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

February 25, 2011

10 CFR 50.4(b)(6)
10 CFR 50.34(b)

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

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

Subject: Watts Bar Nuclear Plant (WBN) Unit 2 – Final Safety Analysis Report (FSAR) – Response to Requests for Additional Information

This letter responds to requests for additional information (RAIs) regarding the Unit 2 FSAR concerning Auxiliary Feedwater.

Enclosure 2 contains the commitment contained 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 25th day of February 2011.

Respectfully,

David Stinson
Watts Bar Unit 2 Vice President

Enclosures:

1. Responses to RAIs Regarding Unit 2 FSAR
2. Commitment Contained in Letter

D030
NRR

cc (Enclosure):

U. S. Nuclear Regulatory Commission
Region II
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NRC Resident Inspector Unit 2
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1260 Nuclear Plant Road
Spring City, Tennessee 37381

ENCLOSURE 1

Response to RAIs Regarding Unit 2 FSAR

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AFW RAIs (NRC verbal request of 01/12/2011)

AFW - 1 What is the basis for the value in the Tech Specs for CST level?

Response: Unit 2 Technical Specifications Limiting Condition for Operation (TS LCO) 3.7.6 states, "The CST level shall be ≥ 200,000 gal."

As described in the TS Bases for LCO 3.7.6, the CST level required is equivalent to a usable volume of ≥ 200,000 gallons, which is based on holding the unit in MODE 3 for 2 hours, followed by a cooldown to RHR entry conditions at 50°F/hour. This basis is established in the CST level calculation and exceeds the volume required by the accident analysis.

The quantity of feedwater required to bring the plant down to RHR cut-in conditions is 196,112 gallons, including a 3,000 gallon allowance to account for AFW Pump Heat described in Westinghouse Technical Bulletin TB-09-4, "Impact of Auxiliary Pump Heat on Westinghouse and Combustion Engineering Analyses / Methodologies."

There is 2,851 gallons of water unavailable due to vortexing / air injection, which results in a minimum required volume of CST water of 198,963 gallons. This is less than the TS requirement of $\geq$ 200,000 gallons.

See Figure on next page.

ENCLOSURE 1

Response to RAIs Regarding Unit 2 FSAR

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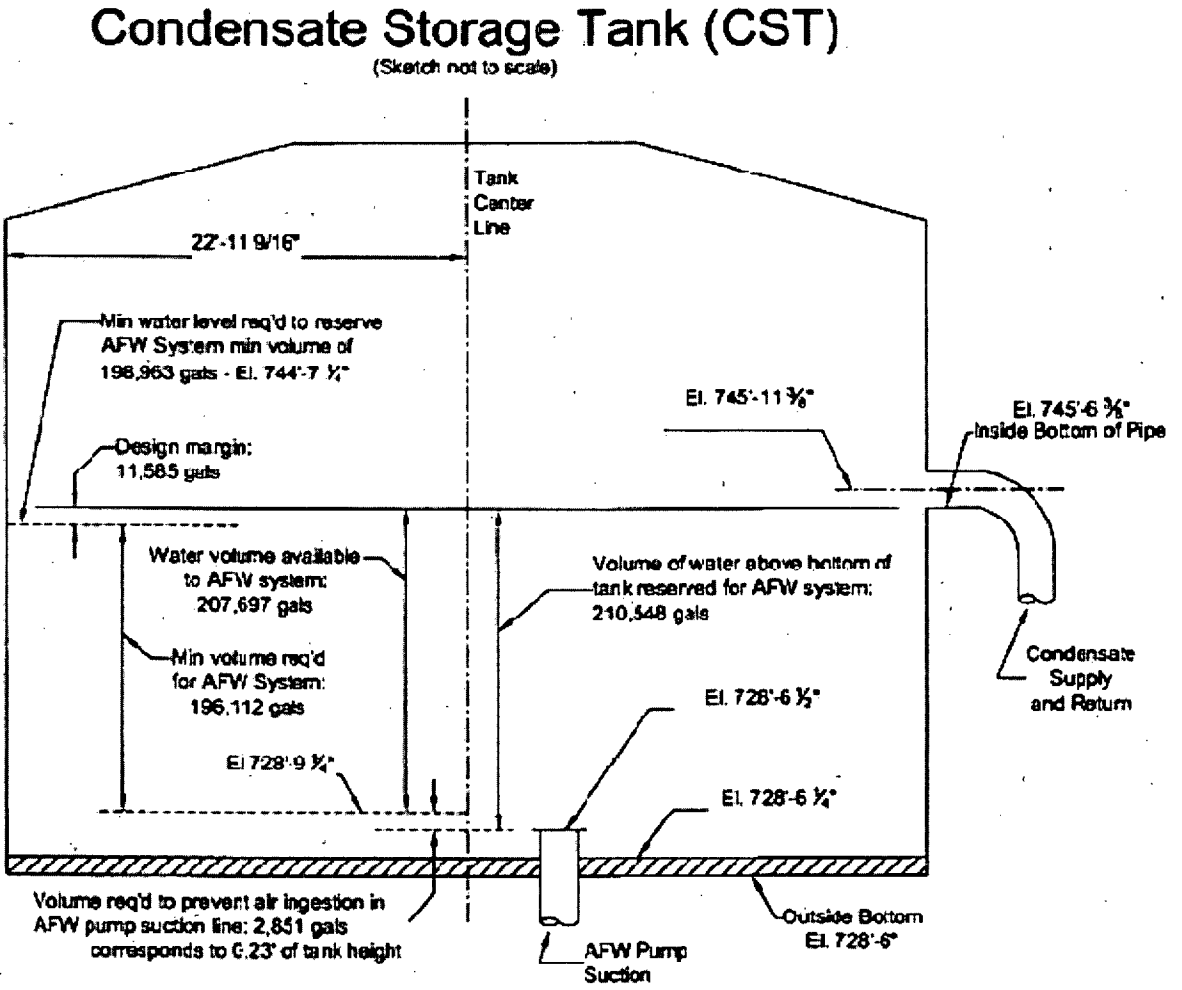

Figure

ENCLOSURE 1

Response to RAIs Regarding Unit 2 FSAR

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AFW - 2 The FSAR says the tanks are separate. How is this controlled procedurally since they can be cross tied?

Response: Unit 1 System Operating Instruction SOI-2&3.01, "Condensate and Feedwater System," Section 8.4, "Transfer Water between CSTs," provides procedural guidance for control of the valves which connect the two tanks. The procedure specifies the opening and closing of specific valves and after completion of the transfer activities, it requires independent verification that the valves are re-closed. The Unit 2 procedure will be similar.

Additionally, TS LCO 3.7.6, "Condensate Storage Tank," provides required actions and corresponding completion times if a CST tank level is below the 200,000 gallons minimum.

AFW - 3 Need to make a statement in the FSAR that we take no credit for the CSTs supplying water to the opposite unit.

Response: Amendment 103 to the Unit 2 FSAR will revise Section 10.4.9.2, "System Description," by adding the following sentence after the second sentence of the second paragraph:

> "The two CSTs are normally isolated from each other, with one CST dedicated to each unit. The AFW safety analyses take no credit for the ability to cross-tie the CSTs."

ENCLOSURE 2

Commitment Contained in Letter

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

Amendment 103 to the Unit 2 FSAR will revise Section 10.4.9.2, "System Description," by adding the following sentence after the second sentence of the second paragraph:

"The two CSTs are normally isolated from each other, with one CST dedicated to each unit. The AFW safety analyses take no credit for the ability to cross-tie the CSTs."