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Docket No.: 50-416

Mr. James P. McGaughy, Jr.
Assistant Vice President
Mississippi Power & Light Co.
P. O. Box 1640
Jackson, Mississippi 39205

Dear Mr. McGaughy:

Subject: Request for Additional Information - Soil Structure Interaction

On July 16, 1982, a meeting was held at Bechtel-Gaithersburg to discuss the methodology for soil structure interaction. We have finished our review of the methodology used for generating the floor response spectra for Category I structures with embedment. We do not agree with the applied methodology and request a dynamic analysis be performed using conventional methods. Details of our request are given in the enclosure.

Please provide your response to this request by March 31, 1983. Any structural modifications that may result from this review will have to be completed prior to startup following the first refueling outage. If you have any questions about this request, please contact M. Dean Houston, Project Manager (301) 492-7564.

Sincerely,

A. Schwencer, Chief
Licensing Branch No. 2
Division of Licensing

Enclosure:
As stated

cc: See next page

OFFICE	DL:LB#2/PM	DL:LB#2/BC					
SURNAME	DHouston:pt	ASchwencer					
DATE	1/12/83	1/12/83					

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ENCLOSURE

Request for Additional Information and the Proposed Methodology on Soil-Structure Interaction at Grand Gulf

The applicant calculated the floor response spectra of Category I structures with embedment for two modeling cases of soil media: namely, the half-space and the finite boundaries represented by the computer code FLUSH. In computing for the modeling condition of the half-space with embedment he reduced all spectral values computed for the modeling condition of half-space without embedment by a straight 40%, a reduction factor obtained from the experience of an entirely different soil model used by FLUSH. Since the concept and assumptions of both soil-modeling methods are different, the experience from one should not be applied indiscriminately to the other. Therefore, we do not accept this procedure in arriving at the floor response spectra for the half-space of soil media with embedment. We suggest the conventional way of using additional lateral soil springs to account for the effect of embedment and to develop a soil-structure mathematical model which would consist of the following steps:

1. Soil spring or compliance function representation of the half-space soil media.
2. Develop the soil springs which simulate the embedment effect of the soil-structure system.
3. Perform the dynamic analysis and obtain the responses of the structure by usual methods of engineering mechanics.