



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

JUN 14 1985

MEMORANDUM FOR: Ashok Thadani, Chief
Reliability and Risk Assessment Branch

FROM: Leon Reiter, Acting Chief
Geosciences Branch, DE

SUBJECT: REVIEW OF DRAFT PROBABILISTIC SAFETY ANALYSIS REVIEW
MANUAL, NUREG/CR-3465, DATED MAY, 1985

As you requested, the Geosciences Branch has reviewed the subject document. Our review has concentrated on the seismic hazard analysis (Section 5.2) and the fragility/hazard interface (section 5.4). Attached is a copy of the document annotated with comments. In addition we are providing the following comments.

The draft review manual refers to the LLNL and EPRI studies as "regional seismic hazard evaluations." These studies are more properly characterized as using generic methodologies. The most recent version of the LLNL study is, in fact, site specific in that it accounts for the specific soil/rock characteristics of the site in the hazard estimates.

We have recommended that the PSA Procedures Guide (NUREG/CR-2815) require, that, if available, for a site the seismic hazard results from the LLNL and EPRI studies be used, unaltered, for the PSA. Since these studies use generic methods based on geologic, tectonic, seismic and statistical information from panels of experts and are undergoing intensive peer review, the seismic hazard results should not need any significant additional review by the staff. If the utility does not agree with the results of these hazard studies it has the option of using, in addition, its own seismic hazard estimates. The review manual would provide the procedures for reviewing these seismic estimates and also, those for sites for which the LLNL and EPRI studies had not been performed.

In view of these comments we recommend that the following paragraph be inserted in section 5.2.1 of the PSA Review Manual.

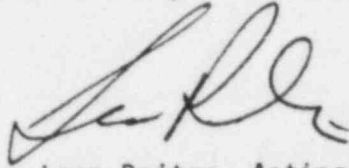
"The Probabilistic Safety Analysis Guide requires that the seismic hazard results from the Lawrence Livermore National Laboratory Seismic Hazard Characterization Program (SHCP) and the Electrical Power Research Institute Seismic Hazard Research Program (SHRP) be used as input in the PSA. These hazard studies will have undergone extensive review and the results of these reviews will be available to the PSA external events reviewer. Therefore, this review manual will be used, with respect to seismic hazard, to review the estimates for sites where there are no SHCP and SHRP results, where the SHCP and SHRP hazards cannot be readily calculated, or where the utility has elected to perform additional hazard estimates."

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If there is any further information we can provide, please contact me or R. Rothman.

A handwritten signature in dark ink, appearing to read 'L. Reiter', with a stylized, cursive script.

Leon Reiter, Acting Chief
Geosciences Branch, DE

Attachment:
As stated

cc: w/o attachment
R. Rothman
R. Bosnak
A. El Bassioni