



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

**SEP 29 2003**

WBN-TS-03-02

10 CFR 50.90

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

In the Matter of the )  
Tennessee Valley Authority )

**WATTS BAR NUCLEAR PLANT (WBN) UNIT 1 - TECHNICAL SPECIFICATION  
(TS) CHANGE 03-02, "REVISION OF BORON REQUIREMENTS FOR COLD  
LEG ACCUMULATORS AND REFUELING WATER STORAGE TANK (RWST)" -  
UPDATE OF PROPOSED TS REVISION (TAC NO. 9480)**

TVA's letter dated August 18, 2003, provided a revision to TS 4.2.1 to add a note to limit the number of Tritium Producing Burnable Absorber Rods (TPBARs) to 240 in order to be consistent with revised boron concentration requirements for the Accumulators and Refueling Water Storage Tank. Based on a September 26, 2003 discussion with NRC's M. H. Chernoff, the purpose of this letter is to revise the text of TS 4.2.1 as shown in the enclosed revised page.

In lieu of a note that modifies the previously approved text allowing 2304 TPBARs, TVA will replace the existing limit of 2304 TPBARs with the revised limit of 240 TPBARs. The previously proposed modifying note is no longer required and is removed by this revision.

The proposed change does not alter TVA's previous analysis of the proposed boron concentration limits and accordingly does not affect TVA's previous no significant hazards consideration conclusion.

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U.S. Nuclear Regulatory Commission

Page 2

SEP 29 2003

There are no regulatory commitments in this submittal. If you have any questions about this request, please contact me at (423) 365-1824.

I declare under penalty of perjury that the foregoing is true and correct. Executed on this 29th day of September, 2003.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. L. Pace', with a stylized flourish at the end.

P. L. Pace  
Manager, Site Licensing  
and Industry Affairs

Enclosure

Technical Specification 4.0, "Design Features," Update to  
Reflect 240 Tritium Producing Burnable Absorber Rods

cc: See page 3

U.S. Nuclear Regulatory Commission  
Page 3

SEP 29 2003

PLP:JLB

Enclosure

cc (Enclosure):

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**Enclosure**

**Technical Specification 4.0, "Design Features"**  
**Update to Reflect 240 Tritium Producing Burnable Absorber Rods**

## 4.0 DESIGN FEATURES

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### 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).

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### 4.2 Reactor Core

#### 4.2.1 Fuel Assemblies

The reactor shall contain 193 fuel assemblies. Each assembly shall consist of a matrix of Zircalloy or Zirlo fuel rods with an initial composition of natural or slightly enriched uranium dioxide (UO<sub>2</sub>) 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. For Unit 1, Watts Bar is authorized to place a maximum of ~~2304~~ 240 Tritium Producing Burnable Absorber Rods into the reactor in an operating cycle.

#### 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)

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