

ArevaEPRDCPEm Resource

From: WILLIFORD Dennis (AREVA) [Dennis.Williford@areva.com]
Sent: Thursday, August 16, 2012 4:56 PM
To: Tesfaye, Getachew
Cc: BENNETT Kathy (AREVA); DELANO Karen (AREVA); ROMINE Judy (AREVA); RYAN Tom (AREVA)
Subject: Response to U.S. EPR Design Certification Application RAI No. 442, FSAR Ch. 7, Supplement 18
Attachments: RAI 442 Supplement 18 Response US EPR DC.pdf

Getachew,

On November 19, 2010, AREVA NP Inc. (AREVA NP) provided a schedule for a technically correct and complete response to the questions in RAI 442. Supplement 1 response was sent on January 7, 2011 to provide a revised schedule for four of the questions. Supplement 2 response was sent on February 9, 2011 to provide a revised schedule. Supplement 3 response was sent on February 18, 2011 to provide technically correct and complete responses to four questions. Supplement 4 response was sent on February 25, 2011 to provide technically correct and complete response to one question. Supplement 5 response was sent on March 2, 2011 to provide technically correct and complete responses to three of the 12 remaining questions. Supplement 6 response was sent on March 15, 2011 to provide technically correct and complete responses to two of the 9 remaining questions. Supplement 7 response was sent on April 5, 2011 to provide a revised schedule. Supplement 8 response was sent on April 25, 2011 to provide a revised schedule. Supplement 9 response was sent on May 20, 2011 to provide a technically correct and complete response to one of the 7 remaining questions. Supplement 10 response was sent on May 25, 2011 to provide a technically correct and complete response to one of the 6 remaining questions. Supplement 11 response was sent on May 25, 2011 to provide a technically correct and complete response to one of the 5 remaining questions. Supplement 12 response was sent on May 25, 2011 to provide a technically correct and complete response to one of the 4 remaining questions. Supplement 13 response was sent on June 3, 2011 to provide a technically correct and complete response to one question. Supplement 14 response was sent on June 9, 2011 to provide a revised technically correct and complete response to Question 07.03-32. Supplement 15 response was sent on June 22, 2011 to provide a revised technically correct and complete response to Questions 07.01-26 and Question 07.01-31. Supplement 16 response was sent on July 13, 2011 to provide a revised response to parts of Question 07.01-30. Supplement 17 response was sent on September 29, 2011 to provide a revised response to parts of Question 07.01-30.

The attached file, "RAI 442 Supplement 18 Response US EPR DC.pdf" provides a revised technically correct and complete response for conforming changes to Chapter 3 for Question 07.01-30. This response and associated mark-up in addition to RAI 442 Supplement 16, processed on July 13, 2011, and RAI 442, Supplement 17, processed on September 29, 2011 provides a complete and final response to this Question 07.01-30. 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 442 Question 07.01-30.

The following table indicates the respective pages in the attachment that contain AREVA NP's response to the subject question.

Question #	Start Page	End Page
RAI 442 — 7.1-30	2	2

This concludes the formal AREVA NP response to RAI 442, and there are no questions from this RAI for which AREVA NP has not provided responses.

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: Thursday, September 29, 2011 11:16 AM
To: Getachew.Tesfaye@nrc.gov
Cc: 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. 442, FSAR Ch. 7, Supplement 17

Getachew,

On November 19, 2010, AREVA NP Inc. (AREVA NP) provided a schedule for a technically correct and complete response to the questions in RAI 442. Supplement 1 response was sent on January 7, 2011 to provide a revised schedule for four of the questions. Supplement 2 response was sent on February 9, 2011 to provide a revised schedule. Supplement 3 response was sent on February 18, 2011 to provide technically correct and complete responses to four questions. Supplement 4 response was sent on February 25, 2011 to provide technically correct and complete response to one question. Supplement 5 response was sent on March 2, 2011 to provide technically correct and complete responses to three of the 12 remaining questions. Supplement 6 response was sent on March 15, 2011 to provide technically correct and complete responses to two of the 9 remaining questions. Supplement 7 response was sent on April 5, 2011 to provide a revised schedule. Supplement 8 response was sent on April 25, 2011 to provide a revised schedule. Supplement 9 response was sent on May 20, 2011 to provide a technically correct and complete response to one of the 7 remaining questions. Supplement 10 response was sent on May 25, 2011 to provide a technically correct and complete response to one of the 6 remaining questions. Supplement 11 response was sent on May 25, 2011 to provide a technically correct and complete response to one of the 5 remaining questions. Supplement 12 response was sent on May 25, 2011 to provide a technically correct and complete response to one of the 4 remaining questions. Supplement 13 response was sent on June 3, 2011 to provide a technically correct and complete response to one question. Supplement 14 response was sent on June 9, 2011 to provide a revised technically correct and complete response to Question 07.03-32. Supplement 15 response was sent on June 22, 2011 to provide a revised technically correct and complete response to Questions 07.01-26 and Question 07.01-31. Supplement 16 response was sent on July 13, 2011 to provide a revised technically correct response to parts of Question 07.01-30.

Based on additional NRC feedback, Chapter 16 updates have been included in this response to Question 07.01-30 (originally submitted with the Supplement 13 response on June 3, 2011).

The attached file, "RAI 442 Supplement 17 Response US EPR DC.pdf" provides a revised technically correct and complete response for conforming changes to Chapter 16 for Question 07.01-30. 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 442 Question 07.01-30.

The following table indicates the respective pages in the attachment that contain AREVA NP's response to the subject question.

Question #	Start Page	End Page
RAI 442 — 7.1-30	2	2

This concludes the formal AREVA NP response to RAI 442, and there are no questions from this RAI for which AREVA NP has not provided responses.

