AP1000DCDFileNPEm Resource

From: Adams II, Samuel L. [adamssl@westinghouse.com]
Sent: Tuesday, May 06, 2008 3:45 PM
To: Perry Buckberg
Cc: Rhonda Carmon
Subject: FW: RAIs SRP 5.2.2, 5.4.1. 5.4.7 and 9.1.1
Attachments: RAIs SRP Sections 5-SRSB.doc; RAIs SRP Section 9.1.1 -SRSB.doc

HI Perry,

I acknowledge receipt of the attached RAIs on SRP 5.2.2, 5.4.1, 5.4.7, and 9.1.1. Please note that there were two 9.1.1 RAIs numbered 01. I have renumbered the second as 04.

I will let you know as soon as possible if a clarification call is necessary.

Thanks.

Sam

From: Perry Buckberg [mailto:Perry.Buckberg@nrc.gov]
Sent: Tuesday, May 06, 2008 11:06 AM
To: Adams II, Samuel L.
Cc: Eileen McKenna; Rhonda Carmon; David Jaffe
Subject: RAIs SRP 5.2.2, 5.4.1. 5.4.7 and 9.1.1

Sam,

Attached are RAIs for SRP section 5.2.2, 5.4.1. 5.4.7 and 9.1.1. Please acknowledge receipt of the attached and let me know ASAP if a phone conference will be needed.

Thanks,

Perry Buckberg
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Office of New Reactors
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Subject: FW: RAIs SRP 5.2.2, 5.4.1. 5.4.7 and 9.1.1
Sent Date: 5/6/2008 3:44:38 PM
Received Date: 5/6/2008 3:44:42 PM
From: Adams II, Samuel L.

Created By: adamssl@westinghouse.com

Recipients:
"Rhonda Carmon" <Rhonda.Carmon@nrc.gov>
Tracking Status: None
"Perry Buckberg" <Perry.Buckberg@nrc.gov>
Tracking Status: None

Post Office: SWEC9910.w-intra.net

Files	**Size**	**Date & Time**
MESSAGE	916	5/6/2008 3:44:42 PM
RAIs SRP Sections 5-SRSB.doc	27712	
RAIs SRP Section 9.1.1 -SRSB.doc	25664	

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

RAI SRP 5.2.2-SRSB-01

For low-temperature overpressure protection (LTOP), the normal residual heat removal system (RNS) relief valve set point was derived based on the lower of 110 percent of the RNS design pressure or the reactor coolant system (RCS) pressure/temperature (P/T) limit, which was based on the generic P/T heat-up and cool-down curves specified in DCD Figures 5.3-2 and 5.3-3. In AP1000 DCA Revision 16, Figures 5.3-2 and 5.3-2 are revised based on the maximum limits for copper and nickel material composition in Table 5.3-1. Therefore, the RNS relief valve set point must be reevaluated since the P/T limit curves used in the original LTOP evaluation may not be bounded by the revised DCD Figures 5.3-2 and 5.3-3.

Please provide an evaluation to confirm the validity of the existing pressure set point, or a re-analysis to determine a new pressure set point of the RNS relief valve based on the revision of the generic heat-up and cool down pressure-temperature limit curves shown in the revised DCD Figures 5.3-2 and 5.3-3.

RAI SRP 5.4.1-SRSB-01

Westinghouse's response to supplemental RAI RAI-TR34-SRSB-02 stated that detailed design information for the external heat exchanger of the sealless reactor coolant pump will be provided to the NRC in the external heat exchanger generic design report which was to be completed/delivered March 31, 2008. When will this report be delivered.

RAI SRP 5.4.1-SRSB-02

In DCD Table 5.4-1, a change of the maximum continuous CCW inlet temperature from 110^{o}F to 95^{o}F, and Note 1 is added to Table 5.4-1 that an elevated CCW supply temperature of up to 110^{o}F may occur for up to 6-hour period.

Please provide the basis for the addition of Note 1.

RAI SRP 5.4.7-SRSB-01

The normal residual heat removal (RNS) system limits the in-containment refueling water storage tank (IRWST) water temperature to less than boiling temperature during extended operation of the passive residual heat removal system and to not greater than 120°F during normal operation. The system performs this function based on a zero exceedance wet bulb temperature of 85.5ºF increased from the previous zero exceedance value of 81ºF. The applicant revised these design parameters to better accommodate a broader range of conditions to encompass the potential sites for AP1000 plants.

The NRC staff reviewed DCD Subsection 5.4.7.1.2.3. Revision 16 ambient wet bulb temperature increase in conjunction with APP-GW-GLN-108 (TR 108), "AP1000 Site Interface Temperature Limits." The NRC staff request for additional information the evaluation calculation and results that demonstrate there is sufficient margin in the systems design for the RNS, CCS and SWS to maintain the same criteria and design basis with the increased ambient wet bulb temperature.

R

RAI SRP 9.1.1-SRSB-01

DCD Subsection 9.1.1.2 does not provide the value of the capacity of the new fuel handling crane.

What is the actual capacity of the new fuel handling crane? This value should be listed.

RAI SRP 9.1.1-SRSB-02

TR106 and TR44 indicate that a structural analysis for the new fuel handling crane uplift analysis was performed based on an uplift load of 2000 pounds. DCD Subsection 9.1.1.2.1.B, Rev. 16, indicates that an analysis was performed based on 2027 pounds.

Please supply support for the 2027 pounds indicated in the DCD.

RAI SRP 9.1.1-SRSB-03

Regarding DCD subsection 9.1.1.2.1.C, Fuel Assembly Drop Accident Analysis, TR106 indicates that TR44 performed the structural analysis in a fuel assembly drop accident analysis based on 2027 pounds. TR44 does not appear to specify the weight used in the analysis. Please confirm that the drop test was performed based on the total combined weight of the fuel assembly, control rod assembly, and handling tool (2,027 pounds).

RAI SRP 9.1.1-SRSB-01

The existing DCD section 9.1.2.3 stated that the purchase specification for the spent fuel storage racks will require the vendor to perform a criticality analysis of the spent fuel storage rack. Revision 16 removes the wording “the vendor to perform.”

Does the removal of the wording “the vendor to perform” create a new COL action item to perform the criticality analysis of the spent fuel storage racks, or is it a reflection that Westinghouse has already performed the criticality analysis for this design?