ENCLOSURE

NRC DOCKET 50-321
OPERATING LICENSE DPR-57
EDWIN I. HATCH NUCLEAR PLANT UNIT 1
REVISION OF REQUEST FOR TECHNICAL SPECIFICATION CHANGES
TO SUPPORT ANALOG TRANSMITTER TRIP SYSTEM INSTALLATION

The following changes should be made to the document entitled "Edwin I. Hatch Nuclear Plant Unit 1, Docket No. 50-321, Technical Specifications Revisions Associated With Installation of Analog Transmitter Trip System" which was enclosed with Georgia Power Company Letter NED-84-436 (dated September 5, 1984), using the pages enclosed with this submittal:

Remove Page	Insert Page
4-26	4-26
	4-28a
6-2	6-2
6-3	6-3
	3.2-6*
	3.2-28*
	3.2-54*
	A1-15**

*These pages are new proposed Unit 1 Technical Specification pages and should be added to the section entitled "Proposed Technical Specifications Revision".

**This page contains the significant hazards evaluation required for this revision by 10 CFR 50.92 and should be added to Appendix 1.

4.B.12 Miscellaneous Trip Setpoint/Allowable Value Modifications

4.B.12.a. New calculations were performed to determine the new setpoint value for each ATTS instrument. The setpoint calculations were made using the criteria of Regulatory Guide 1.105. The Plant Hatch analytical limits were used (where applicable) to develop the allowable values and trip setpoints. Unless identified in the text, the analytical limits used to develop these setpoints are the values used in the design basis of Plant Hatch. The values that are proposed to be inserted into the Technical Specifications are the calculated allowable values. The setpoints used at Plant Hatch will take into consideration instrument drift and will be developed from the allowable values. The proposed Technical Specifications revisions include modifications of the trip setpoints/allowable values for the following instruments:

RPS Trip Function	Trip Unit MPL No.
1. Reactor vessel steam dome pressure - high	B21-N678A,B,C,D
2. Reactor vessel water level - Level 3	B21-N680A,B,C,D
3. Reactor vessel water level - Level 1	B21-N681A,B,C,D

ECCS Trip Function	Trip Unit MPL No.
1. Reactor vessel water level - Level 1	B21-N691A,B,C,D
2. Reactor vessel steam dome pressure - low	B21-N690A,B,C,D
3. Reactor vessel steam dome presssure - low	B21-N690E,F B21-N641B,C
4. Reactor vessel water level - Level 3	B21-N695A,B
5. HPCI steamline differential pressure - high	E41-N657A, B

5. HPCI steam line differential pressure - high (E41-N657A,B)

The purpose of this instrumentation is to detect HPCI steam line breaks and to isolate the HPCI system to confine the resulting radioactivity release and limit the reactor inventory loss. The HELB analysis assumes that the HPCI turbine trips and the system isolates at 300 percent of rated flow. However, the HELB analysis is used for guillotine breaks which have flows several times higher than 300 percent of rated flow. A conservative analysis shows the leakage detection instrumentation isolates in the 400 percent of rated flow range with less inventory loss and less peak qualification parameters than the inventory loss and the qualification parameters calculated in the extreme HELB analysis. Since operability problems are a concern with setpoints derived from an analytical limit of 300 percent using Regulatory Guide 1.105 methodology for this function, it is proposed that the present Plant Hatch setpoint be maintained. This setpoint has been proven to be acceptable from operability considerations. Using this setpoint, an allowable value of 303 percent of rated flow was selected, taking into account instrument drift.

TABLE 6.1

INSTRUCTIONS FOR INCORPORATING TECHNICAL SPECIFICATIONS REVISIONS

If the Technical Specifications revisions are accepted as proposed, the HNP-1 Technical Specifications (Appendix A to Operating License DPR-57) should be incorporated as follows:

