

## ArevaEPRDCPEm Resource

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**From:** WILLIFORD Dennis (AREVA) [Dennis.Williford@areva.com]  
**Sent:** Tuesday, February 26, 2013 8:46 PM  
**To:** Snyder, Amy  
**Cc:** Hearn, Peter; DELANO Karen (AREVA); LEIGHLITER John (AREVA); ROMINE Judy (AREVA); RYAN Tom (AREVA); WILLS Tiffany (AREVA); KOWALSKI David (AREVA)  
**Subject:** Response to U.S. EPR Design Certification Application RAI No. 345, FSAR Ch. 9, Supplement 14

Amy,

AREVA NP Inc. provided a schedule for technically correct and complete responses to the 25 questions in RAI No. 345 on April 2, 2010. Supplement 1 response to RAI No. 345 was sent on June 4, 2010 to provide a revised schedule. Supplement 2 response to RAI No. 345 was sent on June 22, 2010 to address two of the questions. Supplement 3 response to RAI No. 345 was sent on July 8, 2010 to provide a revised schedule. Supplement 4 response to RAI No. 345 was sent on July 20, 2010 to provide technically correct and complete response to four questions and a technically correct and partial response to one question. Supplement 5 response to RAI No. 345 was sent on August 31, 2010 to provide a revised schedule. Supplement 6 response to RAI No. 345 was sent on September 14, 2010 to provide technically correct and complete responses to six questions. Supplement 7 and Supplement 8 responses to RAI No. 345 were sent on September 29, 2010 and October 29, 2010, respectively, to provide a revised schedule. Supplement 9 response to RAI No. 345 was sent on November 4, 2010 to provide technically correct and complete responses to twelve questions and a technically correct and partial response to one question. Supplement 10 and Supplement 11 responses to RAI No. 345 were sent on January 12, 2011 and January 28, 2011, respectively, to provide a revised schedule. Supplement 12 response to RAI No. 345 was sent on February 15, 2011 to provide a technically correct and complete response to the remaining question - Question 09.02.01-39. Supplement 13 response to RAI No. 345 was sent on December 19, 2012 to provide a schedule for a revised response to Question 09.02.01-41.

The schedule for a technically correct and complete revised final response to the remaining question has been changed as provided below.

Question #	Response Date
RAI 345 — 09.02.01-41	March 15, 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](mailto:Dennis.Williford@areva.com)

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**From:** WILLIFORD Dennis (RS/NB)  
**Sent:** Thursday, January 31, 2013 5:36 PM  
**To:** Amy.Snyder@nrc.gov  
**Cc:** DELANO Karen (RS/NB); LEIGHLITER John (RS/NB); ROMINE Judy (RS/NB); RYAN Tom (RS/NB); TOLLEY Tracey (RS/NB); VANCE Brian (RS/NB); WELLS Russell (RS/NB); WILLS Tiffany (CORP/QP); KOWALSKI David (RS/NB); BALLARD Bob (EP/PE); peter.hearn@nrc.gov; GUCWA Len (External RS/NB)  
**Subject:** Response to U.S. EPR Design Certification Application RAI No. 345, FSAR Ch. 9, Question 09.02.01-41 - STATUS

Amy,

AREVA appreciates the NRC staff comments received earlier this afternoon on the DRAFT revised response for RAI No. 345, FSAR Ch. 9, Question 09.02.01-41. AREVA needs time to evaluate the NRC staff comments and will provide a revised schedule for submittal of the final response to this question after evaluation of these comments.

Question #	Response Date
RAI 345 — 09.02.01-41	TBD

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](mailto:Dennis.Williford@areva.com)

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**From:** WILLIFORD Dennis (RS/NB)

**Sent:** Wednesday, December 19, 2012 4:57 PM

**To:** [Amy.Snyder@nrc.gov](mailto:Amy.Snyder@nrc.gov)

**Cc:** DELANO Karen (RS/NB); LEIGHLITER John (RS/NB); ROMINE Judy (RS/NB); RYAN Tom (RS/NB); WILLS Tiffany (CORP/QP); KOWALSKI David (RS/NB); NOXON David (RS/NB); [peter.hearn@nrc.gov](mailto:peter.hearn@nrc.gov)

