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

November 30, 2016

10 CFR 50.73

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Watts Bar Nuclear Plant, Unit 1
Facility Operating License No. NPF-90
NRC Docket No. 50-390

Subject: **Licensee Event Report 390/2016-009-01, Failure to Complete Surveillance Requirements Causes Condition Prohibited by the Technical Specifications**

This submittal provides Licensee Event Report (LER) 390/2016-009-01. This LER provides details concerning a recent event where the requirements of Technical Specification 3.6.3, Containment Isolation Valves, Required Action A.1 was not met, which is reportable in accordance with 10 CFR 50.73(a)(2)(i)(B). This LER supplement clarifies the scope of this report and reconciles event dates.

There are no regulatory commitments contained in this letter. Please direct any questions concerning this matter to Gordon Arent, WBN Licensing Director, at (423) 365-2004.

Respectfully,

Paul Simmons
Site Vice President
Watts Bar Nuclear Plant

Enclosure
cc: See Page 2

cc (Enclosure):

NRC Regional Administrator - Region II
NRC Senior Resident Inspector - Watts Bar Nuclear Plant

NRC FORM 366 (11-2015) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0104 EXPIRES: 10/31/2018

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the FOIA, Privacy and Information Collections Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to Infocollects.Resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

LICENSEE EVENT REPORT (LER)

1. FACILITY NAME	2. DOCKET NUMBER	3. PAGE
Watts Bar Nuclear Plant, Unit 1	05000390	1 OF 6

4. TITLE

Failure to Complete Surveillance Requirements Causes a Condition Prohibited by the Technical Specifications

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO.	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
									N/A	
11	21	2015	2016	- 009	- 01	11	30	2016	FACILITY NAME N/A	DOCKET NUMBER

9. OPERATING MODE	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: *(Check all that apply)*			
1	☐ 20.2201(b)	☐ 20.2203(a)(3)(i)	☐ 50.73(a)(2)(ii)(A)	☐ 50.73(a)(2)(viii)(A)
	☐ 20.2201(d)	☐ 20.2203(a)(3)(ii)	☐ 50.73(a)(2)(ii)(B)	☐ 50.73(a)(2)(viii)(B)
	☐ 20.2203(a)(1)	☐ 20.2203(a)(4)	☐ 50.73(a)(2)(iii)	☐ 50.73(a)(2)(ix)(A)
	☐ 20.2203(a)(2)(i)	☐ 50.36(c)(1)(i)(A)	☐ 50.73(a)(2)(iv)(A)	☐ 50.73(a)(2)(x)
10. POWER LEVEL	☐ 20.2203(a)(2)(ii)	☐ 50.36(c)(1)(ii)(A)	☐ 50.73(a)(2)(v)(A)	☐ 73.71(a)(4)
	☐ 20.2203(a)(2)(iii)	☐ 50.36(c)(2)	☐ 50.73(a)(2)(v)(B)	☐ 73.71(a)(5)
	☐ 20.2203(a)(2)(iv)	☐ 50.46(a)(3)(ii)	☐ 50.73(a)(2)(v)(C)	☐ 73.77(a)(1)
100	☐ 20.2203(a)(2)(v)	☐ 50.73(a)(2)(i)(A)	☐ 50.73(a)(2)(v)(D)	☐ 73.77(a)(2)(i)
	☐ 20.2203(a)(2)(vi)	☒ **50.73(a)(2)(i)(B)**	☐ 50.73(a)(2)(vii)	☐ 73.77(a)(2)(ii)
		☐ 50.73(a)(2)(i)(C)	☐ OTHER Specify in Abstract below or in NRC Form 366A	

12. LICENSEE CONTACT FOR THIS LER

LICENSEE CONTACT	TELEPHONE NUMBER *(Include Area Code)*
Dean C Baker, Licensing Engineer	423-452-4589

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

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX

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

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

On November 21, 2015, Watts Bar Nuclear Unit 1 (WBN1) operations personnel did not conduct a surveillance of the Train B Essential Raw Cooling Water (ERCW) supply inboard containment isolation valve, which represented the late date for this surveillance. WBN1 personnel recognized the potential for this surveillance to go late on November 15, 2015, and therefore the provisions of Technical Specification (TS) Surveillance Requirement 3.0.3 could not be applied. Failure to complete the surveillance required entering TS Limiting Condition for Operation (LCO) 3.6.3 and completing Required Action A.1, but the required action to isolate the affected penetration flowpath was not performed until January 30, 2016. This condition was not recognized as reportable until May 18, 2016.

This supplement clarifies the reportable event and reconciles event dates.

NRC FORM 366A (11-2015) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0104 EXPIRES: 10/31/2018

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LICENSEE EVENT REPORT (LER) CONTINUATION SHEET

1. FACILITY NAME	2. DOCKET NUMBER	3. LER NUMBER		
		YEAR	SEQUENTIAL NUMBER	REV NO.
Watts Bar Nuclear Plant, Unit 1	05000390	2016	- 009	- 01

NARRATIVE

I. Plant Operating Conditions Before the Event

Watts Bar Nuclear Plant Unit 1 (WBN1) was in Mode 1 at 100 percent power.

