



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

April 20, 2022

LICENSEE: Tennessee Valley Authority

FACILITY: Sequoyah Nuclear Plant, Units 1 and 2
Watts Bar Nuclear Plant, Units 1 and 2

SUBJECT: SUMMARY OF APRIL 14, 2022, MEETING WITH TENNESSEE VALLEY
AUTHORITY REGARDING A PROPOSED ALTERNATIVE REQUEST
RELATED TO TESTING OF THE MOTOR-DRIVEN AUXILIARY FEEDWATER
PUMPS AT SEQUOYAH AND WATTS BAR NUCLEAR PLANTS
(EPID L-2022-LRM-0026)

On April 14, 2022, the U.S. Nuclear Regulatory Commission (NRC) staff conducted an observation meeting with representatives of the Tennessee Valley Authority (TVA). The purpose of the meeting was to discuss TVA's proposed alternative request related to the inservice testing (IST) requirements for the motor-driven auxiliary feedwater (MDAFW) pumps at Sequoyah Nuclear Plant (Sequoyah), Units 1 and 2, and Watts Bar Nuclear Plant (Watts Bar), Units 1 and 2.

The meeting notice and agenda, dated March 31, 2022, are available at Agencywide Documents Access and Management System (ADAMS) Accession No. ML22090A029. TVA's presentation slides for the meeting are available at ADAMS Accession No. ML22103A085. A list of participants is enclosed.

TVA stated that it plans to request an alternative to the requirements of the applicable American Society of Mechanical Engineers (ASME) Code for Operation and Maintenance of Nuclear Power Plants (OM Code), 2004 Edition through the 2006 Addenda, Subsection ISTB, "Inservice Testing of Pumps in Light-Water Reactor Nuclear Plants," paragraph ISTB-3310, "Effect of Pump Replacement, Repair, and Maintenance on Reference Values," to allow the OM Code required comprehensive or preservice test of the MDAFW pumps to be performed in Mode 1 during power ascension. The proposed alternative is similar to the one-time alternative request that the NRC previously authorized for the Sequoyah, Unit 1, MDAFW 1B-B pump, except that this proposed request will be a permanent alternative and apply to all eight MDAFW pumps at Sequoyah and Watts Bar. The proposed alternative would apply for the duration of the Sequoyah, Units 1 and 2, fourth 10-year IST interval; and the Watts Bar, Unit 1, third 10-year IST interval; and the Watts Bar, Unit 2, first 10-year IST interval.

TVA explained that Sequoyah and Watts Bar Technical Specification 3.7.5, "Auxiliary Feedwater System [AFW]," requires the MDAFW pumps to be operable in Modes 1, 2, 3, and Mode 4 when the steam generator is relied upon for heat removal. Additionally, Surveillance Requirement (SR) 3.7.5.2 requires that TVA "[v]erify the developed head of each AFW pump at the flow test point is greater than or equal to the required developed head," with a frequency that is in accordance with the Surveillance Frequency Control Program. If repair, replacement, or routine servicing that could affect reference values of an MDAFW pump is performed during an outage (e.g., Modes 5 or 6), then OM Code, paragraph ISTB-3310, requires a Group A,

comprehensive, or preservice test to be performed to confirm existing reference values or to establish new reference values before declaring the pump operable. However, TVA has experienced difficulty in maintaining consistent and stable test conditions for these pumps prior to reaching Mode 1. TVA explained why performing the pump testing in Modes 4, 5, or 6 is difficult, whereas performing the testing in Mode 1 is preferable.

Because TVA considers the MDAFW pump testing during Modes 4, 5, or 6 to present a hardship or unusual difficulty without a compensating increase in the level of quality and safety, TVA will submit the alternative request in accordance with Section 50.55a(z)(2) of Title 10 of the *Code of Federal Regulations*. TVA emphasized that no changes to the technical specifications will be requested.

TVA will propose that if repair, replacement, or routine servicing that could affect reference values of an MDAFW pump is performed during an outage, then initial pump operability for compliance with TS 3.7.5 and SR 3.7.5.2 will be established by performance of a Group A pump test in Modes 4 or 5. The Group A pump test will be performed using the fixed resistance pump minimum flow recirculation path in which pump flow is set, and differential pressure and vibration are measured and compared to acceptance criteria established in accordance with ASME OM Code, paragraphs ISTB-3300 and ISTB-5121, and Table ISTB-5121-1.

TVA will also propose that if repair, replacement, or routine servicing that could affect reference values of an MDAFW pump is performed during an outage, the ASME OM Code, paragraph ISTB-3310 required comprehensive or preservice test will be performed in Mode 1 during power ascension at an appropriate power level within 10 days of reaching Mode 1. If the required comprehensive or preservice test is not performed within these timeframes, the affected unit will enter the required Action Statement of TS 3.7.5.

TVA noted that the Sequoyah, Unit 1, MDAFW 1B-B pump is scheduled to be replaced during the upcoming Unit 1 Cycle 25 refueling outage (U1R25), currently scheduled for October 2022. Therefore, TVA plans to submit the proposed alternative request by April 30, 2022, and request authorization by October 15, 2022.

The NRC asked TVA about the qualification process for the Sequoyah, Unit 1, MDAFW 1B-B pump, and suggested that it would be helpful if TVA includes any information or describe the pump manufacturer's qualification process in the alternative request. The staff also suggested that TVA provide brief explanations if the proposed request differs from the previously authorized one-time request for Sequoyah, Unit 1. The NRC staff noted that for the two TVA precedents that TVA cited, supplements were submitted for those requests. The staff encouraged TVA to review those supplements and include any relevant information in its planned request.

No regulatory decisions were made at this meeting.

Please direct any inquiries to me at 301-415-1627 or by e-mail to Kimberly.Green@nrc.gov.

/RA/

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Office of Nuclear Reactor Regulation

Docket Nos. 50-327 and 50-328
50-390 and 50-391

Enclosure:
List of Participants

cc: Listserv

LIST OF PARTICIPANTS

APRIL 14, 2022, PUBLIC MEETING WITH TENNESSEE VALLEY AUTHORITY
REGARDING SEQUOYAH NUCLEAR PLANT AND WATTS BAR NUCLEAR PLANT
PROPOSED ALTERNATIVE REQUEST FOR TESTING OF MOTOR-DRIVEN AUXILIARY
FEEDWATER PUMPS

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Mark Gowin	TVA
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Duke Dang	TVA
Earl Ridgell	TVA
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