FEB 3 1976

Docket No. 50-321

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

Gentlemen:

The Commission has issued the enclosed Amendment No. 28 to Facility Operating License No. DPR-57 for the Edwin I. Hatch Nuclear Plant Unit 1. This amendment includes a change to the Technical Specifications based on our letters to you dated September 23, 1975 and December 8, 1975. During our review of your letter of October 13, 1975, a modification of the proposed specification change was discussed with your staff and was found to be mutually acceptable.

This amendment revises the Technical Specifications to add requirements that would limit the period of time operation can be continued with immovable control rods that could have control rod drive mechanism collet housing failures.

We have evaluated the potential for environmental impact of plant operation in accordance with the enclosed amendment and have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level, and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and pursuant to 10 CFR §51.5(d)(4) that an environmental statement, negative declaration or environmental impact appraisal need not be prepared in connection with the issuance of this amendment. We have also concluded that there is reasonable assurance that the health and safety of the public will not be endangered by this action.

OFFICE ➤						
SURNAME ➤						
DATE ➤						

A copy of the related Federal Register Notice is also enclosed. Our Safety Evaluation relating to this action was forwarded to you with our letter dated September 23, 1975.

Sincerely,

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

Enclosure:
1. Amendment No. 28 to License DPR-57
2. Federal Register Notice

cc: w/enclosures
See next page

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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. 28
License No. DPR-57

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. 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

   B. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

   C. The facility will operate in conformity with the provisions of the Act, and the rules and regulations of the Commission; and

   D. An environmental statement or negative declaration need not be prepared in connection with the issuance of this amendment.

2. Accordingly, the license is amended by a change to the Technical Specifications as indicated in the attachment to this license amendment.

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

FOR THE NUCLEAR REGULATORY COMMISSION

Karl R. Goller

Karl R. Goller, Assistant Director
for Operating Reactors
Division of Operating Reactors

Attachment:
Change to the Technical
Specifications
Date of Issuance: February 3, 1976

ATTACHMENT TO LICENSE AMENDMENT NO. 28

FACILITY OPERATING LICENSE NO. DPR-57

DOCKET NO. 50-321

Add page 3.3-1a. Replace pages 3.3-2 and 3.3-9 with new pages. No changes have been made on page 3.3-1 and page 3.3-10.

3.3 REACTIVITY CONTROL

Applicability

The Limiting Conditions for Operation associated with reactivity control apply to the operational status of the control rod system.

Objective

The objective of the Limiting Conditions for Operation is to assure the ability of the control rod system to control reactivity.

Specifications

A. Core Reactivity Margin

A sufficient number of control rods capable of insertion shall always be available so that when fully inserted, the core is subcritical for any reactivity condition during the operating cycle, with the highest worth control rod capable of withdrawal fully withdrawn.

B. Inoperable Control Rods

1. No Movement by Control Rod Drive Pressure

Control rod drives which cannot be moved with control rod drive pressure shall be considered inoperable. Control rod drives falling within this category shall have their directional control valves disarmed electrically and the associated rod positions shall be accounted for in complying with specification 3.3.A.

4.3 REACTIVITY CONTROL

Applicability

The Surveillance Requirements associated with reactivity control apply to the control rod system.

Objective

The objective of the Surveillance Requirements is to verify the ability of the control rod system to control reactivity.

Specifications

A. Core Reactivity Margin

A sufficient number of analytically selected control rods shall be withdrawn following initial fuel loading or any refueling outage when core alterations are made to demonstrate with a margin of 0.38% Δk that the core can be made subcritical for any reactivity condition during the subsequent operating cycle with the analytically determined, highest worth control rod capable of withdrawal, fully withdrawn, and all other control rods capable of insertion fully inserted.

B. Operable Control Rod Exercise Requirements

Each partially or fully withdrawn operable control rod shall be exercised one notch at least once each week when operating above 30% rated thermal power. In the event power operation is continuing with three or more inoperable control rods, this test shall be performed at least once each day when operating above 30% rated thermal power.

