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FEB 24 1987

MEMORANDUM FOR: John J. Linehan, Acting Chief
Repository Projects Branch
Division of Waste Management

FROM: Philip S. Justus, Acting Chief
Geotechnical Branch
Division of Waste Management

SUBJECT: CHAPTER 8 OF SANDIA'S PROBABILITY REPORT

Attached please find the comments from the Geology/Geophysics Section of the Geotechnical Branch.

If you will need any additional information regarding the comments, please contact A. K. Ibrahim at X74211.

ISI

Philip S. Justus, Acting Chief
Geotechnical Branch
Division of Waste Management

Attachment:
As stated

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COMMENTS

Chapter 8 of the Sandia's Probability Report provides an excellent overview of the seismic hazard assessment. The author explained the different recurrence models, data availability and merits and limitations of each model. Then he provided recent development in the ground motion effect on repository, and how the ground motion changes as a function of depth. He explained the different ground motion models proposed by different investigators and the merits and limitations of each. He also talked about faults and fault-occurrence models. The author also addressed data need and requirement and what's needed in the future. In general, this chapter is well written and covered the main points dealing with seismic hazard assessment.

The comments we may like the author to address are:

1. Based on the limited amount of earthquake data available, what kind of a recurrence model would the author suggest for design life of 10,000 years for the repository with acceptable uncertainty?
2. Studies of tunnel resonance by McGarr and others emphasize the importance of considering the effect of near field earthquakes on the underground facility. What effects an excessive number of small to moderate earthquakes would have on the operations of the repository and retrievability of the waste?

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CONCURRENCES

ORGANIZATION/CONCUREE	INITIALS	DATE CONCURRED
WMGT/Albrahim	<i>Albrahim</i>	87/02/20
WMGT/PJustus	<i>PJustus</i>	87/02/24

*original hand carried
d/w on 2/24/87*