OCTOBER 1, 1992

Docket Nos. 50-321
and 50-366

Distribution
See next page

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 AMENDMENTS - EDWIN I. HATCH NUCLEAR PLANT, UNITS 1 AND 2 (TACS M84055 AND M84056)

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 183 to Facility Operating License DPR-57 and Amendment No. 123 to Facility Operating License NPF-5 for the Edwin I. Hatch Nuclear Plant, Units 1 and 2.

Your July 17, 1992, application proposed several changes related to shutdown and refueling operations. The amendments approve these changes except for the one related to revising Unit 2 Action statement regarding shutdown cooling operation of the residual heat removal (RHR) service water system. This specific change, as proposed, was found to be nonconservative in that it will reduce the redundancy required for the operability of the RHR service water system which presently exists in the limiting condition of operation for Technical Specification 3.7.1.1. Therefore, this change is unacceptable and is denied.

A copy of the related Safety Evaluation is also enclosed. Also enclosed is a Notice of Partial Denial. A Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

ORIGINAL SIGNED BY:

Kahtan N. Jabbour, Project Manager
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosures:
1. Amendment No. 183 to DPR-57
2. Amendment No. 123 to NPF-5
3. Safety Evaluation
4. Notice of Partial Denial

cc w/enclosures:
See next page

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DOCUMENT NAME: HAT84055.AMD

PDII-3/LA	PDII-3/PM	OTSB/BC	SRXB/BC	OGC	PDII-3/D
LBerry	KJabbour/cw	CGrimes	RJones		DMatthews
9/29/92	9/14/92	9/18/92	9/15/92	9/22/92	10/1/92

not consistent with STS but no technical objection

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

October 1, 1992

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and 50-366

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See next page

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DATED: OCTOBER 1, 1992

AMENDMENT NO. 183 TO EDWIN I. HATCH NUCLEAR PLANT, UNIT 1
AMENDMENT NO. 123 TO EDWIN I. HATCH NUCLEAR PLANT, UNIT 2

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NRC & Local PDRs	
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D. Hagan	MNBB 4702
G. Hill (8)	P1-37
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GPA/PA	17-F-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 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 183
License No. DPR-57

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

   A. The application for amendment to the Edwin I. Hatch Nuclear Plant, Unit 1 (the facility) Facility Operating License No. DPR-57 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 July 17, 1992, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations as 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 set forth in 10 CFR Chapter I;

   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 hereby amended by page 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 Appendix A and B, as revised through Amendment No. 183 , 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 the date of issuance, to be implemented within 60 days from the date 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: October 1, 1992

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 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 123
License No. NPF-5

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

   A. The application for amendment to the Edwin I. Hatch Nuclear Plant, Unit 2 (the facility) Facility Operating License No. NPF-5 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 July 17, 1992, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations as 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 set forth in 10 CFR Chapter I;

   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 hereby amended by page 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 Appendix A and B, as revised through Amendment No. 123 , 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 the date of issuance, to be implemented within 60 days from the date 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: October 1, 1992

ATTACHMENT TO LICENSE AMENDMENT NO. 183

FACILITY OPERATING LICENSE NO. DPR-57

DOCKET NO. 50-321

AND

TO LICENSE AMENDMENT NO. 123

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 vertical lines indicating the areas of change.

	Remove Pages	Insert Pages
Unit 1	1.0-1	1.0-1
	1.0-2	1.0-2
	1.0-5	1.0-5
	3.10-3	3.10-3
	-	3.10-3a
	-	3.10-3b
	3.10-8	3.10-8
Unit 2	IXa	IXa
	XIIIa	XIIIa
	1-2	1-2
	1-11	1-11
	3/4 9-5	3/4 9-5
	3/4 10-5	3/4 10-5
	-	3/4 10-6
	B 3/4 9-1	B 3/4 9-1
	B 3/4 10-1	B 3/4 10-1

1.0 Definitions

The following terms are defined so that a uniform interpretation of these specifications may be achieved.

A. (Deleted)

B. Cold Shutdown Condition - Cold shutdown condition means reactor operation with the Mode Switch in the SHUTDOWN position, coolant temperature ≤ 212°F, and with no core alterations permitted.* The Mode Switch may be placed in the REFUEL position while a single control rod and/or control rod drive is being removed from the core and/or reactor pressure vessel per Specification 3.10.E.3.

*During the performance of inservice hydrostatic or leakage testing with all control rods fully inserted and reactor coolant temperature > 212°F, and/or reactor vessel pressurized, the reactor may be considered to be in the Cold Shutdown Condition for the purpose of determining Limiting Condition for Operation applicability. Note that the Cold Shutdown Condition may be referred to in different ways throughout the Technical Specifications. For example, "reactor subcritical and reactor coolant temperature < 212°F," "irradiated fuel in the reactor vessel and the reactor is depressurized," "reactor water temperature < 212°F and reactor coolant system vented," or "reactor is not pressurized (i.e., ≤ 212°F)" should be interpreted as COLD SHUTDOWN. However, compliance with an ACTION requiring COLD SHUTDOWN shall require a reactor coolant temperature ≤ 212°F. In addition, compliance with the following Specifications is required when performing the hydrostatic or leakage testing under the identified conditions: 3.5.B.1.b, 3.5.C.1.c, 3.6.F.2.d, 3.7.C.1.a(7), 3.9.c, and applicable notes in Table 3.2-1.

