TABLE 3.2.B (Continued)

Minimum No. Operable Per Trip Sys(1)	Function	Trip Level Setting	Action	Remarks
1	HPCI Trip System bus power monitor	N/A	C	1. Monitors availability of power to logic systems.
1	RCIC Trip System bus power monitor	N/A	C	1. Monitors availability of power to logic systems.
1(2)	Instrument Channel - Condensate Header Low Level (LS-73-56A & B)	≥ Elev. 551'	A	1. Below trip setting will open HPCI suction valves to the suppression chamber.
1(2)	Instrument Channel - Suppression Chamber High Level	≤ 7" above instrument zero	A	1. Above trip setting will open HPCI suction valves to the suppression chamber.
2(2)	Instrument Channel - Reactor High Water Level	≤ 583" above vessel zero	A	1. Above trip setting trips RCIC turbine.
1	Instrument Channel - RCIC Turbine Steam Line High Flow	≤ 450" H_2O (7)	A	1. Above trip setting isolates RCIC system and trips RCIC turbine.
4(4)	Instrument Channel - RCIC Steam Line Space High Temperature	≤200°F.	A	1. Above trip setting isolates RCIC system and trips RCIC turbine.
3(2)	Instrument Channel - RCIC Steam Supply Pressure - Low (PS 71-1A-D)	≥50 psig	A	1. Below trip setting isolates RCIC system and trips RCIC turbine.
3(2)	Instrument Channel - RCIC Turbine Exhaust Diaphragm Pressure - High (PS 71-11A-D)	≤20 psig	A	1. Above trip setting isolates RCIC system and trips RCIC turbine.

TABLE 3.2.B (Continued)

Minimum No. Operable Per Trip Sys(1)	Function	Trip Level Setting	Action	Remarks
2(2)	Instrument Channel - Reactor High Water Level	≤583" above vessel zero.	A	1. Above trip setting trips HPCI turbine.
1	Instrument Channel - HPCI Turbine Steam Line High Flow	≤90 psi (7)	A	1. Above trip setting isolates HPCI system and trips HPCI turbine.
4(4)	Instrument Channel - HPCI Steam Line Space High Temperature	≤200°F.	A	1. Above trip setting isolates HPCI system and trips HPCI turbine.
3(2)	Instrument Channel - HPCI Steam Supply Pressure - Low (PS 73-1A-D)	≥100 psig	A	1. Below trip setting isolates HPCI system and trips HPCI turbine.
3(2)	Instrument Channel - HPCI Turbine Exhaust Diaphragm (PS 73-20A-D)	≤20 psig	A	1. Above trip setting isolates HPCI system and trips HPCI turbine.
1	Core Spray System Logic	N/A	B	1. Includes testing auto initiation inhibit to Core Spray Systems in other units.
1	RCIC System (Initiating) Logic	N/A	B	1. Includes Group 7 valves. Refer to Table 3.7.A for list of valves.
1	RCIC System (Isolation) Logic	N/A	B	1. Includes Group 5 valves. Refer to Table 3.7.A for list of valves.
1 (16)	ADS Logic	N/A	A	
1	RHR (LPCI) System (Initiation)	N/A	B	

TABLE 4.2.B (Continued)
SURVEILLANCE REQUIREMENTS FOR INSTRUMENTATION THAT INITIATE OR CONTROL THE CSCS

Function	Functional Test	Calibration	Instrument Check
Instrument Channel - RHR Pump Discharge Pressure	(1)	once/3 months	none
Instrument Channel - Core Spray Pump Discharge Pressure	(1)	once/3 months	none
Core Spray Sparger to RPV d/p	(1)	once/3 months	once/day
Trip System Bus Power Monitor	once/operating Cycle	N/A	none
Instrument Channel - Condensate Header Low Level (LS-73-56A, B)	(1)	once/3 months	none
Instrument Channel - Suppression Chamber High Level	(1)	once/3 months	none
Instrument Channel - Reactor High Water Level	(1)	once/3 months	once/day
Instrument Channel - RCIC Turbine Steam Line High Flow	(1)	once/3 months	none
Instrument Channel - RCIC Steam Line Space High Temperature	(1)	once/3 months	none
Instrument Channel - RCIC Steam Supply Low Pressure	once/31 days	once/18 months	once/day
Instrument Channel - RCIC Turbine Exhaust Diaphragm High Pressure	once/31 days	once/18 months	once/day

