July 26, 1985

Docket No. 50-416

Mr. Jackson B. Richard
Senior Vice President, Nuclear
Mississippi Power and Light Company
P.O. Box 23054
Jackson, Mississippi 39205

Subject: Grand Gulf Nuclear Station Unit 1 -
High Density Spent Fuel Racks

DISTRIBUTION:
Docket No. 50-416
NRC PDR
Local PDR
PRC System
LB #4 r/f
EAdensam
MDuncan
LKintner
WBrooks
Attorney, OELD
JPartlow
BGrimes
EJordan
ACRS (16)

Dear Mr. Richard:

The NRC staff is reviewing the Mississippi Power and Light Company submittal dated May 6, 1985, which requests an amendment to Grand Gulf Unit 1 license to allow installation of high density spent fuel racks in the upper containment pool and in the spent fuel storage pool. The staff finds that the additional information described in the enclosure is needed to complete the review.

In order to meet the schedule for completion of this review, you are requested to provide the information described in the enclosure by August 15, 1985. If you cannot meet this date you should advise the NRC Project Manager for Grand Gulf licensing actions, L. L. Kintner, within 7 days of receipt of this letter.

The reporting and/or recordkeeping requirements contained in this letter affect fewer than ten respondents; therefore, OMB clearance is not required under P.L. 96-511.

Sincerely,

Darl S. Hood

Elinor G. Adensam, Chief
Licensing Branch No. 4
Division of Licensing

Enclosure:
As stated

cc: See next page

DL:LB #4	LA:DL:LB #4	DL:LB #4
LKintner/hmc	MDuncan	EAdensam
7/24/85	7/26/85	7/ /85

Mr. Jackson B. Richard
Mississippi Power & Light Company

Grand Gulf Nuclear Staiton

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President
Claiborne County Board of Supervisors
Port Gibson, Mississippi 39150

Enclosure

REQUEST FOR ADDITIONAL INFORMATION -
GRAND GULF SPENT FUEL POOL EXPANSION

The proposed acceptance criterion for storage in the racks is that the K_∞ of a fuel assembly shall not be greater than 1.395 when calculated at the most reactive point in the assembly life in the core geometry at a temperature of 20 C. This K_∞ value is based on a calculations with a fresh 8 X 8-2 water rod assembly having uniform enrichment in the remaining rods. There are two sources of bias or uncertainty in this calculation which have not been treated. First is the effect on the rack K_∞ of different assembly designs having the same value of K_∞ as calculated for the core geometry. The second source (presumably a bias) arises from the fact that the values of K_∞ assigned to the reload fuel will presumably be those provided by the fuel vendor (General Electric, e.g.) and calculated by their methods, which are different from the ones used to obtain the 1.395 value.

Please provide a discussion of these phenomena to address the magnitude of the uncertainties involved or to support a conclusion that the analyses provided are conservative.