TENNESSEE VALLEY AUTHORITY
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SEP 02 1986

Director of Nuclear Reactor Regulation
Attention: Mr. B. Youngblood, Project Director
PWR Project Directorate No. 4
Division of Pressurized Water
Reactor (PWR) Licensing A
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Youngblood:

In the Matter of the Application of	)	Docket Nos. 50-390
Tennessee Valley Authority	)	50-391

During the NRC staff's review of the Watts Bar Nuclear Plant unit 1 technical specifications in 1984, a condition was identified where the Reactor Protection System permissive P-10 would fail to perform its intended function on reducing power below the P-10 setpoint. In response TVA proposed changes to the draft technical specifications. The proposed changes, transmitted in J. A. Domer's letter to E. Adensam dated January 3, 1985, were incorporated into the final draft of the Watts Bar unit 1 technical specifications (Thomas M. Novak's letter dated February 15, 1985). By letter dated May 20, 1985, the NRC staff provided to TVA changed pages for the final draft of the Watts Bar unit 1 technical specifications which removed the February 15, 1985 P-10 changes. The reason given for the removal was that the P-10 changes deviated from the Westinghouse Standard Technical Specifications (NUREG-0452) and were not plant-specific.

By letter dated February 27, 1986, Westinghouse Electric Corporation notified NRC that the Reactor Protection System permissive P-10 malfunction was a construction deficiency. TVA was also notified by Westinghouse and this condition was reported in accordance with 10 CFR 50.55(e) for Watts Bar Nuclear Plant. In the final report on deficiencies WBRD 50-390/86-42 and 50-391/86-41 TVA identified the corrective action for this condition as being an updated change to the Watts Bar technical specifications. Enclosed is the proposed technical specification change.

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If you have any questions concerning this matter, please get in touch with Glenn Ashley at (615) 365-8839.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

R. Gridley, Director
Nuclear Safety and Licensing

Enclosure (1)
cc (Enclosure):
U.S. Nuclear Regulatory Commission (2)
Region II
Attn: Dr. J. Nelson Grace, Regional Administrator
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

Mr. Tom Kenyon
Watts Bar Project Manager
U.S. Nuclear Regulatory Commission
7920 Norfolk Avenue
Bethesda, Maryland 20814

Enclosure

Justification for Change to P-10 Operability
Requirements in Table 3.3-1

The Reactor Protection System P-10 permissive provides a dual function. During power ascension, two of the four channels above 10 percent power allows the blocking of the low power reactor trips (power range neutron flux trip-low setpoint and intermediate range high neutron flux trip) and deenergizes the source range high voltage as a backup to P-6. During power descent, three of the four channels below 10 percent power reenables the low power reactor trips and allows power to be restored to the source range neutron flux detectors once flux is below P-6. In order to meet single failure criteria during the power descent P-10 function, all four channels must be operable; however, the final draft Watts Bar unit 1 technical specifications allow one P-10 channel to be taken out of service with no action required. To correct this deficiency TVA proposes that all four P-10 channels be required to be operable and that an ACTION statement be added to address one or more channels being inoperable when reactor power is below the P-10 setpoint. Above the P-10 setpoint no remedial action is required. The proposed ACTION statement would require the inoperable channel restored within six hours or the subsequent unit shutdown within one hour. These times are consistent with other allowable out of service times for Reactor Protection System functions. For the purpose of this action, energizing the bistable for an inoperable channel will make that channel operable if that would enable it to perform its design function.

To address the possibility of the source range detectors not being energized due to this condition, the action statement regarding operability of the source range detectors would have an added statement. This proposed added statement would require the reactor trip breakers to be opened, suspension of all operations involving positive reactivity changes and verification that one of the valve combinations given in Technical specification 4.9.1.3 is closed and secured within one hour. These actions will provide a timely means of providing protection against having protective trips removed and a boron dilution accident.

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TABLE 3.3-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
18. Turbine Trip					
a. Low Fluid Oil Pressure	3	2	2	1 #####	7#
b. Turbine Stop Valve Closure	4	4	4	1 #####	11#
19. Safety Injection Input from ESF	2	1	2	1, 2	9
20. Reactor Trip System Interlocks					
a. Intermediate Range Neutron Flux, P-6	2	1	2	2 ##	8
b. Low Power Reactor Trips Block, P-7			4		12
P-10 Input	4	2	~~3~~	1 ###	~~8~~
or					
P-13 Input	2	1	2	1	8
c. Power Range Neutron Flux, P-8	4	2	3	1	8
d. Power Range Neutron Flux, P-9	4	2	3	1	8
e. Power Range Neutron Flux, P-10	4	2	4 ~~3~~	~~###~~ 1, 2	12 ~~8~~
f. Turbine Impulse Chamber Pressure, P-13	2	1	2	1	8

FINAL DRAFT
MAY 9 1985

TABLE 3.3-1 (Continued)

ACTION STATEMENTS (Continued)

b. Above the P-6 (Intermediate Range Neutron Flux Interlock) Setpoint but below 10% of RATED THERMAL POWER, restore the inoperable channel to OPERABLE status prior to increasing THERMAL POWER above 10% of RATED THERMAL POWER.

ACTION 4 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement suspend all operations involving positive reactivity changes.

ACTION 5 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or open the Reactor trip breakers, suspend all operations involving positive reactivity changes and verify that one of the valve combinations given in Specification 4.9.1.3 are closed and secured in position within the next hour. With no channels operable comply with the above requirements within 1 hour.

ACTION 6 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the following conditions are satisfied:

a. The inoperable channel is placed in the tripped condition within 6 hours, and

b. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 4 hours for surveillance testing of other channels per Specification 4.3.1.1.

ACTION 7 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed until performance of the next required ANALOG CHANNEL OPERATIONAL TEST provided the inoperable channel is placed in the tripped condition within 6 hours.

ACTION 8 - With less than the Minimum Number of Channels OPERABLE, within 1 hour determine by observation of the associated permissive annunciator window(s) that the interlock is in its required state for the existing plant condition, or apply Specification 3.0.3.

ACTION 9 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, be in at least HOT STANDBY within 6 hours; however, one channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.1.1, provided the other channel is OPERABLE.

TABLE 3.3-1 (Continued)

ACTION STATEMENTS (Continued)

ACTION 10 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or open the Reactor trip breakers within the next hour.

ACTION 11 - With the number of OPERABLE channels less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or reduce power to below 50% RATED THERMAL POWER within the next 6 hours.

Action 12 - With less than the MINIMUM NUMBER OF CHANNELS OPERABLE requirement and power below the P-10 setpoint, restore the inoperable channel to operable status within 6 hours or open the reactor trip breakers and isolate potential dilution flowpaths per Specification 4.9.1.3 within one hour.