

ArevaEPRDCPEm Resource

From: WILLIFORD Dennis (AREVA) [Dennis.Williford@areva.com]
Sent: Friday, August 02, 2013 7:57 AM
To: Snyder, Amy
Cc: Miernicki, Michael; ANDERSON Katherine (EXTERNAL AREVA); DELANO Karen (AREVA); LEIGHLITER John (AREVA); LENTZ Tony (EXTERNAL AREVA); ROMINE Judy (AREVA); RYAN Tom (AREVA); HOTTLE Nathan (AREVA); HONMA George (EXTERNAL AREVA)
Subject: Response to REISSUED REVISED FINAL RAI - U.S. EPR Design Certification Application FINAL RAI 590, Section 3.9.2- NEW PHASE 4 RAI
Attachments: RAI 590 Response US EPR DC.pdf

Amy,

Attached please find AREVA NP Inc.'s response to the subject request for additional information (RAI). The attached file, "RAI 590 Response US EPR DC.pdf," provides a schedule since a technically correct and complete response to the two questions cannot be provided at this time.

The following table indicates the respective pages in the response document, "RAI 590 Response US EPR DC.pdf," that contain AREVA NP's response to the subject questions.

Question #	Start Page	End Page
RAI 590 — 03.09.02-171	2	2
RAI 590 — 03.09.02-172	3	3

The schedule for a technically correct and complete response to these questions is provided below.

Question #	Advanced Response Date	NRC Comment Request Date	Final Response Date
RAI 590 — 03.09.02-171	August 7, 2013	September 3, 2013	September 11, 2013
RAI 590 — 03.09.02-172	August 7, 2013	September 3, 2013	September 11, 2013

Sincerely,

Dennis Williford, P.E.
U.S. EPR Design Certification Licensing Manager
AREVA NP Inc.

7207 IBM Drive, Mail Code CLT 2B
Charlotte, NC 28262
Phone: 704-805-2223
Email: Dennis.Williford@areva.com

From: Snyder, Amy [<mailto:Amy.Snyder@nrc.gov>]
Sent: Monday, July 29, 2013 11:26 AM
To: ZZ-DL-A-USEPR-DL
Cc: Miernicki, Michael; Segala, John; Clark, Theresa; Wong, Yuken

Subject: REISSUED REVISED FINAL RAI - U.S. EPR Design Certification Application FINAL RAI 590, Section 3.9.2- NEW PHASE 4 RAI

REISSUED due to the following:

Regarding RAI 590, Question 03.09.02-172- The applicant informed the staff on July 2 that it had no retaining bars. As a result the RAI was modified and issued as Final on July 3, 2013. Recently, the applicant said it incorrectly informed the staff that its design had no retaining bars, but in actuality the applicant's design does have retaining bars. As a result, RAI 590, Question 03.09.02-172 was again revised and is being reissued as a REVISED Final RAI with the same due date of August 5, 2013. Please see attached final Modified RAI.

If you have any questions, please contact me.

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

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Attached please find the subject request for additional information (RAI). A draft RAI was provided to you on June 26, 2013. On July 2, 2013, this draft RAI was discussed with AREVA. As a result, the draft RAI was modified. At that time, you also informed us that with the modification, the RAI is clear and does not contain proprietary information and that no further clarification is needed.

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 **within 30 days or August 5 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)
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Hearing Identifier: AREVA_EPR_DC_RAIs
Email Number: 4645

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Subject: Response to REISSUED REVISED FINAL RAI - U.S. EPR Design Certification
Application FINAL RAI 590, Section 3.9.2- NEW PHASE 4 RAI
Sent Date: 8/2/2013 7:57:04 AM
Received Date: 8/2/2013 7:57:12 AM
From: WILLIFORD Dennis (AREVA)

Created By: Dennis.Williford@areva.com

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Post Office: FUSLYNCMX03.fdom.ad.corp

Files	Size	Date & Time
MESSAGE	3794	8/2/2013 7:57:12 AM
RAI 590 Response US EPR DC.pdf		64517

Options

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

Response to

Request for Additional Information No.590

7/3/2013

U.S. EPR Standard Design Certification

AREVA NP Inc.

Docket No. 52-020

**SRP Section: 03.09.02 - Dynamic Testing and Analysis of Systems Structures and
Components**

Application Section: 3.9.2

____ Branch

Question 03.09.02-171:

In recent operating experience at San Onofre Nuclear Generating Station (SONGS), Units 2 and 3, the replacement steam generator (RSG) tubes degraded during the first cycle of operation. While the root cause for the tube-to-tube wear that occurred in the SONGS RSGs has not been finally determined, this particular degradation is suggestive of large in-plane motion of the tubes. To address the adequacy of the U.S. EPR design in regard to in-plane tube motion, AREVA is requested to:

- a) Identify which of the tube modes examined during the fluid-elastic instability analysis were in-plane modes, out-of-plane modes, and/or a combination of the two. If no in-plane modes were examined, provide the justification for why such fluid-elastic instability would not be expected to occur within the operating range of the U.S. EPR steam generator.

- b) Identify the design criteria or approach for ensuring that the anti-vibration bars will provide sufficient contact forces to prevent in-plane instability in the tubes, and describe how either these forces or proper anti-vibration bar performance will be confirmed in the as-built steam generators. Also, identify any additional test information from full scale and model scale steam generators or operating experience that provide confidence that the anti-vibration bars will perform as expected in the U.S. EPR steam generators.

Response to Question 03.09.02-171:

A response to this question will be provided by September 11, 2013.

Question 03.09.02-172:

The applicant is requested to provide the design criteria for the retaining bars that are used to limit flow-induced vibration of the retaining bars, as well as detailed sketches showing the tube bundle and supports.

Response to Question 03.09.02-172:

A response to this question will be provided by September 11, 2013.