

August 5, 1985

Dockets Nos. 50-321  
and 50-366

Mr. J. T. Beckham, Jr.  
Vice President - Nuclear Generation  
Georgia Power Company  
P. O. Box 4545  
Atlanta, Georgia 30302

Dear Mr. Beckham:

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The Commission has issued Amendments Nos. 111 and 50 to Facility Operating Licenses Nos. DPF-57 and NPF-5 for the Edwin I. Hatch Nuclear Plant, Units Nos. 1 and 2. The amendments consist of changes to the Technical Specifications (TSs) in response to your application dated September 5, 1984.

The amendments revise the TSs for Hatch Units 1 and 2 to add requirements for leak testing automatic depressurization system valve accumulators.

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

Sincerely,

*Original signed by*

George W. Rivenbark, Project Manager  
Operating Reactors Branch #4  
Division of Licensing

Enclosures:

1. Amendment No. 111 to DPR-57
2. Amendment No. 50 to NPF-5
3. Safety Evaluation

cc w/enclosures:  
See next page

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PDR

Mr. J. T. Beckham, Jr.  
Georgia Power Company

Edwin I. Hatch Nuclear Plant,  
Units Nos. 1 and 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  
DOCKET NO. 50-321  
EDWIN I. HATCH NUCLEAR PLANT, UNIT NO. 1  
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 111  
License No. DPR-57

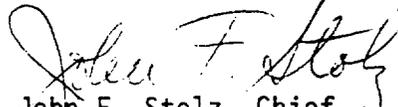
1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Georgia Power Company, et al., (the licensee) dated September 5, 1984, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, 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;
  - 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 amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-57 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 111, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

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



John F. Stolz, Chief  
Operating Reactors Branch #4  
Division of Licensing

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: August 5, 1985

ATTACHMENT TO LICENSE AMENDMENT NO. 111

FACILITY OPERATING LICENSE NO. DPR-57

DOCKET NO. 50-321

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed pages. The revised pages are identified by Amendment number and contain a vertical line indicating the area of change.

Remove

3.5-9  
3.5-18

Insert

3.5-9  
3.5-18

3.5.F Automatic Depressurization System  
(ADS)1. Normal System Availability

The seven valves of the Automatic Depressurization System shall be operable:

- a. Prior to reactor startup from a cold shutdown, or
- b. When there is irradiated fuel in the reactor vessel and the reactor is above 113 psig except as stated in Specification 3.5.F.2.

2. Operation with Inoperable Components

If one of the seven ADS valves is known to be incapable of automatic operation, the reactor may remain in operation for a period not to exceed seven (7) days, provided the HPCI system is operable. (Note that the pressure relief function of these valves is assured by Specification 3.6.H; Specification 3.5.F only applies to the ADS function).

3. Shutdown Requirements

If Specification 3.5.F.1 or 3.5.F.2 cannot be met, an orderly shutdown will be initiated and the reactor pressure shall be reduced to 113 psig or less within 24 hours.

4.5.F Automatic Depressurization System  
(ADS)1. Normal Operational Tests

- a. A simulated automatic actuation test shall be performed on the ADS prior to startup after each refueling outage. Surveillance of all relief valves is covered in Specification 4.6.H.
- b. A leak rate test of each ADS valve accumulator, check valve, and actuator assembly shall be performed during each refueling outage at a pressure of 90+18 psig. The leakage rate shall be verified to be  $\leq 4.5$  SCFH.

2. Surveillance with Inoperable Components

When it is determined that one of the seven ADS valves is incapable of automatic operation, the HPCI system and the actuation logic of the other ADS valves shall be demonstrated to be operable immediately and daily thereafter until all seven ADS valves are capable of automatic operation.

### 3.5.F.1 Normal System Availability (continued)

Specification 3.6 states the requirements for the pressure relief function of the valves. It is possible for any number of the valves assigned to the ADS to be incapable of performing their ADS functions because of instrumentation failures yet be fully capable of performing their pressure relief function.

