



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

August 6, 1998

MEMORANDUM TO: Richard H. Wessman, Chief
Mechanical Engineering Branch
Division of Engineering
Office of Nuclear Reactor Regulation

Goutam Bagchi, Chief
Civil Engineering and Geosciences Branch
Division of Engineering
Office of Nuclear Reactor Regulation

FROM: Andrew J. Murphy, Chief *Andrew J. Murphy*
Structural & Geological Engineering Branch
Division of Engineering Technology
Office of Nuclear Regulatory Research

SUBJECT: REVIEW OF DRAFT FINAL REPORT "REEVALUATION OF
REGULATORY GUIDANCE ON MODAL COMBINATION METHODS
FOR SEISMIC RESPONSE SPECTRUM ANALYSIS"

Reference: Memorandum from William T. Russell to Eric S. Beckjord, Subject: "User
Need" Request for Research Related to Areas of Seismic, Structural, and
Geotechnical Engineering, dated December 16, 1994.

I am requesting your comments on the attached draft final report "Reevaluation of Regulatory Guidance on Modal Combination Methods for Seismic Response Spectrum Analysis." This report was developed in response to the referenced "user need" memorandum that requested the Office of Nuclear Regulatory Research to initiate a project that would provide the technical basis to revise Regulatory Guide 1.92, "Combining Modal Responses and Spatial Components in Seismic Response Analysis," Revision 1, February 1976.

The "user need" memorandum noted that a number of methods for combining the responses of closely spaced modes have been devised which are not as conservative as those specified in the current regulatory guide but are nonetheless considered to be more accurate and appropriate to use. The "user need" memorandum also noted that during the revision of Standard Review Plan Section 3.7.2 (as part of the resolution of USI A-40) the staff decided to incorporate the use of these alternative methods by reference (to be reviewed on a case by case basis) with an implicit understanding to revise the regulatory guide later in response to public comments (see NUREG/CR-5347, "Recommendations for Resolution of Public Comments on USI A-40").

Several members of your staff, for example, Mark Hartzman, John Fair, Kamal Manoly, and David Jeng have participated in project review meetings with the contractor. Their input has been incorporated into the draft final report.

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Your comments on the attached report are requested by September 11, 1998. Questions should be directed to Roger M. Kenneally (telephone: 415-6303, email: rmk).

After the report is published, Roger Kenneally will develop and distribute for your review and comment, draft technical positions that will be used in the revision of Regulatory Guide 1.92. Your input will be elicited on all aspects of the regulatory guide revision.

Attachment: As Stated

cc: PDR

Distribution:

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LShao

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DOCUMENT NAME: g:\rmk\mod-comb.rev

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