



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

June 2, 2021

Mr. James Barstow  
Vice President, Nuclear Regulatory Affairs  
and Support Services  
Tennessee Valley Authority  
1101 Market Street, LP 4A-C  
Chattanooga, TN 37402-2801

SUBJECT: SEQUOYAH NUCLEAR PLANT, UNIT 1 – SUMMARY OF VERBAL  
AUTHORIZATION OF ALTERNATIVE REQUEST RP-10 FOR THE 1B-B  
MOTOR DRIVEN AUXILIARY FEEDWATER PUMP (EPID L-2021-LLR-0039)

Dear Mr. Barstow:

By letter dated May 28, 2021 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML21148A301), as supplemented by letter dated May 28, 2021 (ADAMS Accession No. ML21148A311), the Tennessee Valley Authority (the licensee) proposed to the U.S. Nuclear Regulatory Commission (NRC) an alternative to specific requirements in the American Society of Mechanical Engineers (ASME) *Code for Operation and Maintenance of Nuclear Power Plants*, Section IST, "Rules for Inservice Testing of Light-Water Reactor Power Plants," (OM Code), 2004 Edition through 2006 Addenda, for Sequoyah Nuclear Plant (Sequoyah) Unit 1, pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) 50.55a.

Specifically, the licensee proposed to perform a Group A test of the 1B-B motor driven auxiliary feedwater pump in accordance with the ASME OM Code using the pump minimum flow recirculation path while Sequoyah, Unit 1 was in Mode 3. Further, the licensee proposed to perform the preservice test of the 1B-B motor driven auxiliary feedwater pump, required by ISTB-3310, in Mode 1 during power ascension of Sequoyah, Unit 1, up to 95 percent power level, but no later than 10 days from the Group A test. The licensee stated that compliance with ISTB-3310 would cause a hardship or unusual difficulty without a compensating increase in the level of quality or safety.

The NRC reviewed the licensee's submittal, as supplemented, and determined that complying with the requirements of ASME OM Code ISTB-3310 would result in hardship or unusual difficulty, without a compensating increase in the level of quality and safety and that the licensee met the regulatory requirements in 10 CFR 50.55a(z)(2). Therefore, during a conference call with the licensee on May 29, 2021, the NRC staff verbally authorized the licensee's one-time use of Alternative Request RP-10 for Sequoyah, Unit 1, until completion of the preservice test of the 1B-B motor driven auxiliary feedwater pump following Sequoyah, Unit 1, entering Mode 1, no later than 10 days from the performance of the Group A test. The script for the verbal authorization and a list of the participants on the May 29, 2021, telephone call are enclosed.

This verbal authorization does not preclude the NRC staff from asking additional clarification questions regarding Alternative Request RP-10 while preparing the subsequent written safety evaluation. The NRC staff's goal is to issue the written safety evaluation within 150 days from the date of the verbal authorization. Please direct any inquiries to me at 301-415-6459 or [Michael.Wentzel@nrc.gov](mailto:Michael.Wentzel@nrc.gov).

Sincerely,

*/RA/*

Michael J. Wentzel, Project Manager  
Plant Licensing Branch II-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-327

Enclosures:

1. Verbal Authorization Script
2. List of Attendees

cc: Listserv

VERBAL AUTHORIZATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

FOR 10 CFR 50.55a ALTERNATIVE REQUEST RP-10, MOTOR DRIVEN AUXILIARY

FEEDWATER PUMP 1B-B ALTERNATIVE TEST

SEQUOYAH NUCLEAR PLANT, UNIT 1

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-327

**Technical Evaluation read by Angela Buford, Chief, Mechanical Engineering and Inservice Testing Branch, Division of Engineering and External Hazards, NRC Office of Nuclear Reactor Regulation**

By letter dated May 28, 2021 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML21148A301), Tennessee Valley Authority (TVA, the licensee) proposed to the U.S. Nuclear Regulatory Commission (NRC) an alternative to specific requirements in the American Society of Mechanical Engineers (ASME) *Code for Operation and Maintenance of Nuclear Power Plants*, Section IST, "Rules for Inservice Testing of Light-Water Reactor Power Plants," (OM Code), 2004 Edition through 2006 Addenda, for Sequoyah Nuclear Plant (Sequoyah), Unit 1, pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) 50.55a.

