Georgia Power Company
230 Peachtree Street
Post Office Box 4545
Atlanta, Georgia 30303
Telephone 404 522-6060

January 19, 1979

Chas. F. Whitmer
Vice President
Engineering

Georgia Power
the southern electric system

Director of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

NRC DOCKET 50-321
OPERATING LICENSE DPR-57
EDWIN I. HATCH NUCLEAR PLANT UNIT 1
TECHNICAL SPECIFICATION: HPCI/RCIC ROOM DIFFERENTIAL TEMPERATURE

Gentlemen:

Pursuant to 10 CFR 50.90, as required by 10 CFR 50.59(c)(1), Georgia Power Company hereby proposes an amendment to the Technical Specifications (Appendix A to the Operating License). This proposed change will delete the trip of the High Pressure Coolant Injection (HPCI) and Reactor Core Isolated Cooling (RCIC) steam line isolation valves upon a high differential temperature (dT) condition between the inlet and outlet ventilation air of the HPCI and RCIC pump rooms. This trip has been the cause of a number of spurious closures of the HPCI and RCIC steam line isolation valves thereby reducing the reliability of these systems.

The HPCI and RCIC steam driven pumps are part of the Emergency Core Cooling System (ECCS) and are used to provide water to the core under various conditions. The steam lines which provide the turbine steam contain two normally open containment isolation valves to provide for the minimization of reactor coolant loss and radioactive materials release from the nuclear steam process barrier in the event of a gross leak or rupture of the line. The HPCI and RCIC steam line isolation function is presently initiated by the following conditions in their respective equipment rooms or piping:

a) High room ambient temperature (175°F)
b) Inlet/Outlet room ventilation differential temperature (50°F)
c) High steam flow (300%)
d) Low steam line pressure (HPCI 100 psig; RCIC 50 psig)

The spurious isolation events which occur due to the inlet/outlet ventilation dT are most likely to happen during periods of cold weather when the inlet temperature drops and a resultant increase in dT between ventilation inlet and outlet occurs. As a result of these isolations of the HPCI and RCIC steam lines, the reliability of these important ECCS subsystems is reduced.

Georgia Power

A reconsideration of the instrumentation provided for HPCI or RCIC steam line isolation indicates that the remaining sensors and associated isolation circuits are adequate and sufficiently redundant to cause a HPCI/RCIC isolation in the event of a large steam leak or rupture in the respective steam supply lines. Since HPCI and RCIC are important ECCS subsystems, we view the improvement of HPCI/RCIC reliability to be more important in terms of overall system safety than the retention of the high dT trip which provides only marginal added steam break protection, considering the other varied protection provided. It is therefore requested that these isolation circuits on the HPCI and RCIC subsystems and their associated technical specifications be deleted.

The Plant Review Board and the Safety Review Board have reviewed and approved the proposed changes to the Technical Specifications and have determined that they do not involve an unreviewed safety question and that the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety is not increased nor is the possibility of a new accident or malfunction of equipment important to safety created.

Enclosed with the proposed changes are instructions for the incorporation of the proposed revision into the Technical Specification, and an evaluation of the fee required under 10 CFR 170.12.

Yours very truly,

Chas. F. Whitmer

WEB/mb

Enclosure

Sworn to and subscribed before me this 19th day of January, 1979.

Notary Public, Georgia, State at Large
My Commission Expires Sept. 29, 1981

Notary Public

xc: Mr. Ruble A. Thomas
George F. Trowbride, Esquire

ATTACHMENT 1

NRC DOCKET 50-321
OPERATING LICENSE DPR-57
EDWIN I. HATCH NUCLEAR PLANT UNIT 1
PROPOSED CHANGES TO TECHNICAL SPECIFICATIONS

Pursuant to 10 CFR 170.12 (c), Georgia Power Company has evaluated the attached proposed amendment to Operating License DPR-57 and have determined that:

a) The proposed amendment does not require the evaluation of a new Safety Analysis Report or rewrite of the facility license;

b) The proposed amendment does not contain several complex issues, does not involve ACRS review, or does not require an environmental impact statement;

c) The proposed amendment does not involve a complex issue, an environmental issue or more than one safety issue;

d) The proposed amendment does involve a single issue; namely, the deletion of an instrument signal to two ECCS subsystems' steam line isolation valves;

e) The proposed amendment is therefore a Class III amendment.

