

ArevaEPRDCPEm Resource

From: WELLS Russell (AREVA) [Russell.Wells@areva.com]
Sent: Friday, May 06, 2011 10:43 AM
To: Tesfaye, Getachew
Cc: LENTZ Tony (EXTERNAL AREVA); BENNETT Kathy (AREVA); DELANO Karen (AREVA); ROMINE Judy (AREVA); RYAN Tom (AREVA)
Subject: Response to U.S. EPR Design Certification Application RAI No. 386, FSAR Ch. 14, Supplement 13
Attachments: RAI 386 Supplement 13 Response US EPR DC.pdf

Getachew,

AREVA NP Inc. provided a schedule for technically correct and complete responses to the 24 questions in RAI No. 386 on June 3, 2010. Supplement 1, Supplement 2, Supplement 3, Supplement 4, and Supplement 5 responses to RAI No. 386 were sent on July 15, 2010, August 12, 2010, August 26, 2010, September 9, 2010, and September 22, 2010, respectively, to provide a revised schedule. Supplement 7 was submitted to NRC on November 10, 2010 which provided technically correct and complete responses to 9 of the 24 questions and provided a revised schedule for the remaining 15 questions. Supplement 8 was submitted to NRC on November 29, 2010 and Supplement 9 was submitted to NRC on January 21, 2011 to provide a revised schedule for the response to the remaining questions. Supplement 10 was submitted to NRC on February 9, 2011 which provided technically correct and complete response to 1 of the 15 questions and provided a revised schedule for the remaining 14 questions. Supplement 11 and Supplement 12 were submitted to NRC on March 22, 2011 and April 21, 2011, respectively, to provide a revised schedule for the response to the remaining questions.

The attached file, "RAI 386 Supplement 13 Response US EPR DC.pdf" provides technically correct and complete responses to 1 of the remaining 14 questions.

The following table indicates the respective pages in the response document, "RAI 386 Supplement 13 Response US EPR DC.pdf," that contain AREVA NP's response to the subject questions.

Question #	Start Page	End Page
RAI 386 — 14.03.03-46	2	3

The schedule for the remaining 13 questions has not changed and is provided below.

Question #	Response Date
RAI 386 — 14.02-149	June 9, 2011
RAI 386 — 14.02-150	June 9, 2011
RAI 386 — 14.02-151	June 9, 2011
RAI 386 — 14.02-152	June 9, 2011
RAI 386 — 14.02-156	June 9, 2011
RAI 386 — 14.02-158	June 9, 2011
RAI 386 — 14.02-159	June 9, 2011
RAI 386 — 14.03.02-44	June 9, 2011
RAI 386 — 14.03.02-45	June 9, 2011
RAI 386 — 14.03.02-49	June 9, 2011
RAI 386 — 14.03.02-50	June 9, 2011
RAI 386 — 14.03.02-51	June 9, 2011
RAI 386 — 14.03.08-2	June 9, 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: Thursday, April 21, 2011 7:38 AM

To: 'Tesyfaye, Getachew'

Cc: LENTZ Tony (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. 386, FSAR Ch. 14, Supplement 12

Getachew,

AREVA NP Inc. provided a schedule for technically correct and complete responses to the 24 questions in RAI No. 386 on June 3, 2010. Supplement 1, Supplement 2, Supplement 3, Supplement 4, and Supplement 5 responses to RAI No. 386 were sent on July 15, 2010, August 12, 2010, August 26, 2010, September 9, 2010, and September 22, 2010, respectively, to provide a revised schedule. Supplement 7 was submitted to NRC on November 10, 2010 which provided technically correct and complete responses to 9 of the 24 questions and provided a revised schedule for the remaining 15 questions. Supplement 8 was submitted to NRC on November 29, 2010 and Supplement 9 was submitted to NRC on January 21, 2011 to provide a revised schedule for the response to the remaining questions. Supplement 10 was submitted to NRC on February 9, 2011 which provided technically correct and complete response to 1 of the 15 questions and provided a revised schedule for the remaining 14 questions. Supplement 11 was submitted to NRC on March 22, 2011 to provide a revised schedule for the response to the remaining questions.

The schedule for technically correct and complete responses to the questions has been revised and is provided below:

Question #	Response Date
RAI 386 — 14.02-149	June 9, 2011
RAI 386 — 14.02-150	June 9, 2011
RAI 386 — 14.02-151	June 9, 2011
RAI 386 — 14.02-152	June 9, 2011
RAI 386 — 14.02-156	June 9, 2011
RAI 386 — 14.02-158	June 9, 2011
RAI 386 — 14.02-159	June 9, 2011
RAI 386 — 14.03.02-44	June 9, 2011
RAI 386 — 14.03.02-45	June 9, 2011
RAI 386 — 14.03.02-49	June 9, 2011
RAI 386 — 14.03.02-50	June 9, 2011
RAI 386 — 14.03.02-51	June 9, 2011
RAI 386 — 14.03.03-46	June 9, 2011
RAI 386 — 14.03.08-2	June 9, 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 22, 2011 10:15 AM