In particular, the licensee submitted 10 CFR 50.55a, Alternative Request RP-10, Motor Driven Auxiliary Feedwater (MDAFW) Pump 1B-B Alternative Test, on May 28, 2021, requesting NRC authorization to perform short-term alternative testing from the ASME OM Code requirements as incorporated by reference in 10 CFR 50.55a for the MDAFW pump 1B-B at Sequoyah, Unit 1. The NRC staff's evaluation described in this Verbal Authorization applies only to the MDAFW pump 1B-B at Sequoyah, Unit 1.

In its alternative request, the licensee provided justification that compliance with the provisions of paragraph ISTB-3310, "Effect of Pump Replacement, Repair, and Maintenance on Reference Values," in ASME OM Code, Subsection ISTB, "Inservice Testing of Pumps in Light-Water Reactor Nuclear Power Plants," as incorporated by reference in 10 CFR 50.55a, to perform a preservice test of the MDAFW pump 1B-B during the current Mode 3 at Sequoyah, Unit 1 would result in a hardship without a compensating increase in the level of quality and safety in accordance with 10 CFR 50.55a(z)(2). The licensee reported that performing the preservice test of the MDAFW pump 1B-B in Mode 3 at Sequoyah, Unit 1 would cycle water flow to the steam generators (SGs) and place potential stress on the SG nozzles. Further, the high auxiliary feedwater flow necessary for the preservice test could potentially cause letdown isolations on low pressurizer level and cause temperature reductions in the Sequoyah, Unit 1 reactor coolant system. Also, there might be reactor operator challenges for manual control of plant parameters if the preservice test of the MDAFW pump 1B-B is conducted in Mode 3 that are not present when conducting the preservice test in Mode 1 at Sequoyah, Unit 1.

In its submittal, the licensee proposed to perform a Group A test of the MDAFW pump 1B-B in accordance with the ASME OM Code during the current Mode 3 at Sequoyah, Unit 1 using the pump minimum flow recirculation path. The licensee specified that the preservice test of the

MDAFW pump 1B-B in accordance with the ASME OM Code will be performed in Mode 1 during power ascension of Sequoyah, Unit 1 up to 95 percent power level, but no later than 10 days from the Group A test. If the preservice test is not performed within this timeframe, the licensee stated that Sequoyah, Unit 1 will enter the required Action Statement of Technical Specification 3.7.5 Condition B.

Based on discussions with the NRC staff, the licensee submitted a follow-up letter on May 28, 2021 (ADAMS Accession No. ML21148A311) providing supplemental information to support Alternative Request RP-10 for Sequoyah, Unit 1. In the supplemental letter, the licensee stated that the preservice test method for the MDAFW pump 1B-B will be in accordance with paragraph ISTB-5110, "Preservice Testing," in ASME OM Code, Subsection ISTB, which requires flow and differential pressure to be measured at a minimum of five points. The licensee further stated that if practicable, these points shall be from minimum flow to at least pump design flow. Also, the licensee specified that the Group A reference value for flow and differential pressure will be essentially the same point as the minimum flow and differential pressure used as the minimum flow point for the preservice test of the MDAFW pump 1B-B at Sequoyah, Unit 1.

Based on the information described above for MDAFW pump 1B-B at Sequoyah, Unit 1, the NRC staff finds that (1) the Group A test of the MDAFW pump 1B-B in accordance with the ASME OM Code during the current Mode 3 at Sequoyah, Unit 1 using the pump minimum flow recirculation path will provide reasonable assurance of the operational status of the MDAFW pump 1B-B for the short-time period before the preservice test is conducted; (2) the licensee will verify that the MDAFW pump 1B-B is operating acceptably during the preservice test because the Group A test reference value for flow and differential pressure will be essentially the same point as the minimum flow and differential pressure used as the minimum flow point for the preservice test; and (3) a hardship exists without a compensating increase in the level of quality and safety in accordance with 10 CFR 50.55a(z)(2) for the performance of a preservice test of the MDAFW pump 1B-B during the current Mode 3 at Sequoyah, Unit 1.

