

ArevaEPRDCPEm Resource

From: WILLIFORD Dennis (AREVA) [Dennis.Williford@areva.com]
Sent: Thursday, June 30, 2011 3:12 PM
To: Tesfaye, Getachew
Cc: BENNETT Kathy (AREVA); DELANO Karen (AREVA); ROMINE Judy (AREVA); RYAN Tom (AREVA); NOXON David (AREVA); RYAN Tom (AREVA)
Subject: Response to U.S. EPR Design Certification Application RAI No. 420, FSAR Ch. 3, OPEN ITEM, Supplement 7
Attachments: RAI 420 Supplement 7 Response US EPR DC.pdf

Getachew,

AREVA NP Inc. (AREVA NP) provided a schedule for a technically correct and complete response to RAI No. 420 on August 25, 2010. RAI 420 Supplement 1 sent on November 22, 2010, Supplement 2 sent on January 7, 2011, Supplement 3 sent on February 9, 2011 and Supplement 4 sent on March 14, 2011 provided a revised schedule. RAI 420 Supplement 5 sent on April 13, 2011 provided technically correct and complete final responses to 6 of the 11 questions. RAI 420 Supplement 6 sent on June 10, 2011, provided a revised schedule for the remaining 5 questions. The attached file, "RAI 420 Supplement 7 Response US EPR DC.pdf" provides technically correct and complete FINAL responses to 3 of the remaining 5 questions.

The following table indicates the respective pages in the response document, "RAI 420 Supplement 7 Response US EPR DC.pdf," that contain AREVA NP's response to the subject questions.

Question #	Start Page	End Page
RAI 420 — 03.02.02-8	2	2
RAI 420 — 03.02.02-10	3	3
RAI 420 — 03.02.02-11	4	4

The schedule for providing a complete response to the remaining 2 questions has been revised as indicated below.

Question #	Response Date
RAI 420 — 03.02.01-12	August 19, 2011
RAI 420 — 03.02.02-7	August 19, 2011

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: WILLIFORD Dennis (RS/NB)
Sent: Friday, June 10, 2011 8:14 AM
To: 'Tesfaye, Getachew'
Cc: BENNETT Kathy (RS/NB); DELANO Karen (RS/NB); ROMINE Judy (RS/NB); RYAN Tom (RS/NB); NOXON David (RS/NB); CORNELL Veronica (External RS/NB)
Subject: Response to U.S. EPR Design Certification Application RAI No. 420, FSAR Ch. 3, OPEN ITEM, Supplement 6

Getachew,

AREVA NP Inc. (AREVA NP) provided a schedule for a technically correct and complete response to RAI No. 420 on August 25, 2010. Supplement 1 sent on November 22, 2010, Supplement 2 sent on January 7, 2011, Supplement 3 sent on February 9, 2011 and Supplement 4 sent on March 14, 2011 provided a revised schedule. RAI 420 Supplement 5 sent on April 13, 2011 provided technically correct and complete final responses to 6 of the 11 questions.

The schedule for technically correct and complete responses to the remaining questions has been changed as provided below:

Question #	Response Date
RAI 420 — 03.02.01-12	June 30, 2011
RAI 420 — 03.02.02-7	June 30, 2011
RAI 420 — 03.02.02-8	June 30, 2011
RAI 420 — 03.02.02-10	June 30, 2011
RAI 420 — 03.02.02-11	June 30, 2011

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: WELLS Russell (RS/NB)
Sent: Wednesday, April 13, 2011 3:45 PM
To: 'Tesfaye, Getachew'
Cc: NOXON David (RS/NB); GARDNER Darrell (RS/NB); BENNETT Kathy (RS/NB); DELANO Karen (RS/NB); ROMINE Judy (RS/NB); RYAN Tom (RS/NB)
Subject: Response to U.S. EPR Design Certification Application RAI No. 420, FSAR Ch. 3, OPEN ITEM, Supplement 5

Getachew,

AREVA NP Inc. (AREVA NP) provided a schedule for a technically correct and complete response to RAI No. 420 on August 25, 2010. RAI 420 Supplement 1 sent on November 22, 2010, Supplement 2 sent on January 7, 2011, Supplement 3 sent on February 9, 2011 and Supplement 4 sent on March 14, 2011 provided a revised schedule. The attached file, "RAI 420 Supplement 5 Response US EPR DC" provides a technically correct and complete final response to 6 of the 11 questions, as committed.

