#### **ArevaEPRDCPEm Resource**

From: WILLIFORD Dennis (AREVA) [Dennis.Williford@areva.com]

**Sent:** Friday, June 28, 2013 7:17 PM

To: Snyder, Amy

Cc: Miernicki, Michael; ANDERSON Katherine (EXTERNAL AREVA); DELANO Karen (AREVA);

LEIGHLITER John (AREVA); ROMINE Judy (AREVA); RYAN Tom (AREVA)

Subject: Response to U.S. EPR Design Certification Application RAI No. 155, FSAR Ch 3,

Supplement 18

Amy,

AREVA NP Inc. (AREVA NP) provided responses to 5 of the 78 questions of RAI No. 155 on February 13. 2009. AREVA NP submitted Supplement 1 to the response on March 31, 2009 to address 20 of the remaining 73 questions. AREVA NP submitted Supplement 2 to the response on April 30, 2009, to address 9 of the remaining 53 questions. AREVA NP submitted Supplement 3 to the response on May 29, 2009, to address 20 of the remaining 44 questions. AREVA NP submitted Supplement 4 to the response on June 30, 2009, to address 8 of the remaining 24 questions. AREVA NP submitted Supplement 5 to the response on July 31, 2009, to address 11 of the remaining 16 questions. AREVA NP submitted Supplement 6 to the response on October 30, 2009, to provide new dates for 5 of the remaining 5 questions. AREVA NP submitted Supplement 7 to the response on January 28, 2010, to answer 1 of the remaining 5 questions and provide a new date for 1 of the remaining 5 guestions. AREVA NP submitted Supplement 8 to the response on April 21, 2010, to answer 2 of the remaining 4 questions. AREVA NP submitted a revised schedule for Questions 03.08.01-24 and 03.08.04-06 in Supplements 9, 10 and 11 on June 24, 2010, February 11, 2011 and May 2, 2011, respectively. AREVA NP submitted a revised response for Question 03.08.01-06 in Supplement 12 on May 20, 2011. AREVA NP submitted Supplement 13 on July 8, 2011 to provide revised responses to seven questions. AREVA NP submitted Supplement 14 on December 14, 2011, Supplement 15 on January 25, 2012, and Supplement 16 on February 21, 2012 to provide a revised scheduled for the response to the remaining two questions. AREVA NP submitted Supplement 18 on April 18, 2012 to provide a revised response to Question 03.08.01-20.

To provide the NRC staff updates to all affected responses to questions associated with changes to the current design that need to be supplemented, a revised schedule and response for Questions 03.08.01-13, 3.08.01-20, and 3.08.03-15 has been added to the schedule below. The schedule for the final response to the remaining two questions is unchanged as indicated below.

Question #	<b>Advanced Response Date</b>	NRC Comment Request Date	Final Response Date
RAI 155 — 03.08.01-13	June 28, 2013	August 15, 2013	August 30, 2013
RAI 155 — 03.08.01-20	June 28, 2013	August 15, 2013	August 30, 2013
RAI 155 — 03.08.01-24	June 28, 2013	August 15, 2013	August 30, 2013
RAI 155 — 03.08.03-15	June 28, 2013	August 15, 2013	August 30, 2013
RAI 155 — 03.08.04-06	June 28, 2013	August 15, 2013	August 30, 2013

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, April 18, 2012 8:55 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. 155, FSAR Ch 3, Supplement 17

Getachew,

AREVA NP Inc. (AREVA NP) provided responses to 5 of the 78 questions of RAI No. 155 on February 13, 2009. AREVA NP submitted Supplement 1 to the response on March 31, 2009 to address 20 of the remaining 73 questions. AREVA NP submitted Supplement 2 to the response on April 30, 2009, to address 9 of the remaining 53 questions. AREVA NP submitted Supplement 3 to the response on May 29, 2009, to address 20 of the remaining 44 questions. AREVA NP submitted Supplement 4 to the response on June 30, 2009, to address 8 of the remaining 24 questions. AREVA NP submitted Supplement 5 to the response on July 31, 2009, to address 11 of the remaining 16 questions. AREVA NP submitted Supplement 6 to the response on October 30, 2009, to provide new dates for 5 of the remaining 5 questions. AREVA NP submitted Supplement 7 to the response on January 28, 2010, to answer 1 of the remaining 5 questions and provide a new date for 1 of the remaining 5 questions. AREVA NP submitted Supplement 8 to the response on April 21, 2010, to answer 2 of the remaining 4 questions. AREVA NP submitted a revised schedule for Questions 03.08.01-24 and 03.08.04-06 in Supplements 9, 10 and 11 on June 24, 2010, February 11, 2011 and May 2, 2011, respectively. AREVA NP submitted a revised response for Question 03.08.01-06 in Supplement 12 on May 20, 2011. AREVA NP submitted Supplement 13 on July 8, 2011 to provide revised responses to seven questions. AREVA NP submitted Supplement 14 on December 14, 2011, Supplement 15 on January 25, 2012, and Supplement 16 on February 21, 2012 to provide a revised scheduled for the response to the remaining two questions.

The response to one question (Question 03.08.01-20) has been revised. The attached file, "RAI 155 Supplement 17 Response US EPR DC.pdf" provides the revised response. 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 155 Question 03.08.01-20.

The following table indicates the respective pages in the response document, "RAI 155 Supplement 17 Response US EPR DC.pdf," that contain AREVA NP's response to the subject question.

Question #	Start Page	End Page
RAI 155 — 03.08.01-20	2	12

The schedule for the final response to the remaining two questions is unchanged as indicated below.

Question #	Response Date
RAI 155 — 03.08.01-24	August 30, 2013
RAI 155 — 03.08.04-06	August 30, 2013

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: Tuesday, February 21, 2012 9:24 PM

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. 155, FSAR Ch 3, Supplement 16

Getachew,

AREVA NP Inc. (AREVA NP) provided responses to 5 of the 78 questions of RAI No. 155 on February 13, 2009. AREVA NP submitted Supplement 1 to the response on March 31, 2009 to address 20 of the remaining 73 questions. AREVA NP submitted Supplement 2 to the response on April 30, 2009, to address 9 of the remaining 53 questions. AREVA NP submitted Supplement 3 to the response on May 29, 2009, to address 20 of the remaining 44 questions. AREVA NP submitted Supplement 4 to the response on June 30, 2009, to address 8 of the remaining 24 questions. AREVA NP submitted Supplement 5 to the response on July 31, 2009, to address 11 of the remaining 16 questions. AREVA NP submitted Supplement 6 to the response on October 30, 2009, to provide new dates for 5 of the remaining 5 questions. AREVA NP submitted Supplement 7 to the response on January 28, 2010, to answer 1 of the remaining 5 questions and provide a new date for 1 of the remaining 5 questions. AREVA NP submitted Supplement 8 to the response on April 21, 2010, to answer 2 of the remaining 4 questions. AREVA NP submitted a revised schedule for Questions 03.08.01-24 and 03.08.04-06 in Supplements 9, 10 and 11 on June 24, 2010, February 11, 2011 and May 2, 2011, respectively. AREVA NP submitted a revised response for Question 03.08.01-06 in Supplement 12 on May 20, 2011. AREVA NP submitted Supplement 13 on July 8, 2011 to provide revised responses to seven questions. AREVA NP submitted Supplement 14 on December 14, 2011 to provide a revised scheduled for the response to the remaining two questions. AREVA NP submitted Supplement 15 on January 25, 2012 to provide a revised scheduled for the response to the remaining two questions.

The schedule for the final response to the remaining two questions has been changed as indicated below. This schedule was transmitted to the NRC in AREVA NP letter 12:008 dated February 21, 2012.