**Subject:** Response to U.S. EPR Design Certification Application RAI No. 345, FSAR Ch. 9, Supplement 13

Amy,

AREVA NP Inc. provided a schedule for technically correct and complete responses to the 25 questions in RAI No. 345 on April 2, 2010. Supplement 1 response to RAI No. 345 was sent on June 4, 2010 to provide a revised schedule. Supplement 2 response to RAI No. 345 was sent on June 22, 2010 to address two of the questions. Supplement 3 response to RAI No. 345 was sent on July 8, 2010 to provide a revised schedule. Supplement 4 response to RAI No. 345 was sent on July 20, 2010 to provide technically correct and complete response to four questions and a technically correct and partial response to one question. Supplement 5 response to RAI No. 345 was sent on August 31, 2010 to provide a revised schedule. Supplement 6 response to RAI No. 345 was sent on September 14, 2010 to provide technically correct and complete responses to six questions. Supplement 7 and Supplement 8 responses to RAI No. 345 were sent on September 29, 2010 and October 29, 2010, respectively, to provide a revised schedule. Supplement 9 response to RAI No. 345 was sent on November 4, 2010 to provide technically correct and complete responses to twelve questions and a technically correct and partial response to one question. Supplement 10 and Supplement 11 responses to RAI No. 345 were sent on January 12, 2011 and January 28, 2011, respectively, to provide a revised schedule. Supplement 12 response to RAI No. 345 was sent on February 15, 2011 to provide a technically correct and complete response to the remaining question - Question 09.02.01-39.

Based on the joint AREVA-UniStar public meeting with NRC staff on November 19, 2012 to discuss design changes to the Ultimate Heat Sink (UHS), the response to Question 09.02.01-41 is being revised. The schedule for a technically correct and complete revised response to this question is provided below.

Question #	Response Date
RAI 345 — 09.02.01-41	January 31, 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](mailto:Dennis.Williford@areva.com)

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**From:** BRYAN Martin (External RS/NB)  
**Sent:** Tuesday, February 15, 2011 3:56 PM  
**To:** [Getachew.Tesfaye@nrc.gov](mailto:Getachew.Tesfaye@nrc.gov)  
**Cc:** DELANO Karen (RS/NB); ROMINE Judy (RS/NB); BENNETT Kathy (RS/NB); KOWALSKI David (RS/NB); WILLIFORD Dennis (RS/NB)  
**Subject:** Response to U.S. EPR Design Certification Application RAI No. 345, FSAR Ch. 9, Supplement 12

Getachew,

AREVA NP Inc. provided a schedule for technically correct and complete responses to the 25 questions in RAI No. 345 on April 2, 2010. Supplement 1 response to RAI No. 345 was sent on June 4, 2010 to provide a revised schedule. Supplement 2 response to RAI No. 345 was sent on June 22, 2010 to address two of the questions. Supplement 3 response to RAI No. 345 was sent on July 8, 2010 to provide a revised schedule. Supplement 4 response to RAI No. 345 was sent on July 20, 2010 to provide technically correct and complete response to four questions and a technically correct and partial response to one question. Supplement 5 response to RAI No. 345 was sent on August 31, 2010 to provide a revised schedule. Supplement 6 response to RAI No. 345 was sent on September 14, 2010 to provide technically correct and complete responses to six questions. Supplement 7 and Supplement 8 responses to RAI No. 345 were sent on September 29, 2010 and October 29, 2010, respectively, to provide a revised schedule. Supplement 9 response to RAI No. 345 was sent on November 4, 2010 to provide technically correct and complete responses to twelve questions and a technically correct and partial response to one question. Supplement 10 and Supplement 11 responses to RAI No. 345 were sent on January 12, 2011 and January 28, 2011, respectively, to provide a revised schedule.

The attached file, "RAI 345 Supplement 12 Response US EPR DC.pdf" contains the response to Question 09.02.01-39 which was originally provided on November 4, 2010 and the committed affected pages of the U.S. EPR Final Safety Analysis Report in redline-strikeout format which support the response to this question. No changes have been made to the response except for the FSAR impact section to provide an indication of the changes made to the FSAR and the markup of the U.S. EPR FSAR revised pages.