Because the automatic depressurization system does not provide makeup to the reactor primary vessel, no credit is taken for the steam cooling of the core caused by the system actuation to provide further conservatism to the Core Standby Cooling Systems.

The ADS valve accumulators are sized such that, following loss of the pneumatic supply, at least two valve actuations will be possible with the drywell at 70% of its design pressure. This drywell pressure results from the largest break which could lead to the need for rapid depressurization through the ADS valves. The allowable accumulator leakage criterion ensures the above capability for 30 minutes following loss of the pneumatic supply.

#### 2. Operation with Inoperable Components

With one ADS valve known to be incapable of automatic operation six valves remain operable to perform their ADS function. However, since the ECCS Loss of Coolant Accident analysis for small line breaks assumed that all seven ADS valves were operable, reactor operation with one ADS valve inoperable is only allowed to continue for seven (7) days provided that the HPCI system is demonstrated to be operable and that the actuation logic for the (remaining) six ADS valves is demonstrated to be operable.

#### 3. Minimum Core and Containment Cooling Systems Availability

The purpose of this Specification is to assure that adequate core cooling equipment is available at all times. If, for example, one core spray loop were out of service and the diesel which powered the opposite core spray were out of service, only 2 RHR pumps would be available. Specification 3.9 must also be consulted to determine other requirements for the diesel generators. In addition, refer to definition 1.0.00 for Cumulative Downtime requirements.

This specification establishes conditions for the performance of major maintenance, such as draining of the suppression pool. The availability of the shutdown cooling subsystem of the RHR system and the RHR service water system ensure adequate supplies of reactor cooling and emergency makeup water when the reactor is in the Cold Shutdown condition. In addition this specification provides that, should major maintenance be performed, no work will be performed which could lead to draining the water from the reactor vessel.



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

GEORGIA POWER COMPANY  
OGLETHORPE POWER CORPORATION  
MUNICIPAL ELECTRIC AUTHORITY OF GEORGIA  
CITY OF DALTON, GEORGIA  
DOCKET NO. 50-366  
EDWIN I. HATCH NUCLEAR PLANT, UNIT NO. 2  
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 50  
License No. NPF-5

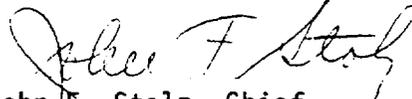
1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Georgia Power Company, et al., (the licensee) dated September 5, 1984, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, 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;
  - 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 amended by 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-5 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 50, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

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



John F. Stolz, Chief  
Operating Reactors Branch #4  
Division of Licensing

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: August 5, 1985

ATTACHMENT TO LICENSE AMENDMENT NO. 50

FACILITY OPERATING LICENSE NO. NPF-5

DOCKET NO. 50-366

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed pages. The revised pages are identified by Amendment number and contain a vertical line indicating the area of change. The corresponding overleaf pages are also provided to maintain document completeness.

Remove

3/4 5-3  
B 3/4 5-2

Insert

3/4 5-3  
B 3/4 5-2

## EMERGENCY CORE COOLING SYSTEMS

### 3/4.5.2 AUTOMATIC DEPRESSURIZATION SYSTEM

#### LIMITING CONDITION FOR OPERATION

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3.5.2 The Automatic Depressurization System (ADS) shall be OPERABLE with at least seven OPERABLE ADS valves.

APPLICABILITY: CONDITIONS 1, 2 and 3 with reactor vessel steam dome pressure  $> 150$  psig.

