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Docket No. 50-321

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

Gentlemen:

The Commission has issued the enclosed Amendment No. 12 to Facility Operating License No. DPR-57 for the Edwin I. Hatch Nuclear Plant Unit 1. The amendment also incorporates Change No. 12 in the Technical Specifications in accordance with your application dated February 3, 1975.

The amendment permits the low pressure core and containment cooling systems to be inoperable provided that the reactor is in the cold shutdown condition and no work is being done that has the potential for draining the reactor pressure vessel.

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. 12
2. Safety Evaluation
3. Federal Register Notice

	(1)	(2)	(4)	(3)	(5)	(6)
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Georgia Power Company &
Oglethorpe Electric Membership Corporation

cc: w/enclosures

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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. 12
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 February 5, 1975, 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; 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.(1) 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. 14"

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

FOR THE NUCLEAR REGULATORY COMMISSION

A. Giambusso, Director
Division of Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Change No. 12
Technical Specifications

Date of Issuance: AUG 1 1975

ATTACHMENT TO LICENSE AMENDMENT NO. 12

CHANGE NO. 12 TO THE TECHNICAL SPECIFICATIONS

FACILITY OPERATING LICENSE NO. DPR-57

DOCKET NO. 50-321

Replace pages 3.5-1, 3.5-3, 3.5-10, 3.5-11, 3.5-15 and 3.5-18 with the attached revised pages.

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS

3.5. CORE AND CONTAINMENT COOLING SYSTEMS

Applicability

The Limiting Conditions for Operation apply to the operational status of the core and containment cooling systems.

Objective

The objective of the Limiting Conditions for Operation is to assure the operability of the core and containment cooling systems under all conditions for which this cooling capability is an essential response to plant abnormalities.

Specifications

A. Core Spray (CS) System

1. Normal System Availability

a. The CS 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 atmospheric pressure, except as stated in Specification 3.5.A.2.

12

4.5. CORE AND CONTAINMENT COOLING SYSTEMS

Applicability

The Surveillance Requirements apply to the core and containment cooling systems when the corresponding limiting conditions for operation are in effect.

Objective

The objective of the Surveillance Requirements is to verify the operability of the core and containment cooling systems under all conditions for which this cooling capability is an essential response to plant abnormalities.

Specifications

A. Core Spray (CS) System

1. Normal Operational Tests

CS system testing shall be performed as follows:

	Item	Frequency
a.	Simulated Automatic Actuation Test	Once/Operating Cycle
b.	System flow rate: Each loop shall deliver at least 4625 gpm against a system head of at least 113 psig.	Once/3 months
c.	Pump Operability	Once/month
d.	Motor Operated Valve Operability	Once/month

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS

3.5.B.1. Normal System Availability (Continued)

b. One RHR loop with two pumps or two loops with one pump per loop shall be operable in the shutdown cooling mode when irradiated fuel is in the reactor vessel and the reactor pressure is atmospheric except prior to a reactor startup as stated in Specification 3.5.B.1.a. 12

c. The reactor shall not be started up with the RHR system supplying cooling to the fuel pool.

4.5.B.1. Normal Operational Tests (Continued)

Item	Frequency
b. Simulated Automatic Actuation Test	Once/Operating Cycle
c. System flow rate: Three RHR pumps shall deliver at least 23,000 gpm against a system head of at least 20 psig.	Once/3 months
d. Pump Operability	Once/month
e. Motor Operated valve operability	Once/month

2. Operation with Inoperable Components

a. One Pump Inoperable

If one RHR pump is inoperable, the reactor may remain in operation for a period not to exceed thirty (30) days provided the remaining RHR pumps, access paths of the RHR system, the CS system, and the diesel generators are operable.

2. Surveillance with Inoperable Components

a. One Pump Inoperable

When one RHR pump is inoperable, the remaining RHR pumps and active components in access paths of the diesel generators shall be demonstrated to be operable immediately. The operable RHR system pumps shall be demonstrated to be operable daily thereafter until the inoperable pump is returned to normal service.

3.5.G Minimum Core and Containment Cooling Systems Availability

During any period when one of the standby diesel generators is inoperable, continued reactor operation is limited to seven (7) days unless operability of the diesel generator is restored within this period. During such seven (7) days all of the components in the RHR system LPCI mode and containment cooling mode shall be operable. If this requirement cannot be met, an orderly shutdown shall be initiated and the reactor shall be in the Cold Shutdown Condition within 24 hours. Specification 3.9 provides further guidance on electrical system availability.

Any combination of inoperable components in the core and containment cooling systems shall not defeat the capability of the remaining operable components to fulfill the core and containment cooling functions.