C. Core Alteration - Core alteration shall be the movement of any fuel, sources, reactivity control components, or other components affecting reactivity within the reactor vessel with the vessel head removed and fuel in the vessel. Movement of source range monitors, local power range monitors, intermediate range monitors, traversing in-core probes, or special movable detectors (including undervessel replacement) is not considered a core alteration. Suspension of core alterations shall not preclude completion of movement of a component to a safe, conservative position.

D. Design Power - Design power refers to the power level at which the reactor is producing 105 percent of reactor vessel rated steam flow. Design power does not necessarily correspond to 105 percent of rated reactor power. The stated design power in megawatts thermal (MWt) is the result of a heat balance for a particular plant design. For Hatch Nuclear Plant Unit 1 the design power is approximately 2537 MWt.

E. Engineered Safety Features - Engineered safety features are those features provided for mitigating the consequences of postulated accidents, including for example containment, emergency core cooling, and standby gas treatment system.

F. Hot Shutdown Condition - Hot shutdown condition means reactor operation with the Mode Switch in the SHUTDOWN position, coolant temperature greater than 212°F, and no core alterations are permitted.*

G. Hot Standby Condition - Hot standby condition means reactor operation with the Mode Switch in the START & HOT STANDBY position, coolant temperature greater than 212°F, reactor pressure less than 1045 psig, critical.

H. Immediate - Immediate means that the required action shall be initiated as soon as practicable, considering the safe operation of the Unit and the importance of the required action.

I. Instrument Calibration - An instrument calibration means the adjustment of an instrument output signal so that it corresponds, within acceptable range and accuracy, to a known value(s) of the parameter which the instrument monitors.

J. Instrument Channel - An instrument channel means an arrangement of a sensor and auxiliary equipment required to generate and transmit to a trip system a single trip signal related to the plant parameter monitored by that instrument channel.

*During the performance of inservice hydrostatic or leakage testing with all control rods fully inserted and reactor coolant temperature > 212°F, and/or reactor vessel pressurized, the reactor may be considered to be in the Cold Shutdown Condition for the purpose of determining Limiting Condition for Operation applicability. However, compliance with an ACTION requiring COLD SHUTDOWN shall require a reactor coolant temperature ≤ 212°F.

Z. Reactor Pressure - Unless otherwise indicated, a reactor pressure listed in these Technical Specifications is that pressure measured at the reactor vessel steam dome.

AA. Refuel Mode - The reactor is in the Refuel Mode when fuel is in the reactor vessel with the head closure bolts less than fully tensioned or with the head removed. The Mode Switch may be in SHUTDOWN or REFUEL.

BB. Refueling Outage - Refueling outage is the period of time between the shutdown of the Unit prior to a refueling and the startup of the Unit after that refueling.

CC. Run Mode - The reactor is in the Run Mode when the Mode Switch is in the RUN position. In this mode the reactor pressure is at or above 825 psig and the reactor protection system is energized with APRM Scram (excluding the APRM 15% of the flux scram) and APRM rod blocks in service.

DD. Safety Limit - The Safety Limits are limits below which the reasonable maintenance of the physical barriers which guard against the controlled release of radioactivity is assured. Exceeding such a limit requires Unit shutdown and review by the Atomic Energy Commission before resumption of Unit Operation. Operation beyond such a limit may not in itself result in serious consequences, but it indicates an operational deficiency subject to regulatory review.

EE. Secondary Containment Integrity - Secondary containment integrity means that the reactor building is intact and all the following conditions are met:

1. At least one door in each access opening is closed.

2. The standby gas treatment system is operable.

3. All automatic ventilation system isolation valves are operable or are secured in the isolated position.

FF. Shutdown Mode - The reactor is in the Shutdown Mode when the Mode Switch is in the SHUTDOWN position and no core alterations are permitted. When the Mode Switch is placed in the SHUTDOWN position a scram is initiated, power to the control rod drives is removed, and the reactor protection system trip systems are de-energized for two seconds and cannot be reset before ten seconds have elapsed.