TABLE 4.2.B (Continued)
SURVEILLANCE REQUIREMENTS FOR INSTRUMENTATION THAT INITIATE OR CONTROL THE CSCS

Function	Functional Test	Calibration	Instrument Check
Instrument Channel - HPCI Turbine Steam Line High Flow	(1)	once/3 months	none
Instrument Channel - HPCI Steam Line Space High Temperature	(1)	once/3 months	none
Instrument Channel - HPCI Steam Supply Low Pressure	once/31 days	once/18 months	once/day
Instrument Channel - HPCI Turbine Exhaust Diaphragm High Pressure	once/31 days	once/18 months	once/day
Core Spray System Logic	once/18 months	(6)	N/A
RCIC System (Initiating) Logic	once/18 months	N/A	N/A
RCIC System (Isolation) Logic	once/18 months	(6)	N/A
HPCI System (Initiating) Logic	once/18 months	(6)	N/A
HPCI System (Isolation) Logic	once/18 months	(6)	N/A
ADS Logic	once/18 months	(6)	N/A
LPCI (Initiating) Logic	once/18 months	(6)	N/A
LPCI (Containment Spray) Logic	once/18 months	(6)	N/A
Core Spray System Auto Initiation Inhibit (Core Spray Auto Initiation)	once/18 months (7)	N/A	N/A
LPCI Auto Initiation Inhibit (LPCI Auto Initiation)	once/18 months (7)	N/A	N/A

NOTES FOR TABLE 3.7.A

Key: O = Open
C = Closed
SC = Stays Closed
GC = Goes Closed

Note: Isolation groupings are as follows:

Group 1: The valves in Group 1 are actuated by any one of the following conditions:

1. Reactor Vessel Low Water Level (378")
2. Main Steamline High Radiation
3. Main Steamline High Flow
4. Main Steamline Space High Temperature
5. Main Steamline Low Pressure

Group 2: The valves in Group 2 are actuated by any of the following conditions:

1. Reactor Vessel Low Water Level (538")
2. High Drywell Pressure

Group 3: The valves in Group 3 are actuated by any of the following conditions:

1. Reactor Low Water Level (538")
2. Reactor Water Cleanup System High Temperature
3. Reactor Water Cleanup System High Drain Temperature

Group 4: The valves in Group 4 are actuated by any of the following conditions:

1. HPCI Steamline Space High Temperature
2. HPCI Steamline High Flow
3. HPCI Steamline Low Pressure
4. HPCI Turbine Exhaust Diaphragm High Pressure

Group 5: The valves in Group 5 are actuated by any of the following condition:

1. RCIC Steamline Space High Temperature
2. RCIC Steamline High Flow
3. RCIC Steamline Low Pressure
4. RCIC Turbine Exhaust Diaphragm High Pressure

Group 6: The valves in Group 6 are actuated by any of the following conditions:

1. Reactor Vessel Low Water Level (538")
2. High Drywell Pressure
3. Reactor Building Ventilation High Radiation

TABLE 3.2.B (Continued)

