Local PDR

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

September 28, 1979

Docket No. 50-321
and 50-366

Mr. Charles F. Whitmer
Vice President - Engineering
Georgia Power Company
P. O. Box 4545
Atlanta, Georgia 30302

Dear Mr. Whitmer:

We are continuing our review of your application dated July 9, 1979 as supplemented by letter dated July 27, 1979 which proposed modification to the spent fuel pools for Hatch Unit Nos. 1 and 2. We have determined that the additional information indicated in the enclosure is required. This request is in addition to that transmitted by our letter dated August 24, 1979.

To provide for timely completion of our review, we request that the additional information by submitted within 30 days of your receipt of this letter. Should you have any questions, please contact us.

Sincerely,

Thomas A. Ippolito, Chief
Operating Reactors Branch #3
Division of Operating Reactors

Enclosure:
Request for Additional
Information

cc w/enclosure:
See page 2

1134 326

7910150 641

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cc:

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Mr. R. F. Rogers
U. S. Nuclear Regulatory Commission
P. O. Box 710
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REQUEST FOR ADDITIONAL INFORMATION
HATCH NUCLEAR POWER PLANT
SPENT FUEL STORAGE POOL MODIFICATION

1. Discuss the effects of the increased loads due to the new rack structures on the fuel pool liner and structures.

2. Discuss the effects of the temperature gradient across the rack structure due to thermal differential between a full and an empty cell.

3. Provide the allowable stresses for all loading combinations considered in the rack design. Indicate whether these allowable stresses are in conformance with those allowables stated in "OTP for Review and Acceptance of Spent Fuel Storage and Handling Applications", issued by NRC on April 14, 1978, and later amended on January 1979.

4. In deriving the hydrodynamic virtual mass it was assumed that the modules and the pool walls are rigid bodies. Indicate the reason why the flexibility of these walls may be ignored.

5. For the accident fuel assembly drop condition, describe in detail the assumptions, type of analysis, the ductility ratios and allowable stresses used in the analysis. Provide, also, the basis for concluding that the leak tightness of the fuel pool is maintained.

6. Provide sufficient detail of the base plates, foot pads, the support pads, all gaps of the rack structure and all sliding surfaces of the racks.

7. Discuss the provisions employed to prevent movement of heavy objects over the spent fuel assemblies. Include a description of all items which may be moved over the spent fuel assemblies. State whether the consequences of dropping any of these items into the rack are more severe than the fuel drop accident.

8. During seismic events (horizontal and vertical), part of the fuel bundle intertial forces is transferred directly to the tube wall or the fuel support plate through the clearance gaps. Indicate how these impactive motion have been considered in the analysis along with the effects of fuel storage rack rocking and sliding on the pool floor. Provide the numerical values for these impactive factors (dynamic amplification factors) and justifications.

9. In the non-linear analysis to calculate the amount of sliding and tilting, a two-node lumped mass model was chosen. Provide more justification and details (sketches and descriptions) of this model.

10. Discuss the service surveillance plans, if any, that you have developed to assure long-term corrosion protection for the fuel rack system in the pool environment.

11. Discuss the possibi ity of swelling (inward and outward) in the cell containing the boral composite due to off gasing generating pressure and discuss the provisions employed to prevent such swelling or the provision employed such that withdrawal of the fuel assembly is insured.