



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

January 13, 2011

10 CFR 50.55a(a)(3)(i)

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

Watts Bar Nuclear Plant, Unit 2  
Docket No. 50-391

**Subject: WATTS BAR NUCLEAR PLANT (WBN) UNIT 2 - AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME) SECTION XI, PRESERVICE INSPECTION (PSI) PROGRAM - REQUEST TO USE SUBSEQUENT EDITION AND ADDENDA OF ASME SECTION XI CODE FOR PSI ACTIVITIES**

**Reference:** TVA letter to NRC dated October 30, 2008, "Watts Bar Nuclear Plant (WBN) Unit 2 - Preservice Inspection Program Plan and Request for Relief No. WBN-2/PDI-4 [ML083090046]"

Pursuant to 10 CFR 50.55a(a)(3)(i), TVA is submitting the enclosed relief request to allow the use of ASME Section 2001 Edition through 2003 Addenda, subject to the limitations and modifications of 10 CFR 50.55a, for the WBN Unit 2 construction completion project PSI Program Code of Record.

This relief request was discussed between representatives of TVA and the NRC on January 6, 2011. The revised PSI Program document for WBN Unit 2 was submitted to NRC in the referenced letter.

There are no new commitments associated with this submittal. If you have any questions, please contact Bill Crouch at (423) 365-2004.

Respectfully,

A handwritten signature in black ink, appearing to read "M. Bajestani", is written over a horizontal line.

Masoud Bajestani  
Watts Bar Unit 2 Vice President

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Enclosure: Tennessee Valley Authority, Watts Bar Nuclear Plant (WBN) Unit 2, American  
Society of Mechanical Engineers (ASME) Section XI Request for Relief  
WBN-2/PSI-2

cc (Enclosure):

U. S. Nuclear Regulatory Commission  
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Marquis One Tower  
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NRC Resident Inspector Unit 2  
Watts Bar Nuclear Plant  
1260 Nuclear Plant Road  
Spring City, Tennessee 37381

## **ENCLOSURE**

### **TENNESSEE VALLEY AUTHORITY WATTS BAR NUCLEAR PLANT (WBN) UNIT 2 AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME) SECTION XI REQUEST FOR RELIEF WBN-2/PSI-2**

TVA requests approval to use the alternative ASME Section XI Code year and addenda for the completion of WBN Unit 2. The alternate ASME Code for Preservice Inspection (PSI) activities is based on the ASME Section XI Edition and Addenda approved at the time construction was resumed on WBN Unit 2.

#### **EXECUTIVE SUMMARY:**

In accordance with 10 CFR 50.55a(a)(3)(i), TVA is requesting relief to utilize a later Code of Record for PSI activities during the completion of WBN Unit 2. Section 50.55a(g)(2) requires the PSI Code of Record to be based on the ASME Section XI Code in effect six months prior to the date of issue of the Construction Permit. Because the construction permit for WBN Unit 2, CPPR-92, is dated January 23, 1973, the applicable Code would be the 1971 Edition through Winter 1971 Addenda of ASME Section XI. Since 10 CFR 50.55a(g)(2) also allows the use of subsequent Code Editions/Addenda, which are incorporated by reference in 10 CFR 50.55a(b)(2), TVA identified the 2001 Edition through 2003 Addenda as the applicable Code of Record based on the date associated with resumption of construction activities.

#### **SYSTEM/COMPONENTS FOR WHICH RELIEF IS REQUESTED:**

ASME Code Class 1, 2, 3, IWF, and MC components including the applicable Examination Categories and Item Numbers.

#### **APPLICABLE CODE EDITION AND ADDENDA FOR THE GIVEN EXAM:**

The ASME Section XI Code Edition and Addenda Code of Record requested for the WBN Unit 2 construction completion project PSI is the 2001 Edition through 2003 Addenda, as amended by 10 CFR 50.55a and those Code Cases either approved for use by Regulatory Guide 1.147 and adopted by WBN Unit 2 or where specific relief has been granted by NRC.

#### **REQUIREMENTS FROM WHICH RELIEF IS REQUESTED:**

Permission is requested to adopt a later NRC-approved Code Edition and Addenda as provided in 10 CFR 50.55a(g)(2), in place of the Code of Record as determined by the date of the construction permit.

#### **RELIEF REQUESTED:**

Section 50.55a(g)(2) requires the PSI Code of Record to be based on the ASME Section XI Code in effect six months prior to the date of issue of the Construction Permit. Because the construction permit for WBN Unit 2, CPPR-92, is dated January 23, 1973, the applicable Code would be the 1971 Edition through Winter 1971 Addenda of ASME Section XI. Since 10 CFR 50.55a(g)(2) also allows the use of subsequent Code Editions/Addenda, which are incorporated by reference in 10 CFR 50.55a(b)(2), TVA identified the 2001 Edition through 2003 Addenda as

## **ENCLOSURE**

### **TENNESSEE VALLEY AUTHORITY WATTS BAR NUCLEAR PLANT (WBN) UNIT 2 AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME) SECTION XI REQUEST FOR RELIEF WBN-2/PSI-2**

the applicable Code of record based on the date associated with resumption of construction activities.

#### **BASIS FOR RELIEF:**

Construction activities at WBN Unit 2 resumed approximately 35 years after the initial construction permit was issued. The 10 CFR 50.55a(g)(2) method for determining the PSI code of record requires the use of the 1971 Edition through Winter 1971 (71/W71) Addenda of ASME Section XI; however, the provision in 10 CFR 50.55a(g)(2) to allow the use of subsequent Code Editions/Addenda, which are incorporated by reference in 10 CFR 50.55a(b)(2), allows the use of a technically superior PSI Code of Record based on 30 years of ASME Code committee knowledge and revisions. For example, Class MC, metal containment, examination was not required in the 71/W71 Section XI code, but it is a requirement of Subsection IWE of the 2001 Edition through 2003 Addenda of ASME Section XI.

#### **PROPOSED ALTERNATIVES:**

Utilize the 2001 Edition through 2003 Addenda of ASME Section XI for WBN Unit 2 construction completion activities subject to the modifications and limitations imposed by 10 CFR 50.55a.

#### **JUSTIFICATION FOR GRANTING RELIEF:**

The 2001 Edition through 2003 Addenda of ASME Section XI was approved for use in 10 CFR 50.55a(b)(2), and 10 CFR 50.55a(g)(2) allows the use of subsequent Code Editions/Addenda that are incorporated by reference in 10 CFR 50.55a(b)(2). The version of 10 CFR 50.55a(b)(2) in place in 2008 states:

- (2) *As used in this section, references to Section XI of the ASME Boiler and Pressure Vessel Code refer to Section XI, and include the 1970 Edition through the 1976 Winter Addenda, and the 1977 Edition (Division 1) through the 2003 Addenda (Division 1). . . .*

The 2001 Edition through 2003 Addenda of ASME Section XI incorporates 30 years of technical lessons learned when compared to the 1971 Edition through Winter 1971 Addenda of the ASME Section XI Code. Thus, the requested relief would permit use of the code that was current at the time construction activities resumed at WBN Unit 2.

#### **IMPLEMENTATION SCHEDULE AND DURATION:**

This relief will be utilized for the duration of PSI activities associated with the completion of WBN Unit 2.