Minimum No. Operable Per Trip Sys(1)	Function	Trip Level Setting	Action	Remarks
1	HPCI Trip System bus power monitor	N/A	C	1. Monitors availability of power to logic systems.
1	RCIC Trip System bus power monitor	N/A	C	1. Monitors availability of power to logic systems.
1(2)	Instrument Channel - Condensate Header Low Level (LS-73-55A & B)	≥ Elev. 551'	A	1. Below trip setting will open HPCI suction valves to the suppression chamber.
1(2)	Instrument Channel - Suppression Chamber High Level	≤ 7" above instrument zero	A	1. Above trip setting will open HPCI suction valves to the suppression chamber.
2(2)	Instrument Channel - Reactor High Water Level	≤ 583" above vessel zero	A	1. Above trip setting trips RCIC turbine.
1	Instrument Channel - RCIC Turbine Steam Line High Flow	≤ 450" H_2O (7)	A	1. Above trip setting isolates RCIC system and trips RCIC turbine.
4(4)	Instrument Channel - RCIC Steam Line Space High Temperature	≤200°F.	A	1. Above trip setting isolates RCIC system and trips RCIC turbine.
3(2)	Instrument Channel - RCIC Steam Supply Pressure - Low (PS 71-1A-D)	≥50 psig	A	1. Below trip setting isolates RCIC system and trips RCIC turbine.
3(2)	Instrument Channel - RCIC Turbine Exhaust Diaphragm Pressure - High (PS 71-11A-D)	≤20 psig	A	1. Above trip setting isolates RCIC system and trips RCIC turbine.

TABLE 3.2.B (Continued)

Minimum No. Operable Per Trip Sys(1)	Function	Trip Level Setting	Action	Remarks
2(2)	Instrument Channel - Reactor High Water Level	≤583" above vessel zero.	A	1. Above trip setting trips HPCI turbine.
1	Instrument Channel - HPCI Turbine Steam Line High Flow	≤90 psi (7)	A	1. Above trip setting isolates HPCI system and trips HPCI turbine.
3(2)	Instrument Channel - HPCI Steam Supply Pressure - Low (PS 73-1A-D)	≥100 psig	A	1. Below trip setting isolates HPCI system and trips HPCI turbine.
3(2)	Instrument Channel - HPCI Turbine Exhaust Diaphragm (PS 73-20A-D)	≤20 psig	A	1. Above trip setting isolates HPCI system and trips HPCI turbine.
4(4)	Instrument Channel - HPCI Steam Line Space High Temperature	≤200°F.	A	1. Above trip setting isolates HPCI system and trips HPCI turbine.
1	Core Spray System Logic	N/A	B	1. Includes testing auto initiation inhibit to Core Spray Systems in other units.
1	RCIC System (Initiating) Logic	N/A	B	1. Includes Group 7 valves. Refer to Table 3.7.A for list of valves.
1	RCIC System (Isolation) Logic	N/A	B	1. Includes Group 5 valves. Refer to Table 3.7.A for list of valves.
1 (16)	ADS Logic	N/A	A	
1	RHR (LPCI) System (Initiation)	N/A	B	

TABLE 4.2.B (Continued)
SURVEILLANCE REQUIREMENTS FOR INSTRUMENTATION THAT INITIATE OR CONTROL THE CSCS

Function	Functional Test	Calibration	Instrument Check
Instrument Channel - RHR Pump Discharge Pressure	(1)	once/3 months	none
Instrument Channel - Core Spray Pump Discharge Pressure	(1)	once/3 months	none
Core Spray Sparger to RPV d/p	(1)	once/3 months	once/day
Trip System Bus Power Monitor	once/operating Cycle	N/A	none
Instrument Channel - Condensate Header Low Level (LS-73-56A, B)	(1)	once/3 months	none
Instrument Channel - Suppression Chamber High Level	(1)	once/3 months	none
Instrument Channel - Reactor High Water Level	(1)	once/3 months	once/day
Instrument Channel - RCIC Turbine Steam Line High Flow	(1)	once/3 months	none
Instrument Channel - RCIC Steam Line Space High Temperature	(1)	once/3 months	none
Instrument Channel - RCIC Steam Supply Low Pressure	once/31 days	once/18 months	once/day
Instrument Channel - RCIC Turbine Exhaust Diaphragm High Pressure	once/31 days	once/18 months	once/day