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: Wednesday, July 13, 2011 1:48 PM

To: Tesfaye, Getachew

Cc: BENNETT Kathy (RS/NB); DELANO Karen (RS/NB); ROMINE Judy (RS/NB); RYAN Tom (RS/NB);

Michael.Canova@nrc.gov

Subject: Response to U.S. EPR Design Certification Application RAI No. 442, FSAR Ch. 7, Supplement 16

Getachew,

On November 19, 2010, AREVA NP Inc. (AREVA NP) provided a schedule for a technically correct and complete response to the questions in RAI 442. Supplement 1 response was sent on January 7, 2011 to provide a revised schedule for four of the questions. Supplement 2 response was sent on February 9, 2011 to provide a revised schedule. Supplement 3 response was sent on February 18, 2011 to provide technically correct and complete responses to four questions. Supplement 4 response was sent on February 25, 2011 to provide technically correct and complete response to one question. Supplement 5 response was sent on March 2, 2011 to provide technically correct and complete responses to three of the 12 remaining questions. Supplement 6 response was sent on March 15, 2011 to provide technically correct and complete responses to two of the 9 remaining questions. Supplement 7 response was sent on April 5, 2011 to provide a revised schedule. Supplement 8 response was sent on April 25, 2011 to provide a revised schedule. Supplement 9 response was sent on May 20, 2011 to provide a technically correct and complete response to one of the 7 remaining questions. Supplement 10 response was sent on May 25, 2011 to provide a technically correct and complete response to one of the 6 remaining questions. Supplement 11 response was sent on May 25, 2011 to provide a technically correct and complete response to one of the 5 remaining questions. Supplement 12 response was sent on May 25, 2011 to provide a technically correct and complete response to one of the 4 remaining questions. Supplement 13 response was sent on June 3, 2011 to provide a technically correct and complete response to one question. Supplement 14 response was sent on June 9, 2011 to provide a revised technically correct and complete response to Question 07.03-32. Supplement 15 response was sent on June 22, 2011 to provide a revised technically correct and complete response to Questions 07.01-26 and Question 07.01-31.

Based on additional NRC feedback, some minor changes have been made to the response to Question 07.01-30 (originally submitted with the Supplement 13 response on June 9, 2011).

The attached file, "RAI 442 Supplement 16 Response US EPR DC.pdf" provides a revised technically correct and complete response to the Question 07.01-30. 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 442 Question 07.01-30.

The following table indicates the respective pages in the attachment that contain AREVA NP's response to the subject question.

Question #	Start Page	End Page
RAI 442 — 7.1-30	2	3

This concludes the formal AREVA NP response to RAI 442, and there are no questions from this RAI for which AREVA NP has not provided responses.

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: Wednesday, June 22, 2011 3:57 PM
To: Tesfaye, Getachew
Cc: 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. 442, FSAR Ch. 7, Supplement 15

Getachew,

On November 19, 2010, AREVA NP Inc. (AREVA NP) provided a schedule for a technically correct and complete response to the questions in RAI 442. Supplement 1 response was sent on January 7, 2011 to provide a revised schedule for four of the questions. Supplement 2 response was sent on February 9, 2011 to provide a revised schedule. Supplement 3 response was sent on February 18, 2011 to provide technically correct and complete responses to four questions. Supplement 4 response was sent on February 25, 2011 to provide technically correct and complete response to one question. Supplement 5 response was sent on March 2, 2011 to provide technically correct and complete responses to three of the 12 remaining questions. Supplement 6 response was sent on March 15, 2011 to provide technically correct and complete responses to two of the 9 remaining questions. Supplement 7 response was sent on April 5, 2011 to provide a revised schedule. Supplement 8 response was sent on April 25, 2011 to provide a revised schedule. Supplement 9 response was sent on May 20, 2011 to provide a technically correct and complete response to one of the 7 remaining questions. Supplement 10 response was sent on May 25, 2011 to provide a technically correct and complete response to one of the 6 remaining questions. Supplement 11 response was sent on May 25, 2011 to provide a technically correct and complete response to one of the 5 remaining questions. Supplement 12 response was sent on May 25, 2011 to provide a technically correct and complete response to one of the 4 remaining questions. Supplement 13 response was sent on June 3, 2011 to provide a technically correct and complete response to one question. Supplement 14 response was sent on June 9, 2011 to provide a revised technically correct and complete response to Question 07.03-32.

The attached file, "RAI 442 Supplement 15 Response US EPR DC.pdf" provides a technically correct and complete response to the remaining two questions. 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 442 Question 07.01-26 and Question 07.01-31.

The following table indicates the respective pages in the attachment that contain AREVA NP's response to the subject question.

Question #	Start Page	End Page
RAI 442 — 7.1-26	2	4
RAI 442 — 7.1-31	5	6

This concludes the formal AREVA NP response to RAI 442, and there are no questions from this RAI for which AREVA NP has not provided responses.

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: Thursday, June 09, 2011 2:50 PM
To: Tesfaye, Getachew
Cc: 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. 442, FSAR Ch. 7, Supplement 14

Getachew,

On November 19, 2010, AREVA NP Inc. (AREVA NP) provided a schedule for a technically correct and complete response to the questions in RAI 442. Supplement 1 response was sent on January 7, 2011 to provide a revised schedule for four of the questions. Supplement 2 response was sent on February 9, 2011 to provide a revised schedule. Supplement 3 response was sent on February 18, 2011 to provide technically correct and complete responses to four questions. Supplement 4 response was sent on February 25, 2011 to provide technically correct and complete response to one question. Supplement 5 response was sent on March 2, 2011 to provide technically correct and complete responses to three of the 12 remaining questions. Supplement 6 response was sent on March 15, 2011 to provide technically correct and complete responses to two of the 9 remaining questions. Supplement 7 response was sent on April 5, 2011 to provide a revised schedule. Supplement 8 response was sent on April 25, 2011 to provide a revised schedule. Supplement 9 response was sent on May 20, 2011 to provide a technically correct and complete response to one of the 7 remaining questions. Supplement 10 response was sent on May 25, 2011 to provide a technically correct and complete response to one of the 6 remaining questions. Supplement 11 response was sent on May 25, 2011 to provide a technically correct and complete response to one of the 5 remaining questions. Supplement 12 response was sent on May 25, 2011 to provide a technically correct and complete response to one of the 4 remaining questions. Supplement 13 response was sent on June 3, 2011 to provide a technically correct and complete response to one question.

