



**Hearing Identifier:** Watts\_Bar\_2\_Operating\_LA\_Public  
**Email Number:** 288

**Mail Envelope Properties** (7AB41F650F76BD44B5BCAB7C0CCABFAF1B7A0666)

**Subject:** TVA letter to NRC\_02-16-11\_TS-TS Bases Supplemental Info  
**Sent Date:** 2/16/2011 1:08:34 PM  
**Received Date:** 2/16/2011 1:08:57 PM  
**From:** Boyd, Desiree L

**Created By:** dlboyd@tva.gov

**Recipients:**

"Crouch, William D" <wdcrouch@tva.gov>

Tracking Status: None

"Hamill, Carol L" <clhamill@tva.gov>

Tracking Status: None

"Boyd, Desiree L" <dlboyd@tva.gov>

Tracking Status: None

"Epperson, Dan" <Dan.Epperson@nrc.gov>

Tracking Status: None

"Poole, Justin" <Justin.Poole@nrc.gov>

Tracking Status: None

"Raghavan, Rags" <Rags.Raghavan@nrc.gov>

Tracking Status: None

"Milano, Patrick" <Patrick.Milano@nrc.gov>

Tracking Status: None

"Campbell, Stephen" <Stephen.Campbell@nrc.gov>

Tracking Status: None

**Post Office:** TVANUCXVS2.main.tva.gov

<b>Files</b>	<b>Size</b>	<b>Date &amp; Time</b>
MESSAGE	477	2/16/2011 1:08:57 PM
02-16-11_TS-TS Bases Supplemental Info_Final .pdf		119925

**Options**

**Priority:** Standard

**Return Notification:** No

**Reply Requested:** No

**Sensitivity:** Normal

**Expiration Date:**

**Recipients Received:**



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

February 16, 2011

10 CFR 50.36

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

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

**Subject: Watts Bar Nuclear Plant (WBN) Unit 2 – Supplemental Information For Review of Developmental Revision A of the Unit 2 Technical Specifications (TS) and Technical Specifications Bases (TS Bases)**

TVA's letter to NRC dated March 4, 2009 (Reference 1), included Developmental Revision A of the Unit 2 TS and TS Bases. Enclosure 2 of that letter noted that the proposed WBN Unit 2 TS and TS Bases were developed by marking up Revision 0 of NUREG-1431, "Standard Technical Specifications Westinghouse Plants," to indicate the WBN Unit 1 TS and TS Bases approved (as appropriate) through Amendment 70 and Revision 91, respectively.

Recently, an NRC staff member noted that the current licensing basis for Unit 1 was to be used as the reference basis for the review and licensing of Unit 2. Based on this, the staff member noted that the Developmental A versions of the TS and TS Bases should have been based on the Unit 1 TS amendment and TS Bases revision that were current when the first WBN Regulatory Framework letter was issued for Unit 2. As a result, the staff requested that a markup of these versions of the TS and TS Bases (i.e., when the framework letter was submitted) be provided that reflects the Unit 1 TS amendment and TS Bases revision that were current when Developmental Revision A of the Unit 2 TS and TS Bases was submitted.

To accomplish this activity, this letter provides the following:

- Enclosure 1 describes the process used to produce the requested markups of the TS and TS Bases. Additionally, the review matrix used for the markups is discussed.
- Enclosure 2 includes the TS Review Matrix and the associated marked-up TS pages.
- Enclosure 3 includes the TS Bases Review Matrix and the associated marked-up TS Bases pages.

U.S. Nuclear Regulatory Commission  
Page 2  
February 16, 2011

During the markup activity described in Enclosure 1, two new discrepancies in Reference 1 were identified. Enclosure 4 summarizes the two new discrepancies and the two discrepancies that were previously fixed in Reference 3 (details are provided in the applicable review matrix) and discusses the corrective action for each discrepancy.

Enclosure 5 provides the list of commitments made in this letter. If you have any questions, please contact Bill Crouch at (423) 365-2004.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 16<sup>th</sup> day of February, 2011.

Respectfully,

A handwritten signature in cursive script, appearing to read "Marie Gillman", with a long horizontal flourish extending to the right.