To: 'Tesyfaye, Getachew'

Cc: LENTZ Tony (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. 386, FSAR Ch. 14, Supplement 11

Getachew,

AREVA NP Inc. provided a schedule for technically correct and complete responses to the 24 questions in RAI No. 386 on June 3, 2010. Supplement 1, Supplement 2, Supplement 3, Supplement 4, and Supplement 5 responses to RAI No. 386 were sent on July 15, 2010, August 12, 2010, August 26, 2010, September 9, 2010, and September 22, 2010, respectively, to provide a revised schedule. Supplement 7 was submitted to NRC on November 10, 2010 which provided technically correct and complete responses to 9 of the 24 questions and provided a revised schedule for the remaining 15 questions. Supplement 8 was submitted to NRC on November 29, 2010 and Supplement 9 was submitted to NRC on January 21, 2011 to provide a revised schedule for the response to the remaining questions. Supplement 10 was submitted to NRC on February 9, 2011 which provided technically correct and complete response to 1 of the 15 questions and provided a revised schedule for the remaining 14 questions.

The schedule for technically correct and complete responses to the questions has been revised and is provided below:

Question #	Response Date
RAI 386 — 14.02-149	April 22, 2011
RAI 386 — 14.02-150	April 22, 2011
RAI 386 — 14.02-151	April 22, 2011
RAI 386 — 14.02-152	April 22, 2011
RAI 386 — 14.02-156	April 22, 2011
RAI 386 — 14.02-158	April 22, 2011
RAI 386 — 14.02-159	April 22, 2011
RAI 386 — 14.03.02-44	April 22, 2011
RAI 386 — 14.03.02-45	April 22, 2011
RAI 386 — 14.03.02-49	April 22, 2011
RAI 386 — 14.03.02-50	April 22, 2011
RAI 386 — 14.03.02-51	April 22, 2011
RAI 386 — 14.03.03-46	April 22, 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: Wednesday, February 09, 2011 1:42 PM

To: Tesfaye, Getachew

Cc: DELANO Karen (RS/NB); ROMINE Judy (RS/NB); BENNETT Kathy (RS/NB); WELLS Russell (RS/NB)

Subject: Response to U.S. EPR Design Certification Application RAI No. 386, FSAR Ch. 14, Supplement 10

Getachew,

AREVA NP Inc. provided a schedule for technically correct and complete responses to the 24 questions in RAI No. 386 on June 3, 2010. Supplement 1, Supplement 2, Supplement 3, Supplement 4, and Supplement 5 responses to RAI No. 386 were sent on July 15, 2010, August 12, 2010, August 26, 2010, September 9, 2010, and September 22, 2010, respectively, to provide a revised schedule. Supplement 7 was submitted to NRC on November 10, 2010 which provided technically correct and complete responses to 9 of the 24 questions and provided a revised schedule for the remaining 15 questions. Supplement 8 was submitted to NRC on November 29, 2010 and Supplement 9 was submitted to NRC on January 21, 2011 to provide a revised schedule for the response to the remaining questions.

The attached file, "RAI 386 Supplement 10 Response US EPR DC.pdf" provides technically correct and complete responses to 1 of the remaining 15 questions.

The following table indicates the respective pages in the response document, "RAI 386 Supplement 10 Response US EPR DC.pdf," that contain AREVA NP's response to the subject questions.

Question #	Start Page	End Page
RAI 386 — 14.03.03-37	2	2

The schedule for the remaining 14 questions has not changed and is provided below.

Question #	Response Date
RAI 386 — 14.02-149	March 25, 2011
RAI 386 — 14.02-150	March 25, 2011
RAI 386 — 14.02-151	March 25, 2011
RAI 386 — 14.02-152	March 25, 2011
RAI 386 — 14.02-156	March 25, 2011
RAI 386 — 14.02-158	March 25, 2011

RAI 386 — 14.02-159	March 25, 2011
RAI 386 — 14.03.02-44	March 25, 2011
RAI 386 — 14.03.02-45	March 25, 2011
RAI 386 — 14.03.02-49	March 25, 2011
RAI 386 — 14.03.02-50	March 25, 2011
RAI 386 — 14.03.02-51	March 25, 2011
RAI 386 — 14.03.03-46	March 25, 2011
RAI 386 — 14.03.08-2	March 25, 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 21, 2011 9:23 AM
To: 'Teshfaye, Getachew'
Cc: DELANO Karen (RS/NB); ROMINE Judy (RS/NB); BENNETT Kathy (RS/NB); WELLS Russell (RS/NB)
Subject: Response to U.S. EPR Design Certification Application RAI No. 386, FSAR Ch. 14, Supplement 9

Getachew,

AREVA NP Inc. provided a schedule for technically correct and complete responses to the 24 questions in RAI No. 386 on June 3, 2010. Supplement 1, Supplement 2, Supplement 3, Supplement 4, and Supplement 5 responses to RAI No. 386 were sent on July 15, 2010, August 12, 2010, August 26, 2010, September 9, 2010, and September 22, 2010, respectively, to provide a revised schedule. Supplement 7 was submitted to NRC on November 10, 2010 which provided technically correct and complete responses to 9 of the 24 questions and provided a revised schedule for the remaining 15 questions. Supplement 8 was submitted to NRC on November 29, 2010 to provide a revised schedule for the response to the remaining questions. In order to allow time for interaction with the NRC, the schedule for a technically correct and complete FINAL response to the remaining questions has been revised and is provided below.