12 When irradiated fuel is in the reactor vessel and the reactor is in the Cold Shutdown Condition, both core spray systems and the LPCI and containment cooling subsystems of the RHR system may be inoperable provided that the shutdown cooling subsystem of the RHR system is operable in accordance with Specification 3.5.B.1.b and that no work is being done which has the potential for draining the reactor vessel.

H. Maintenance of Filled Discharge Pipes

Whenever the core spray system, LPCI, HPCI, or RCIC are required to be operable, the discharge piping from the pump discharge of these systems to the last block valve shall be filled. The suction of the HPCI pumps shall be aligned to the condensate storage tank.

4.5.G Surveillance of Core and Containment Cooling Systems

When it is determined that one of the standby diesel generators is inoperable, the remaining diesels and all of the components in the RHR system LPCI mode and containment cooling mode connected to the operable diesel generators shall be demonstrated to be operable immediately and daily thereafter.

H. Maintenance of Filled Discharge Pipes

The following surveillance requirements shall be performed to assure that the discharge piping of the core spray system, LPCI, HPCI, and RCIC are filled when required:

1. Every month prior to the testing of the LPCI and core spray systems, the discharge piping of these systems shall be vented

4.5.H.1. Maintenance of Filled Discharge Pipes (Cont...)

from the high point and water flow observed.

2. Following any period where the LPCI or core spray systems have not been required to be operable, or have been inoperable the discharge piping of the system or systems being returned to service shall be vented from the high point prior to return of the system to service.

3. Whenever the HPCI or RCIC system is lined up to take suction from the condensate storage tank, the discharge piping of the HPCI and RCIC shall be vented from the high point of the system and water flow observed on a monthly basis.

4. The pressure switches which monitor the discharge lines shall be functionally tested every month and calibrated every three months.

3.5.I. Minimum River Flow

If the river water level should reach the level of 62.4 feet (MSL) the discharge from each plant service water pump will be throttled such that maximum flow from each pump does not exceed 8400 gpm. If the river water level continues to decrease and reaches the low level of 61.7 feet (MSL) an orderly shutdown of the reactor should be initiated and the reactor shall be in the Cold Shutdown Condition within 24 hours until the level exceeds 61.7 feet (MSL).

I. Minimum River Flow

The river water level shall be verified with the following frequencies:

	Level (MSL)	Frequency
1.	>63.0 feet	Biweekly
2.	63.0-62.5 feet	Biweekly
3.	<62.5 feet	Every 12 hrs

Observation of the stated requirements for the containment cooling mode assures that the suppression pool and the drywell will be sufficiently cooled, following a loss-of-coolant accident, to prevent primary containment overpressurization. The containment cooling function of the RHR system is permitted only after the core has reflooded to the two-thirds core height level. This prevents inadvertently diverting water needed for core flooding to the less urgent task of containment cooling. The two-thirds core height level interlock may be manually bypassed by a keylock switch.

The intent of the RHR system specifications is to prevent operation above atmospheric pressure without all associated equipment being operable. However, during operation, certain components may be out of service for the specified allowable repair times. The allowable repair times have been selected using engineering judgment based on experiences and supported by availability analysis. Assurance of the availability of the remaining systems is increased by demonstrating operability immediately and by requiring selected testing during the outage period.

When the reactor vessel pressure is atmospheric, the limiting conditions for operation are less restrictive. At atmospheric pressure, the minimum requirement is for one supply of makeup water to the core. 1

2. Operation with Inoperable Components

a. One Pump Inoperable

Should one RHR pump become inoperable, a full complement of redundant core cooling equipment is still available. Because of the availability of a full complement of redundant core cooling equipment, which is demonstrated to be operable immediately and with specified system surveillance, a 30-day repair period is justified.

b. Two Pumps Inoperable

An RHR subsystem consists of two parallel RHR pumps and the associated piping and valves through which suppression pool water is pumped either into the vessel (LPCI mode) or into the containment or suppression pool (containment cooling mode). Should an RHR subsystem become inoperable, the remaining RHR subsystem LPCI mode and the CS system would provide adequate post accident core cooling and the remaining RHR subsystem containment cooling mode would ensure adequate post accident containment cooling. Because the CS system, the remaining RHR subsystem, and diesel generators are demonstrated to be operable immediately and with specified subsequent performance, a seven (7) day repair period is justified.

