January 11, 1995

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

SUBJECT: ISSUANCE OF AMENDMENTS - VOGTLE ELECTRIC GENERATING PLANT, UNITS 1 AND 2 (TAC NOS. M89564/89565)

Dear Mr. McCoy:

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 79 to Facility Operating License NPF-68 and Amendment No. 58 to Facility Operating License NPF-81 for the Vogtle Electric Generating Plant, Units 1 and 2. The amendments consist of changes to the Technical Specifications (TS) in response to your application dated May 20, 1994.

The amendments relocate the heat flux hot channel factor, $F_Q(Z)$, penalty of 2 percent in TS 4.2.2.2.f to the cycle-specific Core Operating Limits Report (COLR) to allow for burnup-dependent values of the penalty in excess of 2 percent. This amendments also revise the reference in TS 6.8.1.6 to the Westinghouse $F_Q(Z)$ surveillance methodology in order to reflect Revision 1 of WCAP-10216-P, "Relaxation of Constant Axial Offset Control - F_Q Surveillance Technical Specification," approved by the NRC on November 26, 1993.

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

Sincerely,
/s/
Louis L. Wheeler, Senior Project Manager
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket Nos. 50-424 and 50-425

Enclosures:
1. Amendment No. 79 to NPF-68
2. Amendment No. 58 to NPF-81
3. Safety Evaluation

cc w/encl: See next page

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

January 11, 1995

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3. Safety Evaluation

cc w/encl: See next page

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

Mr. J. B. Beasley
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, NW., Suite 2900
Atlanta, Georgia 30323

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

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

Mr. J. D. Woodard
Senior Vice President -
Nuclear Operations
Georgia Power Company
P. O. Box 1295
Birmingham, Alabama 35201

Harold Reheis, Director
Department of Natural Resources
205 Butler Street, SE. Suite 1252
Atlanta, Georgia 30334

Attorney General
Law Department
132 Judicial Building
Atlanta, Georgia 30334

Mr. Ernie Toupin
Manager of Nuclear Operations
Oglethorpe Power Corporation
2100 East Exchange Place
Tucker, Georgia 30085-1349

Charles A. Patrizia, Esquire
Paul, Hastings, Janofsky & Walker
12th Floor
1050 Connecticut Avenue, NW.
Washington, DC 20036

Arthur H. Domby, Esquire
Troutman Sanders
NationsBank Plaza
600 Peachtree Street, NE.
Suite 5200
Atlanta, Georgia 30308-2216

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

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

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. 79
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 May 20, 1994, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations as set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, 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 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. 79 , 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 and shall be implemented within 30 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Herbert N. Berkow, Director
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Technical Specification
Changes

Date of Issuance: January 11, 1995

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

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. 58
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 May 20, 1994, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations as set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, 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 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. 58 , 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 and shall be implemented within 30 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Herbert N. Berkow, Director
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Technical Specification
Changes

Date of Issuance: January 11, 1995

ATTACHMENT TO LICENSE AMENDMENT NO. 79

FACILITY OPERATING LICENSE NO. NPF-68

DOCKET NO. 50-424

AND

TO LICENSE AMENDMENT NO. 58

FACILITY OPERATING LICENSE NO. NPF-81

DOCKET NO. 50-425

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.

Remove Pages	Insert Pages
3/4 2-5	3/4 2-5
6-21	6-21

SURVEILLANCE REQUIREMENTS (Continued)

f. With measurements indicating

$$\text{maximum over } \left(\frac{F_Q{}^C(Z)}{K(Z)} \right)$$

has increased since the previous determination of $F_Q{}^C(Z)$ either of the following actions shall be taken:

1) Increase $F_Q{}^C(Z)$ by the appropriate factor specified in the CORE OPERATING LIMITS REPORT (COLR) and verify that this value satisfies the relationship in Specification 4.2.2.2d, or

2) $F_Q{}^C(Z)$ shall be measured at least once per 7 Effective Full Power Days until two successive maps indicate that

$$\text{maximum over } \left(\frac{F_Q{}^C(Z)}{K(Z)} \right)$$ is not increasing.

g. With the relationships specified in Specification 4.2.2.2d above not being satisfied:

1) Calculate the percent $F_Q(Z)$ exceeds its limits by the following expression:

$$\left\{ \left(\text{maximum over } Z \left[\frac{F_Q{}^C(Z) \times W(Z)}{\frac{F_Q{}^{RTP}}{P} \times K(Z)} \right] \right) - 1 \right\} \times 100 \text{ for } P > 0.5$$

$$\left\{ \left(\text{maximum over } Z \left[\frac{F_Q{}^C(Z) \times W(Z)}{\frac{F_Q{}^{RTP}}{0.5} \times K(Z)} \right] \right) - 1 \right\} \times 100 \text{ for } P \leq 0.5, \text{ and}$$

2) The following action shall be taken.

Within 15 minutes, control the AFD to within new AFD limits which are determined by reducing the AFD limits specified in the CORE OPERATING LIMITS REPORT by 1% AFD for each percent $F_Q(Z)$ exceeds its limits as determined in Specification 4.2.2.2g.1. Within 8 hours, reset the AFD alarm setpoints to these modified limits.

