

August 2, 1988

Docket No. 50-424

Mr. W. G. Hairston, III
Senior Vice President -
Nuclear Operations
Georgia Power Company
P.O. Box 4545
Atlanta, Georgia 30302

Dear Mr. Hairston:

SUBJECT: ISSUANCE OF AMENDMENT NO. 7 TO FACILITY OPERATING LICENSE NPF-68
VOGTLE ELECTRIC GENERATING PLANT, UNIT 1 (TAC 67141)

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 7 to Facility Operating License No. NPF-68 for the Vogtle Electric Generating Plant, Unit 1. The amendment is being issued in response to your letter dated February 4, 1988.

The amendment modified the Technical Specifications to revise the volume limits for the containment spray additive tank. The amendment is effective as of its date of issuance.

A copy of the related safety evaluation supporting Amendment No. 7 to Facility Operating License NPF-68 is enclosed.

Also enclosed is a copy of a "Notice of Issuance of Amendment to Facility Operating License" which has been forwarded to the Office of the Federal Register for publication.

Sincerely,

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

Enclosures:

1. Amendment No. 7 to NPF-68
2. Safety Evaluation
3. F. R. Notice

cc w/enclosures:

See next page

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

Vogtle Electric Generating Plant

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

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

Amendment No. 7
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 February 4, 1988, 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. 7, 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 of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

ORIGINAL SIGNED BY:

David B. Matthews, Director
Project Directorate II-3
Division of Reactor Projects

Attachment:
Technical Specification Changes

Date of Issuance: August 2, 1988

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7/21/88

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8/1/88

ATTACHMENT TO LICENSE AMENDMENT NO. 7

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.

Amended Page

3/4 6-14
B 3/4 6-3

Overleaf Page

3/4 6-13
B 3/4 6-4

CONTAINMENT SYSTEMS

3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS

CONTAINMENT SPRAY SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.2.1 Two independent Containment Spray Systems shall be OPERABLE with each Spray System capable of taking suction from the RWST and transferring suction to the containment emergency sump.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

With one Containment Spray System inoperable, restore the inoperable Spray System to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours; restore the inoperable Spray System to OPERABLE status within the next 48 hours or be in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.2.1 Each Containment Spray System shall be demonstrated OPERABLE:

- a. At least once per 31 days by verifying that each valve (manual, power-operated, or automatic) in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position;
- b. By verifying, that on recirculation flow, each pump develops a differential pressure of greater than or equal to 196 psid when tested pursuant to Specification 4.0.5;
- c. At least once per 18 months during shutdown, by:
 - 1) Verifying that each automatic valve in the flow path actuates to its correct position on a containment spray actuation test signal, and
 - 2) Verifying that each spray pump starts automatically on a containment spray actuation test signal.
- d. At least once per 5 years by performing an air or smoke flow test through each spray header and verifying each spray nozzle is unobstructed.

CONTAINMENT SYSTEMS

SPRAY ADDITIVE SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.2.2 The Spray Additive System shall be OPERABLE with:

- a. A spray additive tank containing a volume of between 3700 (89.9%) and 4000 (97.2%) gallons (LI-0931A, LI-0931B) of between 30 and 32% by weight NaOH solution, and
- b. Two spray additive eductors each capable of adding NaOH solution from the spray additive tank to a Containment Spray System pump flow.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

With the Spray Additive System inoperable, restore the system to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours; restore the Spray Additive System to OPERABLE status within the next 48 hours or be in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.2.2 The Spray Additive System shall be demonstrated OPERABLE:

- a. At least once per 31 days by verifying that each valve (manual, power-operated, or automatic) in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position;
- b. At least once per 6 months by:
 - 1) Verifying the contained solution volume in the tank, and
 - 2) Verifying the concentration of the NaOH solution by chemical analysis.
- c. At least once per 18 months during shutdown, by verifying that each automatic valve in the flow path actuates to its correct position on a containment spray actuation test signal; and
- d. At least once per 5 years by verifying each eductor suction flow rate (to be determined during preoperational tests) by isolating the spray additive tank, opening the valves in the miniflow lines, and the valve in the eductor test line, and running the respective pump:
 - 1) Train A 130 ± 30 gpm, and
 - 2) Train B 120 ± 30 gpm.