Amendment No. 28
Dated: February 3, 1976

B. Inoperable Control Rods (Cont'd)

1. No Movement by Control Rod Drive Pressure (Cont'd)

If a partially or fully withdrawn control rod drive cannot be moved with drive or scram pressure, the reactor shall be brought to the Cold Shutdown condition within 24 hours and shall not be started unless (1) investigation has demonstrated that the cause of the failure is not a failed control rod drive mechanism collet housing, and (2) adequate shutdown margin has been demonstrated as required by Specification 4.3.B.

If investigation demonstrates that the cause of control rod drive failure is a cracked collet housing or if that possibility cannot be eliminated, the reactor shall not be started until the affected control rod drive has been replaced or repaired.

Amendment No. 28
Dated: February 3, 1976

3.3.B.2 Excessive Scram Time

Control rods with a scram insertion time for 90% insertion which exceeds 7.00 seconds shall be considered inoperable, but if they can be moved with control rod drive pressure, they need not be fully inserted or disarmed electrically.

3.3.B.3 Inoperable Accumulators

Control Rods with inoperable accumulators or those whose position cannot be positively determined shall be considered inoperable

4. Limiting Number of Inoperable Control Rods

During reactor power operation, no more than one control rod in any 5 x 5 array may be inoperable (at least 4 operable control rods must separate any 2 inoperable ones). If this Specification cannot be met the reactor shall not be started, or if at power, the reactor shall be brought to a shutdown condition within 24 hours.

C. Control Rod Drive System

1. Control Rod Drive Coupling Integrity

Each control rod shall be coupled to its drive or completely inserted and its directional control valves disarmed electrically except during control rod drive maintenance as stated in Specification 3.10.E.

4.3.B Operable Control Rod Exercise Requirements (Cont'd)

When it is initially determined that a control rod is incapable of normal insertion, an attempt to fully insert the control rod shall be made. If the control rod cannot be fully inserted the reactor shall be brought to the Cold Shutdown Condition within 24 hours and a shutdown margin test made to demonstrate under this condition that the core can be made subcritical for any reactivity condition during the remainder of the operating cycle with the analytically determined, highest worth control rod capable of withdrawal, fully withdrawn, and all other control rods capable of insertion fully inserted.

Once per week, check the status of the pressure and level alarm for each accumulator.

4.3.C. Control Rod Drive System

1. Control Rod Drive Coupling Integrity

The coupling integrity shall be verified for each withdrawn control rod as follows:

a. When the rod is withdrawn the first time after each refueling outage or after maintenance, observe discernible response of the nuclear instrumentation and rod position indication including where applicable the "full-in" and "full-out" position. However, for initial rods when response is not discernible, subsequent exercising of these rods after the reactor is above 30% power shall be performed to verify instrumentation response.

Amendment No. 28
Dated: February 3, 1976

B. Control Rods

Limiting Conditions for Operation:

Specification 3.3.B.1 requires that a rod which cannot be moved with drive pressure be taken out of service by being disarmed electrically. To disarm the drive electrically, four amphenol type plug connectors are removed from the drive insert and withdrawal solenoids rendering the rod incapable of withdrawal. This procedure is equivalent to valving out the drive and is preferred because, in this condition, drive water cools and minimizes crud accumulation in the drive. Electrical disarming does not eliminate position indication. If the rod is fully inserted and disarmed electrically, it is in a safe position of maximum contribution to shutdown reactivity. If it is disarmed electrically in a non-fully inserted position, that position shall be consistent with the shutdown reactivity limitation stated in Specification 3.3.A. This assures that the core can be shutdown at all times with the remaining control rods assuming the highest worth operable control rod does not insert. An allowable pattern for control rods disarmed electrically, which shall meet this Specification, will be determined and made available to the operator. Also if damage within the control rod drive mechanism and in particular, cracks in drive internal housing, cannot be ruled out, then a generic problem affecting a number of drives cannot be ruled out. Circumferential cracks resulting from stress assisted intergranular corrosion have occurred in the collet housing of drives at several BWRs. This type of cracking could occur in a number of drives and if the cracks propagated until severance of the collet housing occurred, scram could be prevented in the affected rods. Limiting the period of operation with a potentially severed collet housing will assure that the reactor will not be operated with a large number of rods with failed collet housings.

