

ArevaEPRDCPEm Resource

From: BRYAN Martin (EXT) [Martin.Bryan.ext@areva.com]
Sent: Wednesday, April 07, 2010 3:42 PM
To: Tesfaye, Getachew
Cc: DELANO Karen V (AREVA NP INC); BENNETT Kathy A (OFR) (AREVA NP INC); ROMINE Judy (AREVA NP INC); LENTZ Tony F (EXT)
Subject: Response to U.S. EPR Design Certification Application RAI No. 292, FSAR Ch. 14, Supplement 2
Attachments: RAI 292 Supplement 2 Response US EPR DC.pdf

Getachew,

AREVA NP Inc. (AREVA NP) provided responses to 1 of the 4 questions of RAI No. 292 on October 19, 2009. AREVA NP submitted Supplement 1 to the response on January 18, 2010 to address 2 of the remaining 3 questions. The attached file, "RAI 292 Supplement 2 Response US EPR DC" provides technically correct and complete response the remaining question, as committed.

The following table indicates the respective pages in the response document, "RAI 292 Supplement 2 Response US EPR DC," that contain AREVA NP's response to the subject question.

Question #	Start Page	End Page
RAI 292 — 14.03-12	2	2

This concludes the formal AREVA NP response to RAI 292, and there are no questions from this RAI for which AREVA NP has not provided responses.

Sincerely,

Martin (Marty) C. Bryan
Licensing Advisory Engineer
AREVA NP Inc.
Tel: (434) 832-3016
Martin.Bryan.ext@areva.com

From: DUNCAN Leslie E (AREVA NP INC)
Sent: Monday, January 18, 2010 3:05 PM
To: 'Tesfaye, Getachew'
Cc: BENNETT Kathy A (OFR) (AREVA NP INC); DELANO Karen V (AREVA NP INC)
Subject: Response to U.S. EPR Design Certification Application RAI No. 292, FSAR Ch. 14, Supplement 1

Getachew,

AREVA NP Inc. (AREVA NP) provided responses to 1 of the 4 questions of RAI No. 292 on October 19, 2009. The attached file, "RAI 292 Supplement 1 Response US EPR DC.pdf," provides technically correct and complete responses to 2 of the remaining 3 questions. AREVA NP is unable to provide a response to RAI 292 Question 14.03-12 at this time because the U.S. EPR FSAR Tier 2 information may be revised due to other RAIs and upcoming testing related to GSI 191.

Appended to this file are affected pages of the U.S. EPR Final Safety Analysis Report in redline-strikeout format which support the response to RAI 292 Questions 14.03.07-33 and 14.03.07-34.

The following table indicates the respective pages in the response document, "RAI 292 Supplement 1 Response US EPR DC.pdf," that contain AREVA NP's response to the subject questions.

Question #	Start Page	End Page
RAI 292 — 14.03-12	2	2
RAI 292 — 14.03.07-33	3	9
RAI 292 — 14.03.07-34	10	10

The schedule for a technically correct and complete response to the remaining question has been changed and is provided below:

Question #	Response Date
RAI 292 — 14.03-12	April 9, 2010

Sincerely,

Les Duncan
 Licensing Engineer
AREVA NP Inc.
 An AREVA and Siemens Company
 Tel: (434) 832-2849
Leslie.Duncan@areva.com

From: Pederson Ronda M (AREVA NP INC)
Sent: Monday, October 19, 2009 7:00 PM
To: Tesfaye, Getachew
Cc: BENNETT Kathy A (OFR) (AREVA NP INC); DELANO Karen V (AREVA NP INC); DUNCAN Leslie E (AREVA NP INC)
Subject: Response to U.S. EPR Design Certification Application RAI No. 292, FSAR Ch. 14

Getachew,

Attached please find AREVA NP Inc.'s (AREVA NP's) response to the subject request for additional information (RAI). The attached file, "RAI 292 Response US EPR DC.pdf," provides technically correct and complete responses to 1 of the 4 questions.

The following table indicates the respective page(s) in the response document, "RAI 292 Response US EPR DC.pdf," that contain(s) AREVA NP's response to the subject questions.

Question #	Start Page	End Page
RAI 292 — 14.03-12	2	2
RAI 292 — 14.03-13	3	3
RAI 292 — 14.03.07-33	4	6
RAI 292 — 14.03.07-34	7	7

A complete answer is not provided for the 3 of the 4 questions. The schedule for technically correct and complete responses to these questions is provided below.

Question #	Response Date
RAI 292 — 14.03-12	January 18, 2010
RAI 292 — 14.03.07-33	January 18, 2010

Sincerely,

Ronda Pederson

ronda.pederson@areva.com

Licensing Manager, U.S. EPR Design Certification

AREVA NP Inc.

