WBN2Public Resource

From: Poole, Justin
Sent: Thursday, March 17, 2011 9:12 AM
To: garent@tva.gov; Crouch, William D
Cc: fakoontz@tva.gov; Elton, Thomas L; WBN2HearingFile Resource; Lyon, Fred; Milano, Patrick
Subject: Revised Component Cooling System RAI 9.2-CSS-6
Attachments: Revised RAI 9 2-CSS-6.docx

On March 11, 2011, the NRC sent a request for additional information (RAI) regarding the component cooling system via email. In preparing the formal letter, the staff made revisions to the questions. See the attached document as to ensure that the RAI questions are understandable, the regulatory basis is clear, there is no proprietary information contained in the RAI, and to determine if the information was previously docketed.

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Hearing Identifier: Watts_Bar_2_Operating_LA_Public
Email Number: 335

Mail Envelope Properties (19D990B45D535548840D1118C451C74D7F50843DE6)

Subject: Revised Component Cooling System RAI 9.2-CSS-6
Sent Date: 3/17/2011 9:12:03 AM
Received Date: 3/17/2011 9:12:05 AM
From: Poole, Justin

Created By: Justin.Poole@nrc.gov

Recipients:
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Tracking Status: None
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Post Office: HQCLSTR02.nrc.gov

Files	**Size**	**Date & Time**
MESSAGE	593	3/17/2011 9:12:05 AM
Revised RAI 9 2-CSS-6.docx	21903	

Options
Priority: Standard
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:
Recipients Received:

REQUEST FOR ADDITIONAL INFORMATION

REGARDING FSAR SECTION 9.2.2, "COMPONENT COOLING SYSTEM (CCS)"

TENNESSEE VALLEY AUTHORITY

WATTS BAR NUCLEAR PLANT, UNIT 2

DOCKET NO. 50-391

By letter to the U.S. Nuclear Regulatory Commission (NRC) dated March 4, 2009 (ADAMS Accession No. ML090700378), the Tennessee Valley Authority (TVA) submitted an update to its application for a facility operating license for Watts Bar Nuclear Plant (WBN), Unit 2. The NRC staff's review of the information provided by TVA, as supplemented by amendments to the WBN Unit 2 Final Safety Analysis Report (FSAR), and TVA's responses to the staff's requests for additional information, is in progress. The NRC staff requests the following additional information to complete its review of the proposed application.

Request for Additional Information (RAI)

Background
In TVA letter dated December 10, 2010, the applicant provided the following:

a) Enclosure 3, "Summary Heat Load and Flow Tables for RAI 9.2-CCS-4". This table shows CCS heat loads and flows for:
   (1) LOOP (loss of offsite power) with loss of Train B
   (2) LOOP with loss of Train A (1A & 2A).
   It is apparent that loss of Train A is the worst case single failure with only CCS HX "C" available for Train B.

b) Response to RAI 9.2-CCS-1 that "The project has performed calculations which demonstrate that there is sufficient Essential Raw Water Cooling (ERCW) and Component Cooling System capability to bring the non-accident unit to Cold Shutdown within 72 hours from entry into hot standby mode."

Questions:

A) For (a) (1) above with LOCA (Unit 1) and Cold Shutdown (Unit 2), it appears that the CCS is capable of removing 56,220 kBTU/hr in CCS Train 1A and 93,230 kBTU/hr in CCS Train 2A.
   1) With this capability of CCS for a LOOP and loss of Train B, explain the capability of the shared CCS for Watts Bar 1 & 2 to comply with GDC 5. [in that systems important to safety shall not be shared among nuclear power units unless it can be shown that such sharing will not significantly impair their ability to perform their safety functions, including, in the event of an accident in one unit, an orderly shutdown and cool down of the remaining unit]
   2) What is the time to reach cold shutdown of the non accident unit? List major assumptions.

B) For (a) (2) above with LOCA (Unit 1) and Cold Shutdown (Unit 2), it appears that the CCS is capable of removing 55,162 kBTU/hr in CCS Train 1B and 73,567 kBTU/hr in CCS Train 2B.
   1) With this capability of CCS for a LOOP and loss of Train A, explain the capability of the shared CCS for Watts Bar 1 & 2 to comply with GDC 5 as described in (A) (1) above.
   2) What is the time to reach cold shutdown of the non accident unit? List major assumptions.

C) How do the calculations mentioned in b) above relate to Enclosure 3, “Summary Heat Load and Flow Tables for RAI 9.2-CCS-4”.

D) Revise the FSAR as necessary to describe the design basis for adherence to GDC 5.