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.10.E.1. Requirements for Withdrawal of 1 or 2 Control Rods (Continued)	4.10.E.1. Requirements for Withdrawal of 1 or 2 Control Rods (Continued)
a. performed. All other refueling interlocks shall be operable.	
b. Prior to performing control rod drive maintenance without removing fuel assemblies:	b. Prior to performing control rod drive maintenance without removing fuel assemblies it shall be demonstrated that the core is subcritical by a margin of at least 0.38% ΔK with the highest worth control rod capable of withdrawal fully withdrawn.
(1) A shutdown margin test shall be made as described in Specification 4.10.E.1.b.	
(2) All the control rod drives in the 5 x 5 rod array centered on the control rod or drive undergoing maintenance shall have their directional control valves electrically disarmed.	
2. Requirements for Withdrawal of More Than 2 Control Rods	
Any number of control rods may be withdrawn or removed from the reactor core provided the Mode Switch is locked in the REFUEL position. After the Fuel assemblies in the two by two cell containing the control rod to be withdrawn are removed, the refueling interlock which prevents withdrawal of that control rod may be bypassed. All other interlocks shall be operable.	
3. Requirements for Withdrawal of a Control Rod in the Cold Shutdown Condition	3. Requirements for Withdrawal of a Control Rod in the Cold Shutdown Condition
The Mode Switch may be placed in the REFUEL position while in the Cold Shutdown Condition to allow withdrawal of a single control rod or withdrawal and subsequent removal of the associated control rod drive provided at least the following requirements are met:	For the condition of the Mode Switch being placed in the REFUEL position while in the Cold Shutdown Condition, verify the following:
a. One of the following conditions exist:	a. The applicable surveillances are performed, at the required frequencies, for the LCOs specified in 3.10.E.3.a.1, if credit is being taken for Specification 3.10.E.3.a.1.
(1) The Refuel position one-rod-out interlock is operable per Specification 3.10.A.1 (control rod full-in position indication must also be operable),	b. The applicable surveillances are performed, at the required frequencies, for the LCOs specified in 3.10.E.3.c.1, if credit is being taken for Specification 3.10.E.3.c.1.
OR	
(2) A control rod withdrawal block is inserted.	
b. All other control rods are fully inserted.	

c. One of the following conditions exists:

(1) The requirements are met for Specifications Table 3.1-1, Scram Numbers 1, 2, 3, and 8 (Inoperative and 15% Flux only); AND the Electric Power Monitoring for the Reactor Protection System is operable per Specification 3.9.D; AND all control rods are operable per Specification 3.3.

OR

(2) All other control rods in a five-by-five array centered on the control rod being withdrawn are disarmed AND the requirements of Specification 3.3.A, Core Reactivity Margin, are met except the single control rod to be withdrawn may be assumed to be the highest-worth control rod.

NOTE: If the control rod being withdrawn is not insertable, then requirement c.2 must be chosen.

With one or more of the above requirements not met with the affected control rod insertable, fully insert all insertable control rods AND place the Mode Switch in the SHUTDOWN position within one hour.

With one or more of the above requirements not met with the affected control rod not insertable, immediately suspend withdrawal of the control rod and removal of the associated CRD AND either fully insert all control rods as soon as practical or satisfy the applicable LCO requirements.

c. Prior to entering this condition, and every 24 hours thereafter, assure that:

(1) All other control rods in a five-by-five array centered on the control rod being withdrawn are disarmed, if credit is being taken for Specification 3.10.E.3.c.2, and

(2) All other control rods are fully inserted, and

(3) A control rod withdrawal block is inserted, if credit is being taken for Specification 3.10.E.3.a.2.

(This page intentionally left blank)

3.10.E.1. Requirements for Withdrawal of 1 or 2 Control Rods

The maintenance is performed with the Mode Switch in the REFUEL position to provide the refueling interlocks normally available during refueling operations. In order to withdraw a second control rod after withdrawal of the first rod, it is necessary to bypass the refueling interlock on the first control rod which prevents more than one control rod from being withdrawn at the same time.

The requirement that an adequate shutdown margin be demonstrated and that all surrounding control rods have their directional control valves electrically disarmed ensures that inadvertent criticality cannot occur during this maintenance. The adequacy of the shutdown margin is verified by demonstrating that the core is shut down by a margin of 0.38 percent Wk with the strongest available control rod fully withdrawn. The safety design basis (FSAR - Section 3.6.5.2) states that the reactor must remain subcritical under all conditions with the single highest worth control rod fully withdrawn.

2. Requirements for Withdrawal of More Than 2 Control Rods

Specification 3.10.E.2. allows unloading of a significant portion of the reactor core. This operation is performed with the Mode Switch in the REFUEL position to provide the refueling interlocks normally available during refueling operations. In order to withdraw more than one control rod, it is necessary to bypass the refueling interlock on each withdrawn control rod which prevents more than one control rod from being withdrawn at a time. The requirement that the fuel assemblies in the cell controlled by the control rod be removed from the reactor core before the interlock can be bypassed ensures that withdrawal of another control rod does not result in inadvertent criticality. Each control rod provides primary reactivity control for the fuel assemblies in the cell associated with that control rod. Thus, removal of an entire cell (fuel assemblies plus control rod) results in a lower reactivity potential of the core.