Based on discussions with the NRC staff, the U.S. EPR FSAR Section 7.3 mark-ups that accompanied the response to Question 07.03-32 have been revised. The response to this question was submitted as a final response in Supplement 12 that was sent to the NRC on May 25, 2011. Although no change has been made to the text of the Question 07.03-32 response itself, the response is being revised in this supplement to include the revised FSAR markups.

The attached file, "RAI 442 Supplement 14 Response US EPR DC.pdf" provides a revised technically correct and complete response to Question 07.03-32. 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 442, Question 07.03-32.

The following table indicates the respective pages in the attachment that contain AREVA NP's response to the subject question.

Question #	Start Page	End Page
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AREVA NP's schedule for providing a technically correct and complete response to the remaining 2 questions in RAI 442 is unchanged and is provided below.

Question #	Response Date
RAI 442 — 7.1-26	June 22, 2011
RAI 442 — 7.1-31	June 22, 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: RYAN Tom (RS/NB)
Sent: Friday, June 03, 2011 6:30 PM
To: Tesfaye, Getachew
Cc: BENNETT Kathy (RS/NB); DELANO Karen (RS/NB); ROMINE Judy (RS/NB); RYAN Tom (RS/NB); WILLIFORD Dennis (RS/NB)
Subject: Response to U.S. EPR Design Certification Application RAI No. 442, FSAR Ch. 7, Supplement 13

Getachew,

On November 19, 2010, AREVA NP Inc. (AREVA NP) provided a schedule for a technically correct and complete response to the questions in RAI 442. Supplement 1 response was sent on January 7, 2011 to provide a revised schedule for four of the questions. Supplement 2 response was sent on February 9, 2011 to provide a revised schedule. Supplement 3 response was sent on February 18, 2011 to provide technically correct and complete responses to four questions. Supplement 4 response was sent on February 25, 2011 to provide technically correct and complete response to one question. Supplement 5 response was sent on March 2, 2011 to provide technically correct and complete responses to three of the 12 remaining questions. Supplement 6 response was sent on March 15, 2011 to provide technically correct and complete responses to two of the 9 remaining questions. Supplement 7 response was sent on April 5, 2011 to provide a revised schedule. Supplement 8 response was sent on April 25, 2011 to provide a revised schedule. Supplement 9 response was sent on May 20, 2011 to provide a technically correct and complete response to one of the 7 remaining questions. Supplement 10 response was sent on May 25, 2011 to provide a technically correct and complete response to one of the 6 remaining questions. Supplement 11 response was sent on May 25, 2011 to provide a technically correct and complete response to one of the 5 remaining questions. Supplement 12 response was sent on May 25, 2011 to provide a technically correct and complete response to one of the 4 remaining questions.

The attached file, "RAI 442 Supplement 13 Response US EPR DC.pdf" provides a technically correct and complete response to Question 07.01-30, 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 442, Question 07.01-30.

The following table indicates the respective pages in the attachment that contain AREVA NP's response to the subject question.

Question #	Start Page	End Page
RAI 442 07.01-30	2	3

AREVA NP's schedule for providing a technically correct and complete response to the remaining 2 questions in RAI 442 is unchanged and is provided below.

Question #	Response Date
RAI 442 — 7.1-26	June 22, 2011
RAI 442 — 7.1-31	June 22, 2011

Sincerely,

Tom Ryan for
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: Wednesday, May 25, 2011 3:03 PM
To: Tesfaye, Getachew
Cc: 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. 442, FSAR Ch. 7, Supplement 12

Getachew,

On November 19, 2010, AREVA NP Inc. (AREVA NP) provided a schedule for a technically correct and complete response to the questions in RAI 442. Supplement 1 response was sent on January 7, 2011 to provide a revised schedule for four of the questions. Supplement 2 response was sent on February 9, 2011 to provide a revised schedule. Supplement 3 response was sent on February 18, 2011 to provide technically correct and complete responses to four questions. Supplement 4 response was sent on February 25, 2011 to provide technically correct and complete response to one question. Supplement 5 response was sent on March 2, 2011 to provide technically correct and complete responses to three of the 12 remaining questions. Supplement 6 response was sent on March 15, 2011 to provide technically correct and complete responses to two of the 9 remaining questions. Supplement 7 response was sent on April 5, 2011 to provide a revised schedule. Supplement 8 response was sent on April 25, 2011 to provide a revised schedule. Supplement 9 response was sent on May 20, 2011 to provide a technically correct and complete response to one of the 7 remaining questions. Supplement 10 response was sent on May 25, 2011 to provide a technically correct and complete response to one of the 6 remaining questions. Supplement 11 response was sent on May 25, 2011 to provide a technically correct and complete response to one of the 5 remaining questions.

The attached file, "RAI 442 Supplement 12 Response US EPR DC.pdf" provides a technically correct and complete response to Question 07.03-32, 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 442, Question 07.03-32.

The following table indicates the respective pages in the attachment that contain AREVA NP's response to the subject question.

Question #	Start Page	End Page
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AREVA NP's schedule for providing a technically correct and complete response to the remaining 3 questions in RAI 442 has been changed and is provided below.

