

August 20, 1992

Docket Nos. 50-424  
and 50-425

Distribution  
See next page

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 AMENDMENTS - VOGTLE NUCLEAR GENERATING PLANT,  
UNITS 1 AND 2 (TAC NOS. M83229 AND M83230)

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 54 to Facility Operating License NPF-68 and Amendment No. 33 to Facility Operating License NPF-81 for the Vogtle Nuclear Generating Plant, Units 1 and 2. The amendments consist of changes to the Technical Specifications (TS) in response to your application dated April 28, 1992, as supplemented July 20, 1992.

The amendments revise the surveillance interval for periodic disassembly and inspection of the steam admission valves associated with the turbine overspeed protection system.

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/

Darl S. Hood, Project Manager  
Project Directorate II-3  
Division of Reactor Projects I/II  
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 54 to NPF-68
2. Amendment No. 33 to NPF-81
3. Safety Evaluation

cc w/enclosures:  
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UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555

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Senior Vice President -  
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Sincerely,

A handwritten signature in black ink that reads "Darl Hood".

Darl S. Hood, Project Manager  
Project Directorate II-3  
Division of Reactor Projects I/II  
Office of Nuclear Reactor Regulation

Enclosures:

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3. Safety Evaluation

cc w/enclosures:  
See next page

Mr. W. G. Hairston, III  
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Vogtle Electric Generating Plant

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

DATED: August 20, 1992

AMENDMENT NO. 54 TO VOGTLE ELECTRIC GENERATING PLANT, UNIT 1  
AMENDMENT NO. 33 TO VOGTLE ELECTRIC GENERATING PLANT, UNIT 2

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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  
VOGTLE ELECTRIC GENERATING PLANT, UNIT 1  
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 54  
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 April 28, 1992, as supplemented July 20, 1992, 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.

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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. 54 , 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



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: August 20, 1992



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. 33  
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 April 28, 1992, as supplemented July 20, 1992, 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. 33 , 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



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: August 20, 1992

ATTACHMENT TO LICENSE AMENDMENT NO. 54

FACILITY OPERATING LICENSE NO. NPF-68

DOCKET NO. 50-424

AND

TO LICENSE AMENDMENT NO. 33

FACILITY OPERATING LICENSE NO. NPF-81

DOCKET NO. 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.

Remove Page

3/4 3-81

Insert Page

3/4 3-81

## INSTRUMENTATION

### 3/4.3.4 TURBINE OVERSPEED PROTECTION

#### LIMITING CONDITION FOR OPERATION

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3.3.4 At least one Turbine Overspeed Protection System shall be OPERABLE.

APPLICABILITY: MODES 1, 2\*, and 3\*.

#### ACTION:

- a. With one stop valve or one control valve per high pressure turbine steam line inoperable and/or with one reheat stop valve or one reheat intercept valve per low pressure turbine steam line inoperable, restore the inoperable valve(s) to OPERABLE status within 72 hours, or close at least one valve in the affected steam lines, or isolate the turbine from the steam supply within the next 6 hours.
- b. With the above required Turbine Overspeed Protection System otherwise inoperable, within 6 hours isolate the turbine from the steam supply.

#### SURVEILLANCE REQUIREMENTS

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4.3.4.1 The provisions of Specification 4.0.4 are not applicable.

4.3.4.2 The above required Turbine Overspeed Protection System shall be demonstrated OPERABLE:

- a. At least once per 7 days while in MODE 1 and while in MODE 2 with the turbine operating, by cycling each of the following valves through at least one complete cycle from the running position:
  - 1) Four high pressure turbine stop valves,
  - 2) Six low pressure turbine intermediate stop valves, and
  - 3) Six low pressure turbine intercept valves.
- b. At least once per 31 days while in MODE 1 and while in MODE 2 with the turbine operating, by direct observation of the movement of each of the above valves and the four high pressure turbine control valves, through one complete cycle from the running position,
- c. At least once per 18 months by performance of a CHANNEL CALIBRATION on the Turbine Overspeed Protection Systems, and
- d. At least once per 60 months by disassembling each of the above valves (including the four high pressure turbine control valves) and performing a visual and surface inspection of valve seats, disks and stems and verifying no unacceptable flaws or corrosion.