Item	Deletions (Page)	Insertions (Page)	Applicable SER*(a) Section(s)
1	1.0-6	1.0-6	4.B.10
2	1.1-3	1.1-3	4.B.11, 4.B.12
3	1.1-4	1.1-4	4.B.10
4	1.1-5	1.1-5	4.B.3, 4.B.11, 4.B.12
5	1.1-13	1.1-13	4.B.11, 4.B.12
6	1.1-14	1.1-14	4.B.10
7	Fig. 2.1-1	Fig. 2.1-1	4.B.2, 4.B.3, 4.B.4, 4.B.11, 4.B.12
8	1.2-1	1.2-1	4.B.12
9	1.2-2	1.2-2	4.B.9
10	1.2-4	1.2-4	4.B.9
11	1.2-6	1.2-6, 6a	4.B.9
12	3.1-3	3.1-3	4.B.11, 4.B.12
13	3.1-4	3.1-4	4.B.11, 4.B.12
14	3.1-5	3.1-5	4.B.10
15	3.1-7	3.1-7	ATTS, 4.B.11
16	3.1-8	3.1-8	ATTS
17	3.1-11	3.1-11	4.B.11
18	3.1-12	3.1-12	4.B.11, 4.B.12
19	3.1-14	3.1-14	ATTS
20	3.1-15	3.1-15	ATTS
21	3.1-17	3.1-17	ATTS
22	3.1-18	3.1-18	ATTS
23	3.2-1	3.2-1	4.B.1
24	3.2-2	3.2-2	4.B.2, 4.B.3, 4.B.6, 4.B.11, 4.B.12
25	3.2-5	3.2-5	4.B.3, 4.B.4, 4.B.11, 4.B.12
26	3.2-6	3.2-6	4.B.12
27	3.2-8	3.2-8	4.B.3, 4.B.4, 4.B.5, 4.B.11, 4.B.12
28	3.2-10	3.2-10	4.B.11, 4.B.12
29	3.2-11	3.2-11	4.B.11, 4.B.12
30	3.2-14	3.2-14	4.B.11, 4.B.12
31	3.2-20	3.2-20	4.B.3
32	3.2-22	3.2-22	4.B.8
33		3.2-23c	4.B.1
34	3.2-24	3.2-24	ATTS, 4.B.11
35	3.2-27	3.2-27	ATTS, 4.B.11
36	3.2-28	3.2-28	ATTS
37	3.2-30	3.2-30	ATTS, 4.B.11
38	3.2-33	3.2-33	ATTS, 4.B.11
39	3.2-35	3.2-35	ATTS, 4.B.11
40	3.2-38	3.2-38	ATTS, 4.B.11

Item	Deletions (Page)	Insertions (Page)	Applicable SER*(a) Section(s)
41	3.2-45	3.2-45	4.B.11
42		3.2-49c	4.B.1
43	3.2-50	3.2-50, 50a	4.B.2, 4.B.3, 4.B.6, 4.B.9, 4.B.11, 4.B.12
44	3.2-52	3.2-52	Editorial, 4.B.3, 4.B.11, 4.B.12
45	3.2-53	3.2-53	ATTS, 4.B.4, 4.B.11, 4.B.12
46	3.2-54	3.2-54	4.B.12
47	3.2-55	3.2-55	Editorial, ATTS, 4.B.3, 4.B.11
48	3.2-56	3.2-56	ATTS, 4.B.4, 4.B.5, 4.B.11,
49	3.2-58	3.2-58	4.B.11, 4.B.12
50	3.2-59	3.2-59	4.B.12
51	3.2-60	3.2-60	4.B.12
52	3.2-62	3.2-62	4.B.11, 4.B.12
53	3.2-68a	3.2-68a	4.B.1
54	3.2-69	3.2-69	ATTS
55	3.6-9	3.6-9	4.B.1
56	3.6-9a	3.6-9a, 9b	4.B.1
57	3.6-21	3.6-21	4.B.1
58	3.6-22	3.6-22	4.B.1
59	3.7-17	3.7-17	4.B.7
60	3.7-18	3.7-18	4.B.7
61	3.7-19	3.7-19	4.B.7, 4.B.11, 4.B.6, 4.B.2
62	3.7-35	3.7-35	4.B.2, 4.B.6, 4.B.7, 4.B.11

* SER-Safety Evaluation Report

a. 1. ATTS refers to proposed revisions justified in Section III of this submittal.
2. 4B.1 through 4B.12 refer to justifications presented in Section IV of this submittal.
3. Editorial refers to the correction of a typographical error.

Table 3.2-2 (Cont.)

