

ArevaEPRDCPEm Resource

From: Snyder, Amy
Sent: Thursday, February 28, 2013 6:53 AM
To: usepr@areva.com
Cc: Lu, Shanlai; Gleaves, Bill; Donoghue, Joseph; Segala, John
Subject: U.S. EPR Design Certification Application FINAL RAI No. 573, FSAR Ch. 15- New Phase 4 RAI
Attachments: FINAL RAI_SRSB_573_7023 .doc

Attached please find the subject request for additional information (RAI). An advanced RAI was provided to you on February 5, 2013 and discussed with your staff on February 15, 2013. On February 15, 2013, you informed us that the advanced RAI does not contain proprietary information and that the advanced RAI is clear and no further clarification is needed. As result, no changes were made to the advanced RAI.

The schedule we have established for review of your application assumes technically correct and complete responses within 30 days of receipt of RAIs,. For any RAIs that cannot be answered **by April 1, 2013**, it is expected that a date for receipt of this information will be provided to the staff within the 30-day period so that the staff can assess how this information will impact the published schedule.

Thank You,

Amy

Amy Snyder, U.S. EPR Design Certification Lead Project Manager

Licensing Branch 1 (LB1)

Division of New Reactor Licensing

Office of New Reactors

U.S. Nuclear Regulatory Commission

 Office: (301) 415-6822

 Fax: (301) 415-6406

 Mail Stop: T6-C20M

 E-mail: Amy.Snyder@nrc.gov

Hearing Identifier: AREVA_EPR_DC_RAIs
Email Number: 4181

Mail Envelope Properties (Amy.Snyder@nrc.gov20130228065300)

Subject: U.S. EPR Design Certification Application FINAL RAI No. 573, FSAR Ch. 15-
New Phase 4 RAI
Sent Date: 2/28/2013 6:53:25 AM
Received Date: 2/28/2013 6:53:00 AM
From: Snyder, Amy

Created By: Amy.Snyder@nrc.gov

Recipients:

"Lu, Shanlai" <Shanlai.Lu@nrc.gov>
Tracking Status: None
"Gleaves, Bill" <Bill.Gleaves@nrc.gov>
Tracking Status: None
"Donoghue, Joseph" <Joseph.Donoghue@nrc.gov>
Tracking Status: None
"Segala, John" <John.Segala@nrc.gov>
Tracking Status: None
"usepr@areva.com" <usepr@areva.com>
Tracking Status: None

Post Office:

Files	Size	Date & Time
MESSAGE	1222	2/28/2013 6:53:00 AM
FINAL_RAI_SRSB_573_7023 .doc		33278

Options

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

Request for Additional Information 573

Issue Date: 2/28/2013

Application Title: U. S. EPR Standard Design Certification - Docket Number 52-020

Operating Company: AREVA NP Inc.

Docket No. 52-020

Review Section: 15.06.05 - Loss of Coolant Accidents Resulting From Spectrum of Postulated Piping Breaks Within the Reactor Coolant Pressure Boundary

Application Section:

QUESTIONS

15.06.05-116

In Section F.3.6 of ANP-10293P Rev.4, the available hydraulic driving head has been calculated for different break locations and ECCS injection modes. However, when K/A2 is developed, it appears that the total driving head is equal to the maximum allowable debris bed pressure drop at least for the HLB/CLI and CLB/CLI cases. Other pressure drops, (e.g, form loss in the downcomer and lower plenum, two-phase pressure drop in the core if there is boiling, DP across clean spacer grids and bundles) are not part of the overall total hydraulic driving head. If this is the case, the DP available to overcome the flow resistance of the debris bed could be non-conservative. Provide additional information about other hydraulic pressure drop components and evaluate their impact on the available debris bed pressure difference.

15.06.05-117

On Page F-64 of ANP-10293P Rev.4 , AREVA assumed that the mass of the Aluminum Oxyhydroxide formed during the 30 day period of long term cooling is negligible in the calculation. However, the calculation results of Appendix D indicate that there is significant amount of Aluminum Oxyhydroxide formed in addition to other chemical species. Demonstrate that the Appendix D results have been properly used to estimate the scale thickness and the peak cladding temperature.