August 22, 2007

TVA-WBN-TS-07-01

10 CFR 50.90

U. S. Nuclear Regulatory Commission
Mail Stop: OFWN P1-35
ATTN: Document Control Desk
Washington, D.C. 20555-0001

Gentlemen:

In the Matter of) Docket No. 50-390
Tennessee Valley Authority)

WATTS BAR NUCLEAR PLANT (WBN) UNIT 1 - TECHNICAL SPECIFICATION CHANGE 07-01, REVISION OF NUMBER OF TRITIUM PRODUCING BURNABLE ABSORBER RODS (TPBARS) IN THE REACTOR CORE - RESPONSE TO TELECON QUESTIONS

The purpose of this submittal is to provide responses to two questions raised by the NRR Project Manager during a telecon on August 15, 2007 regarding the subject amendment. The enclosure to this letter provides those responses.

There are no regulatory commitments associated with this submittal. If you have any questions concerning this matter, please call me at (423) 365-1824.

I declare under penalty of perjury that the foregoing is true and correct. Executed on this 22nd day of August, 2007.

Sincerely,

Original signed by

J. D. Smith
Manager, Site Licensing
and Industry Affairs (Acting)

Enclosure
cc: See Page 2

August 22, 2007

Enclosure
cc (Enclosure):
NRC Resident Inspector
Watts Bar Nuclear Plant
1260 Nuclear Plant Road
Spring City, Tennessee 37381

Mr. Brendan T. Moroney, Project Manager
U.S. Nuclear Regulatory Commission
MS 08G9a
One White Flint North
11555 Rockville Pike
Rockville, Maryland 20852-2738

U.S. Nuclear Regulatory Commission
Region II
Sam Nunn Atlanta Federal Center
61 Forsyth St., SW, Suite 23T85
Atlanta, Georgia 30303

ENCLOSURE
TENNESSEE VALLEY AUTHORITY
WATTS BAR NUCLEAR PLANT
RESPONSE TO NRC TELECON QUESTIONS

NRC QUESTION 1:

The April 25, 2007, license amendment request to increase the number of TPBARs in the reactor core indicates that the TPBARs to be installed in future cores have been redesigned. The submittal primarily discusses the functional performance of the new TPBARs. With regard to structural capability, please provide a comparison of the controls used in the design, fabrication and procurement of the new TPBARs to those used for the original design, as discussed in Section 2.2 of the September 23, 2002, safety evaluation (SE) by the NRC staff (ML022540925).

TVA RESPONSE:

Changes to the TPBAR design for the Cycle 9 TPBARs from what has been previously reviewed and approved are primarily related to the design of internal components. Pacific Northwest National Laboratory (PNNL) has performed the same structural calculations for the Cycle 9 TPBAR that were performed for the previous designs. These structural calculations evaluated the applied stresses in the TPBAR to verify that the Cycle 9 TPBARs continue to meet the allowable stress and fatigue criteria contained in the ASME Boiler and Pressure Vessel Code. PNNL has also completed structural calculations that evaluate the TPBAR design stiffness, buckling pressures, the effects of flow-induced vibration, and shipping and handling loads. The PNNL calculations demonstrated that the Cycle 9 TPBAR design continues to meet the design basis structural criteria and the TVA functional requirements with minimal changes in the results and no adverse impacts.

Additionally, the quality controls used in the design, fabrication and procurement of TPBARs and TPBAR components are the same as those used in the original design as discussed in Section 2.2 of the Staff's September 23, 2002 SE.

NRC QUESTION 2:

Also, discuss any changes in assumptions and results of accident analyses regarding structural failure of the new design.

TVA RESPONSE:

There have been no changes in the assumptions or results for the new TPBAR design. Therefore, the new design remains bounded by the accident analyses performed for the initial TPBAR design of the original amendment request.