCA MOUNTAIN TOTAL SYSTEM PERFORMANCE ASSESSMENT FOR THE  
SITE RECOMMENDATION

On January 23, 2001, U.S. Department of Energy (DOE) and U.S. Nuclear Regulatory Commission (NRC) staff conducted a Technical Exchange to allow DOE to introduce the results of its total system performance assessment in support of its forthcoming site recommendation for Yucca Mountain, Nevada. The Nuclear Waste Policy Act of 1982 requires the NRC to provide preliminary comments (sufficiency comments) concerning the extent to which DOE's at-depth site characterization analyses and waste form proposal (i.e., the DOE's description of the waste form or packaging proposed for use at the repository) seem to be sufficient for inclusion in any license application for the proposed geologic repository at Yucca Mountain. NRC will be reviewing DOE's total system performance assessment for the site recommendation (TSPA-SR), among other technical documents, as it prepares its preliminary sufficiency comments

The detailed agenda for this meeting can be found in Attachment 1. The Technical Exchange was held via a video conference connection between NRC and DOE facilities located in Rockville, Maryland, and Las Vegas, Nevada, respectively. Additional video connections permitted the remote participation of DOE staff as well as other interested parties located in Washington, D.C., and NRC contractor staff at the Center for Nuclear Waste Regulatory Analyses (CNWRA) in San Antonio, Texas. In addition to staff from DOE, NRC, the CNWRA and DOE's Management and Operating contractors, the meeting was attended by representatives from the State of Nevada; the Nevada Nuclear Waste Task Force; Clark, Lincoln, and Nye Counties, Nevada; the City of Las Vegas; the U.S. Environmental Protection Agency; the Naval Nuclear Propulsion Program [Office]; the Nuclear Energy Institute; and the Electric Power Research Institute. Also in attendance were members and staff from the U.S. Nuclear Waste Technical Review Board and NRC's Advisory Committee on Nuclear Waste. Attachment 2 contains the list of attendees who were present at one of the four video conference locations.

The meeting commenced with opening remarks by DOE and NRC during which DOE identified the goals and objectives of the Technical Exchange. DOE stated that no "agreements" would be reached at this informational Technical Exchange. The State of Nevada and affected units of local government declined the invitation to provide opening remarks. Consistent with the detailed agenda found in Attachment 1, DOE presented the results of its TSPA-SR, designated Revision 00, Interim Change Notice (ICN) 1. These presentations can be found in Attachments 3 through 13. The DOE presentations were usually followed by a brief period during which clarifying questions and comments were raised. Following the DOE presentations, the NRC made a presentation on the status of its performance assessment activities. This presentation can be found in Attachment 14.

At the conclusion of the formal presentations, the agenda allowed for an open discussion between NRC and DOE. The following discussions were noteworthy:

In regards to DOE's plans for future TSPA-SR calculations (i.e., Revision 01), the NRC staff noted that in general, it would be useful for DOE to provide its schedule for any such calculations and in particular, its schedule for any low temperature calculations involving cooler thermal loading of the potential repository. In response to the question, DOE indicated that TSPA-SR, Rev. 00, ICN 1 reflects data through June, 2000. DOE indicated that it anticipates that TSPA-SR low temperature mode calculations will be completed in May, 2001, and will reflect data through April, 2001. DOE also indicated that it anticipates that TSPA-SR, Rev. 01 calculations will be completed in July, 2001, and will reflect data through April, 2001. DOE indicated that it anticipates that it will provide the FEPs database to NRC in March, 2001.

The NRC staff agreed to respond to certain specific requests made during the Technical Exchange. These questions included:

- DOE requested to see results of the NRC sensitivity studies in advance of the TSPA Issue Resolution Technical Exchange.
- DOE and Steve Frishman (State of Nevada) requested background information on the design of experiments [factorial method] discussed in the NRC presentation.
- Steve Frishman (State of Nevada) requested to see a consequence calculation for a single volcanic event. NRC indicated that information of that type was included in the Issue Resolution Status Report for the Igneous Activity Key Technical Issue.

Other comments were made by members of the affected units of local government and other affected parties. These comments are noted below.

- Parviz Montazer (Nye County, Nevada) expressed concern regarding the sensitivity studies for the unsaturated zone and questioned whether the two orders of magnitude shown by DOE encompassed the full range of uncertainty.
- Judy Treichel (Nevada Nuclear Waste Task Force) mentioned concern about the use of the NRC proposed regulations in the discussions, that the robust waste package is to compensate for a poor site, and that the dose from volcanism is weighted by the probability of occurrence.

 8.30.02

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