Question #	Response Date
RAI 442 — 7.1-26	June 22, 2011
RAI 442 — 7.1-30	June 3, 2011
RAI 442 — 7.1-31	June 22, 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: Wednesday, May 25, 2011 12:11 PM

To: 'Tesfaye, Getachew'

Cc: 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. 442, FSAR Ch. 7, Supplement 11

Getachew,

On November 19, 2010, AREVA NP Inc. (AREVA NP) provided a schedule for a technically correct and complete response to the questions in RAI 442. Supplement 1 response was sent on January 7, 2011 to provide a revised schedule for four of the questions. Supplement 2 response was sent on February 9, 2011 to provide a revised schedule. Supplement 3 response was sent on February 18, 2011 to provide technically correct and complete responses to four questions. Supplement 4 response was sent on February 25, 2011 to provide technically correct and complete response to one question. Supplement 5 response was sent on March 2, 2011 to provide technically correct and complete responses to three of the 12 remaining questions. Supplement 6 response was sent on March 15, 2011 to provide technically correct and complete responses to two of the 9 remaining questions. Supplement 7 response was sent on April 5, 2011 to provide a revised schedule. Supplement 8 response was sent on April 25, 2011 to provide a revised schedule. Supplement 9 response was sent on May 20, 2011 to provide a technically correct and complete response to one of the 7 remaining questions. Supplement 10 response was sent on May 25, 2011 to provide a technically correct and complete response to one of the 6 remaining questions.

The attached file, "RAI 442 Supplement 11 Response US EPR DC.pdf" provides a technically correct and complete response to Question 07.01-28, as committed. Appended to this file are affected pages of the U.S. EPR Final Safety Analysis Report in redline-strikeout format to support the response to RAI 442, Question 07.01-28.

The following table indicates the respective pages in the attachment that contain AREVA NP's response to the subject question.

Question #	Start Page	End Page
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AREVA NP's schedule for providing a technically correct and complete response to the remaining 4 questions in RAI 442 is unchanged and is provided below.

Question #	Response Date
RAI 442 — 7.1-26	May 27, 2011
RAI 442 — 7.1-30	May 27, 2011
RAI 442 — 7.1-31	May 27, 2011
RAI 442 — 7.3-32	May 27, 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: Wednesday, May 25, 2011 7:42 AM

To: Tesfaye, Getachew

Cc: 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. 442, FSAR Ch. 7, Supplement 10

Getachew,

On November 19, 2010, AREVA NP Inc. (AREVA NP) provided a schedule for a technically correct and complete response to the questions in RAI 442. Supplement 1 response was sent on January 7, 2011 to provide a revised schedule for four of the questions. Supplement 2 response was sent on February 9, 2011 to provide a revised schedule. Supplement 3 response was sent on February 18, 2011 to provide technically correct and complete responses to four questions. Supplement 4 response was sent on February 25, 2011 to provide technically correct and complete response to one question. Supplement 5 response was sent on March 2, 2011 to provide technically correct and complete responses to three of the 12 remaining questions. Supplement 6 response was sent on March 15, 2011 to provide technically correct and complete responses to two of the 9 remaining questions. Supplement 7 response was sent on April 5, 2011 to provide a revised schedule. Supplement 8 response was sent on April 25, 2011 to provide a revised schedule. Supplement 9 response was sent on May 20, 2011 to provide a technically correct and complete response to one of the 7 remaining questions.

The attached file, "RAI 442 Supplement 10 Response US EPR DC.pdf" provides a technically correct and complete response to Question 07.01-27, 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 442, Question 07.01-27.

The following table indicates the respective pages in the attachment that contain AREVA NP's response to the subject question.

Question #	Start Page	End Page
RAI 442 07.01-27	2	2

AREVA NP's schedule for providing a technically correct and complete response to the remaining 5 questions in RAI 442 remains unchanged and is provided below.

Question #	Response Date
RAI 442 — 7.1-26	May 27, 2011
RAI 442 — 7.1-28	May 27, 2011
RAI 442 — 7.1-30	May 27, 2011
RAI 442 — 7.1-31	May 27, 2011
RAI 442 — 7.3-32	May 27, 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, May 20, 2011 5:32 PM
To: Tesfaye, Getachew
Cc: 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. 442, FSAR Ch. 7, Supplement 9

Getachew,

On November 19, 2010, AREVA NP Inc. (AREVA NP) provided a schedule for a technically correct and complete response to the questions in RAI 442. Supplement 1 response was sent on January 7, 2011 to provide a revised schedule for four of the questions. Supplement 2 response was sent on February 9, 2011 to provide a revised schedule. Supplement 3 response was sent on February 18, 2011 to provide technically correct and complete responses to four questions. Supplement 4 response was sent on February 25, 2011 to provide technically correct and complete response to one question. Supplement 5 response was sent on March 2, 2011 to provide technically correct and complete responses to three of the 12 remaining questions. Supplement 6 response was sent on March 15, 2011 to provide technically correct and complete responses to two of the 9 remaining questions. Supplement 7 response was sent on April 5, 2011 to provide a revised schedule. Supplement 8 response was sent on April 25, 2011 to provide a revised schedule.

The attached file, "RAI 442 Supplement 9 Response US EPR DC.pdf" provides a technically correct and complete response to Question 07.09-64, 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 442, Question 07.09-64.

The following table indicates the respective pages in the enclosure that contain AREVA NP's response to the subject question.

Question #	Start Page	End Page
RAI 442 07.09-64	2	3

AREVA NP's schedule for providing a technically correct and complete response to the remaining 6 questions in RAI 442 remains unchanged and is provided below.