II. Description of Events

A. Event

On November 11, 2015, WBN1 transitioned from MODE 5 to MODE 4. On November 15, 2015, WBN1 personnel were unable to perform testing on the Train B Emergency Raw Cooling Water (ERCW) {EIIS:BI} Supply to Upper Containment Coolers (UCCs) {EIIS:CLR} containment isolation check valve for the 1D UCC due to a clearance in place on the 1A UCC. On November 21, 2015, WBN1 operations personnel did not conduct a surveillance of the Train B ERCW inboard containment isolation valve 1-CKV-67-580D in accordance with Technical Specification (TS) Surveillance Requirement (SR) 3.6.3.4. Failure to complete the surveillance required entering TS Limiting Condition for Operation (LCO) 3.6.3, Containment Isolation Valves, and completing Required Action A.1, isolation of the penetration flowpath associated with the 1D UCC. This action was not performed until January 30, 2016. When the missed surveillance was identified, WBN1 operations personnel invoked TS SR 3.0.3. However, further review revealed that the allowances provided in SR 3.0.3 were not appropriate in this instance because the surveillance had been attempted prior to expiration of the SR Frequency.

This plant condition was not recognized as reportable until May 18, 2016 and is being reported in accordance with 10 CFR 50.73(a)(2)(i)(B) as a condition prohibited by the TS.

This Supplement removes reporting the failure to complete TS LCO 3.6.3 Required Action A.2 to verify the affected penetration flowpath is isolated. Further review determined the valve in question, 1-FCV-67-295, an inboard containment isolation valve, had been verified closed less than 92 days prior to Unit 1 reaching Mode 4 after a maintenance outage, thereby completing the required action.

B. Status of structures, components, or systems that were inoperable at the start of the event and that contributed to the event.

On September 22, 2015, during the WBN1 thirteenth refueling outage (1R13), plant operators isolated the ERCW supply line to the train A UCC 1A. There was no additional equipment that was inoperable at that time that contributed to this event.

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C. Dates and approximate times of occurrences.

Date	Event
July 29, 2015	Completed quarterly train A and B check valve testing of the ERCW supply to UCCs
September 22, 2015	TS 3.6.3, Containment Isolation Valves, Required Actions were entered for the isolated train A ERCW supply line.
September 25, 2015	Clearance on 1A UCC verified, including closure of inboard (1-FCV-67-295) and outboard (1-FCV-67-130) containment isolation valves.
November 7, 2015	WBN1 commenced maintenance outage.
November 11, 2015	WBN1 entered MODE 4 after a maintenance outage.
November 15, 2015	Quarterly train A and B check valve testing of the ERCW supply to UCCs cannot be completed
November 21, 2015	Expiration of SR 3.6.3.4 (92-day) Frequency
January 25, 2016	Quarterly train A and B check valve testing of the ERCW supply to UCCs cannot be completed
January 30, 2016	Plant operations personnel recognize that the last successful train B quarterly check valve surveillance testing was completed on July 29, 2015
May 18, 2016	Determined that the plant condition was reportable as a condition prohibited by TS.

On July 29, 2015, WBN1 plant personnel satisfactorily completed the train A and train B check valve testing of the ERCW supply to UCCs in accordance with site surveillance procedures.

On September 22, 2015, WBN1 was in MODE 5 and shortly after commencement of 1R13 (reactor trip breakers were opened September 20, 2015) plant outage workers observed water leaking from the 1A UCC. Further examination revealed that the ERCW supply line to the train A UCC had ruptured and was spilling water into an adjacent area. Accordingly, plant operators took action to isolate the ERCW supply line to the train A UCC 1A. TS 3.6.3, Containment Isolation Valves, Required Actions were entered for the isolated train A ERCW supply line.

On November 11, 2015, WBN1 entered MODE 4 from MODE 5, following a maintenance outage that commenced on November 7, 2015.

On November 15, 2015, WBN1 plant personnel attempted, but could not satisfactorily complete, a portion of the train B quarterly check valve surveillance testing of the ERCW supply to UCCs because the train 1A supply had been isolated in response to the ruptured ERCW supply line. Specifically, 1-CKV-67-580D for the Train B UCC 1B could not be surveilled because the train A ERCW supply from UCC 1A was isolated. The supply for UCC 1A is used to establish testing conditions for the check valve for UCC 1B.

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On November 21, 2015, SR 3.6.3.4 Frequency expired.

On January 25, 2016, performance of the train A and B quarterly check valve surveillance testing of the ERCW supply to UCCs was scheduled, but could not be completely satisfied due to the isolated train A supply line.

