

Docket No.: 50-424

June 23, 1987

Mr. James P. O'Reilly
Senior Vice President - Nuclear Operations
Georgia Power Company
P.O. Box 4545
Atlanta, Georgia 30302

Dear Mr. O'Reilly:

Subject: Issuance of Amendment No.1 to Facility Operating License NPF-68
Vogtle Electric Generating Plant, Unit 1 (TAC 65068)

The Nuclear Regulatory Commission has issued the enclosed Amendment No.1 to Facility Operating License NPF-68 for the Vogtle Electric Generating Plant, Unit 1. The amendment is being issued in response to your application dated March 30, 1987.

The amendment modifies the Technical Specifications to increase the shutdown margin requirements shown in Figure 3.1-2 and changes the title of that figure. The amendment is effective as of its date of issuance.

A copy of the related safety evaluation supporting Amendment No.1 to Facility Operating License NPF-68 is enclosed.

Notice of issuance of the amendment and opportunity for hearing will be included in the Commission's next bi-weekly Federal Register notice.

Sincerely,

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Melanie A. Miller, Project Manager
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Division of Reactor Projects-I/II

Enclosures:

1. Amendment No.1 to NPF-68
2. Safety Evaluation

cc w/encl:
See next page

PDII-3/DRPI/II
MDuncan/rad
06/15/87

PDII-3/DRPI/II
MMiller
06/15/87

PDII-3/DRPI/II
BJYoungblood
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Vogtle Electric Generating Plant

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

GEORGIA POWER COMPANY
OGLETHORPE POWER CORPORATION
MUNICIPAL ELECTRIC AUTHORITY OF GEORGIA
CITY OF DALTON, GEORGIA
DOCKET NO. 50-424
VOGTLE ELECTRIC GENERATING PLANT, UNIT 1
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 1
License No. NPF-68

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment to the Vogtle Electric Generating Plant, Unit 1 (the facility) Facility Operating License No. NPF-68 filed by the Georgia Power Company acting for itself, Oglethorpe Power Corporation, Municipal Electric Authority of Georgia, and City of Dalton, Georgia, (the licensees) dated March 30, 1987, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter I;
 - D. The issuance of this license amendment will not be inimical to the common defense and security or to the health and safety of the public; and;
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is hereby amended by page changes to the Technical Specifications as indicated in the attachments to this license amendment and Paragraph 2.C.(2) of Facility Operating License No. NPF-68 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 1, and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, are hereby incorporated into this license. GPC shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

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B. J. Youngblood, Director
Project Directorate II-3
Division of Reactor Projects