F.1. Normal System Availability (Continued)

Specification 3.6.D 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. Performance analysis of the automatic depressurization system is considered only with respect to its depressurizing effect in conjuction with LPCI or core spray and is based on five valves. There are seven valves connected to the ADS circuitry. Since credit was taken for only five in the performance evaluation of the ADS, it is appropriate that one valve may be out indefinitely without appreciably lowering the probability that the system will perform satisfactorily.

2. Operation With Inoperable Components

With two ADS valves known to be incapable of automatic operation (only one of these may be failed in a way that negates the pressure relief function as stated in Specification 3.6.D) five valves remain operable to perform their ADS function. However, because of the difficulty in proving the operability of the ADS function (actuation of the ADS for testing would cause an unnecessary system blowdown), Reactor operation is only allowed to continue for thirty (30) days providing the HPCI is demonstrated to be operable and the actuation logic of the five ADS remaining 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. 12

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 12 TO LICENSE NO. DPR-57

(CHANGE NO. 12 TO THE TECHNICAL SPECIFICATIONS)

GEORGIA POWER COMPANY
&
OGLETHORPE ELECTRIC MEMBERSHIP CORPORATION

EDWIN I. HATCH NUCLEAR PLANT UNIT 1

DOCKET NO. 50-321

Introduction

By letter dated February 3, 1975, Georgia Power Company requested changes to the Technical Specifications appended to Facility Operating License No. DPR-57 for the Edwin I. Hatch Nuclear Plant Unit 1 (Hatch 1). Georgia Power Company requested a change that would permit the low pressure core and containment cooling systems to be inoperable provided that the reactor is in the cold shutdown condition and no work is being done that has the potential for draining the reactor pressure vessel. Selected modifications to the proposed change were made with mutual concurrence between the NRC staff and the licensee.

Discussion

The licensee has requested the Technical Specification change relating to the inoperability of the core and containment cooling systems in order that, under certain conditions, the pressure suppression pool can be drained to permit inspection and maintenance of the torus containment and related structures. The suppression pool is an integral part of the core standby cooling systems since it provides a primary source of cooling water for the core and containment cooling systems. Any significant repair or maintenance work on the torus would necessitate the draining of the suppression pool water; the present Technical Specifications do not discuss this activity. Therefore, in anticipation of future maintenance work, the licensee has requested that pertinent controls for this activity be addressed specifically in the Technical Specifications.

Evaluation

The licensee has requested the authority to permit the low pressure core and containment cooling systems to be inoperable provided that the reactor is in the cold shutdown contition and no work is being done that has the potential for draining the reactor pressure vessel. In the cold shutdown

condition, the shutdown cooling subsystem of the Residual Heat Removal (RHR) System removes the radioactive decay heat from the reactor by circulating reactor water through RHR heat exchangers. After the initial decay heat levels have subsided, the RHR shutdown cooling subsystem is capable of maintaining the reactor water temperature below 125°F using only one of the two available RHR heat exchangers. In the event of a coolant line break during the cold shutdown condition that would require a backup or external cooling water supply for core cooling, there is a provision via crosstie lines between the RHR service water system and the RHR system for supplying an adequate amount of cooling water to the core from either one of two RHR service water supply subsystems. Therefore, in the cold shutdown condition, adequate supplies of reactor cooling water, which are independent of the low pressure core and containment cooling systems, are available.

In addition, a proviso has been included which establishes conditions to minimize the risk of loss of reactor core cooling water: while the core and containment cooling systems are inoperable at cold shutdown conditions, no work will be done which will have the potential for draining the reactor pressure vessel.

The authority granted in this Technical Specification change presently exists for several operating plants. Considering this fact and the other considerations discussed above, we find the proposed change to the Technical Specifications acceptable.

Conclusions

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

Dated: AUG 1 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. 12 to Facility Operating License No. DPR-57 issued to Georgia Power Company and Oglethorpe Electric Membership Corporation which revised Technical Specifications for operation of the Edwin I. Hatch Nuclear Plant Unit 1, located in Appling County, Georgia. The amendment is effective as of its date of issuance.

The amendment permits the low pressure core and containment cooling systems to be inoperable provided that the reactor is in the cold shutdown condition and no work is being done that has the potential for draining the reactor pressure vessel.

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 Proposed Issuance of Amendment to Facility Operating License in connection with action was published in the FEDERAL REGISTER on April 17, 1975 (40 F. R. 17203). No request for a hearing or petition for leave to intervene was filed following

notice of the proposed action.

For further details with respect to this action, see (1) the application for amendment dated February 3, 1975, (2) Amendment No. 12 to License No. DPR-57, with Change No. 12 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 AUG 1 1975

FOR THE NUCLEAR REGULATORY COMMISSION

George Lear

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