

December 15, 2000

Dr. Stephan J. Brocoum, Assistant Manager  
Licensing and Regulatory Compliance  
U.S. Department of Energy  
Yucca Mountain Site Characterization  
P.O. Box 30307  
North Las Vegas, NV 89036-0307

SUBJECT: ANNOTATED OUTLINE FOR TOPICAL REPORT, "PRECLOSURE SEISMIC  
DESIGN INPUTS FOR A GEOLOGIC REPOSITORY AT YUCCA MOUNTAIN"

Dear Dr. Brocoum:

We have received your letter of October 5, 2000, transmitting the annotated outline of the proposed U. S. Department of Energy (DOE) Topical Report, "Preclosure Seismic Design Inputs for a Geologic Repository at Yucca Mountain (STR III)". My staff and the staff of our contractor, the Center for Nuclear Waste Regulatory Analyses, have reviewed the annotated outline of STR III which will be the third and final of the DOE seismic topical report series. Based on our review of the limited descriptions provided under the titles of the four sections and the subsections within them, we do not have any major comments on the annotated outline. However, we suggest that the title be revised to include fault displacement design inputs in addition to seismic design inputs ("Preclosure Seismic and Fault Displacement Design Inputs for a Geologic Repository at Yucca Mountain") to better reflect the scope of the document. In addition, the staff considers the breakdown of interpretations of seismic source, citing each of six expert team results (annotated outline Section 2.2), to be redundant, given that the Probabilistic Seismic Hazard Assessment provides the detailed analysis of each team. However, we would have no objection if short summaries are provided to support the rest of the contents, as necessary. We recommend that STR III dwell on the technical bases for those seismic and fault displacement inputs to the design of the Structures, Systems, Components Important to Safety and Waste Isolation (including ground support system, spent fuel assemblies, waste packages, drip shields, pedestals, and related items of the Engineered Barrier System).

We would also welcome an opportunity to interact with you to discuss details of the scope and contents of STR III after your staff develops a detailed preliminary draft and before it starts to develop the final version. Such an interaction would be beneficial for all the parties involved and would considerably enhance our review process. In the meantime, if you have any questions related to the contents of this letter, please contact Dr. Mysore Nataraja of my staff by e-mail at <[msn1@nrc.gov](mailto:msn1@nrc.gov)>, or by phone at (301) 415-6695.

Sincerely,

***/RA by D. Brooks for:/***

C. William Reamer, Chief  
High-Level Waste Branch  
Division of Waste Management  
Office of Nuclear Material Safety  
and Safeguards

cc: See attached distribution list.

Letter to S. Brocoun from C.W. Reamer dated: December 15, 2000

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