TABLE 4.2.B (Continued)
SURVEILLANCE REQUIREMENTS FOR INSTRUMENTATION THAT INITIATE OR CONTROL THE CSCS

Function	Functional Test	Calibration	Instrument Check
Instrument Channel - HPCI Turbine Steam Line High Flow	(1)	Once/3 months	none
Instrument Channel - HPCI Steam Line Space High Temperature	(1)	Once/3 months	none
Instrument Channel - HPCI Steam Supply Low Pressure	once/31 days	once/18 months	once/day
Instrument Channel - HPCI Turbine Exhaust Diaphragm High Pressure	once/31 days	once/18 months	once/day
Core Spray System Logic	once/18 months	(6)	N/A
RCIC System (Initiating) Logic	once/18 months	N/A	N/A
RCIC System (Isolation) Logic	once/18 months	(6)	N/A
HPCI System (Initiating) Logic	once/18 months	(6)	N/A
HPCI System (Isolation) Logic	once/18 months	(6)	N/A
ADS Logic	once/18 months	(6)	N/A
LPCI (Initiating) Logic	once/18 months	(6)	N/A
LPCI (Containment Spray) Logic	once/18 months	(6)	N/A
Core Spray System Auto Initiation Inhibit (Core Spray Auto Initiation)	once/18 months (7)	N/A	N/A
LPCI Auto Initiation Inhibit (LPCI Auto Initiation)	once/18 months (7)	N/A	N/A

NOTES FOR TABLE 3.7.A

Key: O = Open
C = Closed
SC = Stays Closed
GC = Goes Closed

Note: Isolation groupings are as follows:

Group 1: The valves in Group 1 are actuated by any one of the following conditions:

1. Reactor Vessel Low Water Level (378")
2. Main Steamline High Radiation
3. Main Steamline High Flow
4. Main Steamline Space High Temperature
5. Main Steamline Low Pressure

Group 2: The valves in Group 2 are actuated by any of the following conditions:

1. Reactor Vessel Low Water Level (538")
2. High Drywell Pressure

Group 3: The valves in Group 3 are actuated by any of the following conditions:

1. Reactor Low Water Level (538")
2. Reactor Water Cleanup System High Temperature
3. Reactor Water Cleanup System High Drain Temperature

Group 4: The valves in Group 4 are actuated by any of the following conditions:

1. HPCI Steamline Space High Temperature
2. HPCI Steamline High Flow
3. HPCI Steamline Low Pressure
4. HPCI Turbine Exhaust Diaphragm High Pressure

Group 5: The valves in Group 5 are actuated by any of the following condition:

1. RCIC Steamline Space High Temperature
2. RCIC Steamline High Flow
3. RCIC Steamline Low Pressure
4. RCIC Turbine Exhaust Diaphragm High Pressure

Group 6: The valves in Group 6 are actuated by any of the following conditions:

1. Reactor Vessel Low Water Level (538")
2. High Drywell Pressure
3. Reactor Building Ventilation High Radiation

TABLE 3.2.B (Continued)

