December 5, 1988

Docket No. 50-424

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. 14 TO FACILITY OPERATING LICENSE NPF-68
VOGTLE ELECTRIC GENERATING PLANT, UNIT 1 (TAC 69103)

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 14 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 August 12, 1988.

The amendment modified the Technical Specifications (TS) to clarify that residual heat removal cold leg injection valves may be closed in Mode 3 during check valve leak testing. The amendment is effective as of its date of issuance.

A copy of the related safety evaluation supporting Amendment No. 14 to Facility Operating License NPF-68 is enclosed.

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

Sincerely,

/S/

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

Enclosures:
1. Amendment No. 14 to NPF-68
2. Safety Evaluation

cc w/enclosures:
See next page

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

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Jon B. Hopkins

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Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

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1. Amendment No. 14 to NPF-68
2. Safety Evaluation

cc w/enclosures:
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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. 14
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 August 12, 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. 14 , 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

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: December 5, 1988

OFFICIAL RECORD COPY

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MRood	JHopkins:		DBMatthews
11/15/88	11/15/88	11/21/88	11/30/88

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   (2) Technical Specifications and Environmental Protection Plan

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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: December 5, 1988

ATTACHMENT TO LICENSE AMENDMENT NO. 14

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	Overleaf Page
3/4 5-4	3/4 5-3
B 3/4 5-2	B 3/4 5-1

3/4.5.2 ECCS SUBSYSTEMS - T_{avg} GREATER THAN OR EQUAL TO 350°F

LIMITING CONDITION FOR OPERATION

3.5.2 Two independent Emergency Core Cooling System (ECCS) subsystems shall be OPERABLE with each subsystem comprised of:

a. One OPERABLE centrifugal charging pump,

b. One OPERABLE Safety Injection pump,

c. One OPERABLE RHR heat exchanger,

d. One OPERABLE RHR pump, and

e. An OPERABLE flow path capable of taking suction from the refueling water storage tank on a Safety Injection signal and semi-automatically transferring suction to the containment emergency sump during the recirculation phase of operation.

APPLICABILITY: MODES 1, 2, and 3.*

ACTION:

a. With one ECCS subsystem inoperable, restore the inoperable subsystem to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

b. In the event the ECCS is actuated and injects water into the Reactor Coolant System, a Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.8.2 within 90 days describing the circumstances of the actuation and the total accumulated actuation cycles to date. The current value of the usage factor for each affected Safety Injection nozzle shall be provided in this Special Report whenever its value exceeds 0.70.

* The provisions of Specifications 3.0.4 and 4.0.4 are not applicable for entry into Mode 3 for the Safety Injection Pumps declared inoperable pursuant to Specification 3.5.3.2 provided the Safety Injection Pumps are restored to OPERABLE status within 4 hours or prior to the temperature of one or more of the RCS cold legs exceeding 375°F, whichever occurs first.

SURVEILLANCE REQUIREMENTS

4.5.2 Each ECCS subsystem shall be demonstrated OPERABLE:

a. At least once per 12 hours by verifying that the following valves are in the indicated positions with power lockout switches in the lockout position:

Valve Number	Valve Function	Valve Position
HV-8835	SI Pump Cold Leg. Inj.	OPEN
HV-8840	RHR Pump Hot Leg. Inj.	CLOSED
HV-8813	SI Pump Mini. Flow Isol.	OPEN
HV-8806	SI Pump Suction from RWST	OPEN
HV-8802A, B	SI Pump Hot Leg Inj.	CLOSED
HV-8809A, B	RHR Pump Cold Leg Inj.	OPEN*

b. At least once per 31 days by:

1) Verifying that the ECCS piping is full of water by venting the ECCS pump casings and accessible discharge piping high points, and

2) 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.

c. By a visual inspection which verifies that no loose debris (rags, trash, clothing, etc.) is present in the containment which could be transported to the Containment Emergency Sump and cause restriction of the pump suctions during LOCA conditions. This visual inspection shall be performed:

