

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

August 27, 1979

TVA BFNP TS 129

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Mr. Denton:

In the Matter of the)	Docket Nos. 50-259
Tennessee Valley Authority)	50-260
		50-296

In accordance with the provisions of 10 CFR part 50.59, we are enclosing 40 copies of a requested amendment to licenses DPR-33, DPR-52, and DPR-68 to change the technical specifications of the Browns Ferry Nuclear Plant units 1, 2, and 3 (Enclosure 1). These proposed changes concern the high drywell pressure trip level setting. The proposal provides additional operational margin without producing a degradation of safety functions. Justification for the proposed trip level setting change is included as Enclosure 2.

In accordance with the requirements of 10 CFR Part 170.22, we have determined these proposed amendments to be Class III for unit 1 and Class I for units 2 and 3. These classifications are based on the facts that the proposed amendment for unit 1 involves a single safety issue which does not involve a significant hazard consideration and the proposed amendments for units 2 and 3 are duplicates of the unit 1 proposed amendment. The remittance for \$4800 (\$4000 for unit 1 and \$800 for units 2 and 3) is being wired to the NRC, Attention: Licensing Fee Management Branch.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

L. M. Mills
L. M. Mills, Manager
Nuclear Regulation and Safety

Subscribed and sworn to before
me this 27 day of August 1979.

Lion Bradbury
Notary Public

My Commission Expires Oct. 4, 1981

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Enclosures
cc: See page 2

Mr. Harold R. Denton

August 27, 1979

cc (Enclosures):

Mr. Charles R. Christopher
Chairman, Limestone County Commission
P.O. Box 188
Athens, Alabama 35611

Dr. Ira L. Myers
State Health Officer
State Department of Public Health
State Office Building
Montgomery, Alabama 36104

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UNIT 1

TABLE 3.2.A
PRIMARY CONTAINMENT AND REACTOR BUILDING ISOLATION INSTRUMENTATION

Minimum No. Operable Per Trip Sys (1)	Function	Trip Level Setting	Action (1)	Remarks
2	Instrument Channel - Reactor Low Water Level (6)	$\geq 538"$ above vessel zero	A or (B and Z)	1. Below trip setting does the following: a. Initiates Reactor Building Isolation b. Initiates Primary Containment Isolation c. Initiates SGTS
1	Instrument Channel - Reactor High Pressure	100 ± 15 psig	D	1. Above trip setting isolates the shutdown cooling suction valves of the ZHR system.
2	Instrument Channel - Reactor Low Water Level (LIS-3-56A-D, SW #1)	$\geq 470"$ above vessel zero.	A	1. Below trip setting initiates Main Steam Line Isolation
2	Instrument Channel - High Drywell Pressure (6) (PS-64-56A-D)	≤ 2.5 psig	A or (B and Z)	1. Above trip setting does the following: a. Initiates Reactor Building Isolation b. Initiates Primary Containment Isolation c. Initiates SGTS
2	Instrument Channel - High Radiation Main Steam Line Tunnel (6)	≤ 3 times normal rated full power background	B	1. Above trip setting initiates Main Steam Line Isolation
2	Instrument Channel - Low Pressure Main Steam Line	≥ 825 psig (4)	B	1. Below trip setting initiates Main Steam Line Isolation
2(3)	Instrument Channel - High Flow Main Steam Line	$\leq 140\%$ of rated steam flow	B	1. Above trip setting initiates Main Steam Line Isolation

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UNIT 2

TABLE 3.2.A
PRIMARY CONTAINMENT AND REACTOR BUILDING ISOLATION INSTRUMENTATION

Minimum No. Operable Per Trip Sys (1)	Function	Trip Level Setting	Action (1)	Remarks
2	Instrument Channel - Reactor Low Water Level (6)	$\geq 538"$ above vessel zero	A or (B and E)	1. Below trip setting does the following: a. Initiates Reactor Building Isolation b. Initiates Primary Containment Isolation c. Initiates SGTS
1	Instrument Channel - Reactor High Pressure	100 ± 15 psig	E	1. Above trip setting isolates the shutdown cooling suction valves of the RHR system.
2	Instrument Channel - Reactor Low Water Level (RIS-3-56A-D, SW #1)	$\geq 470"$ above vessel zero.	A	1. Below trip setting initiates Main Steam Line Isolation
2	Instrument Channel - High Drywell Pressure (6) (PS-64-56A-D)	≤ 2.5 psig	A or (B and E).	1. Above trip setting does the following: a. Initiates Reactor Building Isolation b. Initiates Primary Containment Isolation c. Initiates SGTS
2	Instrument Channel - High Radiation Main Steam Line Tunnel (6)	≤ 3 times normal rated full power background	B	1. Above trip setting initiates Main Steam Line Isolation
2	Instrument Channel - Low Pressure Main Steam Line	≥ 825 psig (4)	B	1. Below trip setting initiates Main Steam Line Isolation
2(3)	Instrument Channel - High Flow Main Steam Line	$\leq 140\%$ of rated steam flow	B	1. Above trip setting initiates Main Steam Line Isolation