Minimum No. Operable Per Trip Sys(1)	Function	Trip Level Setting	Action	Remarks
1	HPCI Trip System bus power monitor	N/A	C	1. Monitors availability of power to logic systems.
1	RCIC Trip System bus power monitor	N/A	C	1. Monitors availability of power to logic systems.
1(2)	Instrument Channel - Condensate Header Low Level (LS-73-56A & B)	≥ Elev. 551'	A	1. Below trip setting will open HPCI suction valves to the suppression chamber.
2(2)	Instrument Channel - Suppression Chamber High Level	≤ 7" above instrument zero	A	1. Above trip setting will open HPCI suction valves to the suppression chamber.
2(2)	Instrument Channel - Reactor High Water Level	≤ 583" above vessel zero	A	1. Above trip setting trips RCIC turbine.
1	Instrument Channel - RCIC Turbine Steam Line High Flow	≤ 450" H_2O (7)	A	1. Above trip setting isolates RCIC system and trips RCIC turbine.
4(4)	Instrument Channel - RCIC Steam Line Space High Temperature	≤200°F.	A	1. Above trip setting isolates RCIC system and trips RCIC turbine.
3(2)	Instrument Channel - RCIC Steam Supply Pressure - Low (PS 71-1A-D)	≥50 psig	A	1. Below trip setting isolates RCIC system and trips RCIC turbine.
3(2)	Instrument Channel - RCIC Turbine Exhaust Diaphragm Pressure - High (PS 71-11A-D)	≤ 20 psig	A	1. Above trip setting isolates RCIC system and trips RCIC turbine.

TABLE 3.2.B (Continued)

Minimum No. Operable Per Trip Sys(1)	Function	Trip Level Setting	Action	Remarks
2(2)	Instrument Channel - Reactor High Water Level	≤583" above vessel zero.	A	1. Above trip setting trips HPCI turbine.
1	Instrument Channel - HPCI Turbine Steam Line High Flow	≤90 psi (7)	A	1. Above trip setting isolates HPCI system and trips HPCI turbine.
4(4)	Instrument Channel - HPCI Steam Line Space High Temperature	≤200°F.	A	1. Above trip setting isolates HPCI system and trips HPCI turbine.
3(2)	Instrument Channel - HPCI Steam Supply Pressure-Low (PS 73-1A-D)	≥100 psig	A	1. Below trip setting isolates HPCI system and trips HPCI turbine.
3(2)	Instrument Channel - HPCI Turbine Exhaust Diaphragm (PS 73-20A-D)	≤ 20 psig	A	1. Above trip setting isolates HPCI system and trips HPCI turbine.
1	Core Spray System Logic	N/A	B	1. Includes testing auto initiation inhibit to Core Spray Systems in other units.
1	RCIC System (Initiating) Logic	N/A	B	1. Includes Group 7 valves. Refer to Table 3.7.A for list of valves.
1	RCIC System (Isolation) Logic	N/A	B	1. Includes Group 5 valves. Refer to Table 3.7.A for list of valves.
1 (16)	ADS Logic	N/A	A	
1	RHR (LPCI) System (Initiation)	N/A	B	
1	RHR (LPCI) System (Containment Cooling Spray) Logic	N/A	A	

TABLE 4.2.B (Cont'd)
SURVEILLANCE REQUIREMENTS FOR INSTRUMENTATION THAT INITIATE OR CONTROL THE CSCS

Function	Functional Test	Calibration	Instrument Check
Instrument Channel - RHR Pump Discharge Pressure	(1)	once/3 months	none
Instrument Channel - Core Spray Pump Discharge Pressure	(1)	once/3 months	none
Core Spray Sparger to RPV d/p	(1)	once/3 months	once/day
Trip System Bus Power Monitor	once/operating Cycle	N/A	none
Instrument Channel - Condensate Header Level (LS-73-56A, B)	(1)	once/3 months	none
Instrument Channel - Suppression Chamber High Level	(1)	once/3 months	none
Instrument Channel - Reactor High Water Level	(1)	once/3 months	once/day
Instrument Channel - RCIC Turbine Steam Line High Flow	(1)	once/3 months	none
Instrument Channel - RCIC Steam Line Space High Temperature	(1)	once/3 months	none
Instrument Channel - RCIC Steam Supply Low Pressure	once/31 days	once/18 months	once/day
Instrument Channel - RCIC Turbine Exhaust Diaphragm High Pressure	once/31 days	once/18 months	once/day