#### ACTION:

- a. With one of the above required ADS valves inoperable, POWER OPERATION may continue provided the HPCI, CSS and LPCI systems are OPERABLE; restore the inoperable ADS valve to OPERABLE status within 14 days or be in at least HOT SHUTDOWN within the next 12 hours and reduce reactor vessel steam dome pressure to  $\leq 150$  psig within the following 24 hours.
- b. With two or more of the above required ADS valves inoperable, be in at least HOT SHUTDOWN within 12 hours and reduce reactor steam dome pressure to  $\leq 150$  psig within the next 24 hours.
- c. With the Surveillance Requirement of Specification 4.5.2.b not performed at the required interval due to low reactor steam pressure, the provisions of Specification 4.0.4 are not applicable provided the appropriate surveillance is performed within 12 hours after reactor steam pressure is adequate to perform the tests.

#### SURVEILLANCE REQUIREMENTS

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4.5.2 The ADS shall be demonstrated OPERABLE at least once per 18 months by:

- a. Performing a system functional test which includes simulated automatic actuation of the system throughout its emergency operating sequence, but excluding actual valve actuation.
- b. Manually opening each ADS valve when the reactor steam dome pressure is  $\geq 100$  psig and observing that either;
  1. The control valve or bypass valve position responds accordingly, or
  2. There is a corresponding change in the measured steam flow.
- c. Performing a leak rate test of each ADS valve accumulator, check valve, and actuator assembly at a pressure of  $90 \pm 18$  psig. The leakage rate shall be verified to be  $\leq 4.5$  SCFH.

### 3/4.5 EMERGENCY CORE COOLING SYSTEM

#### BASES

#### 3/4.5.1 HIGH PRESSURE COOLANT INJECTION SYSTEM

The high pressure coolant injection (HPCI) system is provided to assure that the reactor core is adequately cooled to limit fuel clad temperature in the event of a small break in the nuclear system and loss of coolant which does not result in rapid depressurization of the reactor vessel. The HPCI system permits the reactor to be shut down while maintaining sufficient reactor vessel water level inventory until the vessel is depressurized. The HPCI system continues to operate until reactor vessel pressure is below the pressure at which LPCI system operation or core spray system operation maintains core cooling.

The capacity of the system is selected to provide this required core cooling. The HPCI pump is designed to pump 4250 gpm at reactor pressures between 1135 and 165 psig. Initially, water from the condensate storage tank is used instead of injecting water from the suppression pool into the reactor, but no credit is taken in the hazards analysis for the condensate storage tank water.

With the HPCI system inoperable, adequate core cooling is assured by OPERABILITY of the redundant and diversified automatic depressurization system and the low pressure cooling systems. In addition, the reactor core isolation cooling (RCIC) system, a system for which no credit is taken in the hazards analysis, will automatically provide makeup at reactor operating pressures on a reactor low water level condition. The out-of-service period of 14 days is based on the demonstrated OPERABILITY of redundant and diversified low pressure core cooling systems.

The surveillance requirements provide adequate assurance that the HPCI system will be OPERABLE when required. Although all active components are testable and full flow can be demonstrated by recirculation during reactor operation, a complete functional test requires reactor shutdown. The pump discharge piping is maintained full to prevent water hammer damage and to provide cooling at the earliest moment.

#### 3/4.5.2 AUTOMATIC DEPRESSURIZATION SYSTEM

Upon failure of the HPCI system to function properly after a small break loss-of-coolant accident, the automatic depressurization system (ADS) automatically causes selected safety-relief valves to open, depressurizing the reactor so that flow from the low pressure cooling systems can enter the core in time to limit fuel cladding temperature to less than 2200°F. ADS is conservatively required to be OPERABLE whenever reactor vessel pressure exceeds 150 psig even though low pressure cooling systems provide adequate core cooling up to 350 psig.

## EMERGENCY CORE COOLING SYSTEMS

### BASES

#### AUTOMATIC DEPRESSURIZATION SYSTEM (Continued)

ADS automatically controls seven selected safety-relief valves although the hazards analysis only takes credit for six valves. It is therefore appropriate to permit one valve to be out-of-service for 14 days without materially reducing system reliability.