Marie Gillman  
Acting Watts Bar Unit 2 Vice President

Enclosures:

1. Process for Marking Up the Technical Specifications (TS) and TS Bases Pages
2. Unit 2 TS Review Matrix: Unit 1 Amendments 67 through 70 With Associated Markups
3. Unit 2 TS Bases Review Matrix: Unit 1 Revisions 86 through 91 With Associated Markups
4. Discrepancies Identified During the Process of Marking Up the TS and TS Bases
5. Commitments

References:

1. TVA to NRC letter dated March 4, 2009, "Watts Bar Nuclear Plant (WBN) Unit 2 - Operating License Application Update" (ADAMS Accession No. ML090700378) [Developmental Revision A]
2. TVA to NRC letter dated January 29, 2008, "Watts Bar Nuclear Plant (WBN) - Unit 2 - Regulatory Framework for the Completion of Construction and Licensing Activities for Unit 2" (ADAMS Accession No. ML080320443)
3. TVA to NRC letter dated February 2, 2010, "Watts Bar Nuclear Plant (WBN) - Unit 2 - Developmental Revision B of the Technical Specifications (TS), TS Bases, Technical Requirements Manual (TRM), TRM Bases; and Pressure and Temperature Limits Report (PTLR)" (ADAMS Accession No. ML100550326)
4. TVA to NRC letter dated August 16, 2010, "Watts Bar Nuclear Plant (WBN) - Unit 2 - Change to Developmental TS Section 4.2.2, 'Control Rod Assemblies'" (ADAMS Accession No. ML102290075) [Developmental Revision C]
5. TVA to NRC letter dated October 12, 2010, "Watts Bar Nuclear Plant (WBN) - Unit 2 - Change to Developmental Technical Specification (TS) Sections 3.6.11, 'Ice Bed,' and 3.1.8, 'Rod Position Indication'" (ADAMS Accession No. ML1028505200) [Developmental Revision D]
6. TVA to NRC letter dated January 27, 2011, "Watts Bar Nuclear Plant (WBN) - Unit 2 - Change to Developmental Technical Specification (TS) Section 3.1.8, 'Rod Position Indication'" (ADAMS Accession No. ML110270108) [Developmental Revision E]

cc (Enclosures):

U. S. Nuclear Regulatory Commission  
Region II  
Marquis One Tower  
245 Peachtree Center Ave., NE Suite 1200  
Atlanta, Georgia 30303-1257

NRC Resident Inspector Unit 2  
Watts Bar Nuclear Plant  
1260 Nuclear Plant Road  
Spring City, Tennessee 37381

U.S. Nuclear Regulatory Commission  
Page 4  
February 16, 2011

bcc (Enclosures):

Stephen Campbell  
U.S. Nuclear Regulatory Commission  
MS 08H4A  
One White Flint North  
11555 Rockville Pike  
Rockville, Maryland 20852-2738

Charles Casto, Deputy Regional Administrator for Construction  
U. S. Nuclear Regulatory Commission  
Region II  
Marquis One Tower  
245 Peachtree Center Ave., NE Suite 1200  
Atlanta, Georgia 30303-1257

## ENCLOSURE 1

### Process for Marking Up the Technical Specifications (TS) and TS Bases Pages

#### Tennessee Valley Authority - Watts Bar Nuclear Plant - Unit 2, Docket No. 50-391

See Page 3 of the cover letter for references.

Developmental Revision A of the Unit 2 TS and TS Bases (Reference 1) were based on Revision 0 of NUREG-1431, "Standard Technical Specifications Westinghouse Plants." Developmental Revision A was constructed by starting with NUREG-1431 and then overlaying the Unit 1 TS amendments and TS Bases revisions made from Amendment 0 / Revision 0 through Amendment 70 / Revision 91, respectively.