Question #	Response Date
RAI 442 — 7.1-26	May 27, 2011
RAI 442 — 7.1-27	May 27, 2011
RAI 442 — 7.1-28	May 27, 2011
RAI 442 — 7.1-30	May 27, 2011
RAI 442 — 7.1-31	May 27, 2011
RAI 442 — 7.3-32	May 27, 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: Monday, April 25, 2011 4:43 PM
To: Tesfaye, Getachew
Cc: 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. 442, FSAR Ch. 7, Supplement 8

Getachew,

On November 19, 2010, AREVA NP Inc. (AREVA NP) provided a schedule for a technically correct and complete response to the questions in RAI 442. Supplement 1 response was sent on January 7, 2011 to provide a revised schedule for four of the questions. Supplement 2 response was sent on February 9, 2011 to provide a revised schedule. Supplement 3 response was sent on February 18, 2011 to provide technically correct and complete responses to four questions. Supplement 4 response was sent on February 25, 2011 to provide technically correct and complete response to one question. Supplement 5 response was sent on March 2, 2011 to provide technically correct and complete responses to three of the 12 remaining questions. Supplement 6 response was sent on March 15, 2011 to provide technically correct and complete responses to two of the 9 remaining questions. Supplement 7 response was sent on April 5, 2011 to provide a revised schedule.

To provide additional time to interact with the NRC, a revised schedule is provided in this e-mail.

AREVA NP's schedule for providing a technically correct and complete response to the remaining questions in RAI 442 is provided below.

Question #	Response Date
RAI 442 — 7.1-26	May 27, 2011
RAI 442 — 7.1-27	May 27, 2011
RAI 442 — 7.1-28	May 27, 2011
RAI 442 — 7.1-30	May 27, 2011
RAI 442 — 7.1-31	May 27, 2011
RAI 442 — 7.3-32	May 27, 2011
RAI 442 — 7.9-64	May 27, 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: Tuesday, April 05, 2011 10:56 AM

To: 'Getachew.Tesfaye@nrc.gov'

Cc: 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. 442, FSAR Ch. 7, Supplement 7

Getachew,

On November 19, 2010, AREVA NP Inc. (AREVA NP) provided a schedule for a technically correct and complete response to the questions in RAI 442. Supplement 1 response was sent on January 7, 2011 to provide a revised schedule for four of the questions. Supplement 2 response was sent on February 9, 2011 to provide a revised schedule. Supplement 3 response was sent on February 18, 2011 to provide technically correct and complete responses to four questions. Supplement 4 response was sent on February 25, 2011 to provide technically correct and complete response to one question. Supplement 5 response was sent on March 2, 2011 to provide technically correct and complete responses to three of the 12 remaining questions. Supplement 6 response was sent on March 15, 2011 to provide technically correct and complete responses to two of the 9 remaining questions.

To provide additional time to interact with the NRC, a revised schedule is provided in this e-mail.

AREVA NP's schedule for providing a technically correct and complete response to the remaining questions in RAI 442 is provided below.

Question #	Response Date
------------	---------------

RAI 442 — 7.1-26	April 28, 2011
RAI 442 — 7.1-27	April 28, 2011
RAI 442 — 7.1-28	April 28, 2011
RAI 442 — 7.1-30	April 28, 2011
RAI 442 — 7.1-31	April 28, 2011
RAI 442 — 7.3-32	April 28, 2011
RAI 442 — 7.9-64	April 28, 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: Tuesday, March 15, 2011 12:51 PM

To: 'Tesfaye, Getachew'

Cc: 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. 442, FSAR Ch. 7, Supplement 6

Getachew,

On November 19, 2010, AREVA NP Inc. (AREVA NP) provided a schedule for a technically correct and complete response to the questions in RAI 442. Supplement 1 response was sent on January 7, 2011 to provide a revised schedule for four of the questions. Supplement 2 response was sent on February 9, 2011 to provide a revised schedule. Supplement 3 response was sent on February 18, 2011 to provide technically correct and complete responses to four questions. Supplement 4 response was sent on February 25, 2011 to provide technically correct and complete response to one question. Supplement 5 response was sent on March 2, 2011 to provide technically correct and complete responses to three of the 12 remaining questions. Based on discussions with NRC, the attached file, "RAI 442 Supplement 6 Response US EPR DC.pdf" provides technically correct and complete responses to two of the 9 questions, as committed.

The following table indicates the respective pages in the response document, "RAI 442 Supplement 6 Response US EPR DC.pdf," that contain AREVA NP's response to the subject questions.

Question #	Start Page	End Page
RAI 442 07.01-32	2	3
RAI 442 07.09-67	4	5

AREVA NP's schedule for providing a technically correct and complete response to the remaining questions in RAI 442 remains unchanged and is provided below.

Question #	Response Date
RAI 442 — 7.1-26	April 21, 2011
RAI 442 — 7.1-27	April 14, 2011
RAI 442 — 7.1-28	April 7, 2011
RAI 442 — 7.1-30	April 28, 2011
RAI 442 — 7.1-31	April 7, 2011
RAI 442 — 7.3-32	April 14, 2011
RAI 442 — 7.9-64	April 28, 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: Wednesday, March 02, 2011 4:52 PM
To: Tesfaye, Getachew
Cc: 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. 442, FSAR Ch. 7, Supplement 5

Getachew,

On November 19, 2010, AREVA NP Inc. (AREVA NP) provided a schedule for a technically correct and complete response to the questions in RAI 442. Supplement 1 response was sent on January 7, 2011 to provide a revised schedule for four of the questions. Supplement 2 response was sent on February 9, 2011 to provide a revised schedule. Supplement 3 response was sent on February 18, 2011 to provide technically correct and complete responses to four questions. Supplement 4 response was sent on February 25, 2011 to provide technically correct and complete response to one question. Based on discussions with NRC, the attached file, "RAI 442 Supplement 5 Response US EPR DC.pdf" provides technically correct and complete responses to three of the 12 questions, as committed.