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 420 Question 03.02.02-9.

The following table indicates the respective pages in the response document, "RAI 420 Supplement 5 Response US EPR DC.pdf," that contain AREVA NP's response to the subject questions.

Question #	Start Page	End Page
RAI 420 — 03.02.01-13	2	3
RAI 420 — 03.02.01-14	4	5

RAI 420 — 03.02.01-15	6	7
RAI 420 — 03.02.01-16	8	8
RAI 420 — 03.02.01-17	9	9
RAI 420 — 03.02.02-9	10	10

To allow additional time to interact with the NRC, the schedule for technically correct and complete responses to the remaining 5 questions has been changed and is provided below.

Question #	Response Date
RAI 420 — 03.02.01-12	June 10, 2011
RAI 420 — 03.02.02-7	June 10, 2011
RAI 420 — 03.02.02-8	June 10, 2011
RAI 420 — 03.02.02-10	June 10, 2011
RAI 420 — 03.02.02-11	June 10, 2011

Sincerely,

Russ Wells

U.S. EPR Design Certification Licensing Manager

AREVA NP, Inc.

3315 Old Forest Road, P.O. Box 10935

Mail Stop OF-57

Lynchburg, VA 24506-0935

Phone: 434-832-3884 (work)

434-942-6375 (cell)

Fax: 434-382-3884

Russell.Wells@Areva.com

From: WELLS Russell (RS/NB)

Sent: Monday, March 14, 2011 3:18 PM

To: 'Tefaye, Getachew'

Cc: DELANO Karen (RS/NB); ROMINE Judy (RS/NB); BENNETT Kathy (RS/NB); NOXON David (RS/NB)

Subject: Response to U.S. EPR Design Certification Application RAI No. 420, FSAR Ch. 3, OPEN ITEM, Supplement 4

Getachew,

AREVA NP Inc. (AREVA NP) provided a schedule for a technically correct and complete response to RAI No. 420 on August 25, 2010. RAI 420 Supplement 1 sent on November 22, 2010, Supplement 2 to sent on January 7, 2011, and Supplement 3 sent on February 9, 2011 provided a revised schedule

Additional time is required to interact with the NRC staff.

The schedule for a technically correct and complete response to this question has been changed and is provided below.

Question #	Response Date
RAI 420 — 03.02.01-12	April 20, 2011
RAI 420 — 03.02.01-13	April 20, 2011
RAI 420 — 03.02.01-14	April 20, 2011
RAI 420 — 03.02.01-15	April 20, 2011
RAI 420 — 03.02.01-16	April 20, 2011

RAI 420 — 03.02.01-17	April 20, 2011
RAI 420 — 03.02.02-7	April 20, 2011
RAI 420 — 03.02.02-8	April 20, 2011
RAI 420 — 03.02.02-9	April 20, 2011
RAI 420 — 03.02.02-10	April 20, 2011
RAI 420 — 03.02.02-11	April 20, 2011

Sincerely,

Russ Wells

U.S. EPR Design Certification Licensing Manager

AREVA NP, Inc.