Question #	Response Date
RAI 155 — 03.08.01-24	August 30, 2013
RAI 155 — 03.08.04-06	August 30, 2013

#### 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, January 25, 2012 9:55 AM

**To:** Getachew.Tesfaye@nrc.gov

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

Michael.Miernicki@nrc.gov

Subject: Response to U.S. EPR Design Certification Application RAI No. 155, FSAR Ch 3, Supplement 15

#### Getachew.

AREVA NP Inc. (AREVA NP) provided responses to 5 of the 78 questions of RAI No. 155 on February 13. 2009. AREVA NP submitted Supplement 1 to the response on March 31, 2009 to address 20 of the remaining 73 questions. AREVA NP submitted Supplement 2 to the response on April 30, 2009, to address 9 of the remaining 53 questions. AREVA NP submitted Supplement 3 to the response on May 29, 2009, to address 20 of the remaining 44 questions. AREVA NP submitted Supplement 4 to the response on June 30, 2009, to address 8 of the remaining 24 questions. AREVA NP submitted Supplement 5 to the response on July 31, 2009, to address 11 of the remaining 16 questions. AREVA NP submitted Supplement 6 to the response on October 30, 2009, to provide new dates for 5 of the remaining 5 questions. AREVA NP submitted Supplement 7 to the response on January 28, 2010, to answer 1 of the remaining 5 questions and provide a new date for 1 of the remaining 5 questions. AREVA NP submitted Supplement 8 to the response on April 21, 2010, to answer 2 of the remaining 4 questions. AREVA NP submitted a revised schedule for Questions 03.08.01-24 and 03.08.04-06 in Supplements 9, 10 and 11 on June 24, 2010, February 11, 2011 and May 2, 2011, respectively. AREVA NP submitted a revised response for Question 03.08.01-06 in Supplement 12 on May 20, 2011. AREVA NP submitted Supplement 13 on July 8, 2011 to provide revised responses to seven questions. AREVA NP submitted Supplement 14 on December 14, 2011 to provide a revised scheduled for the response to the remaining two questions.

A preliminary revised schedule for technically correct and complete responses to the remaining two questions is provided below. This schedule is being reevaluated and a new supplement with a revised schedule will be transmitted by February 21, 2012.

Question #	Response Date
RAI 155 — 03.08.01-24	February 21, 2012
RAI 155 — 03.08.04-06	February 21, 2012

#### 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, December 14, 2011 10:32 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. 155, FSAR Ch 3, Supplement 14

#### Getachew,

AREVA NP Inc. (AREVA NP) provided responses to 5 of the 78 questions of RAI No. 155 on February 13, 2009. AREVA NP submitted Supplement 1 to the response on March 31, 2009 to address 20 of the remaining 73 questions. AREVA NP submitted Supplement 2 to the response on April 30, 2009, to address 9 of the remaining 53 questions. AREVA NP submitted Supplement 3 to the response on May 29, 2009, to address 20 of the remaining 44 questions. AREVA NP submitted Supplement 4 to the response on June 30, 2009, to address 8 of the remaining 24 questions. AREVA NP submitted Supplement 5 to the response on July 31, 2009, to address 11 of the remaining 16 questions. AREVA NP submitted Supplement 6 to the response on October 30, 2009, to provide new dates for 5 of the remaining 5 questions. AREVA NP submitted Supplement 7 to the response on January 28, 2010, to answer 1 of the remaining 5 questions and provide a new date for 1

of the remaining 5 questions. AREVA NP submitted Supplement 8 to the response on April 21, 2010, to answer 2 of the remaining 4 questions. AREVA NP submitted a revised schedule for Questions 03.08.01-24 and 03.08.04-06 in Supplements 9, 10 and 11 on June 24, 2010, February 11, 2011 and May 2, 2011, respectively. AREVA NP submitted a revised response for Question 03.08.01-06 in Supplement 12 on May 20, 2011. AREVA NP submitted Supplement 13 on July 8, 2011 to provide revised responses to seven questions.

A preliminary revised schedule for technically correct and complete responses to the remaining two questions is provided below. This schedule is being reevaluated and a new supplement with a revised schedule will be transmitted by January 25, 2012.

Question #	Response Date
RAI 155 — 03.08.01-24	January 25, 2012
RAI 155 — 03.08.04-06	January 25, 2012

#### 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, July 08, 2011 9:22 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. 155, FSAR Ch 3, Supplement 13

#### Getachew,

AREVA NP Inc. (AREVA NP) provided responses to 5 of the 78 questions of RAI No. 155 on February 13, 2009. AREVA NP submitted Supplement 1 to the response on March 31, 2009 to address 20 of the remaining 73 questions. AREVA NP submitted Supplement 2 to the response on April 30, 2009, to address 9 of the remaining 53 questions. AREVA NP submitted Supplement 3 to the response on May 29, 2009, to address 20 of the remaining 44 questions. AREVA NP submitted Supplement 4 to the response on June 30, 2009, to address 8 of the remaining 24 questions. AREVA NP submitted Supplement 5 to the response on July 31, 2009, to address 11 of the remaining 16 questions. AREVA NP submitted Supplement 6 to the response on October 30, 2009, to provide new dates for 5 of the remaining 5 questions. AREVA NP submitted Supplement 7 to the response on January 28, 2010, to answer 1 of the remaining 5 questions and provide a new date for 1 of the remaining 5 questions. AREVA NP submitted Supplement 8 to the response on April 21, 2010, to answer 2 of the remaining 4 questions. AREVA NP submitted a revised schedule for Questions 03.08.01-24 and 03.08.04-06 in Supplements 9, 10 and 11 on June 24, 2010, February 11, 2011 and May 2, 2011, respectively. AREVA NP submitted a revised response for Question 03.08.01-06 in Supplement 12 on May 20, 2011.

The responses to 7 questions (Questions 03.08.01-13, 03.08.01-20, 03.08.03-10, 03.08.05-4, 03.08.05-8, 03.08.05-9, and 03.08.05-10) are superseded by the response to RAI 320 Question 03.07.02-63. The attached file, "RAI 155 Supplement 13 Response US EPR DC.pdf" provides the revised responses.

The following table indicates the respective pages in the response document, "RAI 155 Supplement 13 Response US EPR DC.pdf," that contain AREVA NP's response to the subject question.

Question #	Start Page	End Page
RAI 155 — 03.08.01-13	2	5
RAI 155 — 03.08.01-20	6	15
RAI 155 — 03.08.03-10	16	16
RAI 155 — 03.08.05-04	17	18
RAI 155 — 03.08.05-08	19	21
RAI 155 — 03.08.05-09	22	22
RAI 155 — 03.08.05-10	23	23

The schedule for technically correct and complete response to the remaining questions is unchanged and is provided below.

Question #	Response Date
RAI 155 — 03.08.01-24	December 28, 2011
RAI 155 — 03.08.04-06	December 28, 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 11:28 AM

**To:** Tesfaye, Getachew

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

(External RS/NB); WELLS Russell (RS/NB)

Subject: Response to U.S. EPR Design Certification Application RAI No. 155, FSAR Ch 3, Supplement 12

#### Getachew.

AREVA NP Inc. (AREVA NP) provided responses to 5 of the 78 questions of RAI No. 155 on February 13, 2009. AREVA NP submitted Supplement 1 to the response on March 31, 2009 to address 20 of the remaining 73 questions. AREVA NP submitted Supplement 2 to the response on April 30, 2009, to address 9 of the remaining 53 questions. AREVA NP submitted Supplement 3 to the response on May 29, 2009, to address 20 of the remaining 44 questions. AREVA NP submitted Supplement 4 to the response on June 30, 2009, to address 8 of the remaining 24 questions. AREVA NP submitted Supplement 5 to the response on July 31, 2009, to address 11 of the remaining 16 questions. AREVA NP submitted Supplement 6 to the response on October 30, 2009, to provide new dates for 5 of the remaining 5 questions. AREVA NP submitted Supplement 7 to the response on January 28, 2010, to answer 1 of the remaining 5 questions and provide a new date for 1 of the remaining 5 questions. AREVA NP submitted Supplement 8 to the response on April 21, 2010, to answer 2 of the remaining 4 questions. AREVA NP submitted a revised schedule for Questions

03.08.01-24 and 03.08.04-06 in Supplements 9, 10 and 11 on June 24, 2010, February 11, 2011 and May 2, 2011, respectively.