3. Requirements for Withdrawal of a Control Rod in the Cold Shutdown Condition

Specification 3.10.E.3 allows the Mode Switch to be placed in the REFUEL position while in the Cold Shutdown Condition to allow withdrawal of a single control rod or withdrawal and subsequent removal of the associated control rod drive. The criteria listed emulate equipment operability conditions which normally exist in the Refuel Mode and are designed to preclude the possibility of an inadvertent criticality. The surveillance requirements listed provide assurance that these criteria are met before and during the operation.

F. Reactor Building Cranes

The reactor building crane and monorail hoist are required to be operable for handling the spent fuel cask, new fuel, or spent fuel pool gates. Administratively limiting the height that the spent fuel cask is raised over the refueling floor minimizes the damage that could result from an accident. The design of the reactor building and crane is such that casks of current design cannot be lifted more than two feet above the refueling floor. An analysis has been made which shows that the floor over which the spent fuel cask is handled can satisfactorily sustain a dropped cask from a height of 2 feet. Modifications to the main reactor building crane are being studied in order to increase its ability to withstand a single failure. A spent fuel cask will not be lifted until these modifications have been accepted by the NRC and the NRC has approved the lifting of a cask by the crane, and the appropriate Technical Specifications.

G. Spent Fuel Cask Lifting Trunnions and Yoke

Before lifting a spent fuel cask, the trunnions and yoke shall be in good working condition and properly connected.

INDEX

LIMITING CONDITIONS FOR OPERATIONAL AND SURVEILLANCE REQUIREMENTS

BASES

CHANNEL FUNCTIONAL TEST

A CHANNEL FUNCTIONAL TEST shall be:

a. Analog channels - the injection of a simulated signal into the channel as close to the primary sensor as practicable to verify OPERABILITY including alarm and/or trip functions and channel failure trips.

b. Bistable channels - the injection of a simulated signal into the channel sensor to verify OPERABILITY including alarm and/or trip functions.

CORE ALTERATION

CORE ALTERATION shall be the movement of any fuel, sources, reactivity control components, or other components affecting reactivity within the reactor vessel with the vessel head removed and fuel in the vessel. Movement of source range monitors, local power range monitors, intermediate range monitors, traversing in-core probes, or special movable detectors (including undervessel replacement) is not considered a CORE ALTERATION. Suspension of CORE ALTERATIONS shall not preclude completion of movement of a component to a safe, conservative position.

CORE MAXIMUM FRACTION OF LIMITING POWER DENSITY

The CORE MAXIMUM FRACTION OF LIMITING POWER DENSITY (CMFLPD) shall be the largest FLPD which exists in the core for a given operating condition.

CORE OPERATING LIMITS REPORT

The CORE OPERATING LIMITS REPORT shall be the unit-specific document that provides core operating limits for the current operating reload cycle. These cycle-specific core operating limits shall be determined for each reload cycle in accordance with Specification 6.9.1.11. Plant operation within these operating limits is addressed in individual specifications.

CRITICAL POWER RATIO

The CRITICAL POWER RATIO (CPR) shall be the ratio of that power in the assembly which is calculated by application of an NRC-approved critical power correlation to cause some point in the assembly to experience boiling transition, divided by the actual assembly operating power.

$\bar{E}$-AVERAGE DISINTEGRATION ENERGY

$\bar{E}$ shall be the average, weighted in proportion to the concentration of each radionuclide in the reactor coolant at the time of sampling, of the sum of the average beta and gamma energies per disintegration, in MeV, for isotopes with half lives greater than 15 minutes, making up at least 95% of the total non-iodine activity in the coolant.

TABLE 1.2

OPERATIONAL CONDITIONS

CONDITION[a]	MODE SWITCH POSITION	AVERAGE REACTOR COOLANT TEMPERATURE
1. POWER OPERATION	Run	Any Temperature
2. STARTUP	Startup/Hot Standby	Any Temperature
3. HOT SHUTDOWN	Shutdown	> 212°F[c]
4. COLD SHUTDOWN	Shutdown[d]	≤ 212°F[c]
5. REFUELING	Shutdown or Refuel[b]	≤ 212°F

a. In Conditions 1 through 4, fuel is in the reactor vessel with the reactor vessel head closure bolts fully tensioned. In Condition 5, fuel is in the reactor vessel with the head closure bolts less than fully tensioned or with the head removed.
b. See Special Test Exception 3.10.3.
c. During the performance of inservice hydrostatic or leak testing with all control rods fully inserted and reactor coolant temperature above 212°F, the reactor may be considered to be in the COLD SHUTDOWN condition for the purpose of determining Limiting Condition for Operation applicability. However, compliance with an ACTION requiring COLD SHUTDOWN shall require a reactor coolant temperature ≤ 212°F. In addition, compliance with the following Specifications is required when performing the hydrostatic and leak testing under the identified conditions: 3.6.5.1, 3.6.5.2, 3.6.6.1, and 3.7.1.1.
d. The reactor mode switch may be placed in the Refuel position while a single control rod and/or control rod drive is being removed from the core and/or reactor pressure vessel per Specification 3.10.5.