CORE OPERATING LIMITS REPORT (Continued)

a. WCAP-9272-P-A, "WESTINGHOUSE RELOAD SAFETY EVALUATION METHODOLOGY", July 1985 (W Proprietary).
(Methodology for Specifications 3.1.1.3 - Moderator Temperature Coefficient, 3.1.3.5 - Shutdown Bank Insertion Limit, 3.1.3.6 - Control Bank Insertion Limits and 3.2.3 - Nuclear Enthalpy Rise Hot Channel Factor.)

b. WCAP-10216-P-A, Revision 1A, "RELAXATION OF CONSTANT AXIAL OFFSET CONTROL FQ SURVEILLANCE TECHNICAL SPECIFICATION", February, 1994 (W Proprietary). (Methodology for Specifications 3.2.1 - Axial Flux Difference (Relaxed Axial Offset Control) and 3.2.2 - Heat Flux Hot Channel Factor (W(Z) surveillance requirements for F_Q Methodology).)

c. WCAP-9220-P-A, Rev. 1, "WESTINGHOUSE ECCS EVALUATION MODEL-1981 VERSION", February 1982 (W Proprietary).
(Methodology for Specification 3.2.2 - Heat Flux Hot Channel Factor.)

The core operating limits shall be determined so that all applicable limits (e.g., fuel thermal-mechanical limits, core thermal-hydraulic limits, ECCS limits, nuclear limits such as shutdown margin, and transient and accident analysis limits) of the safety analysis are met.

The CORE OPERATING LIMITS REPORT, including any mid-cycle revisions or supplements thereto, shall be provided upon issuance, for each reload cycle, to the NRC Document Control Desk with copies to the Regional Administrator and Resident Inspector.

SPECIAL REPORTS

6.8.2 Special reports shall be submitted to the Regional Administrator of the Regional Office of the NRC within the time period specified for each report.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 79 TO FACILITY OPERATING LICENSE NPF-68

AND AMENDMENT NO. 58 TO FACILITY OPERATING LICENSE NPF-81

GEORGIA POWER COMPANY, ET AL.

VOGTLE ELECTRIC GENERATING PLANT, UNITS 1 AND 2

DOCKET NOS. 50-424 AND 50-425

1.0 INTRODUCTION

By letter dated May 20, 1994, Georgia Power Company, et al. (the licensee) proposed license amendments to change the Technical Specifications (TS) for Vogtle Electric Generating Plant (Vogtle), Units 1 and 2. The proposed changes would relocate the heat flux hot channel factor, $F_Q(z)$, penalty of 2 percent in TS 4.2.2.2.f to the cycle-specific Core Operating Limits Report (COLR) to allow for burnup-dependent values of the penalty in excess of 2 percent. The proposed amendments also revise the reference in TS 6.8.1.6 to the $F_Q(z)$ surveillance methodology in order to reflect Revision 1 of WCAP-10216-P, "Relaxation of Constant Axial Offset Control - FQ Surveillance Technical Specification," approved by the NRC on November 26, 1993. Revision 1 accounts for $F_Q(z)$ increases greater than 2 percent between measurements.

2.0 EVALUATION

$F_Q(z)$ is the maximum local heat flux on the surface of a fuel rod at core elevation z, divided by the average fuel rod heat flux. For Vogtle, $F_Q(z)$ is shown to be within its limits by performing periodic measurements. Since $F_Q(z)$ surveillance is only required when power has been increased by 20 percent of rated power from the previous surveillance, or at least every 31 effective full power days (EFPD), the TSs take into account the possibility that $F_Q(z)$ may increase between surveillances. The TSs require that when performing the surveillance, the resulting maximum $F_Q(z)$ value must be compared to the maximum $F_Q(z)$ determined from the previous measurement. If the maximum $F_Q(z)$ has increased since the previous determination of $F_Q(z)$, the TS allow two options: either the current $F_Q(z)$ must be increased by an additional 2.0 percent to account for further increases in $F_Q(z)$ before the next surveillance, or the surveillance period must be reduced to every seven EFPD.

The $F_Q(z)$ penalty of 2.0 percent was based on the Westinghouse assumption that F_Q would change by no more than 2.0 percent between monthly flux maps. This assumption was based on calculations for core designs which pre-date the low leakage loading patterns, high amounts of burnable poisons, and 18-month cycles typical of recent cores. Some recent Westinghouse-designed cores typical of the cores at Vogtle have experienced increases in the measured $F_Q(z)$ as high as 5 to 6 percent between monthly flux maps over certain burnup ranges. Therefore, for those cores which are predicted to have larger increases in $F_Q(z)$ over certain burnup

ranges, a larger penalty will be provided on a cycle-specific basis. The penalties will be calculated using NRC-approved methods.

The proposed change involves only the manner in which the penalty factors for $F_Q(z)$ would be specified (i. e., a burnup-dependent factor specified in the COLR versus a constant factor specified in the TS). TS 4.2.2.2.f has been modified to reflect the inclusion of the burnup dependent factor in the COLR. In accordance with Generic Letter 88-16, "Removal of Cycle-Specific Parameters from Technical Specifications," the licensee has included WCAP-10126-P-A, Rev. 1-A in the Administrative Reporting Requirements Section of TS 6.8.1.6 as the approved methodology. Since the penalty factors specified in the COLR will be calculated using NRC-approved methodology they will therefore continue to provide a level of protection equivalent to the existing TS requirement.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Georgia State official was notified of the proposed issuance of the amendments. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendments change requirements with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and change surveillance requirements. The amendments also change administrative procedures or requirements. The NRC 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 (59 FR 37072). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9) and (10). 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.

5.0 CONCLUSION

The Commission 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, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributors: L. Wheeler
L. Kopp

Date: January 11, 1995