

ArevaEPRDCPEm Resource

From: Tesfaye, Getachew
Sent: Friday, January 08, 2010 12:05 PM
To: 'usepr@areva.com'
Cc: Forsaty, Fred; Lu, Shanlai; Donoghue, Joseph; Honcharik, John; Terao, David; Carneal, Jason; Colaccino, Joseph; ArevaEPRDCPEm Resource
Subject: U.S. EPR Design Certification Application RAI No. 339 (4063, 4056), FSAR Ch. 4 OPEN ITEM
Attachments: RAI_339_SRSB_4063_CIB1_4056.doc

Attached please find the subject requests for additional information (RAI). A draft of the RAI was provided to you on December 6, 2009, and on January 7, 2009, you informed us that the RAI is clear and no further clarification is needed. As a result, no change is made to the draft RAI. The questions in this RAI are OPEN ITEMS in the safety evaluation report for Chapter 4 for Phases 2 and 3 reviews. As such, the schedule we have established for your application assumes technically correct and complete responses prior to the start of Phase 4 review. For any RAI that cannot be answered prior to the start of Phase 4 review, it is expected that a date for receipt of this information will be provided so that the staff can assess how this information will impact the published schedule.

Thanks,
Getachew Tesfaye
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Hearing Identifier: AREVA_EPR_DC_RAIs
Email Number: 1077

Mail Envelope Properties (0A64B42AAA8FD4418CE1EB5240A6FED10DF734111B)

Subject: U.S. EPR Design Certification Application RAI No. 339 (4063, 4056), FSAR Ch. 4
OPEN ITEM
Sent Date: 1/8/2010 12:04:45 PM
Received Date: 1/8/2010 12:04:46 PM
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Post Office: HQCLSTR02.nrc.gov

Files	Size	Date & Time
MESSAGE	890	1/8/2010 12:04:46 PM
RAI_339_SRSB_4063_CIB1_4056.doc		31226

Options

Priority: Standard
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Expiration Date:
Recipients Received:

Request for Additional Information No. 339 (4063, 4056), Revision 1

01/08/2010

U. S. EPR Standard Design Certification
AREVA NP Inc.
Docket No. 52-020
SRP Section: 04.02 - Fuel System Design
SRP Section: 04.05.02 - Reactor Internal and Core Support Structure Materials

Application Section: FSAR Chapter 4

QUESTIONS for Reactor System, Nuclear Performance and Code Review (SRSB)
QUESTIONS for Component Integrity, Performance, and Testing Branch 1 (AP1000/EPR Projects)
(CIB1)

04.02-17

OPEN ITEM

Throughout the U.S. EPR Final Safety Analysis Report (FSAR) Tier 2, Section 4.2, AREVA NP refers to licensing topical report ANP-10285P, "U.S. EPR Fuel Assembly Mechanical Design Topical Report." This document is currently under review by the NRC staff. This RAI is created to track an open item associated with this review. It will be closed upon completion of the review by the NRC staff. AREVA is requested to acknowledge receipt of this open item.

04.05.02-9

OPEN ITEM:

AREVA's response to RAI No. 50, Question 04.05.02-1 stated that Stellite 6 is used for hardfacing the Radial Key Inserts, Upper Core Plate Guide Pins and Inserts. Your response also lists the applicable ASME specifications for the Stellite 6 (ASME SFA5.21 Classification ERCCoCr-A, ASME SFA 5.21 Classification ERCoCr-A and ASME SFA5.13 Classification ECoCr-A) that could be used for weld deposition of the Stellite 6 onto the applicable components base material. The staff requests that the applicable ASME code specifications for the hardfacing material, Stellite 6, be included in the U.S. EPR FSAR, Tier 2, Table 4.5.2.

04.05.02-10

OPEN ITEM:

In response to RAI No. 50, Question 04.05.02-4, your response stated that the reentrant corners of the heavy reflector are estimated to experience a peak 60-EFPY neutron fluence of 8.56×10^{22} n/cm² (E>1.0 MeV) which exceeds the threshold for IASCC and

void swelling. Therefore, AREVA plans on participating in the industry EPRI/MRP programs to manage IASCC and void swelling to screen the heavy reflector for IASCC and void swelling. To verify that IASCC and void swelling does not impact the safety function of the heavy reflector or create loose parts, an augmented ASME Code, Section XI inspection program will be developed. Therefore, the staff requests that AREVA include in the U.S. EPR DCD, a license condition or a COL Action Item to address this issue.

04.05.02-11

OPEN ITEM:

AREVA's response to RAI No. 50, Question 04.05.02-2b did not address the staff's request for a discussion on the prevention of notches on the vertical keys and keyways that can act as stress concentrations and crack initiation sites, which could lead to the loss of function of the heavy reflector. Therefore, the staff requests a discussion on this topic.