

ArevaEPRDCPEm Resource

From: Snyder, Amy
Sent: Monday, July 29, 2013 11:26 AM
To: 'usepr@areva.com'
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
Attachments: FINAL REVISED_RAI_590_EMB_7146.docx





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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The applicant is requested to provide detailed sketches showing the tube bundle and supports.

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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 E-mail: Amy.Snyder@nrc.gov

From: Snyder, Amy

Sent: Wednesday, June 26, 2013 1:39 PM

To: 'usepr@areva.com'

Cc: Miernicki, Michael; Segala, John; Jaffe, David; Clark, Theresa; Wong, Yuken; Shuaibi, Mohammed; Akstulewicz, Frank; Delligatti, Mark

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

Attached please find Draft RAI No. 590 regarding your application for standard design certification of the U.S. EPR. If you have any questions or need clarification regarding this Draft RAI, please let me know as soon as possible, I will have our technical Staff available to discuss them with you.

Please also review the draft RAI to ensure that we have not inadvertently included proprietary information. If there is any proprietary information, please let me know within the next ten days. If I do not hear from you within the next ten days, I will assume there are none and will make the Draft RAI publicly available.

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: 4679

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Subject: REISSUED REVISED FINAL RAI - U.S. EPR Design Certification Application
FINAL RAI 590, Section 3.9.2- NEW PHASE 4 RAI
Sent Date: 7/29/2013 11:26:16 AM
Received Date: 7/29/2013 11:26:00 AM
From: Snyder, Amy

Created By: Amy.Snyder@nrc.gov

Recipients:
"Miernicki, Michael" <Michael.Miernicki@nrc.gov>
Tracking Status: None
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MESSAGE	3672	7/29/2013 11:26:00 AM
FINAL REVISED_RAI_590_EMB_7146.docx		30430

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

REISSUED- Request for Additional Information 590

Issue Date: 07/29/2013

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

Operating Company: AREVA NP Inc.

Docket No. 52-020

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

Application Section: 3.9.2

QUESTIONS

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.

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.