



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 105 TO

FACILITY OPERATING LICENSE NPF-5

GEORGIA POWER COMPANY
OGLETHORPE POWER CORPORATION
MUNICIPAL ELECTRIC AUTHORITY OF GEORGIA
CITY OF DALTON, GEORGIA

EDWIN I. HATCH NUCLEAR PLANT, UNIT 2

DOCKET NO. 50-366

1.0 INTRODUCTION

By letter dated September 18, 1989, 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 reduce the MCPR safety limit from its current value of 1.07 to 1.04 for two-loop operation and from 1.08 to 1.05 for single-loop operation, and in addition would change the associated Bases.

2.0 EVALUATION

For Cycle 8 operation of Hatch Unit 2, the licensee loaded fuel manufactured by General Electric (GE) having a high bundle R-factor (≥ 1.04). In order to achieve the maximum economic benefit from each fuel cycle, the licensee intends to load a second consecutive batch of high bundle R-factor fuel (≥ 1.04) for Cycle 9.

Using NRC-approved codes and methods, GE previously determined that the appropriate MCPR safety limit for fuel with a high initial R-factor is 1.04. The NRC staff documented its concurrence with the GE analysis in a December 27, 1987, Safety Evaluation Report (SER) for "General Electric Standard Application for Reactor Fuel" (GESTAR-II), NEDE-24011-P-A, Amendment 14. This SER approved the use of a 1.04 MCPR safety limit for two-loop operation using fuel with a high bundle R-factor and the use of a 0.01 adder to the two-loop MCPR safety limit for single-loop operation.

GE has confirmed that the reload fuel batches for both Cycle 8 and Cycle 9 of Hatch Unit 2 have bundle R-factors ≥ 1.04 , and that the previously approved MCPR safety limits of 1.04 for two-loop operation and 1.05 for single-loop operation are applicable for Cycle 9 operation of Hatch Unit 2. The licensee has stated that it will confirm that the reduced MCPR safety limits are still applicable for fuel loaded in subsequent reload batches, i.e., for Cycle 10 and beyond.

On the basis of the staff's previous approval for use of reduced MCPR safety limits when using fuel with an initial bundle R-factor ≥ 1.04 , and the assurance by the licensee that the reload fuel batches for Cycle 8 and Cycle 9 had initial bundle R-factors ≥ 1.04 , we find acceptable the licensee's proposal to reduce the MCPR safety limits from 1.07 to 1.04 for two-loop operation and from 1.08 to 1.05 for single-loop operation. In addition, the change placing these new values in the related Bases is acceptable.

3.0 ENVIRONMENTAL CONSIDERATION

This amendment involves changes in a requirement 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 made a proposed determination that the amendment involves no significant hazards consideration which was published in the Federal Register on November 1, 1989 (54 FR 46149), and consulted with the State of Georgia. No public comments were received, and the State of Georgia did not have any comments.

We have 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 the amendment will not be inimical to the common defense and security or to the health and safety of the public.

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Dated: December 29, 1989