ATTACHMENT 2

NRC DOCKET 50-321
OPERATING LICENSE DPR-57
EDWIN I. HATCH NUCLEAR PLANT UNIT 1
PROPOSED CHANGE TO TECHNICAL SPECIFICATIONS

The proposed change to Technical Specifications (Appendix A to Operating License DPR-57) would be incorporated as follows:

Remove Page	Insert Page
3.2-5	3.2-5
3.2-8	3.2-8
3.2-54	3.2-54
3.2-56	3.2-56

TABLE 3.2-2

INSTRUMENTATION WHICH INITIATES OR CONTROLS HPCI

Ref. No. (a)	Instrument	Trip Condition Nomenclature	Required Operable Channels per Trip System (b)	Trip Setting	Remarks
1.	Reactor Water Level (Yarway)	Low Low (LL2)	2	$\geq$ - 38 inches	Initiates HPCI; Also initiates RCIC.
2.	Drywell Pressure	High	2	$\leq$ 2 psig	Initiates HPCI; Also initiates LPCI and Core Spray and provides a permissive signal to ADS.
3.	HPCI Turbine Overspeed	Mechanical	1	$\leq$ 5000 rpm	Trips HPCI turbine
4.	HPCI Turbine Exhaust Pressure	High	1	$\leq$ 150 psig	Trips HPCI turbine
5.	HPCI Pump Suction Pressure	Low	1	$\leq$ 15" Hg vacuum	Trips HPCI turbine
6.	Reactor Water level (Narrow Range)	High	2	$\leq$ +58 inches	Trips HPCI turbine
7.	HPCI System Flow (Flow Switch)	High	1	> 800 gpm	Closes HPCI minimum flow bypass line to suppression chamber.
		Low	1	$\leq$ 500 gpm	Opens HPCI minimum flow bypass line if pressure permissive is present.
8	HPCI Equipment Room	High	1	$\leq$ 175°F	Closes isolation valves in HPCI system, trips HPCI turbine.

TABLE 3.2-3
INSTRUMENTATION WHICH INITIATES OR CONTROLS RCIC

Ref. No. (a)	Instrument	Trip Condition Nomenclature	Required Operable Channels per Trip System (b)	Trip Setting	Remarks
1.	Reactor Water Level (Yarway)	Low Low (LL2)	2	$\geq$-38 inches	Initiates RCIC; also initiates HPCI
2.	RCIC Turbine Overspeed	Electrical	1	<110% rated	Trips RCIC turbine.
		Mechanical	1	$\leq$125% rated	Trips RCIC turbine.
3.	RCIC Turbine Exhaust Pressure	High	1	$\leq$+25 psig	Trips RCIC turbine.
4.	RCIC Pump Suction Pressure	Low	1	<15" Hg Vacuum	Trips RCIC turbine.
5.	Reactor Water Level (Narrow Range)	High	2	$\leq$+58 inches	Trips RCIC turbine
6.	RCIC System Flow (Flow Switch)	High	1	>80 gpm	Closes RCIC minimum flow bypass line to suppression chamber.
		Low	1	$\leq$40 gpm	Opens RCIC minimum flow bypass line if pressure permissive is present.
7.	RCIC Equipment Room	High	1	$\leq$175°F	Closes isolation valves in RCIC system, trips RCIC turbine.

3.2.B.8. HPCI Equipment Room Temperature High (Continued)

temperature setting 90 F + ambient was selected to be far enought above anticipated normal HPCI system operational levels to avoid spurious isolation but low enought to provide timely detection of HPCI turbine steam line break. The high temperature trip initiates a timer which isolates the HPCI turbine steam line if the temperature is not reduced below the setpoint.