3315 Old Forest Road, P.O. Box 10935

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Russell.Wells@Areva.com

From: BRYAN Martin (External RS/NB)

Sent: Wednesday, February 09, 2011 1:23 PM

To: 'Tefaye, Getachew'

Cc: DELANO Karen (RS/NB); ROMINE Judy (RS/NB); BENNETT Kathy (RS/NB); NOXON David (RS/NB)

Subject: Response to U.S. EPR Design Certification Application RAI No. 420, FSAR Ch. 3, OPEN ITEM, Supplement 3

Getachew,

AREVA NP Inc. (AREVA NP) provided a schedule for a technically correct and complete response to RAI No. 420 on August 25, 2010. RAI 420 Supplement 1 sent on November 22, 2010 and Supplement 2 sent on January 7, 2011 provided a revised schedule

Additional time is required to interact with the NRC staff.

The schedule for a technically correct and complete response to this question has been changed and is provided below.

Question #	Response Date
RAI 420 — 03.02.01-12	March 16, 2011
RAI 420 — 03.02.01-13	March 16, 2011
RAI 420 — 03.02.01-14	March 16, 2011
RAI 420 — 03.02.01-15	March 16, 2011
RAI 420 — 03.02.01-16	March 16, 2011
RAI 420 — 03.02.01-17	March 16, 2011
RAI 420 — 03.02.02-7	March 16, 2011
RAI 420 — 03.02.02-8	March 16, 2011
RAI 420 — 03.02.02-9	March 16, 2011
RAI 420 — 03.02.02-10	March 16, 2011
RAI 420 — 03.02.02-11	March 16, 2011

Sincerely,

Martin (Marty) C. Bryan
U.S. EPR Design Certification Licensing Manager
AREVA NP Inc.
Tel: (434) 832-3016
702 561-3528 cell
Martin.Bryan.ext@areva.com

From: BRYAN Martin (External RS/NB)
Sent: Friday, January 07, 2011 3:59 PM
To: Tesfaye, Getachew
Cc: DELANO Karen (RS/NB); ROMINE Judy (RS/NB); BENNETT Kathy (RS/NB); NOXON David (RS/NB)
Subject: Response to U.S. EPR Design Certification Application RAI No. 420, FSAR Ch. 3, OPEN ITEM, Supplement 2

Getachew,

AREVA NP Inc. (AREVA NP) provided a schedule for a technically correct and complete response to RAI No. 420 on August 25, 2010. Supplement 1 to RAI 420 provided a revised schedule on November 22, 2010

Additional time is required to interact with the NRC staff.

The schedule for a technically correct and complete response to this question has been changed and is provided below.

Question #	Response Date
RAI 420 — 03.02.01-12	February 14, 2011
RAI 420 — 03.02.01-13	February 14, 2011
RAI 420 — 03.02.01-14	February 14, 2011
RAI 420 — 03.02.01-15	February 14, 2011
RAI 420 — 03.02.01-16	February 14, 2011
RAI 420 — 03.02.01-17	February 14, 2011
RAI 420 — 03.02.02-7	February 14, 2011
RAI 420 — 03.02.02-8	February 14, 2011
RAI 420 — 03.02.02-9	February 14, 2011
RAI 420 — 03.02.02-10	February 14, 2011
RAI 420 — 03.02.02-11	February 14, 2011

Sincerely,

Martin (Marty) C. Bryan
U.S. EPR Design Certification Licensing Manager
AREVA NP Inc.
Tel: (434) 832-3016
702 561-3528 cell
Martin.Bryan.ext@areva.com

From: BRYAN Martin (External RS/NB)
Sent: Monday, November 22, 2010 5:00 PM
To: 'Tesfaye, Getachew'
Cc: DELANO Karen (RS/NB); ROMINE Judy (RS/NB); BENNETT Kathy (RS/NB); NOXON David (RS/NB)
Subject: Response to U.S. EPR Design Certification Application RAI No. 420, FSAR Ch. 3, OPEN ITEM, Supplement 1

Getachew,

AREVA NP Inc. (AREVA NP) provided a schedule for a technically correct and complete response to RAI No. 420 on August 25, 2010.

Additional time is required to interact with the NRC staff.

