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October 18, 2001

Mr. David L. Meyer, Chief  
Rules and Directives Branch  
Division of Administrative Services  
Office of Administration  
Mail Stop T-6 D59  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

Subject: Comments on draft Regulatory Guide DG-1108, "Combining  
Modal Responses and Spatial Components in Seismic  
Response Analysis"  
66FR46849, dated September 7, 2001

Dear Mr. Meyer:

Duke Energy offers the attached comments relative to the solicitation for public comments regarding DG-1108, "Combining Modal Responses and Spatial Components in Seismic Response Analysis."

As written, Regulatory Guide 1.92, proposed Revision 2, permits the use of only two methods for determining the complete seismic response solution if the analyzed system has modal responses in the mid-frequency range: Lindley-Yow method and the Gupta method (Section 1.4 of the Regulatory Guide). The Lindley-Yow method is unacceptable if there are significant modal responses in the low-frequency range. Therefore, only one method, the Gupta method, is acceptable if the system has significant low frequency response.

Duke would like to point out that few programs today incorporate either the Lindley-Yow method or the Gupta method, thus requiring the extensive revision of computer software programs currently used in the industry. In addition, the proposed changes do not provide direction in the application of the Lindley-Yow or Gupta method to spectra with multiple significant peaks, such as might occur high in a building for components supported on a flexible slab. That is, how does one determine  $f_{sp}$  for a spectrum with multiple significant peaks?

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template = ADM-013

Call: O. Goemey (OP15)  
A. Beranek (AFB)

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It is recommended that the NRC permit analysis to be performed using the existing methods in the current Regulatory Guides. It is further recommended that guidance be provided for the determination of  $f_{SP}$  for both a broad, single peak response spectrum, and a response spectrum with multiple significant peaks.

Please address any questions to Jim Effinger at (704) 382-8688.

Thank you for the opportunity to provide these comments.

Very truly yours,

M. S. Tuckman  
Executive Vice President  
Nuclear Generation Department  
Duke Power Company