CONTAINMENT SYSTEMS

BASES

CONTAINMENT VENTILATION SYSTEM (Continued)

The use of the containment purge lines is restricted to the 14-inch purge supply and exhaust isolation valves since, unlike the 24-inch valves, the 14-inch valves are capable of closing during a LOCA or steam line break accident. Therefore, the SITE BOUNDARY dose guideline of 10 CFR Part 100 would not be exceeded in the event of an accident during containment PURGING operation. Only safety-related reasons; e.g., containment pressure control or the reduction of airborne radioactivity to facilitate personnel access for surveillance and maintenance activities, should be used to justify the opening of these isolation valves.

Leakage integrity tests with a maximum allowable leakage rate for containment purge supply and exhaust supply valves will provide early indication of resilient material seal degradation and will allow opportunity for repair before gross leakage failures could develop. The 0.60 L_v leakage limit of Specification 3.6.1.2b. shall not be exceeded when the leakage rates determined by the leakage integrity tests of these valves are added to the previously determined total for all valves and penetrations subject to Type B and C tests.

3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS

3/4.6.2.1 CONTAINMENT SPRAY SYSTEM

The OPERABILITY of the Containment Spray System ensures that containment depressurization and cooling capability will be available in the event of a LOCA or steam line break. The pressure reduction and resultant lower containment leakage rate are consistent with the assumptions used in the safety analyses.

The Containment Spray System and the Containment Cooling System both provide post-accident cooling of the containment atmosphere. However, the Containment Spray System also provides a mechanism for removing iodine from the containment atmosphere and therefore the time requirements for restoring an inoperable Spray System to OPERABLE status have been maintained consistent with that assigned other inoperable ESF equipment.

3/4.6.2.2 SPRAY ADDITIVE SYSTEM

The OPERABILITY of the Spray Additive System ensures that sufficient NaOH is added to the containment spray in the event of a LOCA. The limits on NaOH volume and concentration ensure a pH value of between 8.5 and 10.5 for the solution recirculated within containment after a LOCA. This pH band minimizes the evolution of iodine and minimizes the effect of chloride and caustic stress corrosion on mechanical systems and components. The solution volume limits (3700-4000 gallons) represent the required solution to be delivered (i.e., the delivered solution volume is that volume above the tank discharge). These assumptions are consistent with the iodine removal efficiency assumed in the safety analyses.

CONTAINMENT SYSTEMS

BASES

3/4.6.2.3 CONTAINMENT COOLING SYSTEM

The OPERABILITY of the Containment Cooling System ensures that: (1) the containment air temperature will be maintained within limits during normal operation, and (2) adequate heat removal capacity is available when operated in conjunction with the Containment Spray Systems during post-LOCA conditions.

3/4.6.3 CONTAINMENT ISOLATION VALVES

The OPERABILITY of the containment isolation valves ensures that the containment atmosphere will be isolated from the outside environment in the event of a release of radioactive material to the containment atmosphere or pressurization of the containment and is consistent with the requirements of General Design Criteria 54 through 57 of Appendix A to 10 CFR Part 50. Containment isolation within the time limits specified for those isolation valves designed to close automatically ensures that the release of radioactive material to the environment will be consistent with the assumptions used in the analyses for a LOCA. A list of containment isolation valves is provided in Table 16.3-4 of the VEGP FSAR.

3/4.6.4 COMBUSTIBLE GAS CONTROL

The OPERABILITY of the equipment and systems required for the detection and control of hydrogen gas ensures that this equipment will be available to maintain the hydrogen concentration within containment below its flammable limit during post-LOCA conditions. Either recombiner unit is capable of controlling the expected hydrogen generation associated with: (1) zirconium-water reactions, (2) radiolytic decomposition of water, and (3) corrosion of metals within containment. These Hydrogen Control Systems are consistent with the recommendations of Regulatory Guide 1.7, "Control of Combustible Gas Concentrations in Containment Following a LOCA," Revision 2, November 1978.

The Hydrogen Mixing Systems are provided to ensure adequate mixing of the containment atmosphere following a LOCA. This mixing action will prevent localized accumulations of hydrogen from exceeding the flammable limit.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 7 TO FACILITY OPERATING LICENSE NPF-68

GEORGIA POWER COMPANY, ET AL

DOCKET NO. 50-424

VOGTLE ELECTRIC GENERATING PLANT, UNIT 1

1.0 INTRODUCTION

By letter dated February 4, 1988 Georgia Power Company, et al., the licensee, submitted a request for a change of Technical Specification (TS) 3.6.2.2 "Spray Additive System," which defines the upper and lower volume limits of the sodium hydroxide solution in the containment spray additive tank. The proposed change alters the percentage of level span corresponding to the lower limit from 87.7 percent to 89.9 percent and that corresponding to the upper limit from 97.4 percent to 97.2 percent. Also, the bases for TS 3.6.2.2 are revised to specify the limiting volumes of sodium hydroxide delivered to the containment spray pumps in gallons rather than in the percentages of level span of the spray additive tank.

