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Docket No. 50-321

Georgia Power Company & Oglethorpe Electric
Membership Corporation
ATTN: Mr. I. S. Mitchell, III
Vice President & Secretary
Georgia Power Company
Atlanta, Georgia 30302

Gentlemen:

The Commission has issued the enclosed Amendment No. 17 to Facility Operating License No. DPR-57 for the Edwin I. Hatch Nuclear Plant Unit 1. The amendment also incorporates Change No. 17 in the Technical Specifications in accordance with your application dated April 10, 1975 and supplement dated August 25, 1975.

This amendment modifies the Technical Specifications to decrease the minimum required residual heat removal service water (RHRSW) system developed pump head from 960 feet to 938 feet at the required delivery rate of 4000 gallons per minute (gpm).

Copies of the Safety Evaluation and the Federal Register Notice are also enclosed.

Sincerely,

George Lear, Chief
Operating Reactors Branch #3
Division of Reactor Licensing

Enclosures:

- 1. Amendment No. 17
- 2. Safety Evaluation
- 3. Federal Register Notice

cc w/encls:
See next page

OFFICE →	RL:ORB-3	RL:ORB-3	OELD	RL:ORB-3		
X7872 NAME →	CParrish	JGuibert	M. Wman	GLear		
DATE →	9/23/75	9/24/75	9/1/75	10/3/75		

Georgia Power Company &
Oglethorpe Electric Membership Corporation

cc: w/enclosures

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

GEORGIA POWER COMPANY
OGLETHORPE ELECTRIC MEMBERSHIP CORPORATION

DOCKET NO. 50-321

EDWIN I. HATCH NUCLEAR PLANT UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 17
License No. DPR-57

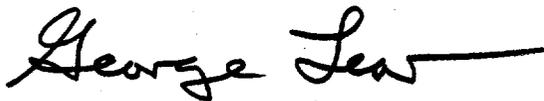
1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Georgia Power Company and Oglethorpe Electric Membership Corporation (the licensees) dated April 10, 1975, and supplement dated August 25, 1975, comply with the standards and requirements of the 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; and
 - 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.
2. Accordingly, the license is amended by a change to the Technical Specifications as indicated in the attachment to this license amendment and Paragraph 2.C.(2) of Facility License No. DPR-57 is hereby amended to read as follows:

"(1) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised, are hereby incorporated in the license. The licensees shall operate the facility in accordance with the Technical Specifications, as revised by issued changes thereto through Change No. 17".

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



George Lear, Chief
Operating Reactors Branch #3
Division of Reactor Licensing

Attachment:
Change No. 17 to the
Technical Specifications

Date of Issuance: OCT 6 1975

ATTACHMENT TO LICENSE AMENDMENT NO. 17
CHANGE NO. 17 TO THE TECHNICAL SPECIFICATIONS
FACILITY OPERATING LICENSE NO. DPR-57
DOCKET NO. 50-321

Replace page 3.5-5 with the attached revised page. No change has been made on page 3.5-6.

LIMITING CONDITIONS FOR OPERATIONSURVEILLANCE REQUIREMENTS3.5.B.3. Shutdown Requirements

If Specification 3.5.B.1.a or 3.5.B.2 cannot be met, the reactor shall be placed in the Cold Shutdown Condition within 24 hours.

C. RHR Service Water System1. Normal System Availability

The RHR service water system shall be operable:

- a. Prior to reactor startup from a Cold Condition, or
- b. when irradiated fuel is in the reactor vessel and the reactor vessel pressure is greater than atmospheric pressure except as stated in Specification 3.5.C.2.
- c. when irradiated fuel is in the reactor vessel and the reactor is depressurized at least one RHR service water loop shall be operable.

2. One Pump Inoperable

If one RHR service water pump is inoperable the reactor may remain in operation for a period not to exceed thirty (30) days provided all other active components of both subsystems are operable.

4.5.C. RHR Service Water System1. Normal Operational Tests

RHR service water system testing shall be performed as follows:

<u>Item</u>	<u>Frequency</u>
a. Pump & Valve Operability	Once/3 months
b. Pump Capacity Test: Each RHR service water pump shall deliver at least 4000 gpm at a system head of at least 938 feet.	After pump maintenance and once/3 months

2. One Pump Inoperable

When one RHR service water pump is inoperable the remaining active components of both RHR subsystems shall be demonstrated to be operable immediately. The operable RHR service water pumps shall be demonstrated to be operable daily thereafter until the inoperable pump is returned to normal service.

5.C.3. Two Pumps Inoperable

If two RHR service water pumps are inoperable, the reactor may remain in operation for a period not to exceed seven (7) days provided all redundant active components in both of the RHR service water subsystems are operable.

4. Shutdown Requirements

If Specifications 3.5.C cannot be met, the reactor shall be placed in the Cold Shutdown Condition within 24 hours.

D. High Pressure Coolant Injection (HPCI) System

1. Normal System Availability

a. The HPCI System shall be operable:

- (1) Prior to reactor startup from a cold condition, or
- (2) when irradiated fuel is in the reactor vessel and the reactor pressure is greater than 113 psig, except as stated in Specification 3.5.D.2.

4.5.C.3. Two Pumps Inoperable

When two RHR service water pumps are inoperable, the remaining operable RHR service water subsystems and their associated diesel generators shall be demonstrated to be operable immediately and daily thereafter for seven (7) days or until the inoperable components are returned to normal operation.