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\*Not applicable in MODE 2 or 3 with all main steam line isolation valves and associated bypass valves in the closed position and all other steam flow paths to the turbine isolated.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 54 TO FACILITY OPERATING LICENSE NPF-68  
AND AMENDMENT NO. 33 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 April 28, 1992, as supplemented July 20, 1992, Georgia Power Company, et al. (the licensee) proposed license amendments to change the surveillance requirement of Technical Specification (TS) 4.3.4.2.d for Vogtle Electric Generating Plant (Vogtle), Units 1 and 2. TS 4.3.4.2.d requires that at least one of each of the four high-pressure turbine stop valves, four high-pressure turbine control valves, six low-pressure turbine intermediate stop valves, and six low-pressure turbine intercept valves be disassembled and inspected at least once every 40 months. The proposed amendments would change this requirement so that all of these valves are disassembled and inspected at least once every 60 months.

The licensee's letter of July 20, 1992, provided additional information in support of the original request and did not change the NRC's proposed finding of no significant hazards consideration.

2.0 BACKGROUND

The Vogtle facility uses two General Electric turbine generators; one for each unit. Steam from the four steam generators of each unit enters the respective high-pressure turbine through four high-pressure steam lines. Each line contains one turbine stop valve and one control valve in a single assembly. After expanding through the high-pressure turbine, the steam passes through one of six moisture separator/reheaters (MSRs). A combined intermediate stop and intercept valve is located in each of the six steam lines leading from the outlet of an MSR to the inlet of one of three low-pressure turbines. Two steam lines supply each low-pressure turbine. During operation, the valves are held open against closing springs by hydraulic fluid pressure in the valve actuators, allowing springs to close the valves.

The valves identified by TS 4.2.4.2.d are used for turbine overspeed protection. Failure of the steam admission valves to close in any one steam line between the steam generators and the high-pressure turbine, or between an

MSR and a low-pressure turbine, coincident with generator separation, would result in a turbine overspeed condition. A turbine overspeed condition significantly increases the probability of turbine missile generation compared to operation at normal speed. Regular testing and inspection of the steam admission valves reduces the probability of their failure.

### 3.0 EVALUATION

Section 10.2 of the Standard Review Plan (SRP), NUREG-0800, provides guidance in evaluating the inservice inspection of turbine steam admission valves. The purpose of the guidance is to ensure that the turbine overspeed protection system will perform in a manner which meets the requirements of General Design Criterion (GDC) 4 of Appendix A to 10 CFR Part 50 with regard to the protection of structures, systems, and components important to safety from the effects of turbine missiles.

Under Vogtle's existing surveillance requirement, assuming an 18-month fuel cycle, one stop valve, one control valve, and one combined intermediate stop and intercept valve are disassembled and inspected during every other refueling outage. Under the proposed change, all four stop valves would be disassembled and inspected during one outage, all four control valves during the next outage, and the six combined intermediate stop and intercept valves during the third outage. Although the stop and control valves are considered to form a single assembly, they are disassembled separately. The combined intermediate stop and intercept valves are integral units that are disassembled and inspected at one time.

Since each individual valve will be inspected more frequently following the proposed change, the licensee concluded that the overall effect of the proposed change should result in increased reliability of the turbine overspeed protection system. The licensee states that the operating experience with these valves at Vogtle has been most favorable, and the valve vendor indicates that turbine steam admission valves of the type used at Vogtle have not experienced any significant generic problems. Although the proposed change to the surveillance requirement may reduce the probability of detecting a generic failure mode of a particular valve type, the licensee concluded that the contribution of generic failures to the total valve failure probability would be small. Assuming the valves are subject to random failures only, the licensee determined that the increased frequency of inspection of each individual valve would result in an improvement in valve reliability by a factor of 2.67.

The NRC staff concurs with the licensee's determination that the proposed change should result in increased reliability of the turbine overspeed protection system. Therefore, the staff finds that the proposed change to the inservice testing program for the turbine steam admission valves does not increase the probability of turbine missile generation. The staff also finds that the change does not create any additional safety concern.

Accordingly, we find that the proposed change complies with the requirements of GDC 4 of Appendix A to 10 CFR Part 50 with regard to the protection of structures, systems, and components important to safety from the effects of

turbine missiles and the intent of the guidance of Section 10.2 of the SRP. The proposed change is, therefore, acceptable.

#### 4.0 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.

#### 5.0 ENVIRONMENTAL CONSIDERATION

The amendments change a surveillance requirement. 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 (57 FR 28201 dated June 24, 1992). 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.

#### 6.0 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: D. Hood, PDII-3/DRPE  
S. Jones, SPLB/DST

Date: August 20, 1992