

January 4, 1990

Dockets Nos. 50-424
50-425

Mr. W. G. Hairston, III
Senior Vice President -
Nuclear Operations
Georgia Power Company
P.O. Box 1295
Birmingham, Alabama 35201

Dear Mr. Hairston:

SUBJECT: ISSUANCE OF AMENDMENT NO. 25 TO FACILITY OPERATING LICENSE NPF-68
AND AMENDMENT NO. 6 TO FACILITY OPERATING LICENSE NPF-81 - VOGTLE
ELECTRIC GENERATING PLANT, UNITS 1 AND 2 (TACS 75170/75171)

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 25 to Facility Operating License No. NPF-68 and Amendment No. 6 to Facility Operating License No. NPF-81 for the Vogtle Electric Generating Plant, Units 1 and 2. These amendments consist of changes to the Technical Specifications (TSs) in response to your application dated September 26, 1989.

The amendments allow operation of Unit 2 with a slightly positive moderator temperature coefficient below 100% power. The amendments are effective following shutdown from Unit 2 Cycle 1 operation.

A copy of the related Safety Evaluation is also enclosed. Notice of issuance of the amendments will be included in the Commission's biweekly Federal Register notice.

Sincerely,

Jon B. Hopkins, Project Manager
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosures:

- 1. Amendment No. 25 to NPF-68
- 2. Amendment No. 6 to NPF-81
- 3. Safety Evaluation

cc w/enclosures:
See next page

OFFICIAL RECORD COPY

Document Name:	VOGTLE AMEND	POSITIVE MTC
LA:PDII3	PM:PDII3	DET 12/18/89
RIngram	JHopkins:sa	RJones, Jr.
11/30/89	12/1/89	12/1/89

D. PDII3
DMatthews
1/4/90

OG

12/18/89

1/1
CP-1

DATED: January 4, 1990

AMENDMENT NO. 25 TO FACILITY OPERATING LICENSE NPF-68 - Vogtle Electric
Generating Plant, Unit 1
AMENDMENT NO. 6 TO FACILITY OPERATING LICENSE NPF-81 - Vogtle Electric
Generating Plant, Unit 2

DISTRIBUTION:

Docket File	
NRC PDR	
Local PDR	
PDII-3 R/F	
Vogtle R/F	
SVarga	14-E-4
GLainas	14-H-3
DMatthews	14-H-25
RIngram	14-H-25
JHopkins	14-H-25
RJones, Jr.	8-E-23
OGC-WF	15-B-18
EJordan	MNBB-3302
GHill (8)	P1-137
ACRS (10)	P-135
GPA/PA	17-F-2
ARM/LFMB	AR-2015
DHagan	MNBB-3302



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

January 4, 1990

Dockets Nos. 50-424
50-425

Mr. W. G. Hairston, III
Senior Vice President -
Nuclear Operations
Georgia Power Company
P.O. Box 1295
Birmingham, Alabama 35201

Dear Mr. Hairston:

SUBJECT: ISSUANCE OF AMENDMENT NO.25 TO FACILITY OPERATING LICENSE NPF-68
AND AMENDMENT NO.6 TO FACILITY OPERATING LICENSE NPF-81 - VOGTLE
ELECTRIC GENERATING PLANT, UNITS 1 AND 2 (TACS 75170/75171)

The Nuclear Regulatory Commission has issued the enclosed Amendment No.25 to Facility Operating License No. NPF-68 and Amendment No.6 to Facility Operating License No. NPF-81 for the Vogtle Electric Generating Plant, Units 1 and 2. These amendments consist of changes to the Technical Specifications (TSs) in response to your application dated September 26, 1989.

The amendments allow operation of Unit 2 with a slightly positive moderator temperature coefficient below 100% power. The amendments are effective following shutdown from Unit 2 Cycle 1 operation.

A copy of the related Safety Evaluation is also enclosed. Notice of issuance of the amendments will be included in the Commission's biweekly Federal Register notice.

Sincerely,

A handwritten signature in cursive script that reads "Jon B. Hopkins".