D. High Pressure Coolant Injection (HPCI) System

1. Normal Operational Tests

HPCI system testing shall be performed as follows:

<u>Item</u>	<u>Frequency</u>
a. Simulated Automatic Actuation Test	Once/Operating Cycle
b. Flow rate at normal reactor vessel operating pressure and Flow rate at 150 psig reactor pressure	Once/3 months Once/Operating Cycle

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 17 TO LICENSE NO. DPR-57

(CHANGE NO. 17 TO THE TECHNICAL SPECIFICATIONS)

GEORGIA POWER COMPANY AND
OGLETHORPE ELECTRIC MEMBERSHIP CORPORATION

EDWIN I. HATCH NUCLEAR PLANT UNIT 1

DOCKET NO. 50-321

Introduction

By letter dated April 10, 1975, and by a supplemental letter dated August 25, 1975, Georgia Power Company (GPC) requested an amendment to Facility Operating License No. DPR-57 for Edwin I. Hatch Nuclear Plant Unit 1. The proposed amendment modifies the Technical Specifications, 4.5.C.1(b), to decrease the minimum required residual heat removal service water (RHRSW) system developed pump head from 960 feet to 938 feet at the required delivery rate of 4000 gallons per minute (gpm).

Discussion

Four RHRSW system pumps, arranged in two trains of 2 pumps each, supply cooling water to the tube side of the 2 residual heat removal (RHR) system heat exchangers. The RHR system heat exchangers are designed for a service water flow rate of 8000 gpm, which corresponds to 4000 gpm from each of the two RHRSW system pumps assigned per RHR system heat exchanger.

Since the shell side of the RHR system heat exchangers contains radioactivity contaminated water, RHRSW system pressure must be sufficient to ensure that leakage from the shell side to the tube side would not occur in the event of a heat exchanger tube leak. This is necessary to prevent leakage of radioactive material to the RHRSW system and, subsequently, to the river.

Evaluation

Technical Specification 4.5.C.1(b) requires that, after pump maintenance and once every three months, each RHRSW system pump be tested to confirm that it delivers at least 4000 gpm at a system head of at least 960 feet. The licensee has proposed that the pump head requirement be changed to 938 feet.

Each RHRSW system pump was designed to deliver 4000 gpm against a head of 955 feet. These design values for pressure and flow rate were established in a conservative manner to ensure a wide margin above actual system requirements. The system head that each RHRSW pump must pump against when both pumps are delivering a total of 8000 gpm is 938 feet. Adequate margin between pump design head and actual system head at the design flow rate was built into the RHRSW pumps to account for the expected reduction in pump head with normal pump wear.

The current Technical Specification establishes RHRSW pump performance requirements which are more demanding than the pump design performance characteristics. As a result, the requirements of the current Technical Specifications could result in RHRSW pumps being declared inoperable at a time when they are actually operating at conditions which fulfill their design function. The proposed requirement of 938 feet developed pump head at a 4000 gpm delivery rate would allow for expected changes in the operating characteristics of the RHRSW pump during its inservice lifetime, while, at the same time, enduring that the RHRSW system cooling capacity is maintained.

The maximum pressure in the RHR heat exchanger shell would occur when the RHR system is operated in the normal shutdown cooling mode at the maximum allowable reactor vessel pressure of 150 psig for that mode of operation. The maximum RHR heat exchanger shell pressure in this situation would be 326 psig. In order to preclude leakage of radioactively contaminated water from the shell to the tube side of the RHR heat exchanger in the event of a tube leak, a minimum pressure differential of 20 psig between the tube outlet and shell side inlet is required. Therefore, the minimum RHRSW pump discharge pressure must be equal to 346 psig, plus a pressure differential to account for elevation differences and pipe losses between the RHRSW pump and the RHR heat exchanger. It has been calculated that this minimum required RHRSW pump discharge pressure is 387 psig.

With the proposed minimum RHRSW pump discharge head of 938 feet, the corresponding minimum pump discharge pressure would be 405 psig and the minimum differential pressure in the RHR heat exchanger would be 38 psig. Therefore, a sufficient margin of safety would exist to prevent radioactive

contamination of the RHRSW system in the event of an RHR heat exchanger tube leak.

Summary

We conclude from the above that operation with a minimum RHRSW pump head of 938 feet at a 4000 gpm delivery rate will ensure that (1) RHRSW system cooling capacity is maintained as designed, and (2) sufficient differential pressure exists in the RHR heat exchanger to preclude leakage of radioactively contaminated water into the RHRSW system in the event of an RHR heat exchanger tube leak.

CONCLUSION

We have concluded, based on the considerations discussed above, that: (1) because the change does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant decrease in a safety margin, the change does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) 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.

Date: OCT 6 1975

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-321

GEORGIA POWER COMPANY
OGLETHORPE ELECTRIC MEMBERSHIP CORPORATION

NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY
OPERATING LICENSE

Notice is hereby given that the U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 17 to Facility Operating License No. DPR-57 issued to Georgia Power Company and Oglethorpe Electric Membership Corporation (the licensees) which revised Technical Specifications for operation of the Edwin I. Hatch Nuclear Plant Unit 1 (the facility), located in Appling County, Georgia. The amendment is effective as of its date of issuance.

The amendment modifies the Technical Specifications to decrease the minimum required residual heat removal service water (RHRSW) system developed pump head from 960 feet to 938 feet at the required delivery rate of 4000 gallons per minute (gpm).

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. Prior public notice of this amendment is not required since the amendment does not involve a significant hazards consideration.

For further details with respect to this action, see (1) the application for amendment dated April 10, 1975, with supplement submitted August 25, 1975, (2) Amendment No. 17 to License No. DPR-57, with Change No. 17 and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N. W., Washington, D. C., and at the Appling County Public Library, Parker Street, Baxley, Georgia 31513.

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 Licensing.

Dated at Bethesda, Maryland, this *6th* day of *October*, 1975.

FOR THE NUCLEAR REGULATORY COMMISSION



George Lear, Chief
Operating Reactors Branch #3
Division of Reactor Licensing