TABLE 4.2.B (Cont'd)
SURVEILLANCE REQUIREMENTS FOR INSTRUMENTATION THAT INITIATE OR CONTROL THE CSCS

Function	Functional Test	Calibration	Instrument Check
Instrument Channel - HPCI Turbine Steam Line High Flow	(1)	once/3 months	none
Instrument Channel - HPCI Steam Line Space High Temperature	(1)	once/3 months	none
Instrument Channel - HPCI Steam Supply Low Pressure	once/31 days	once/18 months	once/day
Instrument Channel - HPCI Turbine Exhaust Diaphragm High Pressure	once/31 days	once/18 months	once/day
Core Spray System Logic	once/18 months	(6)	N/A
RCIC System (Initiating) Logic	once/18 months	N/A	N/A
RCIC System (Isolation) Logic	once/18 months	(6)	N/A
HPCI System (Initiating) Logic	once/18 months	(6)	N/A
HPCI System (Isolation) Logic	once/18 months	(6)	N/A
ADS Logic	once/18 months	(6)	N/A
LPCI (Initiating) Logic	once/18 months	(6)	N/A
LPCI (Containment Spray) Logic	once/18 months	(6)	N/A

NOTES FOR TABLE 3.7.A

Key: O = Open
C = Closed
SC = Stays Closed
GC = Goes Closed

Note: Isolation groupings are as follows:

Group 1: The valves in Group 1 are actuated by any of the following conditions:

1. Reactor Vessel Low Water Level (378")
2. Main Steamline High Radiation
3. Main Steamline High Flow
4. Main Steamline Space High Temperature
5. Main Steamline Low Pressure

Group 2: The valves in Group 2 are actuated by any of the following conditions:

1. Reactor Vessel Low Water Level (538")
2. High Drywell Pressure

Group 3: The valves in Group 3 are actuated by any of the following conditions:

1. Reactor Low Water Level (538")
2. Reactor Water Cleanup System High Temperature
3. Reactor Water Cleanup System High Drain Temperature

Group 4: The valves in Group 4 are actuated by any of the following conditions:

1. HPCI Steamline Space High Temperature
2. HPCI Steamline High Flow
3. HPCI Steamline Low Pressure
4. HPCI Turbine Exhaust Diaphragm High Pressure

Group 5: The valves in Group 5 are actuated by any of the following conditions:

1. RCIC Steamline Space High Temperature
2. RCIC Steamline High Flow
3. RCIC Steamline Low Pressure
4. RCIC Turbine Exhaust Diaphragm High Pressure

Group 6: The valves in Group 6 are actuated by any of the following conditions:

1. Reactor Vessel Low Water Level (538")
2. High Drywell Pressure
3. Reactor Building Ventilation High Radiation

ENCLOSURE 2

DESCRIPTION AND JUSTIFICATION
BROWNS FERRY NUCLEAR PLANT (BFN)

Description of Change

The Browns Ferry Nuclear Plant Technical Specifications of units 1, 2 and 3 are being changed to add instruments to table 3.2.B, Instrumentation that Initiates or Controls the Core and Containment Cooling Systems, and table 4.2.B, Surveillance Requirements for Instrumentation that Initiates or Control the Core Standby Cooling system. The four additional instruments to be listed are to trip and isolate the High Pressure Coolant Injection (HPCI) System and Reactor Core Isolation Cooling (RCIC) System on low steam supply pressure and high turbine exhaust pressure.

The technical specifications are also corrected to add turbine exhaust diaphragm high pressure to the lists of conditions that cause group 4 and 5 (HPCI and RCIC) isolation in the notes for table 3.7.A.

Reason For Change

To complete and clarify the technical specification requirements for trips and isolation signals to the HPCI and RCIC systems for instrumentation that is already installed and in operation at BFN.

Justification for Change

The current BFN Technical Specifications Tables 3.2.B and 4.2.B list various setpoints and surveillance requirements for various instrumentation that initiates or controls the Core Standby Cooling System.