The schedule for a technically correct and complete response to this question has been changed and is provided below.

Question #	Response Date
RAI 420 — 03.02.01-12	January 10, 2011
RAI 420 — 03.02.01-13	January 10, 2011
RAI 420 — 03.02.01-14	January 10, 2011
RAI 420 — 03.02.01-15	January 10, 2011
RAI 420 — 03.02.01-16	January 10, 2011
RAI 420 — 03.02.01-17	January 10, 2011
RAI 420 — 03.02.02-7	January 10, 2011
RAI 420 — 03.02.02-8	January 10, 2011
RAI 420 — 03.02.02-9	January 10, 2011
RAI 420 — 03.02.02-10	January 10, 2011
RAI 420 — 03.02.02-11	January 10, 2011

Sincerely,

Martin (Marty) C. Bryan
U.S. EPR Design Certification Licensing Manager
AREVA NP Inc.
Tel: (434) 832-3016
702 561-3528 cell
Martin.Bryan.ext@areva.com

From: BRYAN Martin (External RS/NB)
Sent: Wednesday, August 25, 2010 8:20 PM
To: 'Tesfaye, Getachew'
Cc: DELANO Karen (RS/NB); ROMINE Judy (RS/NB); BENNETT Kathy (RS/NB); NOXON David (RS/NB)
Subject: Response to U.S. EPR Design Certification Application RAI No. 420, FSAR Ch. 3, OPEN ITEM

Getachew,

Attached please find AREVA NP Inc.'s response to the subject request for additional information (RAI). The attached file, "RAI 420 Response US EPR DC.pdf," provides the schedule for technically correct and complete responses to these questions.

The following table indicates the respective pages in the response document, "RAI 420 Response US EPR DC.pdf," that contain AREVA NP's response to the subject questions.

Question #	Start Page	End Page
RAI 420 — 03.02.01-12	2	2
RAI 420 — 03.02.01-13	3	3
RAI 420 — 03.02.01-14	4	4
RAI 420 — 03.02.01-15	5	5
RAI 420 — 03.02.01-16	6	6
RAI 420 — 03.02.01-17	7	7
RAI 420 — 03.02.02-7	8	8
RAI 420 — 03.02.02-8	9	9
RAI 420 — 03.02.02-9	10	10
RAI 420 — 03.02.02-10	11	11
RAI 420 — 03.02.02-11	12	12

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

Question #	Response Date
RAI 420 — 03.02.01-12	November 23, 2010
RAI 420 — 03.02.01-13	November 23, 2010
RAI 420 — 03.02.01-14	November 23, 2010
RAI 420 — 03.02.01-15	November 23, 2010
RAI 420 — 03.02.01-16	November 23, 2010
RAI 420 — 03.02.01-17	November 23, 2010
RAI 420 — 03.02.02-7	November 23, 2010
RAI 420 — 03.02.02-8	November 23, 2010
RAI 420 — 03.02.02-9	November 23, 2010
RAI 420 — 03.02.02-10	November 23, 2010
RAI 420 — 03.02.02-11	November 23, 2010

Sincerely,

Martin (Marty) C. Bryan
 U.S. EPR Design Certification Licensing Manager
 AREVA NP Inc.
 Tel: (434) 832-3016
 702 561-3528 cell
Martin.Bryan.ext@areva.com

From: Tesfaye, Getachew [mailto:Getachew.Tesfaye@nrc.gov]
Sent: Monday, July 26, 2010 7:20 AM
To: ZZ-DL-A-USEPR-DL
Cc: McNally, Richard; Dixon-Herrity, Jennifer; Patel, Jay; Miernicki, Michael; Colaccino, Joseph
Subject: U.S. EPR Design Certification Application RAI No. 420 (4687,4661), FSAR Ch. 3, OPEN ITEM

Attached please find the subject requests for additional information (RAI). A draft of the RAI was provided to you on June 15, 2010, and on July 19, 2010, 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 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: 3174