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UNIT 3

TABLE 3.2.A
PRIMARY CONTAINMENT AND REACTOR BUILDING ISOLATION INSTRUMENTATION

Minimum No. Operable Per Trip Sys (1)	Function	Trip Level Setting	Action (1)	Remarks
2	Instrument Channel - Reactor Low Water Level (6)	$\geq 538^{\circ}$ above vessel zero	A or (B and E)	1. Below trip setting does the following: a. Initiates Reactor Building Isolation b. Initiates Primary Containment Isolation c. Initiates SGTS
1	Instrument Channel - Reactor High Pressure	100 ± 15 psig	D	1. Above trip setting isolates the shutdown cooling suction valves of the RHR system.
2	Instrument Channel - Reactor Low Water Level (LIS-3-56A-D, SW #1)	$\geq 470^{\circ}$ above vessel zero	A	1. Below trip setting initiates Main Steam Line Isolation
2	Instrument Channel - High Drywell Pressure (6) (PS-64-56A-D)	≤ 2.5 psig	A or (B and E)	1. Above trip setting does the following: a. Initiates Reactor Building Isolation b. Initiates Primary Containment Isolation c. Initiates SGTS
2	Instrument Channel - High Radiation Main Steam Line Tunnel (6)	≤ 3 times normal rated full power background	B	1. Above trip setting initiates Main Steam Line Isolation
2	Instrument Channel - Low Pressure Main Steam Line	≥ 850 psig (4)	B	1. Below trip setting initiates Main Steam Line Isolation
2 (3)	Instrument Channel - High Flow Main Steam Line	$\leq 140\%$ of rated steam flow	B	1. Above trip setting initiates Main Steam Line Isolation
2	Instrument Channel - Main Steam Line Tunnel High Temperature	$\leq 200^{\circ}\text{F}$	B	1. Above trip setting initiates Main Steam Line Isolation.

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ENCLOSURE 2

REASONS AND JUSTIFICATIONS FOR PROPOSED CHANGES TO BROWNS FERRY NUCLEAR PLANT TECHNICAL SPECIFICATIONS FOR UNITS 1, 2, AND 3

UNIT 1

Page 55 It is proposed to change Table 3.2.A: "Instrument Channel - High Drywell Pressure (6) (PS-64-56A-D)" trip level setting from " ≤ 2 psig" to " ≤ 2.5 psig." This change would provide additional operational margin without producing a degradation of safety functions. Instrumentation would be more reliable with greater span to use in calibration and functional checks. This change is similar to a change approved by the NRC on February 7, 1978, for Vermont Yankee.

Evaluation

The high drywell pressure trip signal is used to initiate primary containment isolation and serves as a backup or conjunctive signal to initiate the ECCS. With respect to the time to achieve containment isolation, the performance of the ECCS, and containment response to a postulated LOCA, the following is presented. The higher initial containment pressure will slightly improve ECCS pump performance due to the small increase in the net positive suction head accompanied by a lesser increase in pump discharge pressure. In addition, the change in the containment isolation time and the containment pressure response will be small since they are primarily a function of the differential pressure from drywell ambient and the trip setting. The margins between the containment design pressure and temperature and the calculated results for a spectrum of breaks is sufficiently large to accommodate the small changes associated with the higher setpoint. Fuel peak clad temperatures would be unaffected in the event of the design basis accident by the proposed 0.5 psi increase in containment ambient pressure as the rate of discharge from a postulated double-ended pipe rupture would be at choked-flow conditions and independent of discharge pressure.

UNIT 2

Page 55 Same as page 55 for unit 1 above.

UNIT 3

Page 57 Same as page 55 for unit 1 above.

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