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

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

AUG 16 1996

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

Gentlemen:

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

WATTS BAR NUCLEAR PLANT (WBN) - UNIT 1 - FACILITY OPERATING LICENSE NPF-90 - LICENSEE EVENT REPORT (LER) 50-390/96022

The enclosed report provides details regarding the failure to implement a surveillance requirement within the required time interval. Submittal of this report is in accordance with 10 CFR 50.73(a)(2)(i).

Sincerely,

J. A. Scalice

Enclosure
cc: See page 2

IE22
1/1

cc (Enclosure):
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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)

Surveillance Requirement 3.1.7.3 not adequately implemented.

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
07	19	96	96	022	00	08	19	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)	X	50.73(a)(2)(i)	50.73(a)(2)(viii)	
		20.2203(a)(1)	20.2203(a)(3)(i)		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	
		20.2203(a)(2)(iii)	50.36(c)(1)		50.73(a)(2)(v)	Specify in Abstract below	
		20.2203(a)(2)(iv)	50.36(c)(2)		50.73(a)(2)(vii)	or in NRC Form 366A	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
Jerry Bushnell, Compliance Licensing Engineer	(423)-365-8048

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)

At 1555 hours (EST) on July 19, 1996, with the Plant in Mode 1, reactor power 100 percent, reactor coolant system average temperature 588.4 degrees F, licensed Operations personnel identified during a follow-up review to a question from an NRC inspector, that 1-SI-0-2 was not written to adequately verify control rod sequence and overlap and SR 3.0.3 was entered. Change Notice (CN) 8 to Revision 0 of instruction 1-SI-0-2B-01 was approved and performed successfully at 1831 (EST) on July 19, 1996, to verify control bank sequence and overlap. SR 3.0.3 was exited at that time. The corrective actions implemented for this event include the counseling of the Operations personnel involved in the preparation of 1-SI-0-2 and the revision of the SI to ensure that control bank sequence and overlap are verified and properly documented.

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

I. PLANT CONDITIONS:

At 1555 hours (EST) on July 19, 1996, the Plant parameters were; Mode 1, reactor power 100 percent, reactor coolant system (RCS) (EIIS AB) average temperature - 588.4 degrees F.

II. DESCRIPTION OF EVENT

A. Event

Surveillance Requirement (SR) 3.1.7.3 requires verification that the control rod sequence and overlap limits specified in the Core Operating Limits Report (COLR) are met for control banks not fully withdrawn from the core. This SR is implemented in Surveillance Instruction (SI) 1-SI-0-2-00, "Shift and Daily Surveillance Log Master." During the discussion of this event, 1-SI-0-2-00 and its associated series of procedures will be referred to as 1-SI-0-2.

On July 19, 1996, at 1555 (EST), licensed Operations personnel identified during a follow-up review to a question from an NRC inspector, that 1-SI-0-2 was not written to adequately verify control rod sequence and overlap and SR 3.0.3 was entered at that time. Change Notice (CN) 8 to Revision 0 of instruction 1-SI-0-2B-01, "0700 - 1900 Shift and Daily Surveillance Log Mode 1," was approved and performed successfully at 1831 (EST) on July 19, 1996, to verify control bank sequence and overlap. SR 3.0.3 was exited at that time.

Problem Evaluation Report (PER) WBPER960655 was initiated to document this event in the TVA Corrective Action Program.

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

There were no structures, components, or systems inoperable at the start of the event that contributed to the event.

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

II. DESCRIPTION OF EVENT (continued)

C. Dates and Approximate Times of Major Occurrences

July 19, 1996, 1555 (EST) - Problem Evaluation Report (PER) WBPER960655 was written to document that 1-SI-0-2 did not contain requirements which were adequate to verify control rod sequence and overlap.

July 19, 1996, 1555 (EST) - SR 3.0.3 was entered due to incomplete implementation of SR 3.1.7.3

July 19, 1996, 1831 (EST) - CN 8 to Revision 0 of shift specific instruction 1-SI-0-2B-01 was approved and performed successfully. SR 3.0.3 was exited at that time.

D. Other Systems or Secondary Functions Affected

No other systems or secondary functions were affected by this event.

E. Method of Discovery

In response to a question raised by an NRC inspector, licensed Operations personnel reviewed Alarm Response Instruction (ARI) 81-87, "Nuclear Instrumentation System and Rod Controls," for alarm window 83-D. During this review, it was noted that a reference should be made to 1-SI-0-2 for control rod bank overlap determination. During a subsequent review of 1-SI-0-2 and SR 3.1.7.3, licensed Operations personnel identified that control bank overlap was not being verified as stipulated in the SR. The addition of the reference to ARI-81-87 was made by CN 5 to Revision 1.