The ADS valve accumulators are sized such that, following loss of the pneumatic supply, at least two valve actuations will be possible with the drywell at 70% of its design pressure. This drywell pressure results from the largest break which could lead to the need for rapid depressurization through the ADS valves. The allowable accumulator leakage criterion ensures the above capability for 30 minutes following loss of the pneumatic supply.

#### 3/4.5.3 LOW PRESSURE CORE COOLING SYSTEMS

##### 3/4.5.3.1 CORE SPRAY SYSTEM

The core spray system (CSS) is provided to assure that the core is adequately cooled following a loss-of-coolant accident. Two subsystems provide adequate core cooling capacity for all break sizes from 0.2 ft<sup>2</sup> up to and including the double-ended reactor recirculation line break, and for smaller breaks following depressurization by the ADS.

The CSS specifications are applicable during all OPERATIONAL CONDITIONS because the CSS is a primary source of emergency core cooling after the reactor vessel is depressurized and to provide a source for flooding of the core in case of accidental draining.

When in CONDITION 1, 2 or 3 with one CSS subsystem inoperable, the OPERABILITY of the redundant full capacity CSS subsystem and the full capacity low pressure coolant injection mode of the RHR system provides assurance of adequate core cooling and justifies the specified 7 day out-of-service period.

When in CONDITION 4 or 5 with neither CSS subsystem OPERABLE, prohibition of all operations which have a potential for draining the reactor vessel minimizes the probability of emergency core cooling being required. The required OPERABILITY of both LPCI subsystems or, in CONDITION 5 only, requiring the reactor vessel to be flooded with the fuel pool gates removed, provides assurance of adequate core flooding and the restrictions on operations are not applicable.

The surveillance requirements provide adequate assurance that the CSS will be OPERABLE when required. Although all active components are testable and full flow can be demonstrated by recirculation during reactor operation, a complete functional test requires reactor shutdown. The pump discharge piping is maintained full to prevent water hammer damage to piping and to start cooling at the earliest moment.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
SUPPORTING AMENDMENT NO. 111 TO FACILITY OPERATING LICENSE NO. DPR-57  
AND AMENDMENT NO. 50 TO FACILITY OPERATING LICENSE NO. NPF-5

GEORGIA POWER COMPANY  
OGLETHORPE POWER CORPORATION  
MUNICIPAL ELECTRIC AUTHORITY OF GEORGIA  
CITY OF DALTON, GEORGIA

EDWIN I. HATCH NUCLEAR PLANT, UNITS NOS. 1 AND 2

DOCKETS NOS. 50-321 AND 50-366

1.0 INTRODUCTION

By letter dated September 5, 1984, Georgia Power Company (the licensee) submitted an application for amendments to Facility Operating Licenses Nos. DPR-57 and NPF-5 for the Edwin I. Hatch Nuclear Plant, Units Nos. 1 and 2. The proposed amendments would modify the Technical Specifications (TSs) to add leak rate limits and test requirements for the automatic depressurization system.

2.0 BACKGROUND AND EVALUATION

By letter dated September 2, 1983, the NRC staff issued its Safety Evaluation (SE) on the licensee's responses to NUREG-0737, Item II.K.3.28, concerning the qualification of accumulators for automatic depressurization system (ADS) valves. This September 2, 1983, SE found the licensee's responses to be acceptable. The bases for this finding of acceptability included the licensee's commitment to prepare TSs requiring leak testing of all ADS accumulator systems at least once per operating cycle and the licensee's stated allowable leak rate criteria.

By letter dated September 5, 1984, the licensee submitted proposed TSs to implement this leak rate testing frequency and allowable leak rate criteria. We have found that the proposed TSs are consistent with the earlier commitment and conclude that they are acceptable.

3.0 ENVIRONMENTAL CONSIDERATIONS

The amendments involve a change in surveillance requirements. We have 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

We have 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 the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Dated: August 5, 1985

Principal Contributor: R. Wright