



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NOS. 168 AND 106 TO
FACILITY OPERATING LICENSES DPR-57 AND NPF-5

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

EDWIN I. HATCH NUCLEAR PLANT, UNITS 1 AND 2

DOCKET NOS. 50-321 AND 50-366

1.0 INTRODUCTION

By letter dated June 22, 1989 (Ref. 1), as amended and superseded by letters dated July 31, 1989 (Ref. 2) and October 4, 1989 (Ref. 3), Georgia Power Company (the licensee) proposed changes to the Technical Specifications (TS) for the Edwin I. Hatch Nuclear Plant, Units 1 and 2. The proposed changes would modify specifications having cycle-specific parameter limits by replacing the values of those limits with a reference to the Core Operating Limits Report (COLR) for the values of those limits. The proposed changes include the addition of the COLR to the Definitions sections and to the reporting requirements of the Administrative Controls sections of TS. Guidance on the proposed changes was developed by NRC on the basis of the review of a lead-plant proposal submitted on the Oconee plant docket by Duke Power Company. This guidance was provided to all power reactor licensees and applicants by Generic Letter 88-16 dated October 4, 1988 (Ref. 4). In addition, the licensee also proposed two other changes to the TS that would (1) reduce the core power level below which Control Rod Program Control (CRPC) operation is required from 20 percent to 10 percent of rated thermal power; and (2) revise the Bases and Definitions to permit use of NRC-approved transition boiling correlations other than GEXL.

2.0 EVALUATION

The licensee's proposed changes to the TS are in accordance with the guidance provided by Generic Letter 88-16 and are addressed below:

- (1) The Definition sections of the TS would be modified to include a definition of the COLR that requires cycle/reload-specific parameter limits to be established on a unit-specific basis in accordance with an NRC-approved methodology that maintains the limits of the safety analysis. The definition notes that plant operation within these limits is addressed by individual specifications.
- (2) The following specifications would be revised to replace the values of cycle-specific parameter limits with a reference to the COLR that provides these limits.

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Hatch, Unit 1

(a) Specification 3.11.A

The average planar linear heat generation rate (APLHGR) limits for this specification are specified in the COLR.

(b) Specification 3.11.B

The linear heat generation rate (LHGR) limit for this specification is specified in the COLR.

(c) Specifications 3.3.F and 3.11.C and Surveillance Requirement 4.11.C

The minimum critical power ratio (MCPR) limits for these specifications and the surveillance requirements are specified in the COLR.

Hatch, Unit 2

(a) Specifications 3.14.3 and 3.2.3 and Surveillance Requirement 4.2.3

The MCPR limits for these specifications and the surveillance requirement are specified in the COLR.

(b) Specification 3.2.1 and Surveillance Requirement 4.2.1

The APLHGR limits for this specification and surveillance requirement are specified in the COLR.

(c) Specification 3.2.4 and Surveillance Requirement 4.2.4

The LHGR limits for this specification and surveillance requirement are specified in the COLR.

The bases of affected specifications would be modified to include appropriate reference to the COLR.

- (3) Specification 6.9.11 would be added to the reporting requirements of the Administrative Controls section of the TS for both Hatch Units 1 and 2. This specification requires that the COLR be submitted, upon issuance, to the NRC Document Control Desk with copies to the Regional Administrator and Resident Inspector. The report provides the values of cycle-specific parameter limits that are applicable for the current fuel cycle. Furthermore, these specifications require that the values of these limits be established using NRC-approved methodologies and be consistent with all applicable limits of the safety analysis. The approved methodologies are the following:

Hatch, Unit 1

- (a) NEDE-24011-P-A, "General Electric Standard Application for Reactor Fuel," (applicable amendment specified in the Core Operating Limits Report).
- (b) "Safety Evaluation by the Office of Nuclear Reactor Regulation Supporting Amendment No. 157 to Facility Operating License DPR-57," dated September 12, 1988.