F. Operator Actions

The actions taken by Operations personnel related to this event are discussed in Section V, Corrective Actions, Item 1, Immediate Corrective Actions.

G. Automatic and manual safety system responses

There were no automatic or manual safety system responses and none were necessary.

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

III. CAUSE OF EVENT

Root Cause

During the preparation and review of 1-SI-0-2, extensive efforts were made to ensure compliance with SRs and that all required SRs were addressed. Even though this effort was made, the cause of this event is attributed to a misinterpretation of SR 3.1.7.3 by the licensed Operations personnel that prepared and reviewed 1-SI-0-2.

IV. ANALYSIS OF EVENT - ASSESSMENT OF SAFETY CONSEQUENCES

Limiting Condition for Operation (LCO) 3.1.7 is applicable in operational Modes 1 and 2. Considering this, the performances of 1-SI-0-2, which occurred since initial entry into Mode 3 were reviewed to determine whether the requirements for control bank sequence and overlap were met. The results of this review must be qualified because complete data for the position of the four banks was only taken under certain conditions. During full power operation, periods when control banks A, B, and C are fully withdrawn from the core, sequence and overlap requirements are satisfied as long as the insertion limits for control bank D are met. Therefore, only data for control bank D was recorded. During a period when the rod insertion limit monitor is inoperable, data for the four banks is recorded every four hours in accordance with SR 3.1.7.3. Utilizing the data that was available, it could be established that the requirements of SR 3.1.7.3 had been met. Therefore, there were no safety consequences related to this event.

V. CORRECTIVE ACTIONS

A. Immediate Corrective Actions

SR 3.0.3 was entered at 1555 on July 19, 1996, due to the indication that SR 3.1.7.3 had not been properly performed. On July 19, 1996, at 1831 (EST), CN 8 to Revision 0 of shift specific instruction 1-SI-0-2B-01 was approved and performed successfully. SR 3.0.3 was exited at that time.

B. Corrective Actions to Prevent Recurrence

1. The Operations personnel that prepared and reviewed for adequacy, 1-SI-0-2, have been counseled on this event. Included in the discussion with these individuals were the assumptions made in the evaluation of the requirements of SR 3.1.7.3 and how this resulted in the failure to perform the surveillance properly.

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

V. CORRECTIVE ACTIONS (continued)

2. 1-SI-0-2 has been revised to ensure that control bank sequence and overlap are verified and properly documented. Included in the revision was the addition of a data sheet, currently data sheet 7, which defines bank sequence and provides a means to determine bank overlap at any point during rod movement. In addition, the SI was revised to require verification of overlap using data sheet 7, if control bank D is inserted at 105 steps or below. During full power operation, periods when control banks A, B, and C are fully withdrawn from the core, sequence and overlap are satisfied as long as the insertion limits for control bank D are met. 1-SI-0-2 now includes a step which verifies and documents that the insertion limit for control bank D is not being violated.

3. To ensure that 1-SI-0-2 contained no additional deficiencies, a matrix of SRs was compared to 1-SI-0-2 to establish that it addresses all applicable SRs.

4. A sample population of SRs listed in an SR scheduling matrix were reviewed to establish that the implementing instruction contained requirements appropriate to satisfy the SRs.

VI. ADDITIONAL INFORMATION

A. Failed Components

1. Safety Train Inoperability

There were no failures that rendered a train or a safety system inoperable.

2. Component/System Failure Information

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

There were no component failures involved.

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

There were no component failures involved.

VI. ADDITIONAL INFORMATION (continued)

c. Root Cause of Failure:

There were no component failures involved.

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

There were no component failures involved.

e. Manufacturer and Model Number of Each Failed Component:

There were no component failures involved.

B. Previous Similar Events

LER 95001 was due to the incorrect interpretation and implementation of 1-SI-0-2. The corrective action associated with LER 95001 included a review of the Technical Specifications and SIs to ensure the proper implementation of SRs. 1-SI-0-2 was completely reviewed and revised at this time. The requirements of SR 3.1.7.3 that were placed in 1-SI-0-2 during the revision for LER 95001, resulted in the misunderstanding of the COLR review which resulted in LER 96022. However, the corrective measures taken for LER 95001 in conjunction with the reviews performed as part of the corrective action for LER 96022 ensure proper implementation of SRs applicable to 1-SI-0-2. In addition, there are no other events which have a root cause similar to the cause of LER 96022.

VII. COMMITMENTS

The actions committed to be implemented in response to this event are tabulated in Section V, Corrective Actions.