



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

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December 13, 2011

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:       Withdrawal of License Event Report 390/2011-003, “Mode Change without meeting Limiting Condition for Operation (LCO) 3.7.5”**

**Reference:     Letter from TVA to NRC, Licensee Event Report 390/2011-003, “Mode Change without meeting Limiting Condition for Operation (LCO) 3.7.5,” dated June 24, 2011**

On June 24, 2011, the Tennessee Valley Authority (TVA) submitted Licensee Event Report (LER) 390/2011-003, “Mode Change without meeting LCO 3.7.5.” The LER was reported as a condition prohibited by technical specifications in accordance with WBN License Condition 2.G. This letter is being submitted to withdraw LER 390/2011-003.

LER 390/2011-003 described a condition where the plant entered Mode 3 with an inoperable auxiliary feed pump turbine (AFPT) in violation of LCO 3.7.5 and LCO 3.0.4. LCO 3.7.5 states three (3) trains of AFW are required in Modes 1, 2, and 3 and that one (1) train of AFW is required in Mode 4 when the steam generator (SG) is relied upon for heat removal. LCO 3.0.4 prohibits Mode changes when an LCO is not met under certain conditions that were not applicable to this event. Upon further review, TVA determined that LCO 3.0.4 was not violated for the following reasons.

Surveillance Requirement (SR) 3.7.5.2 states: "Verify the developed head of each AFW pump at the flow test point is greater than or equal to the required developed head." Also included in the SR is a Note that specifies: "Not required to be performed for the turbine driven AFW pump until 24 hours after  $\geq 1092$  psig in the steam generator." SR 3.7.5.2 has a Frequency of every 31 days on a staggered test basis. The AFPT was started at 22:39 on May 15, 2011, to perform Surveillance Instruction 1-SI-3-923-S, "Auxiliary Feedwater Pump 1A-S Comprehensive Pump Test," to demonstrate operability in accordance with SR 3.7.5.2. The turbine started and came up to rated speed of 3950 rpm. To avoid excessive vibration in the pump recirculation line due to resonant frequencies at low flow conditions, Surveillance Instruction 1-SI-3-923-S requires Operations personnel place the AFPT speed controller in manual and reduce turbine speed to 3600 rpm. The turbine failed to respond to the lower speed demand, resulting in the inability to complete Surveillance Instruction 1-SI-3-923-S. As a consequence, LCO 3.7.5 Condition B was entered May 16, 2011, at 20:13 due to failure to complete SR 3.7.5.2 within 24 hours of reaching SG pressure of 1092 psig. Repairs and successful completion of Surveillance Instruction 1-SI-3-923-S were completed on May 19, 2011, at 17:45, at which time the plant exited LCO 3.7.5.

For all design bases events, the AFPT is designed to auto-start on loss of offsite power, low-low level in two SGs, a Safety Injection Signal, or trip of both Main Feed Pump Turbines. During automatic startup, the pump will accelerate to its rated speed of 3950 rpm. The only time pump speed would be reduced to 3600 rpm is during light loads when the pump is running in recirculation mode. Under these conditions, the pump speed controller would be transferred to manual in order to reduce pump speed to 3600 rpm. If pump speed cannot be reduced to 3600 rpm, the consequences would be that pump discharge pressure and recirculation flow at 3950 rpm would be slightly higher and excessive pump vibration could occur due to resonant frequencies at low flow. However, for all design basis events, there is no requirement that the AFPT be capable of running at 3600 rpm. Under low SG flow demand conditions following a design bases accident, the operator has the option of securing the AFPT, if necessary, and maintaining SG level using the motor driven AFW pump(s). Therefore, the AFPT would have been able to fulfill its safety function and was considered OPERABLE.

Based on the above reasons, TVA concluded that the AFPT was OPERABLE when the plant first entered Mode 3 following Refueling Outage Cycle 10 and did not violate LCO 3.0.4. In summary, the condition identified in LER 390/2011-003 was not prohibited by the technical specifications and is not reportable in accordance with 10 CFR 50.73(a)(2)(i)(B) or WBN License Condition 2.G. Therefore, TVA is withdrawing the referenced LER.

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There are no regulatory commitments contained in this letter. Should you have any questions concerning this submittal, please contact R. L. Clark, WBN Site Senior Licensing Engineer, at (423) 365-1818.

Respectfully,

A handwritten signature in black ink, appearing to read 'D. E. Grissette', with a long horizontal flourish extending to the right.

D. E. Grissette  
Site Vice President  
Watts Bar Nuclear Plant

cc: NRC Regional Administrator – Region II  
NRC Senior Resident Inspector – Watts Bar Nuclear Plant