Question #	Response Date
RAI 386 — 14.02-149	March 25, 2011
RAI 386 — 14.02-150	March 25, 2011
RAI 386 — 14.02-151	March 25, 2011
RAI 386 — 14.02-152	March 25, 2011
RAI 386 — 14.02-156	March 25, 2011
RAI 386 — 14.02-158	March 25, 2011
RAI 386 — 14.02-159	March 25, 2011
RAI 386 — 14.03.02-44	March 25, 2011
RAI 386 — 14.03.02-45	March 25, 2011
RAI 386 — 14.03.02-49	March 25, 2011

RAI 386 — 14.03.02-50	March 25, 2011
RAI 386 — 14.03.02-51	March 25, 2011
RAI 386 — 14.03.03-37	March 25, 2011
RAI 386 — 14.03.03-46	March 25, 2011
RAI 386 — 14.03.08-2	March 25, 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 29, 2010 6:55 PM
To: 'Tefsaye, Getachew'
Cc: DELANO Karen (RS/NB); ROMINE Judy (RS/NB); BENNETT Kathy (RS/NB); WELLS Russell (RS/NB)
Subject: Response to U.S. EPR Design Certification Application RAI No. 386, FSAR Ch. 14, Supplement 8

Getachew,

AREVA NP Inc. provided a schedule for technically correct and complete responses to the 24 questions in RAI No. 386 on June 3, 2010. Supplement 1, Supplement 2, Supplement 3, Supplement 4, and Supplement 5 responses to RAI No. 386 were sent on July 15, 2010, August 12, 2010, August 26, 2010, September 9, 2010, and September 22, 2010, respectively, to provide a revised schedule. Supplement 7 was submitted to NRC on November 10, 2010 which provided technically correct and complete responses to 9 of the 24 questions and provided a revised schedule for the remaining 15 questions. To provide additional time to interact with the NRC, a revised schedule is provided in this e-mail for the response to the remaining questions.

The schedule for technically correct and complete responses to the questions has been revised and is provided below:

Question #	Response Date
RAI 386 — 14.02-149	January 27, 2011
RAI 386 — 14.02-150	January 27, 2011
RAI 386 — 14.02-151	January 27, 2011
RAI 386 — 14.02-152	January 27, 2011
RAI 386 — 14.02-156	January 27, 2011
RAI 386 — 14.02-158	January 27, 2011
RAI 386 — 14.02-159	January 27, 2011
RAI 386 — 14.03.02-44	January 27, 2011
RAI 386 — 14.03.02-45	January 27, 2011
RAI 386 — 14.03.02-49	January 27, 2011
RAI 386 — 14.03.02-50	January 27, 2011
RAI 386 — 14.03.02-51	January 27, 2011
RAI 386 — 14.03.03-37	January 27, 2011

RAI 386 — 14.03.03-46	January 27, 2011
RAI 386 — 14.03.08-2	January 27, 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, November 10, 2010 2:10 PM
To: 'Tesfaye, Getachew'
Cc: DELANO Karen (RS/NB); ROMINE Judy (RS/NB); BENNETT Kathy (RS/NB); LENTZ Tony (External RS/NB)
Subject: Response to U.S. EPR Design Certification Application RAI No. 386, FSAR Ch. 14, Supplement 7

Getachew,

AREVA NP Inc. provided a schedule for technically correct and complete responses to the 24 questions in RAI No. 386 on June 3, 2010. Supplement 1, Supplement 2, Supplement 3, Supplement 4, Supplement 5, and Supplement 6 responses to RAI No. 386 were sent on July 15, 2010, August 12, 2010, August 26, 2010, September 9, 2010, September 22, 2010, and October 25, 2010, respectively, to provide a revised schedule.

The attached file, "RAI 386 Supplement 7 Response US EPR DC.pdf" provides technically correct and complete responses to nine questions.

Appended to this file are affected pages of the U.S. EPR Final Safety Analysis Report in redline-strikeout format which supports the response to RAI 345 Questions 14.02-157, 14.03.02-48, and 14.03.08-3.

The following table indicates the respective pages in the response document, "RAI 386 Supplement 7 Response US EPR DC.pdf," that contain AREVA NP's response to the subject questions.

Question #	Start Page	End Page
RAI 386 — 14.02-153	2	2
RAI 386 — 14.02-154	3	3
RAI 386 — 14.02-155	4	4
RAI 386 — 14.02-157	5	5
RAI 386 — 14.02-160	6	6
RAI 386 — 14.03.02-46	7	7
RAI 386 — 14.03.02-47	8	8
RAI 386 — 14.03.02-48	9	10
RAI 386 — 14.03.08-3	11	11

The schedule for the remaining 15 questions has not changed and is provided below.