The following table indicates the respective pages in the response document, "RAI 442 Supplement 5 Response US EPR DC.pdf," that contain AREVA NP's response to the subject question.

Question #	Start Page	End Page
RAI 442 07.03-33	2	2
RAI 442 07.03-34	3	4
RAI 442 07.09-61	5	8

AREVA NP's schedule for providing a technically correct and complete response to all questions in RAI 442 remains unchanged and is provided below.

Question #	Response Date
RAI 442 — 7.1-26	April 21, 2011
RAI 442 — 7.1-27	April 14, 2011
RAI 442 — 7.1-28	April 7, 2011
RAI 442 — 7.1-30	April 28, 2011
RAI 442 — 7.1-31	April 7, 2011
RAI 442 — 7.1-32	April 7, 2011
RAI 442 — 7.3-32	April 14, 2011
RAI 442 — 7.9-64	April 28, 2011
RAI 442 — 7.9-67	April 7, 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: Friday, February 25, 2011 8:07 AM

To: Tesfaye, Getachew

Cc: BRYAN Martin (External 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. 442, FSAR Ch. 7, Supplement 4

Getachew,

On November 19, 2010, AREVA NP Inc. (AREVA NP) provided a schedule for a technically correct and complete response to the questions in RAI 442. Supplement 1 response was sent on January 7, 2011 to provide a revised schedule for four of the questions. Supplement 2 response was sent on February 9, 2011 to provide a revised schedule. Supplement 3 response was sent on February 18, 2011 to provide technically correct and complete responses to four questions. Based on discussions with NRC, the attached file, "RAI 442 Supplement 4 Response US EPR DC.pdf" provides technically correct and complete responses to one of the 13 questions, as committed.

Appended to this file are affected pages of the U.S. EPR Final Safety Analysis Report and Technical Report ANP-10309P, in redline-strikeout format which support the response to RAI 442 Question 07.09-63.

The following table indicates the respective pages in the response document, "RAI 442 Supplement 4 Response US EPR DC.pdf," that contain AREVA NP's response to the subject question.

Question #	Start Page	End Page
RAI 442 07.09-63	2	2

Based upon the information presented to the NRC during the February 15, 2011, Public Meeting, the schedule for the remaining questions has been changed.

AREVA NP's schedule for providing a technically correct and complete response to all questions in RAI 442 is provided below.

Question #	Response Date
RAI 442 — 7.1-26	April 21, 2011
RAI 442 — 7.1-27	April 14, 2011
RAI 442 — 7.1-28	April 7, 2011
RAI 442 — 7.1-30	April 28, 2011
RAI 442 — 7.1-31	April 7, 2011
RAI 442 — 7.1-32	April 7, 2011
RAI 442 — 7.3-32	April 14, 2011
RAI 442 — 7.3-33	April 7, 2011
RAI 442 — 7.3-34	April 7, 2011
RAI 442 — 7.9-61	April 7, 2011
RAI 442 — 7.9-64	April 28, 2011
RAI 442 — 7.9-67	April 7, 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: BRYAN Martin (External RS/NB)

Sent: Friday, February 18, 2011 12:21 PM

To: Tesfaye, Getachew

Cc: DELANO Karen (RS/NB); ROMINE Judy (RS/NB); BENNETT Kathy (RS/NB); RYAN Tom (RS/NB)

Subject: Response to U.S. EPR Design Certification Application RAI No. 442, FSAR Ch. 7, Supplement 3

Getachew,

On November 19, 2010, AREVA NP Inc. (AREVA NP) provided a schedule for a technically correct and complete response to the questions in RAI 442. Supplement 1 response was sent on January 7, 2011 to

provide a revised schedule for four of the questions. Supplement 2 response was sent on February 9, 2011 to provide a revised schedule. Based on discussions with NRC, the attached file, "RAI 442 Supplement 3 Response US EPR DC.pdf" provides technically correct and complete responses to four of the 17 questions, as committed.

Appended to this file are affected pages of the U.S. EPR Final Safety Analysis Report and Technical Report ANP-10281P, in redline-strikeout format which support the response to RAI 442 Question 07.01-29.

The following table indicates the respective pages in the response document, "RAI 442 Supplement 3 Response US EPR DC.pdf," that contain AREVA NP's response to the subject questions.

Question #	Start Page	End Page
RAI 442 07.01-29	2	2
RAI 413 07.09-62	3	4
RAI 413 07.09-65	5	5
RAI 413 07.09-66	6	6

The schedule for technically correct and complete responses to the remaining 13 questions is unchanged and provided below:

AREVA NP's schedule for providing a technically correct and complete response to all questions in RAI 442 is provided below.

Question #	Response Date
RAI 442 — 7.1-26	March 15, 2011
RAI 442 — 7.1-27	March 15, 2011
RAI 442 — 7.1-28	March 15, 2011
RAI 442 — 7.1-30	March 15, 2011
RAI 442 — 7.1-31	March 15, 2011
RAI 442 — 7.1-32	March 15, 2011
RAI 442 — 7.3-32	March 15, 2011
RAI 442 — 7.3-33	March 15, 2011
RAI 442 — 7.3-34	March 15, 2011
RAI 442 — 7.9-61	March 15, 2011
RAI 442 — 7.9-63	March 15, 2011
RAI 442 — 7.9-64	March 15, 2011
RAI 442 — 7.9-67	March 15, 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, February 09, 2011 5:07 PM

To: Tesfaye, Getachew

Cc: DELANO Karen (RS/NB); ROMINE Judy (RS/NB); BENNETT Kathy (RS/NB); RYAN Tom (RS/NB)

Subject: Response to U.S. EPR Design Certification Application RAI No. 442, FSAR Ch. 7, Supplement 2

Getachew,

On November 19, 2010, AREVA NP Inc. (AREVA NP) provided a schedule for a technically correct and complete response to the questions in RAI 442. Supplement 1 response was sent on January 7, 2011 to provide a revised schedule for four of the questions. To allow additional time to interact with the staff and to process the responses a revised schedule is provided below. It should be noted that the dates below may need to be adjusted following the February 15, 2011 public meeting between AREVA and the NRC on digital instrumentation and controls.