REFUELING OPERATIONS

3/4.9.3 CONTROL ROD POSITION

LIMITING CONDITION FOR OPERATION

3.9.3 All control rods shall be fully inserted.*

APPLICABILITY: CONDITION 5, when moving fuel assemblies or startup sources in the core.

ACTION:

With all control rods not fully inserted, suspend fuel and startup source movement. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.3 All control rods shall be verified to be fully inserted within 2 hours prior to the start of and at least once per 12 hours during fuel or startup source movement.

*Except control rods removed per Specification 3.9.11.1 or 3.9.11.2.
**See Special Test Exception 3.10.3.

SPECIAL TEST EXCEPTIONS

3/4.10.5 SINGLE CONTROL ROD WITHDRAWAL - COLD SHUTDOWN

LIMITING CONDITIONS FOR OPERATION

3.10.5 The Reactor Mode Switch may be placed in the REFUEL position while in the Cold Shutdown Condition to allow withdrawal of a single control rod or withdrawal and subsequent removal of the associated control rod drive provided at least the following requirements are met:

a. One of the following conditions exist:

1. The Refuel position one-rod-out interlock is OPERABLE per Specification 3.9.1, AND control rod position indication is OPERABLE per Specification 3.1.3.7;

OR

2. A control rod withdrawal block is inserted.

b. All other control rods are fully inserted.

c. One of the following conditions exists:

1. The requirements are met for Specifications Table 3.3.1-1, functions 1.a, 1.b, 2.a, 2.d, 11 and 12; AND the electric power monitoring for the reactor protection system is operable per Specification 3.8.2.7; AND all control rods are operable per Specification 3.1.3.1.

OR

2. All other control rods in a five-by-five array centered on the control rod being withdrawn are disarmed AND the requirements of Specification 3.1.1, Shutdown Margin, are met except the single control rod to be withdrawn may be assumed to be the highest-worth control rod.

NOTE: If the control rod being withdrawn is not insertable, then requirement c.2 must be chosen.

APPLICABILITY: CONDITION 4 with the Reactor Mode Switch in the Refuel position.

SPECIAL TEST EXCEPTIONS

3/4.10.5 SINGLE CONTROL ROD WITHDRAWAL - COLD SHUTDOWN

LIMITING CONDITIONS FOR OPERATION

ACTION:

a. With one or more of the above requirements not met with the affected control rod insertable, fully insert all insertable control rods AND place the Reactor Mode Switch in the SHUTDOWN position within one hour.

b. With one or more of the above requirements not met with the affected control rod not insertable, immediately suspend withdrawal of the control rod and removal of the associated CRD AND either fully insert all control rods as soon as practical or satisfy the applicable LCO requirements.

SURVEILLANCE REQUIREMENTS

4.10.5 For the condition of the Reactor Mode Switch being placed in the REFUEL position while in MODE 4, verify the following as applicable:

a. The applicable surveillances are performed, at the required frequency, for the LCOs specified in 3.10.5.a.1, if credit is being taken for Specification 3.10.5.a.1.

b. The applicable surveillances are performed, at the required frequency, for the LCOs specified in 3.10.5.c.1, if credit is being taken for Specification 3.10.5.c.1.

c. Prior to entering this condition, and every 24 hours thereafter, assure that:

1. All other control rods in a five-by-five array centered on the control rod being withdrawn are disarmed, if credit is being taken for Specification 3.10.5.c.2, and

2. All other control rods are fully inserted, and

3. A control rod withdrawal block is inserted, if credit is being taken for Specification 3.10.5.a.2.

3/4.9 REFUELING OPERATIONS

BASES

3/4.9.1 REACTOR MODE SWITCH

Locking the OPERABLE reactor mode switch in the refuel position ensures that the restrictions on rod withdrawal and refueling platform movement during the refueling operations are properly activated. These conditions reinforce the refueling procedures and reduce the probability of inadvertent criticality, damage the reactor internals or fuel assemblies, and exposure of personnel to excessive radioactivity.

3/4.9.2 INSTRUMENTATION

The OPERABILITY of at least two source range monitors ensures that redundant monitoring capability is available to detect changes in the reactivity condition of the core. During the unloading, it is not necessary to maintain 3 cps because core alterations will involve only reactivity removal and will not result in criticality. The loading of up to four bundles around the SRMs before attaining the 3 cps is permissible because these bundles form a subcritical configuration.

3/4.9.3 CONTROL ROD POSITION

The requirement that all control rods be inserted during fuel or startup source movement ensures that fuel will not be loaded into a cell without a control rod and prevents two positive reactivity changes from occurring simultaneously.

3/4.9.4 DECAY TIME

The minimum requirement for reactor subcriticality prior to fuel movement ensures that sufficient time has elapsed to allow the radioactive decay of the short lived fission products. This decay time is consistent with the assumptions used in the accident analyses.