Question #	Response Date
RAI 386 — 14.02-149	December 7, 2010
RAI 386 — 14.02-150	December 7, 2010
RAI 386 — 14.02-151	December 7, 2010
RAI 386 — 14.02-152	December 7, 2010
RAI 386 — 14.02-156	December 7, 2010
RAI 386 — 14.02-158	December 7, 2010
RAI 386 — 14.02-159	December 7, 2010
RAI 386 — 14.03.02-44	December 7, 2010
RAI 386 — 14.03.02-45	December 7, 2010
RAI 386 — 14.03.02-49	December 7, 2010
RAI 386 — 14.03.02-50	December 7, 2010
RAI 386 — 14.03.02-51	December 7, 2010
RAI 386 — 14.03.03-37	December 7, 2010
RAI 386 — 14.03.03-46	December 7, 2010
RAI 386 — 14.03.08-2	December 7, 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: BRYAN Martin (External RS/NB)
Sent: Monday, October 25, 2010 1:22 PM
To: 'Getachew.Tesfaye@nrc.gov'
Cc: DELANO Karen (RS/NB); ROMINE Judy (RS/NB); BENNETT Kathy (RS/NB); LENTZ Tony (External RS/NB)
Subject: Response to U.S. EPR Design Certification Application RAI No. 386, FSAR Ch. 14, Supplement 6

Getachew,

AREVA NP Inc. provided a schedule for technically correct and complete responses to the 24 questions in RAI No. 386 on June 3, 2010. Supplement 1, Supplement 2, Supplement 3, Supplement 4, and Supplement 5 responses to RAI No. 386 were sent on July 15, 2010, August 12, 2010, August 26, 2010, September 9, 2010, and September 22, 2010, respectively, to provide a revised schedule.

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

The schedule for technically correct and complete responses to the questions has been revised and is provided below:

Question #	Response Date
RAI 386 — 14.02-149	December 7, 2010
RAI 386 — 14.02-150	December 7, 2010
RAI 386 — 14.02-151	December 7, 2010

RAI 386 — 14.02-152	December 7, 2010
RAI 386 — 14.02-153	December 7, 2010
RAI 386 — 14.02-154	December 7, 2010
RAI 386 — 14.02-155	December 7, 2010
RAI 386 — 14.02-156	December 7, 2010
RAI 386 — 14.02-157	December 7, 2010
RAI 386 — 14.02-158	December 7, 2010
RAI 386 — 14.02-159	December 7, 2010
RAI 386 — 14.02-160	December 7, 2010
RAI 386 — 14.03.02-44	December 7, 2010
RAI 386 — 14.03.02-45	December 7, 2010
RAI 386 — 14.03.02-46	December 7, 2010
RAI 386 — 14.03.02-47	December 7, 2010
RAI 386 — 14.03.02-48	December 7, 2010
RAI 386 — 14.03.02-49	December 7, 2010
RAI 386 — 14.03.02-50	December 7, 2010
RAI 386 — 14.03.02-51	December 7, 2010
RAI 386 — 14.03.03-37	December 7, 2010
RAI 386 — 14.03.03-46	December 7, 2010
RAI 386 — 14.03.08-2	December 7, 2010
RAI 386 — 14.03.08-3	December 7, 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: BRYAN Martin (External RS/NB)
Sent: Wednesday, September 22, 2010 12:31 PM
To: Tesfaye, Getachew
Cc: DELANO Karen (RS/NB); ROMINE Judy (RS/NB); BENNETT Kathy (RS/NB); LENTZ Tony (External RS/NB)
Subject: Response to U.S. EPR Design Certification Application RAI No. 386, FSAR Ch. 14, Supplement 5

Getachew,

AREVA NP Inc. provided a schedule for technically correct and complete responses to the 24 questions in RAI No. 386 on June 3, 2010. Supplement 1, Supplement 2, Supplement 3, and Supplement 4 responses to RAI No. 386 were sent on July 15, 2010, August 12, 2010, August 26, 2010, and September 9, 2010, respectively, to provide a revised schedule.

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

The schedule for technically correct and complete responses to the questions has been revised and is provided below:

