Power Reactor Event # 49288

Site: WATTS BAR **Notification Date / Time:** 08/16/2013 13:50 (EDT)
Unit: 1 **Region:** 2 **State :** TN **Event Date / Time:** 06/09/2013 20:16 (EDT)
Reactor Type: [1] W-4-LP,[2] W-4-LP **Last Modification:** 08/16/2013
Containment Type: ICE COND

NRC Notified by: RUSSELL A. STROUD **Notifications:** RANDY MUSSER R2DO
HQ Ops Officer: DONG HWA PARK PART 21 GROUP EMAIL
Emergency Class: NON EMERGENCY
10 CFR Section:
21.21(d)(3)(i) DEFECTS AND NONCOMPLIANCE

Unit	Scram Code	RX Crit	Init Power	Initial RX Mode	Curr Power	Current RX Mode
1	N	Yes	100	Power Operation	100	Power Operation

PART 21 - AUXILIARY FEEDWATER LEVEL CONTROL VALVE STEM/PLUG ASSEMBLY OUT OF TOLERANCE

"On June 9, 2013, Auxiliary Feedwater Level Control Valve [AFW LCV] 1-LCV-3-156-A, failed its closed-to-open stroke time during quarterly surveillance testing. This level control valve is a basic component which regulates auxiliary feedwater (AFW) flow to Steam Generator 2. The valve failed to open during two attempts. Local observation during testing indicated that the valve 'popped' off the seat, and then traveled smoothly to its full open position on the third and fourth attempt. The failure was determined to be a Maintenance Rule Functional Failure and a CC1 Functional Failure. There were no previous indication(s) of this failure mode during the previous quarterly stroke time testing. The valve internals were replaced on October 7, 2009, during a refueling outage.

"TVA installed a new trim kit which included the cage, lower seat ring, and stem/plug assembly. The valve was returned to service on June 12, 2013, following successful post modification testing. A Kepner-Tregoe (K-T) problem analysis revealed the direct cause was binding due to the stem/plug assembly being out of tolerance. Upon inspection, the Total Indicated Run-out (TIR) of the stem/plug assembly removed from the affected valve was determined to be 0.022 inches. The valve was manufactured by Dresser Masoneilan with a TIR specification of less than or equal to 0.005 inches. The valve model and stem/plug assembly part numbers are:

"Valve: Masoneilan Model 37-20721, 4 inch Control Valve
"Stem: 012160204-215-J000
"Plug: 011501710-1H6U

"Inspection of the five unused spare stem/plug assemblies in storage had a TIR that ranged from 0.006 to 0.022 inches, which is outside vendor specifications. Because the stem/plug assembly removed from the affected AFW LCV and five of the unused stem/plug assemblies were found to be out-of-tolerance, a condition exists and is being reported in accordance with 10CFR50 Part 21.21(d).

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"Similar LCVs in the AFW systems were tested and are OPERABLE with no known defects.

"A detailed report using NRC Form 366, Licensee Event Report, will be submitted to the NRC by 09/15/13 in accordance with 10CFR50 Part 21.21(d)(3)(ii)."

The licensee has notified the NRC Resident Inspector.

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