Attachment:
Technical Specification Changes

Date of Issuance: June 23, 1987

PDII-3/DRPI/II
MDuncan/rad
06/15/87

PDII-3/DRPI/II
Miller
06/15/87

OGC-Bethesda
M. Katman
06/17/87

PDII-3/DRPI/II
BJYoungblood
06/17/87

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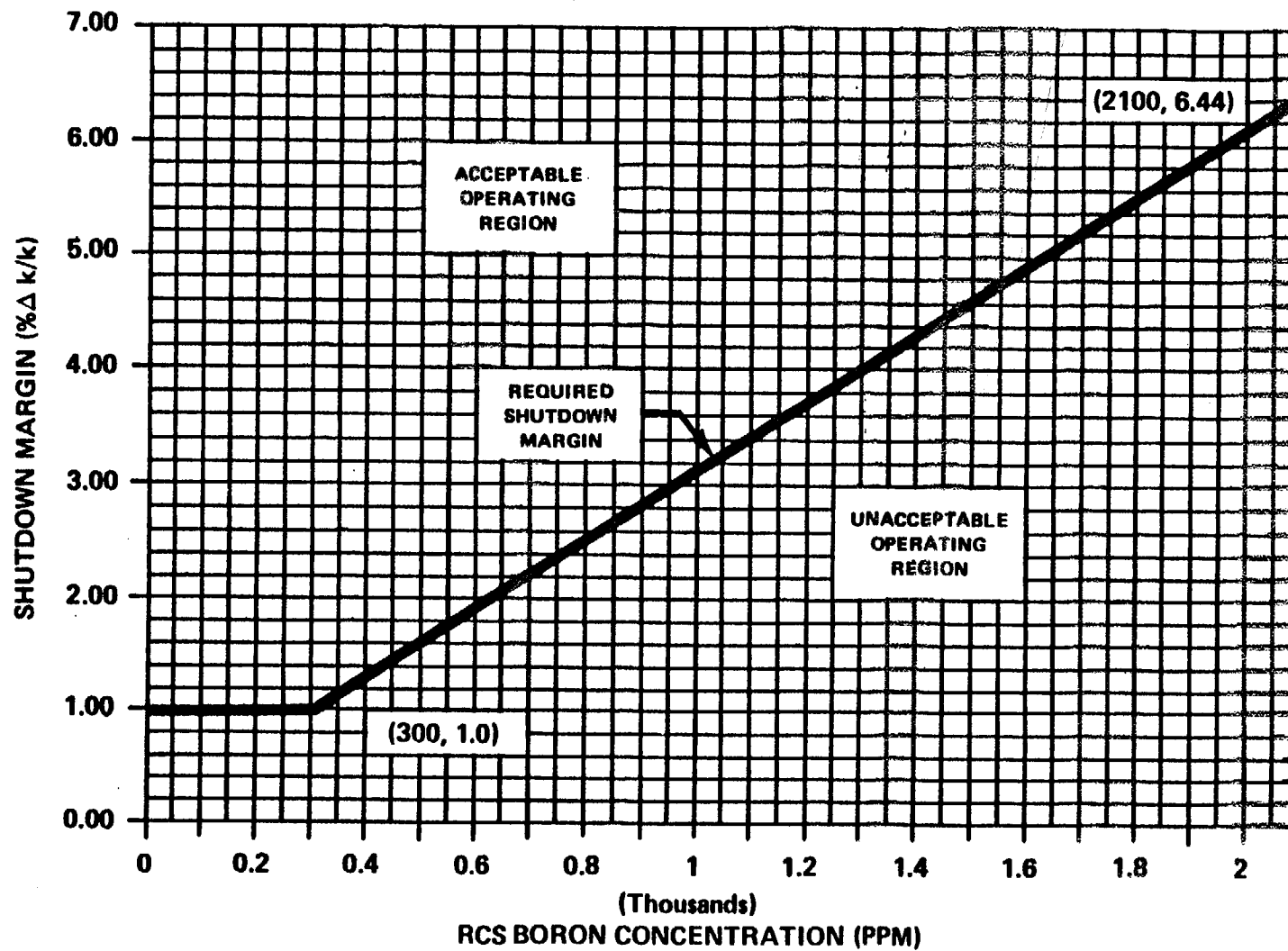


FIGURE 3.1-2 REQUIRED SHUTDOWN MARGIN FOR MODE 5 (MODE 4 WITH NO RCPs RUNNING)

REACTIVITY CONTROL SYSTEMS

MODERATOR TEMPERATURE COEFFICIENT

LIMITING CONDITION FOR OPERATION

3.1.1.3 The moderator temperature coefficient (MTC) shall be:

- a. Less positive than $0 \Delta k/k/^{\circ}F$ for the all rods withdrawn, beginning of cycle life (BOL), hot zero THERMAL POWER condition; and
- b. Less negative than $-4.0 \times 10^{-4} \Delta k/k/^{\circ}F$ for the all rods withdrawn, end of cycle life (EOL), RATED THERMAL POWER condition.

APPLICABILITY: Specification 3.1.1.3a. - MODES 1 and 2* only**.
Specification 3.1.1.3b. - MODES 1, 2, and 3 only**.

ACTION:

- a. With the MTC more positive than the limit of Specification 3.1.1.3a. above, operation in MODES 1 and 2 may proceed provided:
 1. Control rod withdrawal limits are established and maintained sufficient to restore the MTC to less positive than $0 \Delta k/k/^{\circ}F$ within 24 hours or be in HOT STANDBY within the next 6 hours. These withdrawal limits shall be in addition to the insertion limits of Specification 3.1.3.6;
 2. The control rods are maintained within the withdrawal limits established above until a subsequent calculation verifies that the MTC has been restored to within its limit for the all rods withdrawn condition; and
 3. A Special Report is prepared and submitted to the Commission, pursuant to Specification 6.8.2, within 10 days, describing the value of the measured MTC, the interim control rod withdrawal limits, and the predicted average core burnup necessary for restoring the positive MTC to within its limit for the all rods withdrawn condition.
- b. With the MTC more negative than the limit of Specification 3.1.1.3b. above, be in HOT SHUTDOWN within 12 hours.