1) For all accessible areas of the containment prior to establishing CONTAINMENT INTEGRITY, and

2) Of the areas affected within containment at the completion of each containment entry when CONTAINMENT INTEGRITY is established.

d. At least once per 18 months by:

1) Verifying automatic isolation and interlock action of the RHR system from the Reactor Coolant System by ensuring that:

a) With a simulated or actual Reactor Coolant System pressure signal greater than or equal to 377 psig the interlocks prevent the valves from being opened, and

b) With a simulated or actual Reactor Coolant System pressure signal less than or equal to 750 psig the interlocks will cause the valves to automatically close.

2) A visual inspection of the Containment Emergency Sump and verifying that the subsystem suction inlets are not restricted by debris and that the sump components (trash racks, screens, etc.) show no evidence of structural distress or abnormal corrosion.

*Either valve may be realigned in MODE 3 for testing pursuant to Specification 4.4.6.2.2

3/4.5 EMERGENCY CORE COOLING SYSTEMS

BASES

3/4.5.1 ACCUMULATORS

The OPERABILITY of each Reactor Coolant System (RCS) accumulator ensures that a sufficient volume of borated water will be immediately forced into the reactor core through each of the cold legs in the event the RCS pressure falls below the pressure of the accumulators. This initial surge of water into the core provides the initial cooling mechanism during large RCS pipe ruptures.

The limits on accumulator volume, boron concentration and pressure ensure that the assumptions used for accumulator injection in the safety analysis are met.

The accumulator power operated isolation valves are considered to be "operating bypasses" in the context of IEEE Std. 279-1971, which requires that bypasses of a protective function be removed automatically whenever permissive conditions are not met. In addition, as these accumulator isolation valves fail to meet single failure criteria, removal of power to the valves is required.

The limits for operation with an accumulator inoperable for any reason except an isolation valve closed minimizes the time exposure of the plant to a LOCA event occurring concurrent with failure of an additional accumulator which may result in unacceptable peak cladding temperatures. If a closed isolation valve cannot be immediately opened, the full capability of one accumulator is not available and prompt action is required to place the reactor in a mode where this capability is not required.

3/4.5.2 and 3/4.5.3 ECCS SUBSYSTEMS

The OPERABILITY of two independent ECCS subsystems ensures that sufficient emergency core cooling capability will be available in the event of a LOCA assuming the loss of one subsystem through any single failure consideration. Either subsystem operating in conjunction with the accumulators is capable of supplying sufficient core cooling to limit the peak cladding temperatures within acceptable limits for all postulated break sizes ranging from the double ended break of the largest RCS cold leg pipe downward. In addition, each ECCS subsystem provides long-term core cooling capability in the recirculation mode during the accident recovery period.

With the RCS temperature below 350°F, one OPERABLE ECCS subsystem is acceptable without single failure consideration on the basis of the stable reactivity condition of the reactor and the limited core cooling requirements.

BASES

ECCS SUBSYSTEMS (Continued)

The limitation for all safety injection pumps to be inoperable below 350°F provides assurance that a mass addition pressure transient can be relieved by the operation of a single PORV.

The Surveillance Requirements provided to ensure OPERABILITY of each component ensures that at a minimum, the assumptions used in the safety analyses are met and that subsystem OPERABILITY is maintained. Surveillance Requirements for throttle valve position stops and flow balance testing provide assurance that proper ECCS flows will be maintained in the event of a LOCA. Maintenance of proper flow resistance and pressure drop in the piping system to each injection point is necessary to: (1) prevent total pump flow from exceeding runout conditions when the system is in its minimum resistance configuration, (2) provide the proper flow split between injection points in accordance with the assumptions used in the ECCS-LOCA analyses, (3) provide an acceptable level of total ECCS flow to all injection points equal to or above that assumed in the ECCS-LOCA analyses and (4) to ensure that centrifugal charging pump injection flow which is directed through the seal injection path is less than or equal to the amount assumed in the safety analysis. The surveillance requirements for leakage testing of ECCS check valves ensure that a failure of one valve will not cause an intersystem LOCA. In MODE 3, with either HV-8809 A or B closed for ECCS check valve leak testing, adequate ECCS flow for core cooling in the event of a LOCA is assured.

