

From: Wang, Alan
Sent: Monday, January 09, 2012 10:54 AM
To: 'BURMEISTER, BARRY M'
Cc: Lent, Susan; Burkhardt, Janet; Sallman, Ahsan
Subject: River Bend Station Main Steam Tunnel Temps TS Change Request for Additional Information (ME6843)

Joey and Barry,

By letter dated July 27, 2011, as supplemented on September 16, 2011, (Agencywide Documents Access and Management System (ADAMS) Accession No. ML11214A093 and ML11263A013, respectively), Entergy Operations, Inc (Entergy, the licensee) submitted Entergy Letter RBG-47157, "License Amendment Withdrawal and Request – Changes to Technical specification 3.3.6.1, "Primary Containment and Drywell Isolation Instrumentation," to revise the allowable value setpoints for the Main Steam Tunnel Temperature functions 1.e, 3.f, and 4.h.

The NRC staff has determined that the following additional information is needed to complete our review of this amendment. This request for additional information (RAI) was discussed with Mr. Barry Burmeister of your staff on January 6, 2011, and it was agreed that a response would be provided within 30 days from the issuance of this email. If circumstances result in the need to revise the requested response date, please contact me at (301) 415-1445 or via e-mail at Alan.Wang@nrc.gov. The NRC staff has determined that no security-related or proprietary information is contained therein.

The following RAIs are related to Attachment 1 to letter dated July 27, 2011:

1. Section 4.1, under heading "Steam Tunnel Unit Cooler Simulation" states:

"The proposed calculation explicitly simulates the unit cooler using the AIRCOOLER component in GOTHIC. The AIRCOOLER model in GOTHIC calculates both sensible and latent heat removal. Inputs for the AIRCOOLER were selected to represent design performance of the unit cooler."

Please describe "AIRCOOLER component in GOTHIC" and "AIRCOOLER model in GOTHIC". The GOTHIC documents (a) GOTHIC CONTAINMENT ANALYSIS PACKAGE TECHNICAL MANUAL Version 7.2b(QA) dated March 2009, and (b) GOTHIC CONTAINMENT ANALYSIS PACKAGE USER MANUAL Version 7.2b(QA) dated March 2009, do not contain description of the component and model.

2. Describe all the conservative inputs and assumptions used in the current methodology using THREED computer program that have been removed from the proposed methodology which uses the GOTHIC computer program.

2. Section 3.0, third paragraph states:

".....the analysis that establishes the analytical limit for the main steam tunnel temperature corresponding to a 25 gpm leak has been refined to remove unnecessary conservatism and raise the analytical temperature limit."

Please provide justification for the proposed main steam tunnel temperature analytical limit of 194.77 °F indicating that it still remains conservative after removing the unnecessary conservatism.

4. The proposed analytical temperature limit of 194.77 °F is calculated in the north side of the main steam tunnel while assuming the steam leak rate equivalent to 25 gpm in the north side. For the same steam leaks in the south side of the tunnel what would be the analytical temperature in the north side of the tunnel? Please verify that the proposed analytical limit of 194.77 °F is the bounding lowest analytical temperature limit for leakage of 25 gpm anywhere in the steam tunnel.

5. Editorial comment: In the GOTHIC files LK1-RH000.GTH, LK1-RH100.GTH, LK2-RH000.GTH, and LK2-GTH100.GTH boundary conditions table, boundary condition 1F, the flow (25 x the forcing function 1T (lb/hr) does not match the required steam leak rate equivalent to 25 gpm. Shouldn't the y-axis label of forcing function 1T have units (lb/sec) instead of (lb/hr)?