Jon B. Hopkins, Project Manager
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 25 to NPF-68
2. Amendment No. 6 to NPF-81
3. Safety Evaluation

cc w/enclosures:
See next page

Mr. W. G. Hairston, III
Georgia Power Company

Vogtle Electric Generating Plant

cc:

Mr. J. A. Bailey
Manager - Licensing
Georgia Power Company
P.O. Box 1295
Birmingham, Alabama 35201

Bruce W. Churchill, Esq.
Shaw, Pittman, Potts and Trowbridge
2300 N Street, N.W.
Washington, D.C. 20037

Mr. G. Bockhold, Jr.
General Manager, Vogtle Electric
Generating Plant
P.O. Box 1600
Waynesboro, Georgia 30830

Regional Administrator, Region II
U.S. Nuclear Regulatory Commission
101 Marietta Street, N.W., Suite 2900
Atlanta, Georgia 30323

Office of the County Commissioner
Burke County Commission
Waynesboro, Georgia 30830

Office of Planning and Budget
Room 615B
270 Washington Street, S.W.
Atlanta, Georgia 30334

Mr. C. K. McCoy
Vice President - Nuclear, Vogtle Project
Georgia Power Company
P.O. Box 1295
Birmingham, Alabama 35201

Resident Inspector
Nuclear Regulatory Commission
P.O. Box 572
Waynesboro, Georgia 30830

James E. Joiner, Esq.
Troutmen, Sanders, Lockerman,
& Ashmore
1400 Candler Building
127 Peachtree Street, N.E.
Atlanta, Georgia 30303

Mr. R. P. McDonald
Executive Vice President -
Nuclear Operations
Georgia Power Company
P.O. Box 1295
Birmingham, Alabama 35201

Mr. J. Leonard Ledbetter, Director
Environmental Protection Division
Department of Natural Resources
205 Butler Street, S.E., Suite 1252
Atlanta, Georgia 30334

Attorney General
Law Department
132 Judicial Building
Atlanta, Georgia 30334

Mr. Alan R. Herdt, Chief
Project Branch #3
U.S. Nuclear Regulatory Commission
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323



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

GEORGIA POWER COMPANY
OGLETHORPE POWER CORPORATION
MUNICIPAL ELECTRIC AUTHORITY OF GEORGIA
CITY OF DALTON, GEORGIA
VOGTLE ELECTRIC GENERATING PLANT, UNIT 1
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 25
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 September 26, 1989, 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 attachment to this license amendment and paragraph 2.C.(2) of Facility Operating License No. NPF-68 is hereby amended to read as follows:

Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 25 , 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 following shutdown from Unit 2 Cycle 1 operation.

FOR THE NUCLEAR REGULATORY COMMISSION



David B. Matthews, Director
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Technical Specification Changes

Date of Issuance: January 4, 1990



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

GEORGIA POWER COMPANY

OGLETHORPE POWER CORPORATION

MUNICIPAL ELECTRIC AUTHORITY OF GEORGIA

CITY OF DALTON, GEORGIA

VOGTLE ELECTRIC GENERATING PLANT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 6
License No. NPF-81

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment to the Vogtle Electric Generating Plant, Unit 2 (the facility) Facility Operating License No. NPF-81 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 September 26, 1989, 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 attachment to this license amendment and paragraph 2.C.(2) of Facility Operating License No. NPF-81 is hereby amended to read as follows:

Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 6 , 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 following shutdown from Unit 2 Cycle 1 operation.

FOR THE NUCLEAR REGULATORY COMMISSION



David B. Matthews, Director
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Technical Specification Changes

Date of Issuance: January 4, 1990

ATTACHMENT TO LICENSE AMENDMENT NO. 25

FACILITY OPERATING LICENSE NO. NPF-68

AND LICENSE AMENDMENT NO. 6

FACILITY OPERATING LICENSE NO. NPF-81

DOCKETS NOS. 50-424 AND 50-425

Replace the following page of the Appendix "A" Technical Specifications with the enclosed page. The revised page is identified by Amendment number and contains vertical lines indicating the areas of change.