Question #	Response Date
RAI 386 — 14.02-149	October 28, 2010
RAI 386 — 14.02-150	October 28, 2010
RAI 386 — 14.02-151	October 28, 2010
RAI 386 — 14.02-152	October 28, 2010
RAI 386 — 14.02-153	October 28, 2010
RAI 386 — 14.02-154	October 28, 2010
RAI 386 — 14.02-155	October 28, 2010
RAI 386 — 14.02-156	October 28, 2010
RAI 386 — 14.02-157	October 28, 2010
RAI 386 — 14.02-158	October 28, 2010
RAI 386 — 14.02-159	October 28, 2010
RAI 386 — 14.02-160	October 28, 2010
RAI 386 — 14.03.02-44	October 28, 2010
RAI 386 — 14.03.02-45	October 28, 2010
RAI 386 — 14.03.02-46	October 28, 2010
RAI 386 — 14.03.02-47	October 28, 2010
RAI 386 — 14.03.02-48	October 28, 2010
RAI 386 — 14.03.02-49	October 28, 2010
RAI 386 — 14.03.02-50	October 28, 2010
RAI 386 — 14.03.02-51	October 28, 2010
RAI 386 — 14.03.03-37	October 28, 2010
RAI 386 — 14.03.03-46	October 28, 2010
RAI 386 — 14.03.08-2	October 28, 2010
RAI 386 — 14.03.08-3	October 28, 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: BRYAN Martin (External RS/NB)
Sent: Thursday, September 09, 2010 2:30 PM
To: 'Tesfaye, Getachew'
Cc: DELANO Karen (RS/NB); ROMINE Judy (RS/NB); BENNETT Kathy (RS/NB); LENTZ Tony (External RS/NB)
Subject: Response to U.S. EPR Design Certification Application RAI No. 386, FSAR Ch. 14, Supplement 4

Getachew,

AREVA NP Inc. provided a schedule for technically correct and complete responses to the 24 questions in RAI No. 386 on June 3, 2010.

AREVA NP Inc. provided technically correct and complete draft responses to 11 of the 24 questions in "RAI 386 Supplement 1 Response – DRAFT.pdf" on July 8, 2010. A revised schedule was provided in Supplement 1 on July 15, 2010, in Supplement 2 on August 12, 2010, and in Supplement 3 on August 26, 2010. To allow time for interaction between AREVA and the NRC staff, a revised schedule for submittal of final responses is provided in this e-mail.

The schedule for technically correct and complete responses to the questions has been revised and is provided below:

Question #	Response Date
RAI 386 — 14.02-149	October 28, 2010
RAI 386 — 14.02-150	October 28, 2010
RAI 386 — 14.02-151	October 14, 2010
RAI 386 — 14.02-152	October 14, 2010
RAI 386 — 14.02-153	October 28, 2010
RAI 386 — 14.02-154	October 28, 2010
RAI 386 — 14.02-155	October 28, 2010
RAI 386 — 14.02-156	October 14, 2010
RAI 386 — 14.02-157	October 28, 2010
RAI 386 — 14.02-158	October 14, 2010
RAI 386 — 14.02-159	October 14, 2010
RAI 386 — 14.02-160	October 28, 2010
RAI 386 — 14.03.02-44	September 23, 2010
RAI 386 — 14.03.02-45	September 23, 2010
RAI 386 — 14.03.02-46	October 28, 2010
RAI 386 — 14.03.02-47	October 28, 2010
RAI 386 — 14.03.02-48	October 28, 2010
RAI 386 — 14.03.02-49	September 23, 2010
RAI 386 — 14.03.02-50	September 23, 2010
RAI 386 — 14.03.02-51	September 23, 2010
RAI 386 — 14.03.03-37	September 23, 2010
RAI 386 — 14.03.03-46	October 28, 2010
RAI 386 — 14.03.08-2	September 23, 2010
RAI 386 — 14.03.08-3	September 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: BRYAN Martin (External RS/NB)
Sent: Thursday, August 26, 2010 8:27 PM
To: 'Tesyfaye, Getachew'
Cc: DELANO Karen (RS/NB); ROMINE Judy (RS/NB); BENNETT Kathy (RS/NB); LENTZ Tony (External RS/NB)
Subject: Response to U.S. EPR Design Certification Application RAI No. 386, FSAR Ch. 14, Supplement 3

Getachew,

AREVA NP Inc. provided a schedule for technically correct and complete responses to the 24 questions in RAI No. 386 on June 3, 2010.

AREVA NP Inc. provided technically correct and complete draft responses to 11 of the 24 questions in "RAI 386 Supplement 1 Response – DRAFT.pdf" on July 8, 2010. A revised schedule was provided in Supplement 1 on July 15, 2010 and in Supplement 2 on August 12, 2010. To allow time for interaction between AREVA and the NRC staff, a revised schedule for submittal of final responses is provided in this e-mail.

The schedule for technically correct and complete responses has been revised and is provided below:

