

PMSummerColpEM Resource

From: Sebrosky, Joseph
Sent: Friday, June 11, 2010 11:35 AM
To: PMSummerColpEM Resource
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Subject: Summary of June 9, 2010 phone call with Summer to discuss wet bulb temperature exemption request

MEMORANDUM TO: File (Summer Units 2 and 3)

From: Joe Sebrosky, Project Manager
AP1000Projects Branch (NWE1)
Division of New reactor Licensing
Office of New Reactors

Subject: Summary of June 9, 2010 phone call with Summer to discuss wet bulb temperature exemption request

Purpose: To discuss results of a recent audit performed on calculations associated with Summer's wet bulb temperature exemption request

The NRC attendees were:

- John McKirgan, Gene Hsii, Don Habib, Shie-Jeng Peng, Jim Tatum, Sujata Goetz, Tanya Simms, Tom Galletta, and Joe Sebrosky

The applicant participants included:

- SCE&G: Amy M. Monroe, Julie Giles
- Westinghouse: John DeBlasio, and Mark Stella

The staff performed an audit of calculation packages associated with draft RAI responses associated with Summer's wet bulb temperature exemption request. The summary of the audit is found below and is available in ADAMS at ML101550012. The purpose of the phone call was to discuss the 13 issues identified below in the audit summary.

Each of the issues identified in the audit summary were discussed in detail. In general SCE&G agreed to revise the draft RAI response to address the issues and provide the revised response to the staff for its review. The staff stated the docket for SCE&G needed to be clear relative to the information needed to support the exemption request. The staff stated that a Westinghouse technical report that was provided to support a change in wet bulb temperatures for the AP1000 design certification amendment could be helpful in providing a format for resolving many of the issues below. This report was referenced in request for additional information 9.2.2-1. The Westinghouse report is APP-GW-GLE-036, "Impact of a revision to the current Wet Bulb Temperature identified in Table 5.0-1 (Tier 1) and Table 2- 1 (Sheet 1 of 3) of the DCD (Revision 16)," and it was transmitted by a Westinghouse letter dated June 27, 2008 (ADAMS accession number ML081830146).

Additional highlights from the phone call include the following:

- For item 3, SCE&G indicated that the calculation package the staff was reviewing supported the Turkey Point exemption request and that in addition to a maximum safety wet bulb (noncoincident) temperature exemption request the Turkey Point application also included a departure request associated with the maximum normal wet bulb (noncoincident) temperature. SCE&G indicated that the change in the chiller size was related to the Turkey Point departure for maximum normal wet bulb temperature and that no such change in chiller size was needed at Summer. The staff stated that neither the RAI response or the calculation package stated that the change in chiller size was not needed at Summer and that this needed to be made clear in the next revision to the RAI response.

6. The staff expected to see more of a discussion in the 9.2.2-1 draft RAI response regarding the affect the increased wet bulb temperature would have on RTNSS availability controls including the bases for these controls.
7. Neither the draft 9.2.2-1 RAI response nor the calculation packages address all aspects of the question. There is a statement in the draft RAI response that areas not affected by the change in VC Summer maximum safety wet bulb temperature include: HVAC design, including the main control room passive heat sink performance, chilled water system design, steam and power conversion system design, and circulating water system and turbine building closed cooling water system design. There is no discussion in the draft RAI response as to why these systems are not affected.
8. One of the calculation packages associated with draft RAI 9.2.2-1 response notes that the component cooling water return temperature is 97.4F which is below the AP1000 DCD value of 100F. However, this insight is not included in the draft RAI response.
9. The RAI response contains no discussion on wet bulb temperature change related to service water. When reviewing the calculations, staff had to request to review the cooling tower performance evaluation calculation, TPG SWS-M3C-001, which supports calculation TPG-CCS-M3C-001.
10. There is no discussion in the draft RAI response addressing the staff's question requesting a discussion of the normal RHR's system's ability to maintain the incontainment-refueling water storage tank less than boiling during PRHR actuation and not greater than 120F during normal operation.
11. None of the calculation packages reviewed by the staff supported the statement in the draft RAI 9.2.2-1 response that, with the increased heat loads resulting from the higher maximum safety wet bulb temperature, the low capacity chilled water system maintains the Nuclear Island Non-radioactive System's (VBS) capability to maintain the main control room, and 1E electrical rooms below 75 °F with a single train of VBS and the Chilled Water System (VWS) in service.
12. There is no evaluation on the impact of the higher web bulb temperature (including associated humidity) on the control room habitability (e.g. heat stress) and operability of equipment in the control room during normal and accident conditions (such as a loss of HVAC for certain time following an accident).
13. There is a lack of information in the RAI response as to what changes will be made to the application. The staff expects much of the discussion regarding the wet bulb temperature exemption to be presented in various sections of the FSAR or some other licensing basis document. In addition, the staff was expecting to see much of the information that is contained in the calculation packages docketed as part of the RAI response. For example, Westinghouse provided a topical report on the docket to support the amendment request to increase the wet-bulb temperature exemption. The staff does not understand why a similar comprehensive calculation package is not placed on the docket to support Summer's wet bulb temperature exemption request.

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Subject: Summary of June 9, 2010 phone call with Summer to discuss wet bulb temperature exemption request
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