Tennessee Valley Authority, Post Office Box 2000, Spring City, Tennessee 37381-2000

John A. Scalice
Site Vice President, Watts Bar Nuclear Plant

DEC 17 1996

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

Gentlemen:

In the Matter of the) Docket No. 50-390
Tennessee Valley Authority)

WATTS BAR NUCLEAR PLANT (WBN) - UNIT 1 FACILITY OPERATING LICENSE NPF-90 - LICENSEE EVENT REPORT (LER) 50-390/96023 - NONCOMPLIANCE WITH TECHNICAL SPECIFICATIONS (TSs) 3.3.1 AND 3.3.2

The purpose of this letter is to provide the subject report. The enclosed report provides details concerning the noncompliance with TSs 3.3.1, action U.1.2; and 3.3.2, action M.1.2 requirement to set steam generator level trip time delay T_s to match T_m when one steam generator water level low-low channel is inoperable.

If you should have any questions, please contact P. L. Pace at (423) 365-1824.

Sincerely,

R. T. Purcell for

J. A. Scalice

Enclosure
cc: See page 2

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cc (Enclosure):
INPO Records Center
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NRC FORM 366 (4-95) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104
EXPIRES 04/30/98
ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS MANDATORY INFORMATION COLLECTION REQUEST: 50.0 HRS. REPORTED LESSONS LEARNED ARE INCORPORATED INTO THE LICENSING PROCESS AND FED BACK TO INDUSTRY. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (T-6 F33), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20603.

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Watts Bar Nuclear Plant - Unit 1	05000390	1 OF 6

TITLE (4)

Non-Compliance with Technical Specification 3.3.1 and 3.3.2

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
										05000
11	20	96	96	023	00	12	17	96	FACILITY NAME	DOCKET NUMBER 05000

OPERATING MODE (9)	1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)			
POWER LEVEL (10)	100	20.2201(b)	20.2203(a)(2)(v)	50.73(a)(2)(i)	50.73(a)(2)(viii)
		20.2203(a)(1)	20.2203(a)(3)(i)	X 50.73(a)(2)(ii)	50.73(a)(2)(x)
		20.2203(a)(2)(i)	20.2203(a)(3)(ii)	50.73(a)(2)(iii)	73.71
		20.2203(a)(2)(ii)	20.2203(a)(4)	50.73(a)(2)(iv)	OTHER - Specify in Abstract below or in NRC Form 366A
		20.2203(a)(2)(iii)	50.36(c)(1)	50.73(a)(2)(v)	
		20.2203(a)(2)(iv)	50.36(c)(2)	50.73(a)(2)(vii)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
Rickey Stockton, Licensing Engineer	(423)-365-1818

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS

SUPPLEMENTAL REPORT EXPECTED (14)		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE).	X NO				

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On November 20, 1996, with Unit 1 operating in Mode 1 at 100 percent rated thermal power (RTP), Technical Specifications 3.3.1 action U.1.2; and 3.3.2, M.1.2 requirement of 6 hour completion time for setting the trip time delay Ts to match the trip delay Tm was exceeded. Specifically, during the performance of Surveillance Instruction (SI) 1-SI-3-7, "18 Month Channel Calibration Steam Generator 3 Narrow Range Level Channel II Loop 1-LPL-3-93 (L-539)," Limiting Condition for Operation (LCO) 3.3.1 was entered at 0505 EST on November 20, 1996, and was exited later that day at 1615 EST. On November 22, 1996, the shift technical advisor, while questioning compliance with TS 3.3.1, action U.1.2; and TS 3.3.2, action M.1.2 for the performance of 1-SI-3-10, discovered that said TS actions had not been addressed during the November 20, 1996 performance of 1-SI-3-7. A subsequent review identified that the 6 hour completion time for these actions had been exceeded on November 20, 1996.

The root cause of this condition was that the unit supervisor, who authorized the SI performance, assumed incorrectly that the SI contained steps to fulfill the TS actions. Corrective actions included appropriate disciplinary action under TVA personnel policy for the unit supervisor involved in this condition, the shift technical advisor and shift manager were counselled, and a review of plant instructions to determine if similar conditions exist. Recurrence control measures include revisions to plant instructions to provide additional detail as to how the required LCO actions are to be accomplished and feedback to shift managers as to management expectations regarding this condition.

