WBN2Public Resource

From: Hamill, Carol L [clhamill@tva.gov]
Sent: Tuesday, August 17, 2010 8:04 AM
To: Wiebe, Joel; Raghavan, Rags; Milano, Patrick; Campbell, Stephen
Cc: Crouch, William D; Arent, Gordon; Lyons, Sharon K
Subject: 8-16-10_Control Rod Assemblies TS Change Submittal_NRC FINAL
Attachments: 8-16-10_Control Rod Assemblies TS Change Submittal_NRC FINAL.pdf

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From: Hamill, Carol L

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August 16, 2010 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 - Change to Developmental TS Section 4.2.2, "Control Rod Assemblies"**

References:
1. TVA letter to NRC, "Technical Specifications Change WBN-TS-10-05 - Control Rod Assemblies," dated May 28, 2010
2. TVA letter to NRC, "Watts Bar Nuclear Plant (WBN) Unit 2 - Operating License Application Update," dated March 4, 2009
3. TVA letter to NRC, "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)," dated February 2, 2010

This letter transmits a change to WBN Unit 2 Developmental Technical Specification (TS) Section 4.2.2, "Control Rod Assemblies," to reflect that the control material in the Rod Cluster Control Assemblies (RCCAs) will be Silver-Indium-Cadmium (Ag-In-Cd) and not Boron Carbide (B_4C). This change was incorporated into the evaluations and re-analyses performed for WBN Unit 2 and presented in the WBN Unit 2 FSAR. Additionally, on May 28, 2010, WBN Unit 1 requested a TS change to make use of the Ag-In-Cd design (Reference 1).

The previous design was the L-106A-HDR, heavy drive rod with B_4C RCCAs. The new design is the standard L-106A drive rod with a modified coupling to mate with Ag-In-Cd RCCAs. Eight part-length Control Rod Drive Mechanisms and eight guide tube covers will be removed. The new standard L-106A drive rods will be installed after RCCA installation but prior to the reactor vessel head installation. Westinghouse Field Change Notice FCN-WBTM-10794 will install the Ag-In-Cd RCCAs.

Currently, Developmental Revision B TS 4.2.2 states: "The reactor core shall contain 57 control rod assemblies. The control material shall be boron carbide with silver indium cadmium tips as approved by the NRC."

TS 4.2.2 is revised to state: "The reactor core shall contain 57 control rod assemblies. The control material shall be silver indium cadmium as approved by the NRC."

Enclosures 1 and 2 contain the mark-up and the retyped version of the appropriate TS page.

On March 4, 2009 (Reference 2), as part of WBN Unit 2 operating license application update, TVA submitted Developmental Revision A WBN Unit 2 TS, and on February 2, 2010 (Reference 3), TVA submitted Developmental Revision B WBN Unit 2 TS. This change is reflected in the Developmental Revision C version.

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

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 16th day of August 2010.

Respectfully,

M. Bajestani

Masoud Bajestani
Watts Bar Unit 2 Vice President

Enclosures:

1. Mark-up of Developmental Revision B WBN Unit 2 TS Section 4.2.2, Control Rod Assemblies, to Create Revision C

2. Retyped Version of Developmental Revision C WBN Unit 2 TS Section 4.2.2, Control Rod Assemblies

cc (w/enclosures):

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Enclosure 1

Mark-up of

Developmental Revision B WBN Unit 2 TS

Section 4.2.2, Control Rod Assemblies

to Create Revision C

Technical Specification Page

4.0-1

4.0 DESIGN FEATURES

4.1 Site

4.1.1 Site and Exclusion Area Boundaries

The site and exclusion area boundaries shall be as shown in Figure 4.1-1.

4.1.2 Low Population Zone (LPZ)

The LPZ shall be as shown in Figure 4.1-2 (within the 3-mile circle).

4.2 Reactor Core

4.2.1 Fuel Assemblies

The reactor shall contain 193 fuel assemblies. Each assembly shall consist of a matrix of Zirlo fuel rods with an initial composition of natural or slightly enriched uranium dioxide (UO_2) as fuel material. Limited substitutions of zirconium alloy or stainless steel filler rods for fuel rods, in accordance with approved applications of fuel rod configurations, may be used. Fuel assemblies shall be limited to those fuel designs that have been analyzed with applicable NRC staff approved codes and methods and shown by tests or analyses to comply with all fuel safety design bases. A limited number of lead test assemblies that have not completed representative testing may be placed in nonlimiting core regions.

4.2.2 Control Rod Assemblies

The reactor core shall contain 57 control rod assemblies. The control material shall be ~~boron carbide with~~ silver indium cadmium ~~tips~~ as approved by the NRC.

(continued)

Enclosure 2

Retyped Version of

Developmental Revision C WBN Unit 2 TS

Section 4.2.2, Control Rod Assemblies

Technical Specification Page

4.0-1

4.0 DESIGN FEATURES

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(continued)