An AREVA and Siemens company

3315 Old Forest Road

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Phone: 434-832-3694

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From: Tesfaye, Getachew [mailto:Getachew.Tesfaye@nrc.gov]

Sent: Friday, September 18, 2009 3:05 PM

To: ZZ-DL-A-USEPR-DL

Cc: Ashley, Clinton; Jackson, Christopher; Snodderly, Michael; Dehmel, Jean-Claude; Frye, Timothy; Jennings, Jason; Miernicki, Michael; Colaccino, Joseph; ArevaEPRDCPEm Resource

Subject: U.S. EPR Design Certification Application RAI No. 292 (3724, 3718),FSAR Ch. 14

Attached please find the subject requests for additional information (RAI). A draft of the RAI was provided to you on September 11, 2009, and on September 17, 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, except a typographical error correction identified by you. 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, 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.

Thanks,

Getachew Tesfaye

Sr. Project Manager

NRO/DNRL/NARP

(301) 415-3361

Hearing Identifier: AREVA_EPR_DC_RAIs
Email Number: 1300

Mail Envelope Properties (BC417D9255991046A37DD56CF597DB7105C7C970)

Subject: Response to U.S. EPR Design Certification Application RAI No. 292, FSAR Ch. 14, Supplement 2
Sent Date: 4/7/2010 3:41:43 PM
Received Date: 4/7/2010 3:41:48 PM
From: BRYAN Martin (EXT)

Created By: Martin.Bryan.ext@areva.com

Recipients:

"DELANO Karen V (AREVA NP INC)" <Karen.Delano@areva.com>

Tracking Status: None

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Tracking Status: None

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Tracking Status: None

Post Office: AUSLYNCMX02.adom.ad.corp

Files	Size	Date & Time
MESSAGE	5582	4/7/2010 3:41:48 PM
RAI 292 Supplement 2 Response US EPR DC.pdf		60761

Options

Priority: Standard

Return Notification: No

Reply Requested: No

Sensitivity: Normal

Expiration Date:

Recipients Received:

Response to

Request for Additional Information No. 292, Supplement 2

9/18/2009

U. S. EPR Standard Design Certification

AREVA NP Inc.

Docket No. 52-020

SRP Section: 14.03 - Inspections, Tests, Analyses, and Acceptance Criteria

**SRP Section: 14.03.07 - Plant Systems - Inspections, Tests, Analyses, and
Acceptance Criteria**

Application Section: 2.1.1, Table 2.1.1-8; 2.2.2, Table 2.2.2-3

**QUESTIONS for Containment and Ventilation Branch 1 (AP1000/EPR Projects)
(SPCV)**

QUESTIONS for Health Physics Branch (CHPB)

Question 14.03-12:

Follow-up to Question 14.03-7

RAI Question 14.03-7 notes that the debris source term is a key design feature and identifies that there is no ITAAC to inspect containment materials to ensure as-built is consistent with as analyzed/tested. In response, AREVA made the following change to ITAAC for the reactor building (See Table 2.1.1-8 Rev 1):

"The reactor pressure vessel, reactor coolant pumps, pressurizer, steam generators, and interconnecting RCS piping are insulated with reflective metallic insulation."

US EPR is not an all RMI plant and there are other insulating materials that will make up the debris source term, and are more likely to result in consequential head loss, namely particulate and fibrous insulation. Please explain why all source term materials such as fiber and particulate insulation, as well as coatings, are not included in the proposed ITAAC?

Response to Question 14.03-12:

The U.S. EPR piping and components in containment will be insulated extensively with reflective metallic insulation (RMI). The existing ITAAC requires this use of RMI in containment.

As noted in Appendix A, page 14.3-16 to SRP 14.3:

"The applicant should put the top-level design features and performance characteristics that were the most significant to safety in the Tier 1 design descriptions. The level of detail in Tier 1 is governed by a graded approach to the SSCs of the design, based on the safety significance of the functions they perform."

Appendix A, page 14.3-17 states:

"The level of detail specified in the ITAAC should be commensurate with the safety significance of the functions and bases for that SSC."

Recent emergency core cooling system (ECCS) strainer performance testing was performed using the scaled U.S. EPR debris source term materials. The results of testing revealed a negligible ECCS strainer head loss using a design basis debris load. The strainer head loss was approximately 10 percent of the design strainer head loss. Based on the margin in the testing results compared to the design basis debris source term, deviations from the design debris source term materials would still allow satisfactory ECCS operation. Therefore, AREVA NP considers the addition of these other debris source materials to the ITAAC to not be safety significant. In this context, the commitments in U.S. EPR FSAR Tier 2 have to be satisfied and NRC inspection of these non-ITAAC features is covered by IMC 2504 (Non-ITAAC Inspections).

FSAR Impact:

The U.S. EPR FSAR will not be changed as a result of this question.