Amended Page

3/4 1-4

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 $+0.7 \times 10^{-4} \Delta k/k/^\circ F$ for the all rods withdrawn, beginning of cycle life (BOL), condition for power levels up to 70% RATED THERMAL POWER with a linear ramp to 0 $\Delta k/k/^\circ F$ at 100% RATED THERMAL POWER; 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 within the above limit 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

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

**See Special Test Exceptions Specification 3.10.3.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 25 TO FACILITY OPERATING LICENSE NPF-68
AND AMENDMENT NO. 6 TO FACILITY OPERATING LICENSE NPF-81
GEORGIA POWER COMPANY, ET AL.
DOCKETS NOS. 50-424 AND 50-425
VOGTLE ELECTRIC GENERATING PLANT, UNITS 1 AND 2

1.0 INTRODUCTION

By letter dated September 26, 1989, Georgia Power Company, et al., (GPC or the licensee) requested a change to the Technical Specifications (TSs) for Vogtle Electric Generating Plant (VEGP), Units 1 and 2. The proposed change would revise TS 3.1.1.3, "Moderator Temperature Coefficient," to allow operation of Unit 2 with a slightly positive moderator temperature coefficient (MTC) below 100% power. The current TSs require a negative value for Unit 2 MTC at all power levels.

2.0 EVALUATION

The licensee has provided the following information in support of their request:

The proposed change for Unit 2 is identical to that previously approved for Unit 1 on October 4, 1988. The Westinghouse licensing report that was submitted with the Unit 1 change was applicable for both Units 1 and 2 reload core designs. The Westinghouse report was accepted by the NRC as the basis for the current Unit 1 MTC TS requirement for reload cores, and also forms the basis for the Unit 2 change for reload cores.

TS 3.1.1.3 ensures that the value of the MTC remains within the limits assumed in the Final Safety Analysis Report (FSAR) transient and accident analyses. In keeping with this basis, Westinghouse performed the necessary transient and accident analyses with the proposed MTC values to ensure that the results remained within all design and safety criteria. The Westinghouse analysis is described in the report entitled "Positive Moderator Temperature Coefficient and RWST/Accumulator Boron Concentration Increase Licensing Report for Vogtle Electric Generating Plant Units 1 and 2." This report was submitted to NRC as Enclosure 1 to GPC letter SL-4682, dated May 19, 1988. The information contained in the report was also incorporated into the FSAR as Section 15B.

Operation with a slightly positive MTC does not exceed any safety-related design criteria and results in significant benefits. These benefits include (1) a reduction in the number of burnable poison (BP) rods required to maintain a negative MTC value at all power levels, (2) reduced BP handling requirements,

(3) fewer problems associated with the storage and disposal of spent BPs, (4) a reduced probability of enforcing administrative control rod withdrawal limits at low power, (5) higher energy 18-month operating cycles, (6) increased fuel discharge burnups, and (7) decreased fuel costs.

Two points should be noted regarding the applicability of the Westinghouse report to Unit 2. First, the increases in refueling water storage tank boron concentration, accumulator boron concentration, and shutdown margin requirements discussed in the report have already been implemented on Unit 2. These changes were incorporated into the Unit 1 and Unit 2 TSs prior to their issuance with the Unit 2 Operating License. Second, the "revised" Vogtle steam generator tube rupture analysis referenced in the report has been approved by NRC. This approval was documented in the NRC letter to GPC dated November 15, 1988. The revised analysis, which includes the effect of a positive MTC, therefore represents the current Unit 2 licensing basis.

The NRC staff has reviewed the licensee's request. Since the request is identical to that approved by the NRC staff for Unit 1, the NRC staff finds that operation of Unit 2 with a slightly positive MTC below 100% power is acceptable. Therefore, the NRC staff finds the requested amendment to be acceptable.

3.0 ENVIRONMENTAL CONSIDERATION

These amendments involve changes in surveillance requirements. 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 on November 15, 1989 (54 FR 47603), 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 these amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: Jon B. Hopkins, PDII-3/DRP-I/II

Dated: January 4, 1990