2.0 EVALUATION

A review of TS 3.6.2.2 by the licensee has revealed that the limiting volumes of sodium hydroxide delivered to the containment spray pumps expressed in gallons do not correspond to the contained volumes expressed in percentages of the span of the containment spray additive tank. The requested amendment corrects this discrepancy. The change of the lower limit for the contained volume is in a conservative direction, increasing percentage of span from 87.7 to 89.9 percent. However, this change has only an insignificant effect on the pH of sump water which results from injecting the sodium hydroxide solution and operation of the system with the currently specified limits still assures pH equal to or greater than the specified minimum value of 8.5.

The change of the basis for TS 3.6.2.2 specifies the limiting volumes of the sodium hydroxide solution delivered to the spray pumps in gallons rather than in percentages of the level span of the additive tank. This change makes it clear that the bottom unusable portion of the tank is not included in the limiting volumes of the solution delivered to the spray pumps.

The NRC staff has reviewed the licensee's analysis and made its own independent evaluation which confirmed the results of the licensee's analysis.

On the basis of its evaluation the NRC staff finds that the proposed amendment of Technical Specification 3.6.2.2 corrects an inaccuracy which existed in the current specifications. The correction is in a conservative direction. The NRC staff concludes, therefore, that the proposed change is acceptable.

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3.0 ENVIRONMENTAL CONSIDERATION

Pursuant to 10 CFR 51.32 the Commission has determined that issuing the amendment will have no significant impact on the environment (53 FR 25554).

4.0 CONCLUSION

The Commission issued a Notice of Consideration of Issuance of Amendment to Facility Operating License and Opportunity for Hearing which was published in the Federal Register (53 FR 10959) on April 4, 1988. The Commission 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 Contributor: Jon B. Hopkins, PDII-3/DRP-I/II
Krzysztof I. Parczewski, ECEB/DEST

Dated: August 2, 1988

U. S. NUCLEAR REGULATORY COMMISSION
GEORGIA POWER COMPANY
OGLETHORPE POWER CORPORATION
MUNICIPAL ELECTRIC AUTHORITY OF GEORGIA
CITY OF DALTON, GEORGIA
DOCKET NO. 50-424
NOTICE OF ISSUANCE OF AMENDMENT TO
FACILITY OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (Commission) has issued Amendment No. 7 to Facility Operating License No. NPF-68, issued to Georgia Power Company, Oglethorpe Power Corporation, Municipal Electric Authority of Georgia, and City of Dalton, Georgia (the licensee) which revised the Technical Specifications for operation of the Vogtle Electric Generating Plant, Unit 1, located in Burke County, Georgia. The amendment was effective as of the date of its issuance.

The amendment modified the Technical Specifications to revise the volume limits for the containment spray additive tank.

The application for the amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendment.

Notice of Consideration of Issuance of Amendment and Opportunity for Hearing in connection with this action was published in the FEDERAL REGISTER on April 4, 1988 (53 FR 10959). No request for a hearing or petition for leave to intervene was filed following the notice.

The Commission has prepared an Environmental Assessment and Finding of No Significant Impact related to the action and has determined not to prepare an environment impact statement. Based upon the Environmental Assessment, the Commission has concluded that the issuance of this amendment will not have a significant effect on the quality of the human environment.

For further details with respect to the action see (1) the application for amendment dated February 4, 1988, (2) Amendment No. 7 to License No. NPF-68, and (3) the Commission's related Safety Evaluation and Environmental Assessment. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N.W., and and at the Burke County Library, 412 Fourth Street, Waynesboro, Georgia 30830. A copy of items (2) and (3) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Reactor Projects I/II.

Dated at Rockville, Maryland, this 2nd day of August 1988.

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

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DATED: August 2, 1988

AMENDMENT NO. 7 TO FACILITY OPERATING LICENSE NPF-68 - Vogtle Electric
Generating Plant, Unit 1

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