



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
SUPPORTING AMENDMENT NO. 111 TO FACILITY OPERATING LICENSE NPF-5

GEORGIA POWER COMPANY, ET AL.

EDWIN I. HATCH NUCLEAR PLANT, UNIT 2

DOCKET NO. 50-366

1.0 INTRODUCTION

By letter dated October 16, 1990, Georgia Power Company (the licensee) requested changes to the Technical Specification (TS) Minimum Critical Power Ratio (MCPR) safety limit for the Edwin I. Hatch Nuclear Plant, Unit 2. The requested changes would increase the MCPR safety limit from its current value of 1.04 to 1.06 for two-loop operation (TLO) and from 1.05 to 1.07 for single-loop operation (SLO), and in addition, would change the associated Bases.

2.0 EVALUATION

The licensee proposes use of G2-9 fuel bundles in Plant Hatch Unit 2 for operation in Cycle 10. This change requires an increase in the MCPR safety limits, as stated above, to all fuel types in the core. The MCPR safety limits protect the fuel cladding and provide assurance that less than 0.1 percent of the rods in the core experience boiling transition during the worst anticipated operational event. The MCPR safety limits are fuel-type dependent since the mechanical and thermal-hydraulic design of the assemblies controls the results. GE has determined that the proposed MCPR TLO and SLO limits of 1.06 and 1.07, respectively, bound several standard GE fuel designs (high R-factor GE7, GE8, and GE9). The NRC staff has documented agreement with the codes and methods utilized by GE and documented in its Licensing Topical Report entitled, "General Electric Standard Application for Reactor Fuel," NEDE-24011-P-A-9 (GESTAR-II). Also, the licensee has stated that revised MCPR TLO and SLO limits will be submitted for staff approval if the proposed limits are determined as not conservative for new fuel types.

On the basis of the NRC staff's previous approval of GE's topical report and the various TLO (1.04 to 1.07) and SLO (1.05 - 1.08) values resulting from its application, the staff finds acceptable the licensee's proposal to increase the MCPR safety limits from 1.04 to 1.06 for TLO and 1.05 to 1.07 for SLO. In addition, the change placing these values in the related Bases is also acceptable.

### 3.0 ENVIRONMENTAL CONSIDERATION

The amendment involves changes in requirements with respect to the installation or use of facility components located within the restricted area as defined in 10 CFR Part 20. The staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding. Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

### 4.0 CONCLUSION

The Commission's proposed determination that the amendment involves no significant hazards consideration was published in the Federal Register (55 FR 53071) on December 26, 1990. The Commission consulted with the State of Georgia. No public comments were received, and the State of Georgia did not have any comments.

The staff has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations, and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: Frank Rinaldi, PDII-3/DRP-I/II

Dated: March 25, 1991