A final response to Question 03.08.01-06 was submitted in RAI 155 Supplement 8, April 21, 2010. To address NRC comments received during the U.S. EPR FSAR Section 3.8 audit held February 14 – 17, 2011, the response to Question 03.08.01-06 has been revised.

The attached file, "RAI 155 Supplement 12 Response US EPR DC.pdf" provides a technically correct, complete and revised FINAL response to Question 03.08.01-06, as committed.

The following table indicates the respective pages in the response document, "RAI 155 Supplement 12 Response US EPR DC.pdf," that contains AREVA NP's response to the subject question.

Question #	Start Page	End Page
RAI 155 — 03.08.01-06	2	3

The schedule for the technically correct and complete response to the remaining questions is unchanged and is provided below.

Question #	Response Date
RAI 155 — 03.08.01-24	December 28, 2011
RAI 155 — 03.08.04-06	December 28, 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, May 02, 2011 7:26 AM

**To:** Tesfaye, Getachew

Cc: CORNELL Veronica (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. 155, FSAR Ch 3, Supplement 11

Getachew.

AREVA NP Inc. (AREVA NP) provided responses to 5 of the 78 questions of RAI No. 155 on February 13, 2009. AREVA NP submitted Supplement 1 to the response on March 31, 2009 to address 20 of the remaining 73 questions. AREVA NP submitted Supplement 2 to the response on April 30, 2009, to address 9 of the remaining 53 questions. AREVA NP submitted Supplement 3 to the response on May 29, 2009, to address 20 of the remaining 44 questions. AREVA NP submitted Supplement 4 to the response on June 30, 2009, to address 8 of the remaining 24 questions. AREVA NP submitted Supplement 5 to the response on July 31,

2009, to address 11 of the remaining 16 questions. AREVA NP submitted Supplement 6 to the response on October 30, 2009, to provide new dates for 5 of the remaining 5 questions. AREVA NP submitted Supplement 7 to the response on January 28, 2010, to answer 1 of the remaining 5 questions and provide a new date for 1 of the remaining 5 questions. AREVA NP submitted Supplement 8 to the response on April21, 2010, to answer 2 of the remaining 4 questions. AREVA NP submitted a revised schedule for Questions 03.08.01-24 and 03.08.04-06 in Supplements 9 and 10 on June 24, 2010 and February 11, 2011, respectively.

Due to changes in the schedule for FSAR Sections 3.7 and 3.8 as discussed with NRC, the schedule for Questions 03.08.01-24 and 03.08.04-06 is being revised.

The schedule for the technically correct and complete response to the remaining questions is provided below.

Question #	Response Date
RAI 155 — 03.08.01-24	December 28, 2011
RAI 155 — 03.08.04-06	December 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:** BRYAN Martin (External RS/NB) **Sent:** Friday, February 11, 2011 2:32 PM

**To:** 'Tesfaye, Getachew'

Cc: DELANO Karen (RS/NB); ROMINE Judy (RS/NB); BENNETT Kathy (RS/NB); CORNELL Veronica (External RS/NB)

Subject: Response to U.S. EPR Design Certification Application RAI No. 155, FSAR Ch 3, Supplement 10

#### Getachew,

AREVA NP Inc. (AREVA NP) provided responses to 5 of the 78 questions of RAI No. 155 on February 13, 2009. AREVA NP submitted Supplement 1 to the response on March 31, 2009 to address 20 of the remaining 73 questions. AREVA NP submitted Supplement 2 to the response on April 30, 2009, to address 9 of the remaining 53 questions. AREVA NP submitted Supplement 3 to the response on May 29, 2009, to address 20 of the remaining 44 questions. AREVA NP submitted Supplement 4 to the response on June 30, 2009, to address 8 of the remaining 24 questions. AREVA NP submitted Supplement 5 to the response on July 31, 2009, to address 11 of the remaining 16 questions. AREVA NP submitted Supplement 6 to the response on October 30, 2009, to provide new dates for 5 of the remaining 5 questions. AREVA NP submitted Supplement 7 to the response on January 28, 2010, to answer 1 of the remaining 5 questions and provide a new date for 1 of the remaining 5 questions. AREVA NP submitted Supplement 8 to the response on April 21, 2010, to answer 2 of the remaining 4 questions. On June 24, 2010, AREVA NP submitted Supplement 9 to provide a revised schedule for Questions 03.08.01-24 and 03.08.04-06.

The schedule for Questions 03.08.01-24 and 03.08.04-06 has been changed.

The revised schedule for the technically correct and complete response to the remaining questions is provided below.

Question #	Response Date
RAI 155 — 03.08.01-24	July 22, 2011
RAI 155 — 03.08.04-06	July 22, 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 (EXT)

**Sent:** Thursday, June 24, 2010 1:02 PM

To: 'Tesfaye, Getachew'

Cc: DELANO Karen (RS/NB); ROMINE Judy (RS/NB); BENNETT Kathy (RS/NB); VAN NOY Mark (EXT); CORNELL Veronica

(External RS/NB); RYAN Tom (RS/NB); GARDNER Darrell (RS/NB)

Subject: Response to U.S. EPR Design Certification Application RAI No. 155, FSAR Ch 3, Supplement 9

Getachew,

AREVA NP Inc. (AREVA NP) provided responses to 5 of the 78 questions of RAI No. 155 on February 13, 2009. AREVA NP submitted Supplement 1 to the response on March 31, 2009 to address 20 of the remaining 73 questions. AREVA NP submitted Supplement 2 to the response on April 30, 2009, to address 9 of the remaining 53 questions. AREVA NP submitted Supplement 3 to the response on May 29, 2009, to address 20 of the remaining 44 questions. AREVA NP submitted Supplement 4 to the response on June 30, 2009, to address 8 of the remaining 24 questions. AREVA NP submitted Supplement 5 to the response on July 31, 2009, to address 11 of the remaining 16 questions. AREVA NP submitted Supplement 6 to the response on October 30, 2009, to provide new dates for 5 of the remaining 5 questions. AREVA NP submitted Supplement 7 to the response on January 28, 2010, to answer 1 of the remaining 5 questions and provide a new date for 1 of the remaining 5 questions. AREVA NP submitted Supplement 8 to the response on April 21, 2010, to answer 2 of the remaining 4 questions.

Based upon the civil/structural re-planning activities and revised RAI response schedule presented to the NRC during the June 9, 2010, Public Meeting, and to allow time to interact with the NRC on the responses, the schedule for the remaining two questions has been changed.

The revised schedule for the technically correct and complete response to these questions is provided below.