Mail Envelope Properties (2FBE1051AEB2E748A0F98DF9EEE5A5D47AF483)

Subject: Response to U.S. EPR Design Certification Application RAI No. 420, FSAR Ch. 3, OPEN ITEM, Supplement 7
Sent Date: 6/30/2011 3:12:18 PM
Received Date: 6/30/2011 3:12:24 PM
From: WILLIFORD Dennis (AREVA)

Created By: Dennis.Williford@areva.com

Recipients:

"BENNETT Kathy (AREVA)" <Kathy.Bennett@areva.com>
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"ROMINE Judy (AREVA)" <Judy.Romine@areva.com>
Tracking Status: None
"RYAN Tom (AREVA)" <Tom.Ryan@areva.com>
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"NOXON David (AREVA)" <David.Noxon@areva.com>
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Files	Size	Date & Time
MESSAGE	14815	6/30/2011 3:12:24 PM
RAI 420 Supplement 7 Response US EPR DC.pdf		77248

Options

Priority: Standard
Return Notification: No
Reply Requested: No
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Response to

Request for Additional Information No. 420(4687, 4661), Revision 0, Supplement 7

7/26/2010

U. S. EPR Standard Design Certification

AREVA NP Inc.

Docket No. 52-020

SRP Section: 03.02.01 - Seismic Classification

SRP Section: 03.02.02 - System Quality Group Classification

Application Section: 3.2.1

**QUESTIONS for Engineering Mechanics Branch 2 (ESBWR/ABWR Projects)
(EMB2)**

Question 03.02.02-8:**OPEN ITEM**

FSAR Subsection 3.2 describes supplemented grade as those SSCs deemed to be important by NRC staff. Important to safety SSCs are not deemed important by NRC staff, but are identified as important to safety by the applicant's evaluation process such as the PRA, expert panel or other RTNSS process. FSAR Table 3.2.2-1 identifies those SSCs that are defined as NS-AQ. In RAI 03.02.02-3, the applicant was requested to revise the Subsection 3.2 wording to clarify the applicant's process to determine SSCs that are important to safety and, for those SSCs classified as NS-AQ, identify the supplemental design and quality requirements to ensure the reliability assumed in the PRA. If this information is not currently available and will be determined later, the applicant was requested to advise accordingly.

The RAI response stated that the FSAR will not be revised and refers to RAI questions 03.02.01-1 and 03.02.01-4 and FSAR Tier 2 Section 17.4 for a description of the reliability assurance program. The responses to the referenced RAIs and the description of the reliability assurance program in Chapter 17.4 do not currently identify the list of risk-significant SSCs or define the supplemental design and quality requirements for each nonsafety-related SSC classified in Table 3.2.2-1, such as NS-AQ, that may be important to safety. However, the response to RAI 17.04-16 identified that the FSAR will be revised to include a list of risk-significant SSCs. Identify or reference the list of nonsafety-related SSCs requiring special treatment in the FSAR, such as NS-AQ or other list of risk-significant SSCs and confirm that all nonsafety-related SSCs are or will be included in Table 3.2.2-1 with an appropriate classification based on its risk significance. Also identify the special treatment applied or, if not yet developed, revise FSAR subsection 3.2.2 to reference the D-RAP or other process to ensure the integrity and reliability assumed in the PRA and identify when the special treatment requirements are to be identified.

Response to Question 03.02.02-8:

As stated in the Response to Question 03.02.01-12 of this RAI, risk significance is not part of the equipment classification process. Since risk significance is not part of the SSC classification criteria, U.S. EPR FSAR Tier 2, Table 3.3.2-1, which specifically addresses SSC classification will not be revised. U.S.EPR FSAR Tier 2, Table 17.4-2 provides the list of SSC included within the RAP program at a structure and system level. Special treatment for risk-significant (RAP-related) SSC will be added to U.S. EPR FSAR Tier 2, Section 17.4 as described in the Response to Question 03.02.01-12.