3/4.9.5 SECONDARY CONTAINMENT

Secondary containment is designed to minimize any ground level release of radioactive material which may result from an accident. The reactor building provides secondary containment during normal operation when the drywell is sealed and in service. When the reactor is shutdown or during refueling, the drywell may be open and the reactor building then becomes the primary containment. The refueling floor is maintained under the secondary containment integrity of Hatch-Unit 1.

Establishing and maintaining a vacuum in the building with the standby gas treatment system once per 18 months, along with the surveillance of the doors, hatches and dampers, is adequate to ensure that there are no violations of the integrity of the secondary containment. Only one closed damper in each penetration line is required to maintain the integrity of the secondary containment.

3/4.10 SPECIAL TEST EXCEPTIONS

BASES

3/4.10.1 PRIMARY CONTAINMENT INTEGRITY

The requirement for PRIMARY CONTAINMENT INTEGRITY is removed during the period when open vessel tests are being performed during low power PHYSICS TESTS.

3/4.10.2 ROD WORTH MINIMIZER

In order to perform the tests required in the Technical Specifications it is necessary to bypass the sequence restraints on control rod movement. The additional surveillance requirements ensure that the Specifications on heat generation rates and shutdown margin requirements are not exceeded during the period when these tests are being performed.

3/4.10.3 SHUTDOWN MARGIN DEMONSTRATIONS

Performance of shutdown margin demonstrations with the vessel head removed requires additional restrictions in order to ensure that criticality does not occur. These additional restrictions are specified in this LCO.

3/4.10.4 RECIRCULATION LOOPS

This special test exception permits reactor criticality under no flow conditions and is required to perform certain startup and PHYSICS TESTS while at low THERMAL POWER levels.

3/4.10.5 SINGLE CONTROL ROD WITHDRAWAL - COLD SHUTDOWN

This specification allows the Mode Switch to be placed in the Refuel position while in the Cold Shutdown Condition to allow withdrawal of a single control rod or withdrawal and subsequent removal of the associated control rod drive. The criteria listed emulate equipment operability conditions which normally exist in the Refuel Mode and are designed to preclude the possibility of an inadvertent criticality. The surveillance requirements listed provide assurance that these criteria are met before and during the operation.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 183 TO FACILITY OPERATING LICENSE DPR-57

AND AMENDMENT NO. 123 TO FACILITY OPERATING LICENSE NPF-5

GEORGIA POWER COMPANY, ET AL.

EDWIN I. HATCH NUCLEAR PLANT, UNITS 1 AND 2

DOCKET NOS. 50-321 AND 50-366

1.0 INTRODUCTION

By letter dated July 17, 1992, Georgia Power Company, et al. (the licensees), proposed license amendments to change the Technical Specifications (TS) for the Edwin I. Hatch Nuclear Plant, Units 1 and 2. The proposed changes would change several portions of the TS which involve shutdown and refueling operations. The proposed changes are listed below:

Proposed Change 1:

This proposed change will revise the definition of Core Alteration in TS 1.c for Unit 1 and 1.0 for Unit 2.

Proposed Change 2:

This proposed change will revise the definitions of Cold Shutdown Condition and Refuel Mode in Unit 1 TS Section 1.0, and the Operational Conditions in Unit 2 TS Table 1.2.

Proposed Change 3:

This proposed change will revise the Action statement for the residual heat removal service water (RHRSW) system shutdown cooling mode in Unit 2 TS 3.7.1.1.

Proposed Change 4:

This proposed change will alter the wording of Unit 2 TS 3.9.3. This TS currently requires all control rods to be fully inserted during Core Alterations. The proposed change will require all control rods to be fully inserted when moving fuel assemblies or startup sources in the core, rather than during all Core Alterations.

This proposed change will also revise the wording of the Bases for TS 3.9.3. The phrase "during CORE ALTERATIONS" is being replaced with the phrase "during fuel or startup source movement."

Proposed Change 5:

This proposed change will add new Unit 1 TS 3.10.E.3, "Requirements for Withdrawal of a Control Rod in the Cold Shutdown Condition," and new Unit 2 TS 3.10.5, "Single Control Rod Withdrawal - Cold Shutdown," which will permit the withdrawal of a single control rod for testing while in Cold Shutdown (Unit 2 Mode 4) by imposing certain restrictions.

In addition, this proposed change will add Bases for these new TSs for both units and will include a reference to the new Unit 2 TS 3.10.5 and its Bases in the Unit 2 index. The current Unit 2 TS 3.10.5, "High Pressure Coolant Injection System," is being deleted along with its listing in the index. Also, the title of Unit 2 TS 3/4 10.2 was changed by Amendment 121 from "Rod Sequence Control System" to "Rod Worth Minimizer," but the corresponding index listing was not changed. This listing is now being corrected.

2.0 EVALUATION

a. Proposed Change 1

This proposed change will revise the definition of Core Alteration in Technical Specification (TS) 1.C for Unit 1 and 1.0 for Unit 2.