The NRC staff reviewer has requested that an alternate markup be provided which is based on the versions of the Unit 1 TS and TS Bases which were current at the time of the first WBN Unit 2 regulatory framework letter (Reference 2). At that time, the Unit 1 TS and TS Bases were at Amendment 67 and Revision 86, respectively. Therefore, the attached markups depict the applicable changes from the date of Reference 2 to the date of Reference 1 (i.e., January 29, 2008, to March 4, 2009). Thus, the markups herein address Unit 1 TS Amendments 68 through 70 and TS Bases Revisions 87 through 91. Unit 1 TS Amendment 69 was found to be a temporary change that is not needed for Unit 2; thus, it is not included in the markup provided in Enclosure 2. Additionally, as noted below, some of the Unit 1 TS amendments and TS Bases revisions prior to Amendment 67 and Revision 86, respectively, will not apply to Unit 2 (e.g., Unit 2 will not utilize a tritium producing core).

Changes to the Unit 2 TS and TS Bases made after the date of Reference 1 are addressed by References 3 through 6.

The markups contained in this letter result in basically the same TS and TS Bases as provided in Reference 1 except for the discrepancies noted in Enclosure 4.

The requested markups provided in Enclosures 2 and 3 involve only the affected pages that resulted from the process described below:

#### For the TS:

- Marked up the applicable Unit 1 TS pages to show the changes that resulted from Unit 1 TS Amendments 68 and 70 (i.e., the amendments incorporated between the submittal of References 1 and 2).
- Designated the Unit 1 TS amendments that were not incorporated on Unit 2. Where appropriate, provided a markup to show how the TS looked prior to incorporation of the amendment that was not incorporated.
- Provided a review matrix for the TS. This matrix indicates, by TS section, which amendments were incorporated and which amendments were not incorporated. This matrix also delineates when / why a markup is not provided.

## ENCLOSURE 1

### Process for Marking Up the Technical Specifications (TS) and TS Bases Pages

#### Tennessee Valley Authority - Watts Bar Nuclear Plant - Unit 2, Docket No. 50-391

##### For the TS Bases:

- Marked up the applicable Unit 1 TS Bases pages to show the changes that resulted from Unit 1 TS Bases Revisions 87, 88, 89, and 90 (i.e., the revisions incorporated between the submittal of References 1 and 2).
- Noted the Unit 1 TS Bases revisions that were not incorporated on Unit 2. Where appropriate, provided a markup to show how the TS Bases looked prior to incorporation of the revision that was not incorporated.
- Provided a review matrix for the TS Bases. This matrix indicates, by TS Bases section, which revisions were incorporated and which revisions were not incorporated. This matrix also delineates when / why a markup is not provided.

##### Key to Abbreviations Use on Review Matrices

- TS            Technical Specifications
- TS Bases    Technical Specifications Bases
- AXX         Technical Specifications Amendment XX
- RXX         Technical Specifications Bases Revision XX
- AXX (RXX)   Technical Specifications Amendment XX (Technical Specifications Bases Revision XX)



**ENCLOSURE 2**

**Unit 2 TS Review Matrix: Unit 1 Amendments 67 through 70 With Associated Markups**

**Tennessee Valley Authority - Watts Bar Nuclear Plant - Unit 2, Docket No. 50-391**

**ENCLOSURE 3**

**Unit 2 TS Bases Review Matrix: Unit 1 Revisions 86 through 91 With Associated Markups**

**Tennessee Valley Authority - Watts Bar Nuclear Plant - Unit 2, Docket No. 50-391**

## ENCLOSURE 4

### Discrepancies Identified During the Process of Marking Up the TS and TS Bases

#### Tennessee Valley Authority - Watts Bar Nuclear Plant - Unit 2, Docket No. 50-391

1. Affected sections: TS 3.3.1 and 3.4.1; TS Bases 3.3.1 and 3.4.1

Background:

Unit 1 TS Amendment 47 amended the Unit 1 TS to allow an alternate method for the measurement of RCS total flow rate via measurement of the RCS elbow tap differential pressures. Unit 1 TS Bases Revision 60 revised the Unit 1 TS Bases to implement the changes made by Amendment 47.

The review matrix for Developmental Revision A stated the following for each section:

- TS 3.3.1: "The changes will be applied to Unit 2."
- TS Bases 3.3.1: "The changes will be applied to Unit 2."
- TS 3.4.1: "The changes will be applied to Unit 2."
- TS Bases 3.4.1: "The changes will be applied to Unit 2."