*With K_{eff} greater than or equal to 1.

**See Special Test Exceptions Specification 3.10.3.

ATTACHMENT TO LICENSE AMENDMENT NO. 1

FACILITY OPERATING LICENSE NO. NPF-68

DOCKET NO. 50-424

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed pages. The revised pages are identified by Amendment number and contain vertical lines indicating the areas of change. The corresponding overleaf pages are also provided to maintain document completeness.

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Page

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Overleaf
Page

III
3/4 1-4



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 1 TO FACILITY OPERATING LICENSE NPF-68

GEORGIA POWER COMPANY, ET AL

DOCKET NO. 50-424

VOGTLE ELECTRIC GENERATING PLANT, UNIT 1

I. INTRODUCTION

By letter dated March 30, 1987, Georgia Power Company, et al., (the licensee) requested a change to the Technical Specifications for Vogtle Electric Generating Plant, Unit 1. The change proposed would increase the shutdown margin requirements shown in Figure 3.1-2 and change the title of Figure 3.1-2. The proposed Figure 3.1-2 shows the required shutdown margin for Mode 4 when no reactor coolant pumps are in operation and for Mode 5 at all times. The boron dilution accident analysis is the basis for this curve. Westinghouse has recently revised its analysis methodology for analyzing boron dilution accidents, and the proposed change is a result of this reanalysis. The proposed title change would avoid confusion with Technical Specification Figure 3.1-1 and be consistent with Technical Specification 3.4.1.3.

II. EVALUATION

Because of its review of the Diablo Canyon natural circulation test results, the NRC staff concluded that under low flow, natural circulation conditions, the water in the reactor vessel upper head could become stagnant and not actively mix with the remainder of the reactor coolant. Dissolved boron in the water within the upper head would not be available to mitigate the consequences of a boron dilution accident. The licensee took credit for the boron contained in the water within the reactor vessel upper head when the Final Safety Analysis Report boron dilution accident analysis was performed. Due to the revised NRC staff position, Westinghouse reanalyzed the Vogtle boron dilution accident for Modes 4 and 5 when no reactor coolant pumps are in operation. In the new analyses, no credit was taken for the boron in the water within the reactor vessel upper head.

For dilution events during hot standby, hot shutdown and cold shutdown (Modes 3, 4, and 5), Technical Specification 3.1.1.2 specifies the required shutdown margin as a function of RCS boron concentration. The specified shutdown margin ensures a minimum of 15 minutes from the time of the high flux at shutdown alarm to the total loss of shutdown margin. A reduction in the active mixing volume results in a reduction in time available for operator action. However, an increased boron requirement can be used to offset this reduction in time.

The boron dilution event for Vogtle was reanalyzed to exclude the water within the reactor vessel upper head, and the result was that a slightly higher boron concentration was needed to ensure the required 15 minute time requirement. The proposed Technical Specification Figure 3.1-2 reflects this slightly increased boron requirement. The Westinghouse reanalysis was performed with staff approved models.

The staff finds that the requested changes are acceptable because: (1) they are based upon analyses performed with approved methods and (2) the 15 minute time requirement will be satisfied with the proposed higher boron concentration. Further, the title change of Figure 3.1-2 is acceptable because it removes the overlap regarding pump operation which currently exists between Figures 3.1-1 and 3.1-2.

III. ENVIRONMENTAL CONSIDERATION

This amendment involves a change in the 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 off-site 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 have been no public comments 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 this amendment.

IV. CONCLUSION

The Commission made a proposed determination that the amendment involves no significant hazards consideration which was published in the Federal Register (52 FR 18981) on May 20, 1987, and 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 Contributors: Melanie Miller, DRPI/II/PDII-3
Margaret Chatterton, DEST/SRXB

Dated: June 23, 1987

June 23, 1987

AMENDMENT NO. 1 TO FACILITY OPERATING LICENSE NPF-68 -
VOGTLE ELECTRIC GENERATING PLANT, UNIT 1

DISTRIBUTION: w/enclosures:

Docket Nos. 50-424

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