Hatch, Unit 2

- (a) NEDE-24011-P-A, "General Electric Standard Application for Reactor Fuel," (applicable amendment specified in the Core Operating Limits Report).
- (b) "Safety Evaluation by the Office of Nuclear Reactor Regulation Supporting Amendment Nos. 151 and 89 to Facility Operating License DPR-57 and NPF-5," dated January 22, 1988.

Finally, the specification requires that all changes in cycle-specific parameter limits be documented in the COLR before each reload cycle or remaining part of a reload cycle and submitted upon issuance to NRC, prior to operation with the new parameter limits.

On the basis of the review of the above items, the NRC staff concludes that the licensee provided an acceptable response to those items as addressed in the NRC guidance in Generic Letter 88-16 on modifying cycle-specific parameter limits in TS. Because plant operation continues to be limited in accordance with the values of cycle-specific parameter limits that are established using NRC-approved methodologies, the NRC staff concludes that the changes are administrative in nature and there is no impact on plant safety as a consequence. Accordingly, the staff finds that the proposed changes are acceptable.

As part of the implementation of Generic Letter 88-16, the staff has also reviewed a sample COLR that was provided by the licensee. On the basis of this review, the staff concludes that the format and content of the sample COLR are acceptable.

The licensee also requested two other changes to the TS that would (1) reduce the core power level below which Control Rod Program Control (CRPC) operation is required from 20 percent to 10 percent of rated thermal power; and (2) revise the Bases and Definitions to permit use of NRC-approved transition boiling correlations other than GEXL. The first change is based on NRC approval of Amendment 17 to Topical Report NED-24011-P-A (GESTAR-II). The NRC safety evaluation report (Ref. 5) approved the reduction in the power level at which the CRPCs are bypassed from its current value of 20 percent to 10 percent of rated power. The evaluation performed in Reference 5 determined that, if the core power level exceeds 10 percent of rated thermal power, no control rod pattern can generate rod worths that would result in the fuel enthalpy

exceeding the enthalpy limit of 280 cal/gm during the worst control rod drop accident. The second change allows the use of NRC-approved boiling transition correlations other than GEXL. This change recognizes that new, NRC-approved fuel designs and correlations are available to the Boiling Water Reactor (BWR) utility owners. This change, therefore, is administrative in nature. We have reviewed the changes to the Hatch Units 1 and 2 TS and Bases that have been made to accommodate these two issues and conclude, based on the considerations discussed above, that they are acceptable.

In summary, the NRC staff has reviewed the request by the licensee to modify the TS of Hatch Units 1 and 2 to remove the specific values of some cycle-dependent parameters from the specifications and place the values in a COLR that would be referenced by the specification. Based on this review, we conclude that these TS modifications are acceptable.

The staff also reviewed the changes to the TS and Bases that would (1) reduce the core power level below which CRPC operation is required from 20 percent to 10 percent and (2) permit the use of NRC-approved boiling transition correlations other than GEXL. The staff concludes that these changes are acceptable.

3.0 ENVIRONMENTAL CONSIDERATION

These amendments change 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 amendments involve 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 amendments involve no significant hazards consideration and there has been no public comment on such finding. Accordingly, the amendments meet 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 amendments.

4.0 CONCLUSION

The Commission made a proposed determination that the amendments involve no significant hazards consideration which was published in the Federal Register (54 FR 46147) on November 11, 1989, 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 amendments will not be inimical to the common defense and security or to the health and safety of the public.

5.C REFERENCES

1. Letter (HL-246) from W. G. Hairston, III (GPC) to NRC, dated June 22, 1989.
2. Letter (HL-661) from W. G. Hairston, III (GPC) to NRC, dated July 31, 1989.
3. Letter (HL-709) from W. G. Hairston, III (GPC) to NRC, dated October 4, 1989.
4. Generic Letter 88-16, "Removal of Cycle-Specific Parameter Limits from Technical Specifications," dated October 4, 1989.
5. Letter from Ashok C. Thadani (NRC) to J.S. Charnley (GE), "Acceptance for Referencing of Licensing Topical Report NEDE-24011-P-A, 'General Electric Standard Application for Reactor Fuel,' Revision 8, Amendment 17."

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Dated: December 29, 1989