The following table indicates the respective pages in the response document, "RAI 345 Supplement 12 Response US EPR DC.pdf," that contain AREVA NP's response to the subject question.

Question #	Start Page	End Page
RAI 345 — 09.02.01-39	2	3

This concludes the formal AREVA NP response to RAI 345, and there are no questions from this RAI for which AREVA NP has not provided responses.

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](mailto:Martin.Bryan.ext@areva.com)

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**From:** BRYAN Martin (External RS/NB)  
**Sent:** Friday, January 28, 2011 12:57 PM  
**To:** 'Tefaye, Getachew'  
**Cc:** DELANO Karen (RS/NB); ROMINE Judy (RS/NB); BENNETT Kathy (RS/NB); KOWALSKI David (RS/NB)  
**Subject:** Response to U.S. EPR Design Certification Application RAI No. 345, FSAR Ch. 9, Supplement 11

Getachew,

AREVA NP Inc. provided a schedule for technically correct and complete responses to the 25 questions in RAI No. 345 on April 2, 2010. Supplement 1 response to RAI No. 345 was sent on June 4, 2010 to provide a revised schedule. Supplement 2 response to RAI No. 345 was sent on June 22, 2010 to address two of the questions. Supplement 3 response to RAI No. 345 was sent on July 8, 2010 to provide a revised schedule. Supplement 4 response to RAI No. 345 was sent on July 20, 2010 to provide technically correct and complete response to four questions and a technically correct and partial response to one question. Supplement 5 response to RAI No. 345 was sent on August 31, 2010 to provide a revised schedule. Supplement 6 response to RAI No. 345 was sent on September 14, 2010 to provide technically correct and complete responses to six questions. Supplement 7 and Supplement 8 responses to RAI No. 345 were sent on September 29, 2010 and October 29, 2010, respectively, to provide a revised schedule. Supplement 9 response to RAI No. 345 was sent on November 4, 2010 to provide technically correct and complete responses to twelve questions and a technically correct and partial response to one question. Supplement 10 response to RAI No. 345 was sent on January 12, 2011 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 Question 09.02.01-39.

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

<b>Question #</b>	<b>Response Date (FSAR Markups)</b>
RAI 345 — 09.02.01-39	February 15, 2011

Sincerely,

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

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**From:** BRYAN Martin (External RS/NB)  
**Sent:** Wednesday, January 12, 2011 5:50 PM  
**To:** 'Tefaye, Getachew'  
**Cc:** DELANO Karen (RS/NB); ROMINE Judy (RS/NB); BENNETT Kathy (RS/NB); KOWALSKI David (RS/NB)  
**Subject:** Response to U.S. EPR Design Certification Application RAI No. 345, FSAR Ch. 9, Supplement 10

Getachew,

AREVA NP Inc. provided a schedule for technically correct and complete responses to the 25 questions in RAI No. 345 on April 2, 2010. Supplement 1 response to RAI No. 345 was sent on June 4, 2010 to provide a

revised schedule. Supplement 2 response to RAI No. 345 was sent on June 22, 2010 to address two of the questions. Supplement 3 response to RAI No. 345 was sent on July 8, 2010 to provide a revised schedule. Supplement 4 response to RAI No. 345 was sent on July 20, 2010 to provide technically correct and complete response to four questions and a technically correct and partial response to one question. Supplement 5 response to RAI No. 345 was sent on August 31, 2010 to provide a revised schedule. Supplement 6 response to RAI No. 345 was sent on September 14, 2010 to provide technically correct and complete responses to six questions. Supplement 7 and Supplement 8 responses to RAI No. 345 were sent on September 29, 2010 and October 29, 2010, respectively, to provide a revised schedule. Supplement 9 was provided on November 04, 2010 to provide responses for the remaining thirteen questions. However, in the response itself it was stated that the FSAR markups for RAI 345 question 09.02.01-39 would be provided by January 12, 2011. Additional time is needed to finalize the markups and interact with the NRC so a revised date for the FSAR markups for question 09.02-01-39 is provided below.

