



# MISSISSIPPI POWER & LIGHT COMPANY

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P. O. BOX 1640, JACKSON, MISSISSIPPI 39205

PRODUCTION DEPARTMENT

October 4, 1979

Office of Inspection and Enforcement  
U. S. Nuclear Regulatory Commission  
Region II - Suite 1217  
230 Peachtree Street, N.W.  
Atlanta, Georgia 30303

Attention: Mr. J. P. O'Reilly, Director

Gentlemen:

SUBJECT: Grand Gulf Nuclear Station  
Interim Report of PRD 79/13  
as Defined in 10 CFR 50.55(e)  
File 0260/0498/15525/15526  
AECM-79/112

On September 4, 1979, Mr. V. Brownlee of your office was notified of a potential reportable deficiency regarding William Powell supplied valves which may not meet the seismic requirements of the original purchase specification. Data is still being gathered and analyzed preparatory to determining reportability within the meaning of 10 CFR 50.55(e).

The following is the present status of the engineering activity:

Part of the New Loads requalification for valves includes determination of natural frequencies of valves having extended topworks (i.e., motor, air and gear operators). Equipment which was previously qualified to be rigid thru 33 Hz for seismic loads must now be either requalified thru 100 Hz or its natural frequency must be determined and other fixes utilized. Natural frequency reports in house for William Powell valves indicated frequencies from approximately 150 Hz to 1400 Hz. To ascertain the accuracy of these reports; three valves were selected and finite element analysis was performed by Acton Lab. The results of Acton Lab analysis should have been within 10-20% of the original valves, obtained by Powell using the lumped mass method with 13 degrees of freedom. But the differences ranged from 200-2000% with some frequencies falling below 33 Hz. Since this was not a valid comparison, the data from the Powell reports were input into Bechtel Power Corporation's ME-101 computer program. Again the resultant frequencies were low. William Powell was contacted and requested to recalculate the natural frequencies and asked to review Acton's work for errors. Powell identified some minor modeling errors and performed some calculations. The methodology used by Powell is acceptable. The original analysis were performed by Midwest Technical for Powell. For these types of calculations the supplier or his sub vendor is responsible for the accuracy of the analysis.

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Bechtel only reviews the methodology and assures that specification parameters are met. Therefore, Powell was requested to explain the apparent discrepancies. Powell then requested Mid-West to recalculate the frequencies and an outside consultant has been called in.

The results of the above actions are expected to be available for analysis, the analysis completed, and the determination of reportability within the meaning of 10 CFR 50.55(e) be made by December 30, 1979. A final report will be submitted at that time.

Very truly yours,



L. F. Dale  
Nuclear Project Manager

JRF/JDR:dwe

cc: Mr. T. B. Conner  
Mr. R. B. McGehee  
Mr. N. L. Stampley  
Mr. Victor Stello, Jr., Director **THIS COPY FOR**

bcc: Dr. D. C. Gibbs  
Mr. Adrian Zaccaria  
Mr. J. M. Ward  
Mr. R. L. Scott  
Mr. D. M. Lake  
Mr. W. L. Nail  
Mr. T. E. Reaves  
Mr. J. P. McCaughy  
Mr. C. K. McCoy  
Mr. J. C. Fuller  
File

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