The proposed change will add the following instrumentation and their allowable values to the subject tables:

HPCI Steam Supply Low Pressure Instrument Channel
HPCI Turbine Exhaust Diaphragm Pressure Instrument Channel
RCIC Steam Supply Low Pressure Instrument Channel
RCIC Turbine Exhaust Diaphragm Pressure Instrument Channel

The HPCI System is a turbine driven system using steam to inject either condensate storage tank water or suppression pool water into the reactor vessel in the event of an intermediate or small line break. Various trips have been installed on the HPCI System to provide isolation capabilities and added protection to the subject system. Two of these trips have been installed and therefore need to be incorporated into the BFN Technical Specifications.

The HPCI Steam Supply Low Pressure Instrument Channels will automatically close the HPCI steam supply line isolation valves when the steam pressure has decreased to such a low value that the HPCI turbine is inoperable, thus preventing steam and radioactive gases from escaping through the HPCI turbine shaft seals into the Reactor Building. General Electric Company has recommended using an allowable limiting trip setting of $\geq$100 psig. Use of this setpoint will ensure that the instrumentation will generate a HPCI

Justification for Change (Cont'd)

isolation signal when the steam supply falls below 100 psig. This value is sufficiently below the lower end of the HPCI operating range (1120 to 150 psig) to avoid affecting HPCI System operational requirements yet high enough to generate an isolation signal before the reactor vessel has fully depressurized while still ensuring any radioactive gases do not escape through the HPCI turbine shaft seals.

The HPCI turbine exhaust diaphragm pressure instruments provides an exhaust rupture disc high pressure signal to the HPCI steam supply isolation valve control circuitry for HPCI isolation. The HPCI turbine exhaust line contains a branch line with two rupture discs in series which open into the HPCI turbine room. In the event that a high pressure occurs in the turbine exhaust line and the HPCI turbine is not tripped by existing sensors, the rupture discs are designed to fail at a pressure below the HPCI turbine casing pressure.

The HPCI Turbine Exhaust Diaphragm Signal is used to detect ruptures in either the inner rupture disc or both rupture discs which protect the HPCI turbine casing from overpressurization. The maximum calculated limit setting is $\leq$52 psig. Using $\leq$20 psig as an allowable limit setting will assure isolation prior to 52 psig. Currently the BFN Final Safety Analysis Report (FSAR) Table 7.3.2 states that the trip setting of this instrumentation is $\leq$10 psig. However, if this number is so low, it may result in spurious trips to the HPCI System. If spurious trips do occur, the technical specification allowable value will permit raising the FSAR value to avoid such trips.

The RCIC Steam Supply Low Pressure Instrument Channels provide RCIC steam line isolation in the event low pressure is detected. General Electric recommends an allowable setpoint for these instruments of $\geq$50 psig. RCIC isolation will result when the steam supply pressure falls below 50 psig. This value is sufficiently below the lower end of the RCIC System operating range (1120 to 150 psig) to avoid affecting RCIC System operational requirements; however, high enough to generate an isolation signal before the reactor vessel has become depressurized while still ensuring any radioactive gasses do not escape through the RCIC turbine shaft seals.

The RCIC Turbine Exhaust Diaphragm Pressure Instrument detects pressure between the turbine exhaust rupture discs. A high pressure signal will initiate RCIC steam line isolation. As with the HPCI Turbine Exhaust Diaphragm, the allowable trip value is $\leq$20 psig. The actual calculated maximum setting is $\leq$50 psig which was determined by a TVA document, "Determination of Pressure Setpoint for the Prevention of RCIC Turbine Casing Overpressurization." Using a $\leq$20 psig as an allowable limit will assure isolation prior to 50 psig.

These changes simply add technical specification requirements to instruments and functions that already exist at the plant. The FSAR discusses these systems and specifies the trip signals added by these changes in sections 4.7.5, 6.4.1, and 7.3.4.7. Since TVA is only adding requirements to the technical specifications and no change will be made to plant operation, TVA has concluded that the proposed changes to the technical specifications will not adversely affect plant safety.