Question #	Response Date

RAI 155 — 03.08.01-24	May 25, 2011
RAI 155 — 03.08.04-06	May 25, 2011

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:** Wednesday, April 21, 2010 12:56 PM

**To:** 'Tesfaye, Getachew'

Cc: DELANO Karen V (AREVA NP INC); ROMINE Judy (AREVA NP INC); BENNETT Kathy A (OFR) (AREVA NP INC); VAN

NOY Mark (EXT)

Subject: Response to U.S. EPR Design Certification Application RAI No. 155, FSAR Ch 3, Supplement 8

Getachew,

AREVA NP Inc. (AREVA NP) provided responses to 5 of the 78 questions of RAI No. 155 on February 13, 2009. AREVA NP submitted Supplement 1 to the response on March 31, 2009 to address 20 of the remaining 73 questions. AREVA NP submitted Supplement 2 to the response on April 30, 2009, to address 9 of the remaining 53 questions. AREVA NP submitted Supplement 3 to the response on May 29, 2009, to address 20 of the remaining 44 questions. AREVA NP submitted Supplement 4 to the response on June 30, 2009, to address 8 of the remaining 24 questions. AREVA NP submitted Supplement 5 to the response on July 31, 2009, to address 11 of the remaining 16 questions. AREVA NP submitted Supplement 6 to the response on October 30, 2009, to provide new dates for 5 of the remaining 5 questions. AREVA NP submitted Supplement 7 to the response on January 28, 2010, to answer 1 of the remaining 5 questions and provide a new date for 1 of the remaining 5 questions. The attached file, "RAI 155 Supplement 8 Response US EPR DC.pdf" provides a technically correct and complete response to 2 of the remaining 4 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 155 Questions 03.08.01-3 and 03.08.01-6.

The following table indicates the respective pages in the response document, "RAI 155 Supplement 8 Response US EPR DC.pdf" that contain AREVA NP's response to the subject questions.

Question #	Start Page	End Page
RAI 155 — 03.08.01-3	2	3
RAI 155 — 03.08.01-6	4	5

The schedule for technically correct and complete responses to the remaining 2 questions is unchanged and provided below:

Question #	Response Date	
RAI 155 — 03.08.01-24	August 3, 2010	
RAI 155 — 03.08.04-06	August 3, 2010	

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: DUNCAN Leslie E (AREVA NP INC) Sent: Thursday, January 28, 2010 7:40 PM

To: 'Tesfaye, Getachew'

**Cc:** DELANO Karen V (AREVA NP INC); BENNETT Kathy A (OFR) (AREVA NP INC); VAN NOY Mark (EXT) **Subject:** Response to U.S. EPR Design Certification Application RAI No. 155, FSAR Ch 3, Supplement 7

#### Getachew.

AREVA NP Inc. (AREVA NP) provided responses to 5 of the 78 questions of RAI No. 155 on February 13, 2009. AREVA NP submitted Supplement 1 to the response on March 31, 2009 to address 20 of the remaining 73 questions. AREVA NP submitted Supplement 2 to the response on April 30, 2009, to address 9 of the remaining 53 questions. AREVA NP submitted Supplement 3 to the response on May 29, 2009, to address 20 of the remaining 44 questions. AREVA NP submitted Supplement 4 to the response on June 30, 2009, to address 8 of the remaining 24 questions. AREVA NP submitted Supplement 5 to the response on July 31, 2009, to address 11 of the remaining 16 questions. AREVA NP submitted Supplement 6 to the response on October 30, 2009, to provide new dates for 5 of the remaining 5 questions. The attached file, "RAI 155 Supplement 7 Response US EPR DC.pdf" provides a technically correct and complete response to 1 of the remaining 5 questions, as committed.

The response for 1 of the 2 questions committed for in Supplement 7 has been deferred for submittal in conjunction with Supplement 8 because of its dependency on work that is not yet complete.

The following table indicates the respective pages in the response document, "RAI 155 Supplement 7 Response US EPR DC.pdf" that contain AREVA NP's response to the subject question.

Question #	Start Page	End Page
RAI 155 — 03.08.01-20	2	11

The schedule for technically correct and complete responses to the remaining 4 questions is changed and provided below:

Question #	Response Date
RAI 155 – 03.08.01-3	April 21, 2010
RAI 155 – 03.08.01-6	April 21, 2010
RAI 155 – 03.08.01-24	August 3, 2010
RAI 155 – 03.08.04-6	August 3, 2010

Sincerely,

Les Duncan
Licensing Engineer
AREVA NP Inc.
An AREVA and Siemens Company

Tel: (434) 832-2849 Leslie.Duncan@areva.com **From:** WELLS Russell D (AREVA NP INC) **Sent:** Friday, October 30, 2009 12:57 PM

**To:** 'Getachew Tesfaye'

Cc: Pederson Ronda M (AREVA NP INC); BENNETT Kathy A (OFR) (AREVA NP INC); DELANO Karen V (AREVA NP INC)

Subject: Response to U.S. EPR Design Certification Application RAI No. 155, FSAR Ch 3, Supplement 6

Getachew,

AREVA NP Inc. (AREVA NP) is unable to provide a response for RAI 155 Supplement 6 at this time. As discussed with the NRC staff, new seismic analyses using an embedded Finite Element – SASSI model are being finalized, which yields a new in-structure-seismic-response-spectra that will provide a more accurate assessment of sliding and overturning and improve high frequency response analysis.

The revised schedule for technically correct and complete responses to the remaining 5 questions is provided below:

Question #	Response Date
RAI 155 — 03.08.01-3	January 28, 2010
RAI 155 — 03.08.01-6	April 21, 2010
RAI 155 — 03.08.01-20	January 28, 2010
RAI 155 — 03.08.01-24	August 3, 2010
RAI 155 — 03.08.04-6	August 3, 2010

Sincerely,

(Russ Wells on behalf of)

### Ronda Pederson

ronda.pederson@areva.com

Licensing Manager, U.S. EPR Design Certification

New Plants Deployment

AREVA NP, Inc.

An AREVA and Siemens company

3315 Old Forest Road

Lynchburg, VA 24506-0935

Phone: 434-832-3694

Cell: 434-841-8788

From: Pederson Ronda M (AREVA NP INC) Sent: Friday, July 31, 2009 4:15 PM

**To:** 'Tesfaye, Getachew'

**Cc:** BENNETT Kathy A (OFR) (AREVA NP INC); DELANO Karen V (AREVA NP INC); VAN NOY Mark (EXT) **Subject:** Response to U.S. EPR Design Certification Application RAI No. 155, FSAR Ch 3, Supplement 5

#### Getachew,

AREVA NP Inc. (AREVA NP) provided responses to 5 of the 78 questions of RAI No. 155 on February 13, 2009. AREVA NP submitted Supplement 1 to the response on March 31, 2009 to address 20 of the remaining questions. AREVA NP submitted Supplement 2 to the response on April 30, 2009, to address 9 of the remaining questions. AREVA NP submitted Supplement 3 to the response on May 29, 2009, to address 20 of the remaining questions. AREVA NP submitted Supplement 4 to the response on June 30, 2009, to address 8 of the remaining questions. The attached file, "RAI 155 Supplement 5 Response US EPR DC.pdf" provides technically correct and complete responses to 11 of the remaining 16 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 155 Supplement 5 Questions 03.08.02-2, 03.08.02-7, 03.08.03-4, 03.08.03-17,03.08.05-1, 03.08.05-8, and 03.08.05-12.

The following table indicates the respective pages in the response document, "RAI 155 Supplement 5 Response US EPR DC.pdf" that contain AREVA NP's response to the subject questions.