FACILITY NAME (1)	DOCKET	LER NUMBER (6)			PAGE (3)
	05000	YEAR	SEQUENTIAL NUMBER	REVISION	2 OF 6
Watts Bar Nuclear Plant, Unit 1	05000390	96	023	00	

TEXT *(If more space is required, use additional copies of NRC Form 366A)* (17)

I. PLANT CONDITIONS

Watts Bar Nuclear Plant Unit 1 was operating in Mode 1 at 100 percent RTP.

II. DESCRIPTION OF EVENT

A. Event

On November 22, 1996, the shift technical advisor, while questioning compliance with TS 3.3.1, action U.1.2; and TS 3.3.2, action M.1.2 for the performance of 1-SI-3-10, "18 Month Channel Calibration Steam Generator 4 Narrow Range Level Channel II Loop 1-LPL-3-106 (L-549)," discovered that said TS actions had not been addressed during the November 20, 1996 performance of 1-SI-3-7, "18 Month Channel Calibration Steam Generator 3 Narrow Range Level Channel II Loop 1-LPL-3-93 (L-539)."

A subsequent review identified that the 6 hour completion time for these actions had been exceeded on November 20, 1996. Specifically, on November 20, 1996, performance of 1-SI-3-7 began at 0422 EST with entry into Limiting Condition for Operations (LCOs) 3.3.1 and 3.3.2 at 0505 EST. Instrument loop 1-LPL-3-93 (L-539) (Energy Industry Identification System (EIIS) code BA/LRC) was returned to service later that day at 1555 EST with Operations acknowledgment at 1615 EST that the SI was complete.

B. Inoperable Structures, Components, or Systems that Contributed to the Event

There were no inoperable structures, components or systems that contributed to this event.

C. Dates and Approximate Times of Major Occurrences

DATE	TIME	EVENT
11/20/96	0412 EST	Operations authorized performance of 1-SI-3-7
11/20/96	0422 EST	Performance of 1-SI-3-7 started
11/20/96	0505 EST	Operations entered LCOs 3.3.1, 3.3.2, and 3.3.3 for 1-SI-3-7
11/20/96	1555 EST	1-SI-3-7 completed with instrument loop L-539 returned to service

11/20/96	1615 EST	Operations acknowledged completion of 1-SI-3.-7
11/22/96	0620 EST	STA questioned how LCO actions U.1.2 of TS 3.3.1 and M.1.2 of TS 3.3.2 were to be accomplished. This led to the discovery of the November 20, 1996 condition.

D. Other Systems or Secondary Functions Affected

No other systems or secondary functions were affected.

E. Method of Discovery

As previously described, a shift technical advisor questioned how LCO actions U.1.2 of TS 3.3.1 and M.1.2 of TS 3.3.2 were to be accomplished during performance of 1-SI-3-10 on November 22, 1996.

F. Operator Actions

See Method of Discovery section above and Cause of Event section below.

G. Automatic and Manual Safety System Response

There were no automatic or manual safety system responses due to this condition.

III. CAUSE OF EVENT

The root cause of this condition was that the unit supervisor, who authorized 1-SI-3-7 performance assumed that the SI, since it required entry into LCOs 3.3.1 and 3.3.2, had steps to fulfill the associated actions U.1.2 and M.1.2, respectively. The unit supervisor did not confirm this assumption. However, upon the performance of SI 1-SI-3-10 on November 22, 1996, a shift technical advisor questioned how actions U.1.2 of 3.3.1 and M.1.2 of 3.3.2 were to be satisfied which led to the discovery of the November 20, 1996 condition.

IV. ANALYSIS OF EVENT - ASSESSMENT OF SAFETY CONSEQUENCES

A. Evaluation of Plant Systems/Components

The SG water level low-low trip function ensures that protection is provided against a loss of heat sink and actuates the AFW System prior to uncovering the SG tubes. The SGs are

the heat sink for the reactor. In order to act as a heat sink, the SGs must contain a minimum amount of water.

