

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

August 2, 2016

10 CFR 50.4

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

> Watts Bar Nuclear Plant, Unit 2 Facility Operating License No. NPF-96 NRC Docket No. 50-391

Subject: Technical Specification (TS) 5.9.8 - Post Accident Monitoring System (PAMS) Report

The program requirements for the Watts Bar Nuclear Plant (WBN) Post Accident Monitoring System (PAMS) requires a report to be submitted within 14 days when Condition B of Technical Specification Limiting Condition for Operation 3.3.3, "Post Accident Monitoring (PAM) Instrumentation," is entered. On July 22, 2016, an evaluation determined that the containment isolation valve indication for the Steam Generator Blowdown (SGBD) isolation valves outside containment have been inoperable for more than 30 days. This special report is provided in the Enclosure.

There are no new regulatory commitments 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

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cc (Enclosure):

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

Enclosure Technical Specification 5.9.8 PAMS Report

Background

The Watts Bar Nuclear Plant (WBN) Technical Specification (TS) 3.3.3, "Post Accident Monitoring (PAM) Instrumentation," specifies the operability requirements for PAM instrumentation. TS Table 3.3.3-1, Function 11, "Containment Isolation Valve Position," requires two operable indication channels per penetration flow path. On June 29, 2016, the outboard Steam Generator Blowdown (SGBD) isolation valves on WBN Unit 2 were determined to have inoperable valve position indication.

TS 3.3.3 Limiting Condition for Operation (LCO) Condition A allows a single indication channel to be inoperable for 30 days. If the indication channel is not restored within 30 days, LCO Condition B is entered, which requires action in accordance with TS 5.9.8 to be taken immediately. TS 5.9.8 requires a report to be submitted to the Nuclear Regulatory Commission within 14 days.

A review for past operability of the SGBD isolation valve indication completed on July 22, 2016 determined that, due to Environmental Qualification (EQ) concerns, the indication in question had been inoperable when Unit 2 first entered Mode 3 on March 30, 2016.

This report outlines the preplanned alternate method of monitoring, the cause of inoperability, and the plans and schedule for restoring the instrumentation channels of the Function to OPERABLE status.

Preplanned Alternate Method of Monitoring

With the outboard SGBD isolation value indication inoperable, operations personnel will use blowdown flow indication to validate value closure in the event of a containment isolation signal.

Cause of Inoperability

The outboard SGBD isolation valves are Target Rock solenoid valves with reed switches to support position indication. The design of the insulation around the solenoid valves subjected the valves and the reed switches to elevated temperatures that invalidated their EQ test report. The insulation for these valves has been removed, resulting in reduced temperatures at the reed switches.

Actions and Schedule to Restore Instrumentation Function to Operable Condition

Replacement of the outboard SGBD isolation valve indication requires the valve to be closed and de-energized. Loss of blowdown has an adverse impact on steam generator chemistry, and should be performed when the unit is not at power. The actions to replace the SGBD isolation valve reed switches have been scheduled following a power ascension reactor trip from 30 percent power, which is anticipated to occur in August 2016.