Surveillance Requirements:

The weekly control rod exercise test serves as a periodic check against deterioration of the control rod system and also verifies the ability of the control rod drive to scram, since, if a rod can be moved with drive pressure, it will scram because of higher pressure applied during scram. The frequency of exercising the control rods under the conditions of three or more inoperable rods provides even further assurance of the reliability of the remaining control rods. The checks are done at power levels greater than 30% rated thermal power to clear the RWM and RSCS interlocks.

3.3.C. Control Rod Drive System

1. Control Rod Drive Coupling Integrity

Limiting Conditions for Operation:

Operability of the control rod drive system requires that the drive be coupled to the control rod. In the analysis of control rod drop accidents (FSAR subsection 14.4.3), it has been assumed that one control rod drive coupling has lost its integrity. To assure that not more than one coupling could be in this condition, it is required that either a drive is coupled to the control rod or the drive is fully inserted and disarmed electrically. This requirement serves to maintain operation within the envelope of conditions considered by the plant safety analyses.

Surveillance Requirements:

Observation of a response from the nuclear instrumentation during an attempt to withdraw a control rod provides an indication that the rod is following the drive. The overtravel position feature provides a positive check on the coupling integrity, for only an uncoupled drive can reach the overtravel position.

2. Scram Insertion Times

Limiting Conditions for Operation:

The control rod drive system is designed to bring the reactor subcritical at a rate fast enough to prevent excessive fuel damage. The limiting power transient is that resulting from a loss of condenser vacuum (FSAR Appendix G, Event 12, turbine stop-value closure with closure of the turbine bypass system). Analysis of the transient shows that the negative reactivity rates resulting from the scram with the average response of all the drives as given in the specification provide the required protection and MCHFR remains greater than 1.0. The limit on the number and pattern of rods permitted to have long scram times is specified to assure that the effect of rods of long scram times are minimized in regard to reactivity insertion rate. Grouping of long scram time rods is prevented by not permitting more than one slow rod in any four rod array. The minimum amount of reactivity to be inserted during a scram is controlled by permitting no operable control rod to have a scram insertion time for 90% insertion greater than 7 seconds.

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-321

GEORGIA POWER COMPANY AND
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. 28 to Facility Operating License No. DPR-57, 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.

This amendment revises the Technical Specifications to add requirements that would limit the period of time operation can be continued with immovable control rods that could have control rod mechanism collet housing failures.

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 the Proposed Issuance of Amendment to Facility Operating License in connection with this action was published in the FEDERAL REGISTER on December 18, 1975 (40 F.R. 58701). No request for a hearing or petition for leave to intervene was filed following notice of the proposed action.

The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant to 10 CFR §51.5(d)(4) an environmental statement, negative declaration or environmental impact appraisal need not be prepared in connection with issuance of this amendment.

For further details with respect to this action, see (1) the Commission's letters to Georgia Power Company and Oglethorpe Electric Membership Corporation dated September 23, 1975 and December 8, 1975, (2) the letter from Georgia Power Company to the Commission dated October 13, 1975, (3) Amendment No. 28 to License No. DPR-57, and (4) the Commission's related Safety Evaluation issued on September 23, 1975. 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 single copy of items (1), (3) and (4) 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 3rd day of February, 1976.

FOR THE NUCLEAR REGULATORY COMMISSION

George Lear

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