The description of supplemented grade in U.S.EPR FSAR Tier 2, Section 3.2 will be revised as described in the Response to Question 03.02.01-12.

FSAR Impact:

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

Question 03.02.02-10:**OPEN ITEM**

10 CFR Part 52.47 identifies that the Commission will require prior to design certification, that information normally contained in certain procurement specifications and construction and installation specifications be completed and available for audit. FSAR Tier 1 Chapter 2 includes system based design descriptions. This chapter identifies that specifications exist for components, piping and supports shown as ASME Section III. It is understood that this information is based on the information included in FSAR Tier 2 and design specifications are required for ASME Section III systems and components, but it is not clear if specifications exist for non-ASME systems and components. In RAI 03.02.02-6, the applicant was requested to clarify if the design information on quality group classification for all important to safety systems and components within the scope of the FSAR is included in specifications and if this information is now available for audit. The RAI response referenced the response to RAI 03.02.01-5. The response to RAI 03.02.01-5 identified that the design information on the seismic classification of SSCs within the scope of the FSAR, including structures, is included in design documents which are available for NRC inspection. The NRC Staff plans to audit this information to determine if the design is essentially complete in scope regarding quality group classifications of important to safety SSCs. Staff is concerned that P&IDs included in Tier 1 may not be consistent with P&IDs in Tier 2 concerning classification level of detail. The staff will schedule an audit based on availability of the documentation. The applicant is requested to correct any discrepancies between Tier 1 and Tier 2 and identify when the design information will be available.

Response to Question 03.02.02-10:

The Response to RAI 399, Question 14.03.03-47 provides revised U.S. EPR FSAR Tier 1 figures to indicate the ASME Code Section III Class 1, 2, and 3 boundaries. Other than differences in the level of detail shown with respect to ASME code class boundaries, no discrepancies have been identified between Tier 1 and Tier 2 figures.

The availability of design information on the seismic classification of SSCs within the scope of the FSAR is discussed in the response to Question 03.02.01-15.

FSAR Impact:

U.S. EPR FSAR, Tier 1, figures will be revised as described in the response and are provided in the response to RAI 399, Question 14.03.03-47.

Question 03.02.02-11:**OPEN ITEM**

FSAR Tier 1 subsection 1.0 identifies that Tier 1 information is derived from Tier 2 and SRP 14.3 states that safety findings are based on Tier 2, not Tier 1, information because Tier 1 information is derived from Tier 2. SRP 14.3 further identifies that Tier 1 is to be clear and consistent with Tier 2 information. In regard to the FSAR Tier 1 ASME Code Class information included in the Chapter 2 system based design descriptions and ITAAC, update the figures included in Tier 1 to be consistent with Tier 2 figures in terms of level of detail for ASME classifications. FSAR Tier 1 subsection 1.0 identifies that Tier 1 information is derived from Tier 2 and SRP 14.3 states that safety findings are based on Tier 2, not Tier 1, information because Tier 1 information is derived from Tier 2. SRP 14.3 further identifies that Tier 1 is to be clear and consistent with Tier 2 information. In regard to the FSAR Tier 1 ASME Code Class information included in the Chapter 2 system based design descriptions and ITAAC, update the figures included in Tier 1 to be consistent with Tier 2 figures in terms of level of detail for ASME classifications.

Response to Question 03.02.02-11:

The Response to RAI 399, Question 14.03.03-47 provides revised U.S. EPR FSAR Tier 1 figures to indicate the ASME Code Section III Class 1, 2, and 3 boundaries. Other than differences in the level of detail shown with respect to ASME code class boundaries, no discrepancies have been identified between Tier 1 and Tier 2 figures.

FSAR Impact:

U.S. EPR FSAR, Tier 1, figures will be revised as described in the response and are provided in the response to RAI 399, Question 14.03.03-47.