Question #	Start Page	End Page
RAI 155 — 03.08.02-02	2	2
RAI 155 — 03.08.02-07	3	3
RAI 155 — 03.08.02-08	4	4
RAI 155 — 03.08.03-04	5	5
RAI 155 — 03.08.03-16	6	7
RAI 155 — 03.08.03-17	8	9
RAI 155 — 03.08.05-01	10	10
RAI 155 — 03.08.05-08	11	16
RAI 155 — 03.08.05-10	17	18
RAI 155 — 03.08.05-12	19	19
RAI 155 — 03.08.05-18	20	20

The schedule for technically correct and complete responses to the remaining 5 questions is unchanged and provided below:

Question RAI 155#	Response Date
RAI 155 — 03.08.01-03	October 30, 2009
RAI 155 — 03.08.01-06	October 30, 2009
RAI 155 — 03.08.01-20	October 30, 2009
RAI 155 — 03.08.01-24	October 30, 2009

### Ronda Pederson

ronda.pederson@areva.com

Licensing Manager, U.S. EPR Design Certification

**AREVA NP Inc.** 

An AREVA and Siemens company

3315 Old Forest Road Lynchburg, VA 24506-0935

Phone: 434-832-3694 Cell: 434-841-8788

**From:** WELLS Russell D (AREVA NP INC) **Sent:** Tuesday, June 30, 2009 8:34 PM **To:** 'Getachew Tesfaye'; Miernicki, Michael

Cc: Pederson Ronda M (AREVA NP INC); BENNETT Kathy A (OFR) (AREVA NP INC); DELANO Karen V (AREVA NP INC)

Subject: Response to U.S. EPR Design Certification Application RAI No. 155, FSAR Ch 3, Supplement 4

#### Getachew,

AREVA NP Inc. (AREVA NP) provided responses to 5 of the 78 questions of RAI No. 155 on February 13, 2009. AREVA NP submitted Supplement 1 to the response on March 31, 2009 to address 20 of the remaining 73 questions. AREVA NP submitted Supplement 2 to the response on April 30, 2009, to address 9 of the remaining 53 questions. AREVA NP submitted Supplement 3 to the response on May 29, 2009, to address 20 of the remaining 44 questions. The attached file, "RAI 155 Supplement 4 Response US EPR DC.pdf" provides technically correct and complete responses to 8 of the remaining 24 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 155 Questions 03.08.05-14 and 03.08.02-1.

The following table indicates the respective pages in the response document, "RAI 155 Supplement 4 Response US EPR DC.pdf," that contain AREVA NP's response to the subject questions.

Question #	Start Page	End Page
RAI 155 — 03.08.01-11	2	2
RAI 155 — 03.08.02-1	3	3
RAI 155 — 03.08.02-4	4	4
RAI 155 — 03.08.05-7	5	8
RAI 155 — 03.08.05-13	9	10
RAI 155 — 03.08.05-14	11	13
RAI 155 — 03.08.05-15	14	14
RAI 155 — 03.08.05-16	15	15
RAI 155 — 03.08.05-18	16	16

The schedule for technically correct and complete responses to the remaining 16 questions is unchanged, with the exception of question 03.08.05-18, and is provided below. The schedule for the response to question 03.08.05-18 has been changed to July 31, 2009.

Question RAI 155#	Response Date
RAI 155 — 03.08.01-03	October 30, 2009
RAI 155 — 03.08.01-06	October 30, 2009
RAI 155 — 03.08.01-20	October 30, 2009
RAI 155 — 03.08.01-24	October 30, 2009
RAI 155 — 03.08.02-02	July 31, 2009
RAI 155 — 03.08.02-07	July 31, 2009
RAI 155 — 03.08.02-08	July 31, 2009
RAI 155 — 03.08.03-04	July 31, 2009
RAI 155 — 03.08.03-16	July 31, 2009
RAI 155 — 03.08.03-17	July 31, 2009
RAI 155 — 03.08.04-06	October 30, 2009
RAI 155 — 03.08.05-01	July 31, 2009
RAI 155 — 03.08.05-08	July 31, 2009
RAI 155 — 03.08.05-10	July 31, 2009
RAI 155 — 03.08.05-12	July 31, 2009
RAI 155 — 03.08.05-18	July 31, 2009

(Russ Wells on behalf of)

## Ronda Pederson

ronda.pederson@areva.com

Licensing Manager, U.S. EPR Design Certification

New Plants Deployment

AREVA NP, Inc.

An AREVA and Siemens company

3315 Old Forest Road

Lynchburg, VA 24506-0935

Phone: 434-832-3694

Cell: 434-841-8788

From: Pederson Ronda M (AREVA NP INC)

**Sent:** Friday, May 29, 2009 9:49 PM

**To:** Getachew Tesfaye

Cc: BENNETT Kathy A (OFR) (AREVA NP INC); DELANO Karen V (AREVA NP INC); VAN NOY Mark (EXT)

Subject: Response to U.S. EPR Design Certification Application RAI No. 155, Supplement 3

#### Getachew,

AREVA NP Inc. (AREVA NP) provided responses to 5 of the 78 questions of RAI No. 155 on February 13, 2009. AREVA NP submitted Supplement 1 to the response on March 31, 2009, to address 20 of the remaining questions. AREVA NP submitted Supplement 2 to the response on April 30, 2009, to address 9 of the remaining questions. The attached file, "RAI 155 Supplement 3 Response US EPR DC.pdf" provides technically correct and complete responses to 20 of the remaining 44 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 155 Questions 03.08.01-8, 03.08.01-10, 03.08.01-12, 03.08.03-3, 03.08.03-6, 03.08.03-10, 03.08.04-3, and 03.08.05-6.

The following table indicates the respective pages in the response document, "RAI 155 Supplement 3 Response US EPR DC.pdf" that contain AREVA NP's response to the subject questions.

Question #	Start Page	End Page
RAI 155 — 03.08.01-8	2	9
RAI 155 — 03.08.01-9	10	10
RAI 155 — 03.08.01-10	11	17
RAI 155 — 03.08.01-12	18	19
RAI 155 — 03.08.01-16	20	21
RAI 155 — 03.08.01-22	22	24
RAI 155 — 03.08.01-27	25	26
RAI 155 — 03.08.02-5	27	27
RAI 155 — 03.08.02-6	28	31
RAI 155 — 03.08.02-10	32	32
RAI 155 — 03.08.03-3	33	35
RAI 155 — 03.08.03-6	36	37
RAI 155 — 03.08.03-10	38	38
RAI 155 — 03.08.03-11	39	40
RAI 155 — 03.08.03-12	41	41
RAI 155 — 03.08.04-3	42	45
RAI 155 — 03.08.04-4	46	47
RAI 155 — 03.08.04-5	48	48
RAI 155 — 03.08.05-2	49	50
RAI 155 — 03.08.05-6	51	52

The schedule for technically correct and complete responses to the remaining 24 questions is unchanged and provided below:

Question RAI 155 #	Response Date
RAI 155 — 03.08.01-03	October 30, 2009
RAI 155 — 03.08.01-06	October 30, 2009
RAI 155 — 03.08.01-11	June 30, 2009
RAI 155 — 03.08.01-20	October 30, 2009
RAI 155 — 03.08.01-24	October 30, 2009
RAI 155 — 03.08.02-01	June 30, 2009
RAI 155 — 03.08.02-02	July 31, 2009

RAI 155 — 03.08.02-04	June 30, 2009
	,
RAI 155 — 03.08.02-07	July 31, 2009
RAI 155 — 03.08.02-08	July 31, 2009
RAI 155 — 03.08.03-04	July 31, 2009
RAI 155 — 03.08.03-16	July 31, 2009
RAI 155 — 03.08.03-17	July 31, 2009
RAI 155 — 03.08.04-06	October 30, 2009
RAI 155 — 03.08.05-01	July 31, 2009
RAI 155 — 03.08.05-07	June 30, 2009
RAI 155 — 03.08.05-08	July 31, 2009
RAI 155 — 03.08.05-10	July 31, 2009
RAI 155 — 03.08.05-12	July 31, 2009
RAI 155 — 03.08.05-13	June 30, 2009
RAI 155 — 03.08.05-14	June 30, 2009
RAI 155 — 03.08.05-15	June 30, 2009
RAI 155 — 03.08.05-16	June 30, 2009
RAI 155 — 03.08.05-18	June 30, 2009

## Ronda Pederson

ronda.pederson@areva.com

Licensing Manager, U.S. EPR Design Certification

AREVA NP Inc.