10. HPCI Steam Line Pressure Low

Low pressure in the HPCI steam line could indicate a break in the HPCI steam line. Therefore, the HPCI steam line isolation valves are automatically closed. The steam line low pressure function is provided so that in the event a gross rupture of the HPCI steam line occurred upstream from the high flow sensing location, thus negating the high flow indicating function, isolation would be effected on low pressure. The isolation setpoint of $\geq$ 100 psig is chosen at a pressure below which the HPCI turbine can effectively operate.

11. HPCI Steam Line ΔP (Flow) High

HPCI turbine high steam flow could indicate a break in the HPCI turbine steam line. The automatic closure of the HPCI steam line isolation valves prevents the excessive loss of reactor coolant and the release of significant amounts of radioactive materials from the nuclear system process barrier. Upon detection of HPCI turbine high steam flow the HPCI turbine steam line is isolated. The high steam flow trip setting of 300% flow was selected high enough to avoid spurious isolation, i.e., above the high steam flow rate encountered during turbine starts. The setting was selected low enough to provide timely detection of an HPCI turbine steam line break.

12. HPCI Turbine Exhaust Diaphragm Pressure High

High pressure in the HPCI turbine exhaust could indicate that the turbine rotor is not turning, thus allowing reactor pressure to act on the turbine exhaust line. The HPCI steam line isolation valves are automatically closed to prevent overpressurization of the turbine exhaust line. The turbine exhaust diaphragm pressure trip setting of $\leq$ 10 psig is selected high enough to avoid isolation of the HPCI if the turbine is operating, yet low enough to effect isolation before the turbine exhaust line is unduly pressurized.

13. Suppression Chamber Area Air Temperature High

As in the HPCI equipment room, and for the same reason, a temperature of 90 F + ambient will initiate a timer to isolate the HPCI turbine steam line.

3.2.C.5. Reactor Water Level High (Narrow Range)

A reactor water level of +58 inches on the Narrow Range scale is indicative that the RCIC system has performed satisfactorily in providing make-up water to the reactor vessel. The reactor vessel high water level setting which trips the RCIC turbine is near the top of the steam separators and is sufficient to prevent gross moisture carryover to the RCIC turbine. Two level switches trip to initiate an RCIC turbine shutdown.

6. RCIC System Flow

To prevent damage by overheating at reduced RCIC system pump flow, a pump discharge minimum flow bypass is provided. The bypass is controlled by an automatic, D. C. motor-operated valve. A high flow signal from a flow meter downstream of the pump on the main RCIC line will cause the bypass valve to close. Two signals are required to open the valve: An RCIC pump discharge pressure switch high pressure signal must be received to act as a permissive to open the bypass valve in the presence of a low flow signal from the flow switch.

Note:

Because the steam supply line to the RCIC turbine is part of the nuclear system process barrier, the following conditions (7 - 13) automatically isolate this line, causing shutdown of the RCIC system turbine.

7. RCIC Equipment Room Temperature High

High ambinet temperature in the RCIC equipment room near the emergency area cooler could indicate a break in the RCIC system turbine steam line. The automatic closure of the RCIC steam line valves prevents the excessive loss of reactor coolant and the release of significant amounts of radioactive material from the nuclear system process barrier. The high temperature setting of 90 F + ambinet was selected to be far enough above anticipated normal RCIC system operational levels to avoid spurious isolation but low enough to provide timely detection of an RCIC turbine steam line break. The high temperature trip initiates a timer which isolates the RCIC turbine steam line if the temperature is not reduced below the setpoint.

9. RCIC Steam Line Pressure Low

Low pressure in the RCIC Steam Line could indicate a break in the RCIC steam line. Therefore, the RCIC steam line isolation valves are automatically closed. The steam line low pressure function is provided so that in the event a gross rupture of the RCIC steam line occurred upstream from the high flow sensing location, thus negating the high flow indicating function, isolation would be effected on low pressure. The iso-