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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 43 TO FACILITY OPERATING LICENSE NO. NPF-5

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

EDWIN I. HATCH NUCLEAR PLANT, UNIT NO. 2

DOCKET NO. 50-366

1.0 Introduction

By letter dated December 21, 1983, Georgia Power Company (the licensee) requested an amendment to Facility Operating License NPF-5 for the Edwin I. Hatch Nuclear Plant, Unit No. 2. This request was supplemented by additional information on April 16 and May 2, 1984. The proposed change to Technical Specification 3.3.6.6 would allow operation of the traversing incore probe (TIP) system for up to 31 effective full power days (EFPD) with one or more system probes in an inoperable condition. At present, the Technical Specifications prevent operation with properly functioning probes when more than one system probe is inoperable.

2.0 Evaluation

According to Technical Specification 3.3.6.6, the TIP system is presently used for the following functions:

(a) recalibration of the local power range monitors (LPRM);

(b) monitoring the average planar linear heat generation rate (APLHGR), the linear heat generation rate (LHGR), or the minimum critical power ratio (MCPR);

(c) adjustment of the average power range monitor (APRM) setpoints.

Recalibration of the LPRM detectors requires usage of the OD-1 process computer program which can be run only if all four TIP machines are operable. Therefore, the proposed changes would have no affect on function (a).

When the plant process computer is operable, functions (b) and (c) above do not directly utilize TIP data. The proposed changes would, therefore, not affect these functions under normal conditions.

If the process computer and its backup are unavailable, however, the monitoring and setpoint adjustments of functions (b) and (c) could be performed manually with the P-1B calculation using TIP data. General Electric Company has noted in NEDO-25443 that the P-1B calculation can be performed acceptably with only a portion of the TIP system functioning. In these fairly rare instances, plant procedures and guidelines are designed to prevent usage of this manual calculation in a non-conservative manner.

Process computer program OD-2 is used to provide substitute or updated LPRM readings for a particular LPRM string. When this program is run, the new data obtained from the TIP system can be used to update the Core Maximum Fraction of Limiting Power Density (CMFLPD) thermal limit. If the CMFLPD exceeds the Fraction of Rated Thermal Power (FRTP), Technical Specifications require the APRM setpoints to be adjusted to correct the situation. Since APRM adjustment requires operability of the TIP system, the current Technical Specifications effectively prohibit use of the OD-2 calculation with less than three TIP probes operable. The proposed Technical Specification requirements would allow usage of OD-2 when only a portion of the TIP system is operable. The calibration constants for all LPRMs other than those in the traversed channel remain unaffected by use of the OD-2 program. In addition, OD-2 will not affect the results from P-1B since machine normalization factors and LPRM calibration constants are not involved in the P-1B calculation. During periods of degraded TIP system operability, usage of OD-2 would not permit operation of the reactor at a power level higher than is currently allowed.

The requested Technical Specification change increases the number of traversing incore probes from three to four. The increase in the number of probes required is a conservative change and constitutes an additional restriction on system operability.

Based on our review as described above, we find the requested revisions to Technical Specification 3.3.6.6 acceptable.

3.0 Environmental Considerations

The amendment involves a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. We have 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

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.

Dated: January 31, 1985

Principal Contributor: L. Kopp