An AREVA and Siemens company

3315 Old Forest Road Lynchburg, VA 24506-0935 Phone: 434-832-3694

Cell: 434-841-8788

From: Pederson Ronda M (AREVA NP INC) Sent: Thursday, April 30, 2009 9:16 PM To: Getachew Tesfaye (gxt2@nrc.gov)

**Cc:** BENNETT Kathy A (OFR) (AREVA NP INC); DELANO Karen V (AREVA NP INC); VAN NOY Mark (EXT) **Subject:** Response to U.S. EPR Design Certification Application RAI No. 155, Supplement 2 (part 4 of 4)

Getachew,

Response file, "RAI 155 Supplement 2 Response US EPR DC (Part 4 of 4).pdf" is attached.

Sincerely,

### Ronda Pederson

ronda.pederson@areva.com

Licensing Manager, U.S. EPR Design Certification

**AREVA NP Inc.** 

An AREVA and Siemens company

3315 Old Forest Road Lynchburg, VA 24506-0935

Phone: 434-832-3694 Cell: 434-841-8788

From: Pederson Ronda M (AREVA NP INC)
Sent: Thursday, April 30, 2009 9:12 PM
To: Getachew Tesfaye (gxt2@nrc.gov)

**Cc:** BENNETT Kathy A (OFR) (AREVA NP INC); DELANO Karen V (AREVA NP INC); VAN NOY Mark (EXT) **Subject:** Response to U.S. EPR Design Certification Application RAI No. 155, Supplement 2 (part 3 of 4)

Getachew,

Response file, "RAI 155 Supplement 2 Response US EPR DC (Part 3 of 4).pdf" is attached.

Sincerely,

### Ronda Pederson

ronda.pederson@areva.com

Licensing Manager, U.S. EPR Design Certification

**AREVA NP Inc.** 

An AREVA and Siemens company

3315 Old Forest Road Lynchburg, VA 24506-0935 Phone: 434-832-3694

Cell: 434-841-8788

From: Pederson Ronda M (AREVA NP INC) Sent: Thursday, April 30, 2009 9:11 PM To: Getachew Tesfaye (gxt2@nrc.gov)

**Cc:** BENNETT Kathy A (OFR) (AREVA NP INC); DELANO Karen V (AREVA NP INC); VAN NOY Mark (EXT) **Subject:** Response to U.S. EPR Design Certification Application RAI No. 155, Supplement 2 (part 2 of 4)

Getachew,

Response file, "RAI 155 Supplement 2 Response US EPR DC (Part 2 of 4).pdf" is attached.

Sincerely,

### Ronda Pederson

ronda.pederson@areva.com

Licensing Manager, U.S. EPR Design Certification

AREVA NP Inc.

An AREVA and Siemens company 3315 Old Forest Road Lynchburg, VA 24506-0935

Phone: 434-832-3694 Cell: 434-841-8788

From: Pederson Ronda M (AREVA NP INC) Sent: Thursday, April 30, 2009 9:09 PM To: Getachew Tesfaye (qxt2@nrc.gov)

**Cc:** BENNETT Kathy A (OFR) (AREVA NP INC); DELANO Karen V (AREVA NP INC); VAN NOY Mark (EXT) **Subject:** Response to U.S. EPR Design Certification Application RAI No. 155, Supplement 2 (part 1 of 4)

#### Getachew,

AREVA NP Inc. (AREVA NP) provided responses to 5 of the 78 questions of RAI No. 155 on February 13, 2009. AREVA NP submitted Supplement 1 to the response on March 31, 2009 to address 20 of the remaining questions. The response document, "RAI 155 Supplement 2 Response U.S. EPR DC" provides technically correct and complete responses to 9 of the remaining 53 questions, as committed.

Due to transmittal size limitations, the response file has been separated to e-mail the response in four parts. Attached is "RAI 155 Supplement 2 Response U.S. EPR DC (Part 1 of 4).pdf."

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 155 Questions 03.08.01-07, 03.08.02-03, 03.08.03-05, 03.08.03-14 and 03.08.03-15.

The following table indicates the respective pages in the response document, "RAI 155 Supplement 2 Response U.S. EPR DC," that contain AREVA NP's response to the subject questions.

Question #	Start	End Page
	Page	
RAI 155 — 03.08.01-07	2	5
RAI 155 — 03.08.01-17	6	6
RAI 155 — 03.08.02-03	7	7
RAI 155 — 03.08.03-05	8	15
RAI 155 — 03.08.03-14	16	16
RAI 155 — 03.08.03-15	17	37
RAI 155 — 03.08.04-02	38	38
RAI 155 — 03.08.05-05	39	42
RAI 155 — 03.08.05-11	43	43
RAI 155 — 03.08.05-12	44	44

AREVA NP's response to RAI 155 Question 03.08.05-12 has been deferred to July 31, 2009 to be provided concurrently with the response to a similar question regarding the Nuclear Island common structure. With this exception, the schedule for technically correct and complete responses to the remaining 44 questions is unchanged and is provided below:

Question RAI 155 #	Response Date
RAI 155 — 03.08.01-03	October 30, 2009

RAI 155 — 03.08.01-06	October 30, 2009
RAI 155 — 03.08.01-08	May 29, 2009
RAI 155 — 03.08.01-09	May 29, 2009
RAI 155 — 03.08.01-10	May 29, 2009
RAI 155 — 03.08.01-11	June 30, 2009
RAI 155 — 03.08.01-12	May 29, 2009
RAI 155 — 03.08.01-16	May 29, 2009
RAI 155 — 03.08.01-20	October 30, 2009
RAI 155 — 03.08.01-22	May 29, 2009
RAI 155 — 03.08.01-24	October 30, 2009
RAI 155 — 03.08.01-27	May 29, 2009
RAI 155 — 03.08.02-01	June 30, 2009
RAI 155 — 03.08.02-02	July 31, 2009
RAI 155 — 03.08.02-04	June 30, 2009
RAI 155 — 03.08.02-05	May 29, 2009
RAI 155 — 03.08.02-06	May 29, 2009
RAI 155 — 03.08.02-07	July 31, 2009
RAI 155 — 03.08.02-08	July 31, 2009
RAI 155 — 03.08.02-10	May 29, 2009
RAI 155 — 03.08.03-03	May 29, 2009
RAI 155 — 03.08.03-04	July 31, 2009
RAI 155 — 03.08.03-06	May 29, 2009
RAI 155 — 03.08.03-10	May 29, 2009
RAI 155 — 03.08.03-11	May 29, 2009
RAI 155 — 03.08.03-12	May 29, 2009
RAI 155 — 03.08.03-16	July 31, 2009
RAI 155 — 03.08.03-17	July 31, 2009
RAI 155 — 03.08.04-03	May 29, 2009
RAI 155 — 03.08.04-04	May 29, 2009
RAI 155 — 03.08.04-05	May 29, 2009
RAI 155 — 03.08.04-06	October 30, 2009
RAI 155 — 03.08.05-01	July 31, 2009
RAI 155 — 03.08.05-02	May 29, 2009
RAI 155 — 03.08.05-06	May 29, 2009
RAI 155 — 03.08.05-07	June 30, 2009
RAI 155 — 03.08.05-08	July 31, 2009
RAI 155 — 03.08.05-10	July 31, 2009
RAI 155 — 03.08.05-12	July 31, 2009
RAI 155 — 03.08.05-13	June 30, 2009
RAI 155 — 03.08.05-14	June 30, 2009
RAI 155 — 03.08.05-15	June 30, 2009
RAI 155 — 03.08.05-16	June 30, 2009
RAI 155 — 03.08.05-18	June 30, 2009