Therefore, the NRC finds that the licensee's proposed alternative, submitted in accordance with 10 CFR 50.55a(z)(2), will provide reasonable assurance that the MDAFW pump 1B-B at Sequoyah, Unit 1 will be operationally ready to perform its safety function until the preservice test for the MDAFW pump 1B-B is completed following Sequoyah, Unit 1 entering Mode 1, no later than 10 days from the performance of the Group A test. All other ASME OM Code requirements as incorporated by reference in 10 CFR 50.55a for which relief or an alternative was not specifically requested and approved in the request dated May 28, 2021, remain applicable. If the licensee identifies a performance issue with the MDAFW pump 1B-B, the licensee will be expected to take action to implement the requirements of its Technical Specifications. This Verbal Authorization is applicable to the alternative testing for the MDAFW pump 1B-B specified in the licensee's request dated May 28, 2021, until the completion of the preservice test following Sequoyah, Unit 1 entering Mode 1, no later than 10 days after the Group A test. The NRC staff's detailed description of its review of the request in the licensee's submittal dated May 28, 2021, to perform alternative testing of the MDAFW pump 1B-B at Sequoyah, Unit 1 will be provided through a separate safety evaluation. The licensee's testing plans for this pump may be adjusted as appropriate by any subsequent NRC-authorized alternative or relief requests.

**Authorization read by David Wrona, Chief of the Plant Licensing Branch II-2,  
Office of Nuclear Reactor Regulation**

As Chief of the Plant Licensing Branch II-2, Office of Nuclear Reactor Regulation, I agree with the conclusions of the Mechanical Engineering and Inservice Testing Branch.

The NRC staff concludes that the proposed alternative for Sequoyah, Unit 1 will provide reasonable assurance of adequate safety until the preservice test for the MDAFW pump 1B-B is completed.

The NRC staff finds that complying with the preservice testing requirements of paragraph ISTB-3310 in the ASME OM Code, Subsection ISTB, as incorporated by reference in 10 CFR 50.55a, for the MDAFW pump 1B-B during the current Mode 3 at Sequoyah, Unit 1 would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety. Accordingly, the NRC staff concludes that the licensee has adequately addressed all of the regulatory requirements set forth in 10 CFR 50.55a(z)(2).

Therefore, effective May 29, 2021, the NRC authorizes the use of the proposed alternative at Sequoyah, Unit 1 as described in the licensee's submittal and supplement both dated May 28, 2021, until completion of the preservice test for the MDAFW pump 1B-B following Sequoyah, Unit 1 entering Mode 1, no later than 10 days from the performance of the Group A test. All other requirements in the ASME OM Code as incorporated by reference in 10 CFR 50.55a for which relief or an alternative was not specifically requested and approved in this alternative request remain applicable.

This Verbal Authorization does not preclude the NRC staff from asking additional clarification questions regarding the proposed alternative while subsequently preparing the written safety evaluation.

LIST OF ATTENDEES

MAY 29, 2021, TELECONFERENCE WITH TENNESSEE VALLEY AUTHORITY

REGARDING VERBAL AUTHORIZATION OF ALTERNATIVE REQUEST RP-10

FOR SEQUOYAH NUCLEAR PLANT, UNIT 1

<b>Name</b>	<b>Organization</b>
Angie Buford	U.S. Nuclear Regulatory Commission
Dave Hardage	U.S. Nuclear Regulatory Commission
Tom Scarbrough	U.S. Nuclear Regulatory Commission
Bob Wolfgang	U.S. Nuclear Regulatory Commission
Michael Wentzel	U.S. Nuclear Regulatory Commission
Dave Wrona	U.S. Nuclear Regulatory Commission
Duke Dang	Tennessee Valley Authority
Jeremy Beau Eckermann	Tennessee Valley Authority
John Grace	Tennessee Valley Authority
Kevin Groom	Tennessee Valley Authority
Kimberly Hulvey	Tennessee Valley Authority
Alicia Jenkins	Tennessee Valley Authority
Tony Langford	Tennessee Valley Authority
Jeff Sowa	Tennessee Valley Authority
Robert Urbanski	Tennessee Valley Authority
Russ Wells	Tennessee Valley Authority

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 DATED JUNE 2, 2021

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**ADAMS Accession No. ML21152A125**

\*by e-mail

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DATE	06/01/2021	06/02/2021	06/01/2021
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NAME	DWrona	MWentzel	
DATE	06/02/2021	06/02/2021	

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