AREVA NP's schedule for providing a technically correct and complete response to all questions in RAI 442 is provided below.

Question #	Response Date
RAI 442 — 7.1-26	March 15, 2011
RAI 442 — 7.1-27	March 15, 2011
RAI 442 — 7.1-28	March 15, 2011
RAI 442 — 7.1-29	March 15, 2011
RAI 442 — 7.1-30	March 15, 2011
RAI 442 — 7.1-31	March 15, 2011
RAI 442 — 7.1-32	March 15, 2011
RAI 442 — 7.3-32	March 15, 2011
RAI 442 — 7.3-33	March 15, 2011
RAI 442 — 7.3-34	March 15, 2011
RAI 442 — 7.9-61	March 15, 2011
RAI 442 — 7.9-62	March 15, 2011
RAI 442 — 7.9-63	March 15, 2011
RAI 442 — 7.9-64	March 15, 2011
RAI 442 — 7.9-65	March 15, 2011
RAI 442 — 7.9-66	March 15, 2011
RAI 442 — 7.9-67	March 15, 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 11:15 AM

To: Tesfaye, Getachew

Cc: DELANO Karen (RS/NB); ROMINE Judy (RS/NB); BENNETT Kathy (RS/NB); RYAN Tom (RS/NB); PANNELL George (CORP/QP)

Subject: Response to U.S. EPR Design Certification Application RAI No. 442, FSAR Ch. 7, Supplement 1

Getachew,

On November 19, 2010, AREVA NP Inc. (AREVA NP) provided a schedule for a technically correct and complete response to the questions in RAI 442. To allow additional time to interact with the staff a revised schedule is provided below for questions 7.1.29, 7.1.32, 7.9-65 and 7.9-67. The schedule for the other questions remains unchanged.

AREVA NP's schedule for providing a technically correct and complete response to all questions in RAI 442 is provided below.

Question #	Response Date
RAI 442 — 7.1-26	March 15, 2011
RAI 442 — 7.1-27	March 15, 2011
RAI 442 — 7.1-28	March 15, 2011
RAI 442 — 7.1-29	February 9, 2011
RAI 442 — 7.1-30	February 9, 2011
RAI 442 — 7.1-31	March 15, 2011
RAI 442 — 7.1-32	February 9, 2011
RAI 442 — 7.3-32	February 9, 2011
RAI 442 — 7.3-33	February 9, 2011
RAI 442 — 7.3-34	March 15, 2011
RAI 442 — 7.9-61	February 9, 2011
RAI 442 — 7.9-62	February 9, 2011
RAI 442 — 7.9-63	February 9, 2011
RAI 442 — 7.9-64	March 15, 2011
RAI 442 — 7.9-65	March 15, 2011
RAI 442 — 7.9-66	February 9, 2011
RAI 442 — 7.9-67	February 9, 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, November 19, 2010 5:12 PM

To: 'Tefaye, Getachew'

Cc: DELANO Karen (RS/NB); ROMINE Judy (RS/NB); BENNETT Kathy (RS/NB); PANNELL George (CORP/QP)

Subject: Response to U.S. EPR Design Certification Application RAI No. 442, FSAR Ch. 7

Getachew,

Attached please find AREVA NP Inc.'s response to the subject request for additional information (RAI). The attached file, "RAI 442 Response US EPR DC.pdf" provides a schedule since a technically correct and complete response to the 17 question (s) is not provided.

The following table indicates the respective pages in the response document, "RAI 442 Response US EPR DC.pdf," that contain AREVA NP's response to the subject questions.

Question #	Start Page	End Page
RAI 442 — 7.1-26	2	2
RAI 442 — 7.1-27	3	3
RAI 442 — 7.1-28	4	4
RAI 442 — 7.1-29	5	5
RAI 442 — 7.1-30	6	6
RAI 442 — 7.1-31	7	8
RAI 442 — 7.1-32	9	9
RAI 442 — 7.3-32	10	10
RAI 442 — 7.3-33	11	11
RAI 442 — 7.3-34	12	12
RAI 442 — 7.9-61	13	13
RAI 442 — 7.9-62	14	14
RAI 442 — 7.9-63	15	15
RAI 442 — 7.9-64	16	16
RAI 442 — 7.9-65	17	17
RAI 442 — 7.9-66	18	18
RAI 442 — 7.9-67	19	19

A complete answer is not provided for the 17 questions. The schedule for a technically correct and complete response to these questions is provided below.

Question #	Response Date
RAI 442 — 7.1-26	March 15, 2011
RAI 442 — 7.1-27	March 15, 2011
RAI 442 — 7.1-28	March 15, 2011
RAI 442 — 7.1-29	January 7, 2011
RAI 442 — 7.1-30	February 9, 2011
RAI 442 — 7.1-31	March 15, 2011
RAI 442 — 7.1-32	January 7, 2011
RAI 442 — 7.3-32	February 9, 2011
RAI 442 — 7.3-33	February 9, 2011
RAI 442 — 7.3-34	March 15, 2011
RAI 442 — 7.9-61	February 9, 2011
RAI 442 — 7.9-62	February 9, 2011
RAI 442 — 7.9-63	February 9, 2011
RAI 442 — 7.9-64	March 15, 2011
RAI 442 — 7.9-65	January 7, 2011
RAI 442 — 7.9-66	February 9, 2011
RAI 442 — 7.9-67	January 7, 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: Tesfaye, Getachew [<mailto:Getachew.Tesfaye@nrc.gov>]
Sent: Wednesday, October 20, 2010 8:09 AM
To: ZZ-DL-A-USEPR-DL
Cc: Zhao, Jack; Morton, Wendell; Mott, Kenneth; Spaulding, Deirdre; Truong, Tung; Zhang, Deanna; Jackson, Terry; Canova, Michael; Colaccino, Joseph; ArevaEPRDCPEm Resource
Subject: U.S. EPR Design Certification Application RAI No. 442(4295,5076,5068,5067), FSAR Ch. 7