The purpose of the definition of Core Alterations is to identify operations which have the potential for adding positive reactivity to the core while the vessel head is removed and fuel is in the vessel.

Incore instruments (such as source range monitors, local power range monitors, intermediate range monitors, traversing incore probes, or special movable detectors) are being excluded from this definition because the amount of fissile material contained in the detectors is so small their movement does not result in any significant change in core reactivity. Therefore, the systems which were previously required to be operable during incore instrument movement can now be made inoperable so that the licensee can perform the required surveillance testing or preventative maintenance.

The NRC staff has reviewed the above change and finds it acceptable.

b. Proposed Change 2

This proposed change will revise the definitions of Cold Shutdown Condition and Refuel Mode in Unit 1 TS section 1.0, and the Operational Conditions in Unit 2 TS Table 1.2.

The revision will specify the condition of the head closure bolts corresponding to the Refuel Mode to remove any uncertainty as to exactly when the reactor mode change occurs. This will help ensure the operability requirements of the existing mode are met.

The addition of "Shutdown" as an allowable mode switch position for the Refuel Mode will preclude confusion by ensuring no undefined condition is entered during the normal evolution of entering the Refuel Mode. Having the mode switch in Shutdown under these conditions will represent no reduction in safety for the following reasons:

1) The reactor manual control system interlocks associated with the "Shutdown" position are more restrictive than those for the Refuel Mode. Specifically, with the mode switch in the Refuel position, the one-rod-out interlock allows no more than one control rod to be withdrawn at a time. However, with the mode switch in the Shutdown position, a rod block is enforced at all times so that no control rods may be withdrawn.

2) TS 3.10.A.1 (TS 3.9.1 for Unit 2) requires the mode switch to be locked in the Refuel position with the refueling interlocks operable during Core Alterations.

The NRC staff has reviewed the above change and finds it acceptable.

c. Proposed Change 3

This proposed change will revise the action statement for the residual heat removal service water (RHRSW) system shutdown cooling mode in Unit 2 TS 3.7.1.1.

The licensee stated that the design of the Hatch RHRSW system includes two separate RHRSW subsystems A and B, supporting RHR subsystems A and B, respectively. Each RHRSW subsystem is comprised of two RHRSW pumps, a flowpath and a heat exchanger for transferring heat from the associated RHR subsystem. RHRSW subsystem A contains RHRSW pumps A and C, and RHRSW subsystem B contains RHRSW pumps B and D. An additional feature is the ability to crosstie the RHRSW subsystems such that the pumps in one RHRSW subsystem can provide flow through the heat exchanger in the other RHRSW subsystem and thereby support the opposite RHR subsystem.

Therefore, the licensee concluded that the RHRSW system would be capable of supporting the shutdown cooling function of the RHR system if it contained one operable RHRSW pump and flowpath in the subsystem corresponding to the operable RHR pump.

Based on its review, the staff finds that this change is nonconservative in that it will reduce the redundancy required for the operability of the RHR service water system which presently exists in the limiting condition of operation for Technical Specification 3.7.1.1. Therefore, this change is unacceptable and is denied.

d. Proposed Change 4

This proposed change will alter the wording of Unit 2 TS 3.9.3. This TS originally required all control rods to be fully inserted during Core Alterations. The proposed change will require all control rods to be fully

inserted when moving fuel assemblies or startup sources in the core, rather than during all Core Alterations.

This proposed change will also revise the wording of the bases for Specification 3.9.3. The phrase "during CORE ALTERATIONS" is being replaced with the phrase "during fuel or startup source movement."

When the vessel head is removed, the reactor mode switch will be in either Refuel or Shutdown. In Refuel, the one-rod-out interlock prevents more than one control rod from being withdrawn at a time. In Shutdown, a control rod block is in effect at all times preventing the withdrawal of even a single control rod. Because TS 3.1.1, Shutdown Margin, requires the core to be subcritical by at least .38% delta k/k at all times with the highest worth control rod withdrawn, the refuel mode switch interlocks will ensure the reactor does not become critical. Therefore, it is acceptable to allow control rod withdrawal as long as no other Core Alterations are taking place.

The discussion of TS 3.9.3 contained in the bases section is not being changed. Only the wording is being changed to match the wording of this TS.

The NRC staff has reviewed the above change and finds it acceptable.

e. Proposed Change 5

This proposed change will add new Unit 1 TS 3.10.E.3, "Requirements for Withdrawal of a Control Rod in the Cold Shutdown Condition" and new Unit 2 TS 3.10.5, "Single Control Rod Withdrawal - Cold Shutdown", which will permit the withdrawal of a single control rod for testing while in Cold Shutdown (Unit 2 Mode 4) by imposing certain restrictions.