The steam generator water level trip time delay (TTD) creates additional operational margin, during escalation to power, by allowing the operator time to recover level when the primary side load is sufficiently small to allow such action. The TTD is based on continuous monitoring of primary side power through the use of vessel delta T. Two time delays are calculated based on the number of steam generators indicating less than the low-low trip setpoint. The magnitude of the delays decreases with increasing primary side power level, up to 50 percent RTP. Above 50 percent RTP there are no time delays for the low-low level channel trips.

In the event of failure of a steam generator water level channel, the channel is placed in the trip condition as input to the Solid State Protection System (SSPS) (EIIS code JE/JG) and does not affect the TTD setpoint calculations for the remaining operable channels. It is then necessary for the operator to force the use of the shorter TTD time delay by adjustment of the single steam generator time delay calculation (Ts) to match the multiple steam generator time delay calculation (Tm) for the affected protection set, through the Man-Machine Interface.

B. Evaluation of Personnel Performance

The unit supervisor assumed that the surveillance instruction contained steps to accomplish Technical Specification actions. This supervisor did not take steps to confirm this assumption.

A contributing factor to this condition may have been that the prior performances of the series of surveillance instructions for SG channels had been completed within the 6 hour completion time frame with no need to complete the TS actions. Since 1-SI-3-7 took longer than the 6 hours to complete due to having to calibrate the loop transmitter, the TS action was not recognized by the unit supervisor as having not been completed.

C. Safety Significance

Since the subject condition occurred when the unit was above 50 percent reactor power (at 100 percent RTP), the time delays were zero for the steam generator low-low level channel trips. In addition, since the Ts and Tm were not adjusted to coincide per LCO action U.1.2, had the plant experienced a transient to less than 50 percent power during the performance of SI 1-SI-3-7 on November 20, 1996, the plant may not have received a steam generator low-low level trip as soon as designed. This additional time delay would be approximately 12 seconds to 2 minutes depending upon plant power level.

V. CORRECTIVE ACTIONS

A. Immediate Corrective Actions

TVA has taken appropriate disciplinary action under TVA personnel policy in regards to the unit supervisor. The shift technical advisor and the shift manager were counselled as to expectations involving the LCO action completion times.

TVA has compared Surveillance Instructions (SIs), Offsite Dose Instruction (ODIs), Technical Requirements Instructions (TRIs), and Fire Operation Requirements (FORs) to the Technical Specifications to determine: 1) if LCO actions entered during performance of the instructions are identified for applicable performance modes, 2) if the instruction provided specific steps for implementing the LCO actions or references other procedures, and 3) if no guidance for LCO actions was provided, then determined whether a procedure or instruction that provided such guidance existed.

As a result, TVA has identified a number of procedures for revision, including the specific SIs involved with this condition (i.e., 1-SI-3-7, 1-SI-3-10, etc.), where additional details are needed as to how certain LCO actions are to be accomplished. These procedure revisions are tracked under the corrective actions for Problem Evaluation Report WBPER961117.

B. Corrective Actions to Prevent Recurrence

This condition has been discussed with the shift managers as to the management expectations regarding the verification of technical specification actions to be met, receiving a second senior reactor operator determination on LCO entry, and a crew brief upon entry and exit of LCOs.

TVA will revise the procedures, identified as the result of the above review, to provide additional detail as to how the required LCO actions are to be accomplished. These revisions will be completed by March 14, 1997 or prior to the next scheduled performance, whichever is sooner.

VI. ADDITIONAL INFORMATION

A. Failed Components

1. Safety Train Inoperability

The steam generator level trip function could have been slightly delayed under low power condition.

2. **Component/System Failure Information**

a. **Method of Discovery of Each Component or System Failure:**

There was no component failure as a result of this condition.

b. **Failure Mode, Mechanism, and Effect of Each Failed Component:**

There was no component failure as a result of this condition.

c. **Root Cause of Failure:**

There was no component failure as a result of this condition.

d. **For Failed Components With Multiple Functions, List of Systems or Secondary Functions Affected:**

There was no component failure as a result of this condition.

e. **Manufacturer and Model Number of Each Failed Component:**

There was no component failure as a result of this condition.

B. **Previous Similar Events**

A review of previous WBN LERs identified no other occurrence of exceeding a LCO action time.

VII. COMMITMENTS

TVA will revise the procedures, identified as the result of the above review, to provide additional detail as to how the required LCO actions are to be accomplished. These revisions will be completed by March 14, 1997.