Ref. No. (a)	Instrument	Trip Condition Nomenclature	Required Operable Channels per Trip System (b)	Trip Setting	Remark
9.	HPCI Steam Line Pressure	Low	2	≥ 100 psig	Closes isolation valves in HPCI system, trips HPCI turbine.
10.	HPCI Steam Line ΔP (Flow)	High	1	≤ 303% rated flow	Close isolation valves in HPCI system, trips HPCI turbine.
11.	HPCI Turbine Exhaust Diaphragm Pressure	High	1	≤ 10 psig	Close isolation valves in HPCI system, trips HPCI turbine.
12.	Suppression Chamber Area Ambient Temperature	High	1	≤ 179°F	Close isolation valves in HPCI system, trips HPCI turbine.
13.	Suppression Chamber Area Differential Air Temperature	High	1	≤ 50°F	Close isolation valves in HPCI system, trips HPCI turbine.
14.	Condensate Storage Tank Level	Low	2	≥ 0 inches	Automatic interlock switches suction from CST to suppression chamber
15.	Suppression Chamber Water Level	High	2	≤ 0 inches	Automatic interlock switches suction from CTS to suppression chamber
16.	HPCI Logic Power Failure Monitor		1	Not Applicable	Monitors availability of power to logic system.

a. The column entitled "Ref. No." is only for convenience so that a one-to-one relationship can be established between items in Table 3.2-2 and items in Table 4.2-2.

Table 4.2-2 (Cont'd)

Ref. No. (a)		Instrument Check Minimum Frequency	Instrument Functional Test Minimum Frequency (b)	Instrument Calibration Minimum Frequency (c)
10	HPCI Steam Line ΔP (Flow)	Once/Shift	Once/month	Once/operating cycle
11	HPCI Turbine Exhaust Diaphragm Pressure	None	(d)	Every 3 months
12	Suppression Chamber Area Ambient Temperature	None	(d)	Every 3 months
13	Suppression Chamber Area Differential Air Temperature	None	(d)	Every 3 months
14	Condensate Storage Tank Level	None	(d)	Every 3 months
15	Suppression Chamber Water Level	None	(d)	Every 3 months
16	HPCI Logic Power Failure Monitor	None	Once/operating cycle	None

Notes for Table 4.2-2

a. The column entitled "Ref. No." is only for convenience so that a one-to-one relationship can be established between items in table 4.2-2 and items in Table 3.2-2.

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

temperature setting 90°F + ambient was selected to be far enough above anticipated normal HPCI system operational levels to avoid spurious isolation but low enough 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.

9. 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 in the event that 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 allowable value of ≥ 100 psig is selected at a pressure sufficiently high so as to prevent turbine stall.

10. HPCI Steam Line ΔP (Flow) High

HPCI steam line high 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 amount of radioactive materials from the nuclear system process barrier. Upon detection of HPCI steam line high flow the HPCI turbine steam line is isolated. The high steam flow trip setting of 303% 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.

11. 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 ≤ 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.

12. 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.

10 CFR 50.92 Evaluation for the Proposed HPCI Steamline Differential Trip Setpoint/Allowable Value Modification to the Technical Specifications for Edwin I. Hatch Nuclear Plant-Unit 1[a]

Georgia Power Company (GPC) reviewed the requirements of 10 CFR 50.92 as they relate to the proposed HPCI steamline differential pressure trip setpoint/ allowable value modification to the Technical Specifications. The purpose of this change is to update the Technical Specifications trip setpoint for these instruments which are being replaced by the analog transmitter trip system (ATTS). Since the time that original setpoint was determined, a better calculational method has been developed. This proposed change uses the Regulatory Guide 1.105 methodology in updating the setpoint for the new ATTS instruments, and takes credit for the improved error and drift characteristics of the new system. This change replaces the trip setpoint listed in the Technical Specifications with the newly evaluated allowable value determined through Regulatory Guide 1.105 methodology.

GPC reviewed the proposed change and considers it not to involve a significant hazards consideration for the following reasons:

1. It will not significantly increase the probability or consequences of an accident previously evaluated, because the new ATTS instruments are of a superior design as compared to the current instruments. In addition, the setpoint was determined using the criteria of Regulatory Guide 1.105, and therefore, still meets the Final Safety Analysis Report (FSAR) criteria.

2. It will not create the possibility of a new or different kind of accident from any accident previously evaluated, because the basic trip function, as described in the FSAR, is unchanged.

3. It will not involve a significant reduction in a margin of safety, because the original design basis was maintained. In addition, Regulatory Guide 1.105 criteria were used in the calculation of the new setpoint.

a. See subsection 4B.12.b.5 (page 4-28a) for discussion of proposed revisions.