## Ronda Pederson

ronda.pederson@areva.com

Licensing Manager, U.S. EPR Design Certification

**AREVA NP Inc.** 

An AREVA and Siemens company 3315 Old Forest Road Lynchburg, VA 24506-0935

Phone: 434-832-3694 Cell: 434-841-8788

From: Pederson Ronda M (AREVA NP INC) Sent: Tuesday, March 31, 2009 8:16 PM

**To:** Getachew Tesfaye

Cc: BENNETT Kathy A (OFR) (AREVA NP INC); DELANO Karen V (AREVA NP INC); VAN NOY Mark (EXT); HEDRICK Gary

E (AFS)

Subject: Response to U.S. EPR Design Certification Application RAI No. 155, Supplement 1

Getachew,

AREVA NP Inc. (AREVA NP) provided responses to 5 of the 78 questions of RAI No. 155 on February 13, 2009. The attached file, "RAI 155 Supplement 1 Response U.S. EPR DC" provides technically correct and complete responses to 20 of the remaining 73 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 155 Supplement 1 Questions 03.08.01-04, 03.08.01-05, 03.08.01-21, 03.08.02-09, 03.08.03-02, 03.08.03-09, 03.08.05-03, and 03.08.05-04.

The following table indicates the respective page(s) in the response document, "RAI 155 Supplement 1 Response U.S. EPR DC," that contain AREVA NP's response to the subject questions.

Question #	Start	End Page
	Page	
RAI 155 — 03.08.01-01	2	2
RAI 155 — 03.08.01-02	3	9
RAI 155 — 03.08.01-04	10	12
RAI 155 — 03.08.01-05	13	16
RAI 155 — 03.08.01-13	17	19
RAI 155 — 03.08.01-21	20	20
RAI 155 — 03.08.01-23	21	21
RAI 155 — 03.08.01-25	22	22
RAI 155 — 03.08.02-09	23	23
RAI 155 — 03.08.03-01	24	31
RAI 155 — 03.08.03-02	32	33
RAI 155 — 03.08.03-07	34	34
RAI 155 — 03.08.03-08	35	36

RAI 155 — 03.08.03-09	37	37
RAI 155 — 03.08.03-13	38	38
RAI 155 — 03.08.04-01	39	40
RAI 155 — 03.08.05-03	41	41
RAI 155 — 03.08.05-04	42	46
RAI 155 — 03.08.05-09	47	48
RAI 155 — 03.08.05-17	49	53

The schedule for technically correct and complete responses to the remaining 53 questions is unchanged and provided below:

Question RAI 155 #	Response Date
RAI 155 — 03.08.01-03	October 30, 2009
RAI 155 — 03.08.01-06	October 30, 2009
RAI 155 — 03.08.01-07	April 30, 2009
RAI 155 — 03.08.01-08	May 29, 2009
RAI 155 — 03.08.01-09	May 29, 2009
RAI 155 — 03.08.01-10	May 29, 2009
RAI 155 — 03.08.01-11	June 30, 2009
RAI 155 — 03.08.01-12	May 29, 2009
RAI 155 — 03.08.01-16	May 29, 2009
RAI 155 — 03.08.01-17	April 30, 2009
RAI 155 — 03.08.01-20	October 30, 2009
RAI 155 — 03.08.01-22	May 29, 2009
RAI 155 — 03.08.01-24	October 30, 2009
RAI 155 — 03.08.01-27	May 29, 2009
RAI 155 — 03.08.02-01	June 30, 2009
RAI 155 — 03.08.02-02	July 31, 2009
RAI 155 — 03.08.02-03	April 30, 2009
RAI 155 — 03.08.02-04	June 30, 2009
RAI 155 — 03.08.02-05	May 29, 2009
RAI 155 — 03.08.02-06	May 29, 2009
RAI 155 — 03.08.02-07	July 31, 2009
RAI 155 — 03.08.02-08	July 31, 2009
RAI 155 — 03.08.02-10	May 29, 2009
RAI 155 — 03.08.03-03	May 29, 2009
RAI 155 — 03.08.03-04	July 31, 2009
RAI 155 — 03.08.03-05	April 30, 2009
RAI 155 — 03.08.03-06	May 29, 2009
RAI 155 — 03.08.03-10	May 29, 2009
RAI 155 — 03.08.03-11	May 29, 2009
RAI 155 — 03.08.03-12	May 29, 2009
RAI 155 — 03.08.03-14	April 30, 2009
RAI 155 — 03.08.03-15	April 30, 2009

RAI 155 — 03.08.03-16	July 31, 2009
RAI 155 — 03.08.03-17	July 31, 2009
RAI 155 — 03.08.04-02	April 30, 2009
RAI 155 — 03.08.04-03	May 29, 2009
RAI 155 — 03.08.04-04	May 29, 2009
RAI 155 — 03.08.04-05	May 29, 2009
RAI 155 — 03.08.04-06	October 30, 2009
RAI 155 — 03.08.05-01	July 31, 2009
RAI 155 — 03.08.05-02	May 29, 2009
RAI 155 — 03.08.05-05	April 30, 2009
RAI 155 — 03.08.05-06	May 29, 2009
RAI 155 — 03.08.05-07	June 30, 2009
RAI 155 — 03.08.05-08	July 31, 2009
RAI 155 — 03.08.05-10	July 31, 2009
RAI 155 — 03.08.05-11	April 30, 2009
RAI 155 — 03.08.05-12	April 30, 2009
RAI 155 — 03.08.05-13	June 30, 2009
RAI 155 — 03.08.05-14	June 30, 2009
RAI 155 — 03.08.05-15	June 30, 2009
RAI 155 — 03.08.05-16	June 30, 2009
RAI 155 — 03.08.05-18	June 30, 2009

## Ronda Pederson

ronda.pederson@areva.com

Licensing Manager, U.S. EPR Design Certification

AREVA NP Inc.

An AREVA and Siemens company

3315 Old Forest Road Lynchburg, VA 24506-0935

Phone: 434-832-3694 Cell: 434-841-8788

**From:** Pederson Ronda M (AREVA NP INC) **Sent:** Friday, February 13, 2009 7:18 PM

To: 'Getachew Tesfaye'

Cc: BENNETT Kathy A (OFR) (AREVA NP INC); DELANO Karen V (AREVA NP INC); VAN NOY Mark (EXT); HARRIS Carolyn

A (AREVA NP INC)

Subject: Response to U.S. EPR Design Certification Application RAI No. 155, FSAR Ch. 3

Getachew,

Attached please find AREVA NP Inc.'s (AREVA NP) response to the subject request for additional information (RAI). The attached file, "RAI 155 Response US EPR DC.pdf" provides technically correct and complete responses to 5 of the 78 questions.

Appended to this file are affected pages of the U.S. EPR Final Safety Analysis Report in redline-strikeout format which support the responses to RAI 155 Questions 03.08.01-15, 03.08.01-18, 03.08.01-19, and 03.08.01-26.

The following table indicates the respective pages in the response document, "RAI 155 Response US EPR DC.pdf," that contain AREVA NP's response to the subject questions.