In addition, this proposed change will add bases for these new TS for both units and will include a reference to new Unit 2 TS 3.10.5 and its bases in the Unit 2 index. The current Unit 2 TS 3.10.5, "High Pressure Coolant Injection System," is being deleted along with its listing in the index. Also, the title of Unit 2 TS 3/4 10.2 was changed by Amendment 121 from "Rod Sequence Control System" to "Rod Worth Minimizer," but the corresponding index listing was not changed. This listing is now being corrected.

Originally, in Cold Shutdown, the reactor mode switch is in the Shutdown position, and all control rods are inserted and blocked from withdrawal. Many systems and functions are not required in these conditions due to the installed interlocks associated with the reactor mode switch in the Shutdown position. Circumstances will arise while in Cold Shutdown, however, which present the need to withdraw a single control rod for various tests (e.g., friction tests, control rod timing, and coupling integrity (checks). Certain situations may also require the removal of a control rod drive (CRD). This proposed change would allow single control rod withdrawals and possible subsequent removals by selecting the Refuel position for the reactor mode switch.

With the reactor mode switch in the Refuel position, the analyses for control rod withdrawal during refueling are applicable and, provided the assumptions of these analyses are satisfied in Cold Shutdown, these analyses will bound the consequences of a postulated accident. Explicit safety analyses in the Final Safety Analysis Report (Section 15.1.13) demonstrate the functioning of the refueling interlocks and adequate Shutdown Margin (SDM) will preclude unacceptable reactivity excursions.

Refueling interlocks prevent the withdrawal of more than one control rod. Under these conditions, since only one control rod can be withdrawn, the core will always be subcritical even with the highest worth control rod withdrawn since adequate SDM exists.

The original TS 3.10.5, "High Pressure Coolant Injection System," is being deleted along with its listing in the index. This TS includes a footnote which states it is only applicable from June 2-9, 1980. Since this time period has elapsed, this TS is no longer applicable and may be deleted.

The change to the index listing of TS 3/4 10.2 is strictly an editorial correction.

The NRC staff has reviewed the above change and finds it acceptable.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Georgia State official was notified of the proposed issuance of the amendments. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendments change requirements with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and change surveillance requirements. The NRC staff has 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 (57 FR 34584 dated August 5, 1992). 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.

5.0 CONCLUSION

The Commission 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, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: K. Jabbour, PDII-3/NRR

Date: October 1, 1992

7590-01

UNITED STATES NUCLEAR REGULATORY COMMISSION

GEORGIA POWER COMPANY

DOCKET NOS. 50-321 AND 50-366

NOTICE OF PARTIAL DENIAL OF AMENDMENT TO FACILITY OPERATING LICENSE

AND OPPORTUNITY FOR HEARING

The U.S. Nuclear Regulatory Commission (the Commission) has denied a request by Georgia Power Company, (the licensee) for amendments to Facility Operating License Nos. DPR-57 and NPF-5, issued to the licensee for operation of the Edwin I. Hatch Nuclear Plant, Unit Nos. 1 and 2, located in Appling County, Georgia. Notice of Consideration of Issuance of the amendments was published in the FEDERAL REGISTER on August 5, 1992 (57 FR 34584).

The licensee's application of July 17, 1992, proposed several changes to the Technical Specifications relating to shutdown and refueling operations. The amendments authorize these changes except for one to change Hatch Unit 2 Action statement regarding shutdown cooling operation of the residual heat removal (RHR) service water system. This specific change, as proposed, was found to be nonconservative in that it will reduce the redundancy required for the operability of the RHR service water system which presently exists in the limiting condition of operation for Technical Specification 3.7.1.1.

The NRC staff has concluded that the licensee's proposed change is unacceptable and is denied. The licensee was notified of the Commission's denial by letter dated October 1, 1992.

By November 9, 1992 , the licensee may demand a hearing with respect to the denial described above. Any person whose interest may be affected by this proceeding may file a written petition for leave to intervene.

A request for hearing or petition for leave to intervene must be filed with the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C., 20555, Attention: Docketing and Services Branch, or may be delivered to the Commission's Public Document Room, the Gelman Building, 2120 L Street, N.W., Washington, D.C., by the above date.

A copy of any petitions should also be sent to the Office of the General Counsel, U.S. Nuclear Regulatory Commission, Washington, D.C., 20555, and to Ernest L. Blake, Jr., Esquire, Shaw, Pittman, Potts and Trowbridge, 2300 N. Street, NW., Washington, DC 20037, attorney for the licensee.

For further details with respect to this action, see (1) the application for amendment dated July 17, 1992, and (2) the Commission's letter to the licensee dated October 1, 1992.

These documents are available for public inspection at the Commission's Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC 20555, and at the local public document room located at the Appling County Public Library, 301 City Hall Drive, Baxley, Georgia 31513. A copy of item (2) may be obtained upon request addressed to the U.S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: Document Control Desk.

Dated at Rockville, Maryland, this 1st day of October , 1992.

FOR THE NUCLEAR REGULATORY COMMISSION

David B. Matthews, Project Director
Project Directorate II-3
Division of Reactor Projects -
Office of Nuclear Reactor Regulation