3/4.5.4 REFUELING WATER STORAGE TANK

The OPERABILITY of the Refueling Water Storage Tank (RWST) as part of the ECCS ensures that sufficient negative reactivity is injected into the core to counteract any positive increase in reactivity caused by RCS cooldown. RCS cooldown can be caused by inadvertent depressurization, a loss-of-coolant accident, or a steam line rupture.

The limits on RWST minimum volume and boron concentration ensure that 1) sufficient water is available within containment to permit recirculation cooling flow to the core, 2) the reactor will remain subcritical in the cold condition following a small LOCA or steamline break, assuming complete mixing of the RWST, RCS, and ECCS water volumes with all control rods inserted except the most reactive control assembly (ARI-1), and 3) the reactor will remain subcritical in the cold condition following a large break LOCA (break flow $\geq$ 3.0 FT^2) assuming complete mixing of the RWST, RCS, ECCS water and other sources of water that may eventually reside in the sump, post-LOCA with all control rods assumed to be out.

The contained water volume limit includes an allowance for water not usable because of tank discharge line location or other physical characteristics.

The limits on contained water volume and boron concentration of the RWST also ensure a pH value of between 8.0 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.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 14 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 August 12, 1988, Georgia Power Company, et al., (GPC or the licensee) requested a change to the Technical Specifications for Vogtle Electric Generating Plant, (VEGP), Unit 1. The proposed change would change the Technical Specifications (TS) to clarify that residual heat removal cold leg injection valves may be closed in Mode 3 during check valve leak testing.

2.0 EVALUATION

The proposed amendment revises Technical Specification 4.5.2, "ECCS Subsystems - Tavg Greater Than or Equal to 350°F" and its bases. The revision clarifies that Residual Heat Removal Cold Leg Injection Valves HV-8809A and HV-8809B may be temporarily closed in Mode 3 during leakage testing of reactor coolant system pressure isolation check valves.

The proposed change specifies that valves HV-8809A and B may be temporarily closed in Mode 3 during leak testing of Reactor Coolant System (RCS) pressure isolation check valves. Leak testing of these check valves is required following each refueling outage, following valve realignment or maintenance, and prior to entering Mode 2 following a cold shutdown of 72 hours or more (if not tested in the previous 9 months). The optimum plant condition for leak testing of the pressure isolation check valves is Mode 3 at full RCS pressure, just prior to entering Mode 2. At this point, valve disturbances are complete and better seating of the check valves will produce more meaningful test results. This testing procedure was described to the NRC in GPC letter SL-3505 dated October 27, 1987. NRC approval of the testing procedure was documented in a November 5, 1987 NRC letter and Section 5.4.7 of Supplement 7 to NUREG-1137, "Safety Evaluation Report related to the operation of Vogtle Electric Generating Plant, Units 1 and 2," dated January 1988. The proposed amendment clarifying the temporary valve closure is in accordance with that NRC approved testing procedure. Therefore, the NRC staff finds that the proposed amendment is acceptable.

3.0 ENVIRONMENTAL CONSIDERATION

This amendment involves changes in surveillance requirements. 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 offsite, and that there is no significant increase in individual or cumulative occupational exposure. The NRC staff has made a determination that the amendment involves no significant hazards consideration, and there has been no public comment 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 the amendment.

4.0 CONCLUSION

The Commission made a proposed determination that the amendment involves no significant hazards consideration which was published in the Federal Register on October 19, 1988 (53 FR 40989), 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 Contributor: Jon B. Hopkins, PDII-3/DRP-I/II

Dated: December 5, 1988

DATED: December 5, 1988

AMENDMENT NO. 14 TO FACILITY OPERATING LICENSE NPF-68 - Vogtle Electric Generating Plant, Unit 1

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