Question #	Response Date
RAI 386 — 14.02-149	September 9, 2010
RAI 386 — 14.02-150	September 9, 2010
RAI 386 — 14.02-151	October 14, 2010
RAI 386 — 14.02-152	October 14, 2010
RAI 386 — 14.02-153	September 9, 2010
RAI 386 — 14.02-154	September 9, 2010
RAI 386 — 14.02-155	September 9, 2010
RAI 386 — 14.02-156	October 14, 2010
RAI 386 — 14.02-157	September 9, 2010
RAI 386 — 14.02-158	October 14, 2010
RAI 386 — 14.02-159	October 14, 2010
RAI 386 — 14.02-160	September 9, 2010
RAI 386 — 14.03.02-44	September 23, 2010
RAI 386 — 14.03.02-45	September 23, 2010
RAI 386 — 14.03.02-46	September 9, 2010
RAI 386 — 14.03.02-47	September 9, 2010
RAI 386 — 14.03.02-48	September 9, 2010
RAI 386 — 14.03.02-49	September 23, 2010
RAI 386 — 14.03.02-50	September 23, 2010
RAI 386 — 14.03.02-51	September 23, 2010
RAI 386 — 14.03.03-37	September 23, 2010
RAI 386 — 14.03.03-46	September 9, 2010
RAI 386 — 14.03.08-2	September 23, 2010
RAI 386 — 14.03.08-3	September 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: BRYAN Martin (EXT)
Sent: Thursday, August 12, 2010 6:02 PM
To: 'Tesfaye, Getachew'
Cc: DELANO Karen (RS/NB); ROMINE Judy (RS/NB); BENNETT Kathy (RS/NB); LENTZ Tony F (EXT)
Subject: Response to U.S. EPR Design Certification Application RAI No. 386, FSAR Ch. 14, Supplement 2

Getachew,

AREVA NP Inc. provided a schedule for technically correct and complete responses to the 24 questions in RAI No. 386 on June 3, 2010. A revised schedule was provided in Supplement 1 on July 15, 2010.

AREVA NP Inc. provided technically correct and complete DRAFT responses to 7 of the 24 questions in "RAI 386 Supplement 1 Response – DRAFT.pdf" on July 8, 2010. To allow time for interaction between AREVA and the NRC staff, a revised schedule for submittal of final responses for these 7 questions is provided in this e-mail.

The schedule for technically correct and complete responses to the questions has been revised and is provided below:

Question #	Response Date
RAI 386 — 14.02-149	September 9, 2010
RAI 386 — 14.02-150	September 9, 2010
RAI 386 — 14.02-151	August 26, 2010
RAI 386 — 14.02-152	August 26, 2010
RAI 386 — 14.02-153	September 9, 2010
RAI 386 — 14.02-154	September 9, 2010
RAI 386 — 14.02-155	September 9, 2010
RAI 386 — 14.02-156	August 26, 2010
RAI 386 — 14.02-157	September 9, 2010
RAI 386 — 14.02-158	August 26, 2010
RAI 386 — 14.02-159	August 26, 2010
RAI 386 — 14.02-160	September 9, 2010
RAI 386 — 14.03.02-44	August 26, 2010
RAI 386 — 14.03.02-45	August 26, 2010
RAI 386 — 14.03.02-46	August 26, 2010
RAI 386 — 14.03.02-47	August 26, 2010
RAI 386 — 14.03.02-48	August 26, 2010
RAI 386 — 14.03.02-49	August 26, 2010
RAI 386 — 14.03.02-50	August 26, 2010
RAI 386 — 14.03.02-51	August 26, 2010
RAI 386 — 14.03.03-37	August 26, 2010
RAI 386 — 14.03.03-46	August 26, 2010
RAI 386 — 14.03.08-2	August 26, 2010
RAI 386 — 14.03.08-3	August 26, 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: BRYAN Martin (EXT)
Sent: Thursday, July 15, 2010 1:03 PM
To: 'Tefaye, Getachew'
Cc: DELANO Karen V (AREVA NP INC); ROMINE Judy (AREVA NP INC); BENNETT Kathy A (OFR) (AREVA NP INC); LENTZ Tony F (EXT)
Subject: Response to U.S. EPR Design Certification Application RAI No. 386, FSAR Ch. 14, Supplement 1

Getachew,

AREVA NP Inc. provided a schedule for technically correct and complete responses to the 24 questions in RAI No. 386 on June 3, 2010.

AREVA NP Inc. provided technically correct and complete DRAFT responses to 7 of the 24 questions in RAI No. 386 on July 8, 2010. To allow additional time for interaction between AREVA and the NRC staff, a revised schedule for submittal of final responses for these 7 questions is provided in this e-mail (386-14.02-149, 150, 153, 154, 155, 157 and 160).

The schedule for technically correct and complete responses to the questions has been revised and is provided below:

Question #	Response Date
RAI 386 — 14.02-149	August 12, 2010
RAI 386 — 14.02-150	August 12, 2010
RAI 386 — 14.02-151	August 26, 2010
RAI 386 — 14.02-152	August 26, 2010
RAI 386 — 14.02-153	August 12, 2010
RAI 386 — 14.02-154	August 12, 2010
RAI 386 — 14.02-155	August 12, 2010
RAI 386 — 14.02-156	August 26, 2010
RAI 386 — 14.02-157	August 12, 2010
RAI 386 — 14.02-158	August 26, 2010
RAI 386 — 14.02-159	August 26, 2010
RAI 386 — 14.02-160	August 12, 2010
RAI 386 — 14.03.02-44	August 26, 2010
RAI 386 — 14.03.02-45	August 26, 2010
RAI 386 — 14.03.02-46	August 26, 2010
RAI 386 — 14.03.02-47	August 26, 2010
RAI 386 — 14.03.02-48	August 26, 2010
RAI 386 — 14.03.02-49	August 26, 2010
RAI 386 — 14.03.02-50	August 26, 2010
RAI 386 — 14.03.02-51	August 26, 2010
RAI 386 — 14.03.03-37	August 26, 2010
RAI 386 — 14.03.03-46	August 26, 2010
RAI 386 — 14.03.08-2	August 26, 2010
RAI 386 — 14.03.08-3	August 26, 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: BRYAN Martin (EXT)
Sent: Thursday, June 03, 2010 7:02 PM
To: 'Tesfaye, Getachew'
Cc: DELANO Karen V (AREVA NP INC); ROMINE Judy (AREVA NP INC); BENNETT Kathy A (OFR) (AREVA NP INC); LENTZ Tony F (EXT); RYAN Tom (AREVA NP INC)
Subject: Response to U.S. EPR Design Certification Application RAI No. 386(4306,4418,4532,4349,2666,4512,4341), FSAR Ch. 14