Attached please find the subject requests for additional information (RAI). A draft of the RAI was provided to you on September 10, 2010, and discussed with your staff on October 13, 2010. Drat RAI Questions 07.01-26 and 07.03-33 were modified as a result of that discussion. 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: 3989

Mail Envelope Properties (2FBE1051AEB2E748A0F98DF9EEE5A5D4DB6C96)

Subject: Response to U.S. EPR Design Certification Application RAI No. 442, FSAR Ch. 7, Supplement 18
Sent Date: 8/16/2012 4:55:47 PM
Received Date: 8/16/2012 4:56:32 PM
From: WILLIFORD Dennis (AREVA)

Created By: Dennis.Williford@areva.com

Recipients:
"BENNETT Kathy (AREVA)" <Kathy.Bennett@areva.com>
Tracking Status: None
"DELANO Karen (AREVA)" <Karen.Delano@areva.com>
Tracking Status: None
"ROMINE Judy (AREVA)" <Judy.Romine@areva.com>
Tracking Status: None
"RYAN Tom (AREVA)" <Tom.Ryan@areva.com>
Tracking Status: None
"Tsfaye, Getachew" <Getachew.Tsfaye@nrc.gov>
Tracking Status: None

Post Office: auscharm02.adom.ad.corp

Files	Size	Date & Time
MESSAGE	53503	8/16/2012 4:56:32 PM
RAI 442 Supplement 18 Response US EPR DC.pdf		129006

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

Response to
Request for Additional Information No. 442 (4295, 5076, 5068, 5067), Revision 1,
Supplement 18

9/10/2010

U.S. EPR Standard Design Certification
AREVA NP Inc.
Docket No. 52-020
SRP Section: 07.01 - Instrumentation and Controls - Introduction
SRP Section: 07.03 - Engineered Safety Features Systems
SRP Section: 07.09 - Data Communication Systems

Application Section: FSAR Ch 7

QUESTIONS for Instrumentation, Controls and Electrical Engineering 1
(AP1000/EPR Projects) (ICE1)

Question 07.01-30:

Provide details on how the U.S. EPR design will verify functionality of the self testing features based on guidance from BTP 7-17.

For the U.S. EPR design, the applicant has committed to meeting BTP 7-17, "Guidance on Self-Test and Surveillance Test Provisions." BTP 7-17 (which cites GDC 21 and 10 CFR 50.55a(h) as a regulatory bases) states that: "(a) Self-test functions should be verified during periodic functional tests, and (b) If automatic test features are credited with performing surveillance test functions, provisions should be made to confirm the execution of the automatic test during plant operation. The capability to periodically test and calibrate the automatic test equipment should also be provided. The balance of surveillance and test functions that are not performed by the automatic test feature should be performed manually to meet the intent of Regulatory Guide 1.118. In addition, the automatic test feature function should conform to the same requirements and considerations (e.g., test interval) as the manual function."

- a) The staff requests that the applicant provide details on the method by which the U.S. EPR Protection System self testing features will be periodically verified and how the operation will be confirmed during plant operation.
- b) How does the applicant propose to meet item (b), as quoted above?

Response to Question 07.01-30:

Proposed changes to the instrumentation and controls (I&C) architecture were communicated to the NRC staff in the public meeting on February 15, 2011. The change in this Supplement 18 corrects an FSAR change to Table 3.2.2-1 provided in RAI 442, Supplement 13, processed on June 3, 2011. This response and associated mark-up in addition to RAI 442 Supplement 16, processed on July 13, 2011, and RAI 442, Supplement 17, processed on September 29, 2011 provides a complete and final response to this Question 07.01-30.

FSAR Impact:

U.S. EPR FSAR Tier 2, Table 3.2.2-1, will be revised as described in the response and indicated on the enclosed markup.

U.S. EPR Final Safety Analysis Report Markups

Table 3.2.2-1—Classification Summary
Sheet 86 of 194

KKS System or Component Code	SSC Description	Safety Classification (Note 15)	Quality Group Classification	Seismic Category (Note 16)	10 CFR 50 Appendix B Program (Note 5)	Location (Note 17)	Comments/ Commercial Code
I&C SYSTEMS							
Protection System							
JR, CLE, CLF, CLG, CLH							
30CLF35	Gateway, Division 2	NS-AQ	N/A	II	Yes	2UJK	Located in close proximity to safety-related equipment
30CLG35	Gateway, Division 3	NS-AQ	N/A	II	Yes	3UJK	Located in close proximity to safety-related equipment
JR	Service Unit	NS	N/A	NSC	No	UJK	
JR	Balance of Protection System	S	N/A	I	Yes	UJK	
Priority & Actuator Control System							
DS, CLE6, CLF6, CLG6, CLH6							
CLE6, CLF6, CLG6, CLH6	Priority & Actuator Control System Cabinets	S	N/A	I	Yes	UJK	
CLE61/62/63, CLF61/62, CLG61/62, CLH61/62/63	Priority & Actuator Control System Cabinets	NS-AQ	N/A	II	Yes	UJK	Located in close proximity to safety-related equipment
Safety Automation System							
DR							
DR	Balance of DR System	S	N/A	I	Yes	UBP, UBZ, UJA, UJK, UFA	