ENCLOSURE 3

DETERMINATION OF NO SIGNIFICANT HAZARDS CONSIDERATION
BROWNS FERRY NUCLEAR PLANT (BFN)
UNITS 1, 2, AND 3

Description of Amendment Request

The proposed amendment would change the Technical Specification of Browns Ferry Nuclear Plant (BFN) units 1, 2, and 3 to specify requirements for instruments that trip and isolate the High Pressure Coolant Injection (HPCI) system and the Reactor Core Isolation Cooling (RCIC) system when the steam supply pressure to their respective turbine is low or when their turbine exhaust diaphragm pressure is too high. The instrument function being added will also complete the technical specification requirements for the HPCI and RCIC trip and isolation signals listed in the Final Safety Analysis Report (FSAR).

Basis for Proposed No Significant Hazards Consideration Determination

NRC has provided standards for determining whether a significant hazards consideration exists as stated in 10 CFR 50.92(c). A proposed amendment to an operating license involves no significant hazards considerations if operation of the facility in accordance with the proposed amendment would not (1) involve a significant increase in the probability or consequences of an accident previously evaluated, or (2) create the possibility of a new or different kind of accident from an accident previously evaluated, or (3) involve a significant reduction in a margin of safety.

1. The proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

   The subject HPCI/RCIC instrumentation provides system/equipment protection as addressed in the BFN-FSAR Section 4.3, 6.4, and 7.3. This instrumentation and allowable values not only protects this equipment, it also provides assurance that radioactive gases do not escape through the rupture in the HPCI/RCIC pump shaft seals upon turbine stall. This instrumentation provides additional pressure system boundary protection by assuring HPCI/RCIC pump casing integrity.

   The BFN FSAR provides various analysis for potential BFN accidents. Adding these instruments to the BFN Technical Specifications does not change any operational characteristics, modify any equipment or minimize any mitigation responsibilities of the HPCI/RCIC Systems as analyzed in the BFN FSAR. The main function of the HPCI/RCIC is to assure that the reactor is adequately cooled to limit fuel cladding temperature in the event of a small break in the nuclear system and a loss of coolant which does not result in a rapid depressurization of the reactor vessel. These changes do not alter the function of these systems; therefore, their intended safety function is maintained as previously analyzed. This change is also being made to bring the BFN Technical Specifications in compliance with the as-built plant, BFN FSAR, and GE Standard Technical Specifications.

Basis for Proposed No Significant Hazards Consideration Determination (Cont'd)

2. This change does not create the possibility of a new or different kind of accident from an accident previously evaluated. This change does not eliminate, modify nor provide any new operational conditions. These changes provide assurance that these systems operate as designed and analyzed in the BFN FSAR.

3. This change does not involve a significant reduction in a margin of safety. Adding these instruments to the BFN Technical Specifications provides additional safety to the HPCI/RCIC Systems. The proposed changes do not eliminate or decrease any operational characteristics or processes of the plant. These instruments are presently installed and operational. Adding these instruments to the BFN Technical Specifications also assures that they are incorporated into the plant surveillance testing program. This program provides verification on a specified frequency that the subject instrumentation functions as designed.

   The allowable setpoints used for these instruments are within their calculated maximum values. This provides adequate margin such that instrument drift or inadvertent transients will not affect the intended safety function of the HPCI/RCIC Systems.

   The addition of this instrumentation does not alter any seismic or environmental qualification criteria for BFN. Based on the above, this change does not involve a significant reduction in the margin of safety to the BFN HPCI/RCIC Systems.

Since the application for amendment involves a proposed change that is encompassed by the criteria for which no significant hazards consideration exists, TVA has made a proposed determination that the application involves no significant hazards consideration.