



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

February 15, 2017

Mr. J. W. Shea  
Vice President, Nuclear Licensing  
Tennessee Valley Authority  
1101 Market Street, LP 3R-C  
Chattanooga, TN 37402-2801

SUBJECT: WATTS BAR NUCLEAR PLANT, UNIT 2 – REQUEST FOR TENNESSEE VALLEY AUTHORITY'S CONSENT TO IMPOSITION OF NEW REQUIREMENT RELATED TO MITIGATION OF BEYOND-DESIGN-BASIS EVENTS

Dear Mr. Shea:

The U.S. Nuclear Regulatory Commission (NRC or the Commission) requests that Tennessee Valley Authority (TVA) consent to the imposition of a new requirement on the holder of Facility Operating License (FOL) No. NPF-96 for the Watts Bar Nuclear Plant (WBN), Unit 2, without the NRC conducting a backfit analysis. This imposition would take place under the Mitigation of Beyond-Design-Basis Events (MBDBE) final rule as a result of the licensing history for WBN, Unit 2. The new requirement consists of the need to maintain the spent fuel pool (SFP) cooling strategies and guidelines during the decommissioning of WBN, Unit 2, when it takes place in the future, until the removal of all irradiated fuel from the WBN shared SFP. WBN, Unit 2 is currently required to have these strategies and guidelines in place only until it begins decommissioning. There is a corresponding requirement in place for this SFP under the license for WBN, Unit 1 that does not end when WBN, Unit 1 begins decommissioning. As a result, there is no safety issue driving a need for this backfit, which is solely to address a regulatory gap efficiently. As described below, TVA's consent would be the most cost-effective path for both the licensee and the NRC to ensure that TVA has strategies and guidelines to maintain or restore SFP cooling capabilities for the WBN SFP until all irradiated fuel has been permanently removed from the SFP.

The NRC issued the WBN, Unit 2, FOL on October 22, 2015 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML15251A587), which was after the imposition in 2007 of licensee-specific Mitigation Strategy License Conditions requiring strategies and guidelines to maintain or restore core cooling, SFP cooling, and containment capabilities, in the event of the loss of large areas of the plant due to explosions or fire. These license conditions were made generically applicable in the 2009 Power Reactor Security Requirements rulemaking (74 FR 13925; March 27, 2009), as Section 50.54(hh)(2) of Title 10 of the *Code of Federal Regulations* (10 CFR). As a result of this timing, the WBN, Unit 2, FOL does not include the Mitigation Strategy License Condition. WBN, Unit 2, is required to have guidance and strategies for maintaining or restoring core cooling, containment, and SFP conditions, under the current 10 CFR 50.54(hh)(2). Termination of the 10 CFR 50.54(hh)(2) requirements is currently governed by 10 CFR 50.54(hh)(3), which provides that the section does not apply to a nuclear power plant once the certifications under 10 CFR 50.82(a) have been submitted.

The draft final MBDBE rule provided to the Commission in SECY-16-0142 (ADAMS Package Accession No. ML16301A005) relocates the requirements of 10 CFR 50.54(hh)(2) to a new 10 CFR 50.155(b)(3). The draft final rule includes provisions in new 10 CFR 50.155(a)(2) that govern the removal of these requirements for licensees as they progress through the

decommissioning process. These provisions result in the removal of requirements for strategies, and guidelines to maintain or restore core cooling and containment capabilities once the NRC has docketed the certification from a power reactor licensee described in 10 CFR 50.82(a)(1) or 10 CFR 52.110(a). The provisions retain in place the requirement for strategies and guidelines under 10 CFR 50.155(b)(3) to maintain or restore SFP cooling capabilities until all irradiated fuel has been permanently removed from the SFP.

WBN, Units 1 and 2, share a common SFP. The Mitigation Strategy License Condition for WBN, Unit 1, Condition 2.C.(6), of FOL No. NPF-90 requires WBN, Unit 1, to have SFP mitigation measures that will remain in effect until the license condition is removed, or the operating license for WBN, Unit 1, is terminated. The change in the termination of requirements for SFP cooling strategies contained in the draft final MBDBE rule is not a backfit for WBN, Unit 1, because it has the Mitigation Strategy License Condition. Modification of the provisions for termination of the SFP cooling strategies would be a backfit for WBN, Unit 2. The backfit would not have an immediate safety benefit, and the associated direct and indirect costs would be *de minimis*. However, as discussed below, the backfit would accrue safety benefits in the future and could result in cost savings for the licensee. The NRC believes that a backfit is the most efficient treatment of this set of circumstances for the reasons discussed below.

WBN, Unit 1, was issued an FOL on February 7, 1996 (ADAMS Accession No. ML080290360), which expires on November 9, 2035. In contrast, the FOL for WBN, Unit 2, expires on October 21, 2055. This difference in licensing dates has the potential to result in a significant time delay between the decommissioning of WBN, Unit 1, and WBN, Unit 2. This time delay could result in a need to retain the WBN, Unit 1, FOL after decommissioning of the facility in order to maintain in place the requirement for SFP strategies for the shared SFP after WBN, Unit 2 permanently ceases operations and submits certifications under 10 CFR 50.82(a)(1). If WBN, Units 1 and 2, were to operate for their entire license terms, including potential renewal periods, the result could be a 20-year period for which maintenance of the WBN, Unit 1, FOL is necessary in order to retain the safety benefits that would otherwise accrue under the WBN, Unit 2, FOL if it were subject to the backfit of requirements for SFP cooling strategies post-decommissioning. The cost of maintaining this license in order to cover these strategies for the shared SFP would include adjusted annual fees in accordance with 10 CFR 171.15(c)(1). The annual fee is currently \$194,000.00, as reflected in the recently published "Revision of Fee Schedules; Fee Recovery for Fiscal Year 2017" (82 FR 8696, January 31, 2017). Extending the requirement for SFP strategies post-decommissioning to the FOL for WBN, Unit 2, by subjecting it to the requirements in the draft final MBDBE rule would result in the potential for earlier termination of the WBN, Unit 1, FOL and removal of needs for those annual fees.

While it is possible to include in the MBDBE final rule a specific exemption for that period of time for WBN, Unit 2, such an exemption would not result in any savings to the licensee because of the existence of the corresponding requirement for WBN, Unit 1. This is because there are existing requirements for the strategies for both units for the shared pool, and the post-decommissioning requirements will be maintained in place for WBN, Unit 1, if WBN, Unit 2, is exempted.

For these reasons, the NRC concludes that requiring WBN, Unit 2, to comply with the new 10 CFR 50.155(b)(3) to maintain or restore SFP cooling capabilities until all irradiated fuel has been permanently removed from the SFP would be the most cost-efficient path for both the licensee and the NRC to maintain this requirement throughout the terms of the WBN, Units 1 and 2, 10 CFR Part 50 licenses.

Please reply to this letter in writing, indicating TVA's consent, as the holder of FOL No. NPF-96 for WBN, Unit 2, to the imposition of new 10 CFR 50.155(b)(3) to maintain or restore SFP cooling capabilities until all irradiated fuel has been permanently removed from the SFP, without the NRC conducting a backfit analysis for this imposition on WBN, Unit 2.

Sincerely,

A handwritten signature in black ink, appearing to read "Anne Boland", with a long horizontal flourish extending to the right.

Anne T. Boland, Director  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-391

cc: Distribution via Listserv

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**ADAMS Accession Number: ML17040A353**

\*by e-mail

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