Question #	Start Page	End Page
	8	8
RAI 155 — 03.08.01-01	2	2
RAI 155 — 03.08.01-02	3	3
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RAI 155 — 03.08.01-04	5	5
RAI 155 — 03.08.01-05	6	6
RAI 155 — 03.08.01-06	7	7
RAI 155 — 03.08.01-07	8	8
RAI 155 — 03.08.01-08	9	9
RAI 155 — 03.08.01-09	10	10
RAI 155 — 03.08.01-10	11	11
RAI 155 — 03.08.01-11	12	12
RAI 155 — 03.08.01-12	13	13
RAI 155 — 03.08.01-13	14	14
RAI 155 — 03.08.01-14	15	17
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RAI 155 — 03.08.02-02	37	37
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RAI 155 — 03.08.02-04	39	39
RAI 155 — 03.08.02-05	40	40
RAI 155 — 03.08.02-06	41	41
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RAI 155 –	- 03.08.02-08	43	43
	- 03.08.02-09	44	44
	- 03.08.02-10	45	45
RAI 155 –	- 03.08.03-01	46	46
RAI 155 –	- 03.08.03-02	47	47
	- 03.08.03-03	48	48
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RAI 155 –	- 03.08.03-05	50	50
	- 03.08.03-06	51	51
RAI 155 –	- 03.08.03-07	52	52
RAI 155 –	- 03.08.03-08	53	53
	- 03.08.03-09	54	54
RAI 155 –	- 03.08.03-10	55	55
RAI 155 –	- 03.08.03-11	56	56
	- 03.08.03-12	57	57
RAI 155 –	- 03.08.03-13	58	58
RAI 155 –	- 03.08.03-14	59	59
RAI 155 –	- 03.08.03-15	60	60
RAI 155 –	- 03.08.03-16	61	61
RAI 155 –	- 03.08.03-17	62	63
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RAI 155 –	- 03.08.04-05	69	69
RAI 155 –	- 03.08.04-06	70	70
RAI 155 –	- 03.08.05-01	71	71
RAI 155 –	- 03.08.05-02	72	72
RAI 155 –	- 03.08.05-03	73	73
RAI 155 –	- 03.08.05-04	74	75
RAI 155 –	- 03.08.05-05	76	76
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RAI 155 –	- 03.08.05-07	78	78
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RAI 155 –	- 03.08.05-09	81	81
RAI 155 –	- 03.08.05-10	82	82
RAI 155 –	- 03.08.05-11	83	83
RAI 155 –	- 03.08.05-12	84	84
RAI 155 –	- 03.08.05-13	85	85
RAI 155 –	- 03.08.05-14	86	86
RAI 155 –	- 03.08.05-15	87	87
RAI 155 –	- 03.08.05-16	88	88
RAI 155 –	- 03.08.05-17	89	89
RAI 155 –	- 03.08.05-18	90	90

A complete answer is not provided for 73 of the 78 questions. The schedule for a technically correct and complete response to these questions is provided below.

Question #	Response Date
RAI 155 — 03.08.01-01	March 31, 2009
RAI 155 — 03.08.01-02	March 31, 2009
RAI 155 — 03.08.01-03	October 30, 2009
RAI 155 — 03.08.01-04	March 31, 2009
RAI 155 — 03.08.01-05	March 31, 2009
RAI 155 — 03.08.01-06	October 30, 2009
RAI 155 — 03.08.01-07	April 30, 2009
RAI 155 — 03.08.01-08	May 29, 2009
RAI 155 — 03.08.01-09	May 29, 2009
RAI 155 — 03.08.01-10	May 29, 2009
RAI 155 — 03.08.01-11	June 30, 2009
RAI 155 — 03.08.01-12	May 29, 2009
RAI 155 — 03.08.01-13	March 31, 2009
RAI 155 — 03.08.01-16	May 29, 2009
RAI 155 — 03.08.01-17	April 30, 2009
RAI 155 — 03.08.01-20	October 30, 2009
RAI 155 — 03.08.01-21	March 31, 2009
RAI 155 — 03.08.01-22	May 29, 2009
RAI 155 — 03.08.01-23	March 31, 2009
RAI 155 — 03.08.01-24	October 30, 2009
RAI 155 — 03.08.01-25	March 31, 2009
RAI 155 — 03.08.01-27	May 29, 2009
RAI 155 — 03.08.02-01	June 30, 2009
RAI 155 — 03.08.02-02	July 31, 2009
RAI 155 — 03.08.02-03	April 30, 2009
RAI 155 — 03.08.02-04	June 30, 2009
RAI 155 — 03.08.02-05	May 29, 2009
RAI 155 — 03.08.02-06	May 29, 2009
RAI 155 — 03.08.02-07	July 31, 2009
RAI 155 — 03.08.02-08	July 31, 2009
RAI 155 — 03.08.02-09	March 31, 2009
RAI 155 — 03.08.02-10	May 29, 2009
RAI 155 — 03.08.03-01	March 31, 2009
RAI 155 — 03.08.03-02	March 31, 2009
RAI 155 — 03.08.03-03	May 29, 2009
RAI 155 — 03.08.03-04	July 31, 2009
RAI 155 — 03.08.03-05	April 30, 2009
RAI 155 — 03.08.03-06	May 29, 2009
RAI 155 — 03.08.03-07	March 31, 2009
RAI 155 — 03.08.03-08	March 31, 2009

RAI 155 — 03.08.03-09	March 31, 2009
RAI 155 — 03.08.03-10	May 29, 2009
RAI 155 — 03.08.03-11	May 29, 2009
RAI 155 — 03.08.03-12	May 29, 2009
RAI 155 — 03.08.03-13	March 31, 2009
RAI 155 — 03.08.03-14	April 30, 2009
RAI 155 — 03.08.03-15	April 30, 2009
RAI 155 — 03.08.03-16	July 31, 2009
RAI 155 — 03.08.03-17	July 31, 2009
RAI 155 — 03.08.04-01	March 31, 2009
RAI 155 — 03.08.04-02	April 30, 2009
RAI 155 — 03.08.04-03	May 29, 2009
RAI 155 — 03.08.04-04	May 29, 2009
RAI 155 — 03.08.04-05	May 29, 2009
RAI 155 — 03.08.04-06	October 30, 2009
RAI 155 — 03.08.05-01	July 31, 2009
RAI 155 — 03.08.05-02	May 29, 2009
RAI 155 — 03.08.05-03	March 31, 2009
RAI 155 — 03.08.05-04	March 31, 2009
RAI 155 — 03.08.05-05	April 30, 2009
RAI 155 — 03.08.05-06	May 29, 2009
RAI 155 — 03.08.05-07	June 30, 2009
RAI 155 — 03.08.05-08	July 31, 2009
RAI 155 — 03.08.05-09	March 31, 2009
RAI 155 — 03.08.05-10	July 31, 2009
RAI 155 — 03.08.05-11	April 30, 2009
RAI 155 — 03.08.05-12	April 30, 2009
RAI 155 — 03.08.05-13	June 30, 2009
RAI 155 — 03.08.05-14	June 30, 2009
RAI 155 — 03.08.05-15	June 30, 2009
RAI 155 — 03.08.05-16	June 30, 2009
RAI 155 — 03.08.05-17	March 31, 2009
RAI 155 — 03.08.05-18	June 30, 2009

# Ronda Pederson

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**AREVA NP Inc.** 

An AREVA and Siemens company

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

Sent: Wednesday, January 14, 2009 9:33 AM

To: ZZ-DL-A-USEPR-DL

**Cc:** Jim Xu; Samir Chakrabarti; Sujit Samaddar; Michael Miernicki; Joseph Colaccino; ArevaEPRDCPEm Resource **Subject:** U.S. EPR Design Certification Application RAI No. 155 (1671, 1831,1672, 1834, 1833, 1836), FSAR Ch. 3

Attached please find the subject requests for additional information (RAI). A draft of the RAI was provided to you on December 12, 2008, and discussed with your staff on January 13, 2009. No changes were made to the Draft RAI Questions 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: 4582

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**Subject:** Response to U.S. EPR Design Certification Application RAI No. 155, FSAR Ch 3,

Supplement 18

**Sent Date:** 6/28/2013 7:17:03 PM **Received Date:** 6/28/2013 7:17:20 PM

From: WILLIFORD Dennis (AREVA)

Created By: Dennis.Williford@areva.com

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