Discrepancy:

The changes should not have been incorporated in Developmental Revision A of the Unit 2 TS and TS Bases because the elbow tap differential pressure measurement method is not being used on Unit 2.

Corrective Action(s):

Developmental Revision B of the Unit 2 TS and TS Bases deleted the changes incorporated per Unit 1 TS Amendment 47 / Unit 1 TS Bases Revision 60. No further corrective action is required.

2. Affected section: TS Bases 3.6.9

Background:

Unit 1 TS Bases Revision 71 revised the Unit 1 TS Bases to reflect changes to the Unit 1 TS approved by Unit 1 TS Amendment 59 (support steam generator replacement by allowing TEMPORARY use of penetrations in Shield Building Dome during Modes 1-4).

The review matrix for Developmental Revision A stated, "This change will NOT be applied to Unit 2."

Discrepancy:

Contrary to the above, a minor portion of Unit 1 TS Bases Revision 71 (i.e., "See TS Bases 3.6.15, Shield Building, for additional information on EGTS.") was incorporated into Developmental Revision A of the Unit 2 TS Bases.

## ENCLOSURE 4

### Discrepancies Identified During the Process of Marking Up the TS and TS Bases

#### Tennessee Valley Authority - Watts Bar Nuclear Plant - Unit 2, Docket No. 50-391

##### Corrective Action:

Since this wording is nothing more than an aid to indicate where additional information on EGTS can be found, leaving this statement in the Unit 2 TS Bases has no impact on the Bases.

The wording will be left in the Unit 2 TS Bases; no further corrective action is required.

#### 3. Affected section: TS section 3.7.1

##### Background:

Unit 2 TS Amendment 31 amended the Unit 1 TS to approve Power Uprate using Leading Edge Flow Meter (LEFM).

The review matrix for Developmental Revision A stated, "This change will NOT be implemented on Unit 2 at this time."

##### Discrepancy:

Contrary to this statement, the "58%" value in REQUIRED ACTION A.1 should have remained at "59%."

##### Corrective Action:

A future Developmental Revision to the Unit 2 TS will correct the "58%" value in TS LCO 3.7.1, REQUIRED ACTION A.1 to "59%."

#### 4. Affected section: TS Bases 3.8.1

##### Background:

Unit 1 TS Bases Revision 50 revised the Unit 1 TS Bases to reflect changes to the Unit 1 TS approved by Unit 1 TS Amendment 39 (revise LCO 3.8.1's allowed outage time to restore an inoperable emergency diesel generator to operable status from 72 hours to 14 days).

The review matrix for Developmental Revision A stated, "This change will NOT be applied to Unit 2."

##### Discrepancy:

Contrary to the above, the version showing the changes incorporated for Unit 2 TS Bases 3.8.1 that was provided in Developmental Revision A of the Unit 2 TS Bases included the following verbiage at the end of SR 3.8.1.14:

"Prior to performance of this SR in Modes 1 or 2, actions are taken to establish that adequate conditions exist for performance of the SR. The required actions are defined in Bases Table 3.8.1-2."

## ENCLOSURE 4

### Discrepancies Identified During the Process of Marking Up the TS and TS Bases

#### Tennessee Valley Authority - Watts Bar Nuclear Plant - Unit 2, Docket No. 50-391

This verbiage was not shown in the markup provided for Developmental Revision A of the Unit 2 TS Bases, and should NOT have been incorporated. Table 3.8.1-2 was not added by the markup, and it was not incorporated.

#### Corrective Action:

A future Developmental Revision to the Unit 2 TS Bases will remove the above wording from the TS Bases for SR 3.8.1.14.

## **ENCLOSURE 5**

### **Commitments**

#### **Tennessee Valley Authority - Watts Bar Nuclear Plant - Unit 2, Docket No. 50-391**

1. A future Developmental Revision to the Unit 2 TS will correct the "58%" value in Unit 2 TS LCO 3.7.1, REQUIRED ACTION A.1 to "59%."
2. A future Developmental Revision to the Unit 2 TS Bases will remove the "Prior to performance of this SR in Modes 1 or 2, actions are taken to establish that adequate conditions exist for performance of the SR. The required actions are defined in Bases Table 3.8.1-2." wording from the TS Bases for SR 3.8.1.14.