Getachew,

Attached please find AREVA NP Inc.'s response to the subject request for additional information (RAI). The attached file, "RAI 386 Response US EPR DC.pdf" provides a schedule since a technically correct and complete response to the 24 questions is not provided.

The following table indicates the respective pages in the response document, "RAI 386 Response US EPR DC.pdf," that contain AREVA NP's response to the subject questions.

Question #	Start Page	End Page
RAI 386 — 14.02-149	2	2
RAI 386 — 14.02-150	3	3
RAI 386 — 14.02-151	4	4
RAI 386 — 14.02-152	5	5
RAI 386 — 14.02-153	6	6
RAI 386 — 14.02-154	7	7
RAI 386 — 14.02-155	8	8
RAI 386 — 14.02-156	9	9
RAI 386 — 14.02-157	10	10
RAI 386 — 14.02-158	11	11
RAI 386 — 14.02-159	12	12
RAI 386 — 14.02-160	13	13
RAI 386 — 14.03.02-44	14	15
RAI 386 — 14.03.02-45	16	16
RAI 386 — 14.03.02-46	17	17
RAI 386 — 14.03.02-47	18	18
RAI 386 — 14.03.02-48	19	19
RAI 386 — 14.03.02-49	20	20
RAI 386 — 14.03.02-50	21	21
RAI 386 — 14.03.02-51	22	22

RAI 386 — 14.03.03-37	23	23
RAI 386 — 14.03.03-46	24	24
RAI 386 — 14.03.08-2	25	26
RAI 386 — 14.03.08-3	27	27

A complete answer is not provided for the 24 questions. The schedule for a technically correct and complete response to these questions is provided below.

Question #	Response Date
RAI 386 — 14.02-149	July 15, 2010
RAI 386 — 14.02-150	July 15, 2010
RAI 386 — 14.02-151	August 26, 2010
RAI 386 — 14.02-152	August 26, 2010
RAI 386 — 14.02-153	July 15, 2010
RAI 386 — 14.02-154	July 15, 2010
RAI 386 — 14.02-155	July 15, 2010
RAI 386 — 14.02-156	August 26, 2010
RAI 386 — 14.02-157	July 15, 2010
RAI 386 — 14.02-158	August 26, 2010
RAI 386 — 14.02-159	August 26, 2010
RAI 386 — 14.02-160	July 15, 2010
RAI 386 — 14.03.02-44	August 26, 2010
RAI 386 — 14.03.02-45	August 26, 2010
RAI 386 — 14.03.02-46	August 26, 2010
RAI 386 — 14.03.02-47	August 26, 2010
RAI 386 — 14.03.02-48	August 26, 2010
RAI 386 — 14.03.02-49	August 26, 2010
RAI 386 — 14.03.02-50	August 26, 2010
RAI 386 — 14.03.02-51	August 26, 2010
RAI 386 — 14.03.03-37	August 26, 2010
RAI 386 — 14.03.03-46	August 26, 2010
RAI 386 — 14.03.08-2	August 26, 2010
RAI 386 — 14.03.08-3	August 26, 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: Tuesday, May 04, 2010 1:52 PM

To: ZZ-DL-A-USEPR-DL

Cc: Keim, Andrea; Rasmussen, Richard; Dehmel, Jean-Claude; Bernal, Sara; Roach, Edward; Jeng, David; Hawkins,

Kimberly; Ng, Ching; Dixon-Herrity, Jennifer; Miernicki, Michael; Colaccino, Joseph; ArevaEPRDCPEm Resource

Subject: U.S. EPR Design Certification Application RAI No. 386(4306,4418,4532,4349,2666,4512,4341), FSAR Ch. 14

Attached please find the subject requests for additional information (RAI). A draft of the RAI was provided to you on April 6, 2010, and discussed with your staff on May 4, 2010. Drat RAI Question 14.03.02-47 was 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: 2934

Mail Envelope Properties (1F1CC1BBDC66B842A46CAC03D6B1CD4104530AE9)