On, January 30, 2016, during document reviews, plant operations personnel recognized that the last successful completion of the train B quarterly check valve surveillance testing of the ERCW supply to UCCs had been completed on July 29, 2015, which was beyond the quarterly periodicity, which expired on November 21, 2015. In response, the penetration flowpath associated with the 1D UCC was isolated in accordance with TS LCO 3.6.3 Action A.1. In addition, plant operations personnel invoked TS SR 3.0.3, for a missed surveillance. A subsequent review determined that because personnel were aware that the surveillance might go late on November 15, 2015, that invoking TS SR 3.0.3 after the fact was inappropriate.

On May 18, 2016, it was determined that the plant condition described above was reportable as a condition prohibited by TS.

D. Manufacturer and model number (or other identification) of each component that failed during the event.

There were no components that failed during the event. The portions of the affected ERCW supply line to the 1A and 1D UCC are two inch stainless steel piping. The valves affected by this condition are stainless steel two inch check valves

E. Other systems or secondary functions affected.

There were no other systems or secondary functions affected by this condition.

F. Method of discovery of each component or system failure or procedural error

The discovery of the condition prohibited by TS was identified by the NRC Senior Resident Inspector and confirmed by a WBN reportability evaluation.

G. The failure mode, mechanism, and effect of each failed component, if known.

There were no components that failed during the event.

H. Operator actions

Other than the events described herein, there were no direct operator actions that influenced this event.

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NARRATIVE

I. Automatically and manually initiated safety system responses

There were no automatically or manually initiated safety system responses as a result of this event.

III. Cause of the Event

A. The cause of each component or system failure or personnel error, if known.

There were no component or system failures that caused this event.

B. The cause(s) and circumstances for each human performance related root cause

WBN Operations personnel performed a Cognitive Adverse Trend review that analyzed these events as well as other recent LCO classification errors, and concluded:

"Operations Licensed personnel have not applied adequate rigor to ensure the accurate identification and timely implementation of Limiting Conditions of Operability (LCO)" Specifically, "Operations Licensed personnel have not consistently employed a process that validates LCO entries through the use of the licensing bases documents. Management oversight in the Main Control Room has not corrected issues with timely documentation of LCO implementation."

IV. Analysis of the Event

On September 22, 2015, a leak was identified on the 1A UCC. The UCC was verified as isolated on September 25, 2015. The UCCs are located on top of the steam generator (SG) enclosures, with an A train and a B train UCC located on each enclosure. Each UCC has an inlet check valve that also acts as a containment isolation valve inside containment, and these check valves are located on top of the SG enclosures. This check valve is tested in both the open and closed direction every 92 days as required by the Inservice Test Program and TS SR 3.6.3.4. To test these check valves in the closed direction, a mechanical jumper is connected to a vent valve from the opposite train UCC to provide a motive force to close the valve. When UCC 1A was isolated, the motive force to test the check valve for UCC 1D was lost. This issue was recognized when testing was attempted on November 15, 2015, but a successful test was not completed prior to the late date on November 21, 2015 for 1-CKV-67-580D. Operations personnel should have isolated the 1D UCC on November 21, 2015 as required by TS LCO 3.6.3 Required Action A.1 since TS SR 3.6.3.4 could not be completed.

V. Assessment of Safety Consequences

Safety limits and limiting safety system settings were not affected by this condition. There were no safety system responses associated with this condition. There were no component failures associated with this condition. There was no loss of safety function as a result of this condition.

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NARRATIVE

VI. Corrective Actions

Corrective actions are being managed by Tennessee Valley Authority's corrective action program under Condition Reports (CRs) 1174000, 1172114, 1169297, 1164837, 1131257, and 1131256.

A. Immediate Corrective Actions

Upon discovery of the missed surveillance, compliance with TS 3.6.3 was achieved on January 30, 2016, when the required containment penetration isolation valves were confirmed to be closed.

B. Corrective Actions to Prevent Recurrence or to reduce probability of similar events occurring in the future.

The WBN Operations Superintendent will present a "case study" of the all events identified in the cognitive adverse trend evaluation to all licensed operators. The training will review TS issues with all licensed operators to ensure understanding.

VII. Additional Information

A. Previous similar events at the same plant

A review of internal operating experience did not reveal any previously reported events or conditions that involved the same underlying concern or reason as this event, such as the same root cause, failure, or sequence of events. However, recent similar events at WBN1 have been identified and are being addressed through a Cognitive Adverse Trend review that analyzed these events.

B. Additional Information

None.

C. Safety System Functional Failure Consideration (Reference NEI 99-02, "Regulatory Assessment Performance Indicator Guideline," for definitions and guidance)

The event did not result in a safety system functional failure.

D. Scrams with Complications Consideration (Reference NEI 99-02 for definitions and guidance)

There was no unit SCRAM, complicated or otherwise, associated with this event.

VIII. Commitments

None.