Subject: Response to U.S. EPR Design Certification Application RAI No. 386, FSAR Ch. 14, Supplement 13
Sent Date: 5/6/2011 10:42:48 AM
Received Date: 5/6/2011 10:42:53 AM
From: WELLS Russell (AREVA)
Created By: Russell.Wells@areva.com

Recipients:

"LENTZ Tony (EXTERNAL AREVA)" <Tony.Lentz.ext@areva.com>
Tracking Status: None
"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: AUSLYNCMX02.adom.ad.corp

Files	Size	Date & Time
MESSAGE	35653	5/6/2011 10:42:53 AM
RAI 386 Supplement 13 Response US EPR DC.pdf		58135

Options

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

Response to

Request for Additional Information No. 386(4306, 4418, 4532, 4349, 2666, 4512, 4341), Supplement 13

5/4/2010

U.S. EPR Standard Design Certification

AREVA NP Inc.

Docket No. 52-020

SRP Section: 14.02 - Initial Plant Test Program - Design Certification and New License Applicants

SRP Section: 14.03.02 - Structural and Systems Engineering - Inspections, Tests, Analyses, and Acceptance Criteria

SRP Section: 14.03.03 - Piping Systems and Components - Inspections, Tests, Analyses, and Acceptance Criteria

SRP Section: 14.03.08 - Radiation Protection Inspections, Tests, Analyses, and Acceptance Criteria

Application Section: SRP 14.02 (NUREG 0800)

QUESTIONS for Quality and Vendor Branch 2 (ESBWR/ABWR) (CQVB)

QUESTIONS for Health Physics Branch (CHPB)

QUESTIONS for Structural Engineering Branch 2 (ESBWR/ABWR Projects) (SEB2)

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

Question 14.03.03-46:**Follow up to RAI 260, Question 14.03.03-39.**

In its response to RAI 14.03.03-39, the applicant included reference of SQDP, EQDP, or analyses in the ITA and AC for item b of the ITAAC related to the seismic Category I components. In its response, the applicant also stated that this seismic qualification ITAAC were clarified and standardized in the Response to RAI 210, Supplement 1, Question 14.03.02-12. However, the staff found the response not acceptable and there are two concerns.

- 1) In the ITAAC proposed, the applicant did not verify whether the seismic category I components will be located in a seismic Category I building. Thus, the staff requests the applicant to amend the ITA and AC of item b of the ITAAC to reflect that the seismic Category I components should be installed in the seismic Category I building as specified on the construction drawing.
- 2) The applicant proposed in the ITA and AC of item b of the ITAAC that the deviations will be reconciled to the seismic qualification reports (SQDP, EQDP, or analyses). The proposed clarifies that the reconciliation will be performed to compare the deviation with the SQDP, EQDP, or analyses and the staff found this portion of statement is acceptable. However, simply indicating that deviations will be reconciled, as proposed by the applicant, is insufficient. The staff believes that the proper acceptance criteria should be such that the conclusion of reconciliation reflects that the components, including anchorage, are seismically bounded by the tested or analyzed conditions. The staff was aware of and reviewed several RAI Questions (14.03.02-12, 14.03.06-27, 14.03.03-02, and 14.03.04-03) and AREVA's responses related to the Seismic qualification ITAAC. In all the original questions (14.03.06-27 and 14.03.04-03), the applicant was requested to include the statement "equipment including anchorage is seismically bounded by tested or analyzed conditions" in the ITA and AC of item b of the seismic qualification ITAAC. However, AREVA did not make the acceptable changes in the responses to the aforementioned questions. Thus, the applicant is requested to amend the ITA and AC of item b to reflect that "the reconciliation concludes that components identified in Table x.x.x-x, including anchorage, are seismically bounded by the tested or analyzed conditions".

Response to Question 14.03.03-46:

- 1) Justifying the adequacy of the design is a Tier 2 provision. U.S. EPR FSAR Tier 1 verifies that design commitments made in U.S. EPR FSAR Tier 2 are implemented. In U.S. EPR FSAR Tier 1, each system addresses the location of Seismic Category 1 components by verifying the location of the components as listed in the system equipment tables. For example, for the U.S. EPR FSAR Tier 1, Section 2.2.3, safety injection system, the second ITAAC verifies that the equipment is located as listed in U.S. EPR FSAR Tier 1, Table 2.2.3-1. U.S. EPR FSAR Tier 1, Table 2.2.3-1 has a column labeled "Location" that lists the building of which the equipment is installed. ITAAC on the design of those structures are provided separately in the structure sections of U.S. EPR FSAR Tier 1.
- 2) The statement, "is seismically bounded by the tested or analyzed conditions," is difficult to interpret. It is assumed that this phrase is intended to mean that the qualification (test or analysis) conditions bound the installed conditions relative to the seismic design basis. The current U.S. EPR FSAR, Tier 1 seismic ITAAC, related to installation in accordance with the construction drawings, provides the trigger to perform any necessary reconciliation to the

qualified design basis (test or analysis). If required, this reconciliation will involve re-qualification to achieve the result that the qualification bounds the installation.

FSAR Impact:

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