Question #	Response Date ( FSAR Markups)
RAI 345 — 09.02.01-39	January 28, 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](mailto:Martin.Bryan.ext@areva.com)

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**From:** BRYAN Martin (External RS/NB)  
**Sent:** Thursday, November 04, 2010 8:00 PM  
**To:** 'Tesyfaye, Getachew'  
**Cc:** DELANO Karen (RS/NB); ROMINE Judy (RS/NB); BENNETT Kathy (RS/NB); KOWALSKI David (RS/NB)  
**Subject:** Response to U.S. EPR Design Certification Application RAI No. 345, FSAR Ch. 9, Supplement 9

Getachew,

AREVA NP Inc. provided a schedule for technically correct and complete responses to the 25 questions in RAI No. 345 on April 2, 2010. Supplement 1 response to RAI No. 345 was sent on June 4, 2010 to provide a revised schedule. Supplement 2 response to RAI No. 345 was sent on June 22, 2010 to address two of the questions. Supplement 3 response to RAI No. 345 was sent on July 8, 2010 to provide a revised schedule. Supplement 4 response to RAI No. 345 was sent on July 20, 2010 to provide technically correct and complete response to four questions and a technically correct and partial response to one question. Supplement 5 response to RAI No. 345 was sent on August 31, 2010 to provide a revised schedule. Supplement 6 response to RAI No. 345 was sent on September 14, 2010 to provide technically correct and complete responses to six questions. Supplement 7 and Supplement 8 responses to RAI No. 345 were sent on September 29, 2010 and October 29, 2010, respectively, to provide a revised schedule.

The attached file, "RAI 345 Supplement 9 Response US EPR DC.pdf" provides technically correct and complete responses to the remaining thirteen 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 09.02.01-28, 09.02.01-32, 09.02.01-35, 09.02.01-36, 09.02.01-38, 09.02.01-41, 09.02.01-42, 09.02.01-46, 09.02.01-48 and 09.02.01-49.

The following table indicates the respective pages in the response document, "RAI 345 Supplement 9 Response US EPR DC.pdf," that contain AREVA NP's response to the subject questions.

Question #	Start Page	End Page
RAI 345 — 09.02.01-28	2	5
RAI 345 — 09.02.01-29	6	6
RAI 345 — 09.02.01-32	7	8
RAI 345 — 09.02.01-34 (a, b and c)	9	10
RAI 345 — 09.02.01-35	11	14
RAI 345 — 09.02.01-36	15	17
RAI 345 — 09.02.01-38	18	19
RAI 345 — 09.02.01-39	20	21
RAI 345 — 09.02.01-41	22	24
RAI 345 — 09.02.01-42	25	26
RAI 345 — 09.02.01-46	27	28
RAI 345 — 09.02.01-48	29	30
RAI 345 — 09.02.01-49	31	33

This concludes the formal AREVA NP response to RAI 345, and there are no questions from this RAI for which AREVA NP has not provided responses.

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](mailto:Martin.Bryan.ext@areva.com)

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Getachew,

AREVA NP Inc. provided a schedule for technically correct and complete responses to the 25 questions in RAI No. 345 on April 2, 2010. Supplement 1 response to RAI No. 345 was sent on June 4, 2010 to provide a revised schedule. Supplement 2 response to RAI No. 345 was sent on June 22, 2010 to address two of the questions. Supplement 3 response to RAI No. 345 was sent on July 8, 2010 to provide a revised schedule. Supplement 4 response to RAI No. 345 was sent on July 20, 2010 to provide technically correct and complete response to four questions and a technically correct and partial response to one question. Supplement 5 response to RAI No. 345 was sent on August 31, 2010 to provide a revised schedule. Supplement 6 response to RAI No. 345 was sent on September 14, 2010 to provide technically correct and complete responses to six questions. Supplement 7 response to RAI No. 345 was sent on September 29, 2010 to provide a revised schedule. To provide additional time to process the responses, a revised schedule is provided in this e-mail.

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

Question #	Response Date
RAI 345 — 09.02.01-28	November 4, 2010
RAI 345 — 09.02.01-29	November 4, 2010
RAI 345 — 09.02.01-32	November 4, 2010
RAI 345 — 09.02.01-34 (a, b and c)	November 4, 2010
RAI 345 — 09.02.01-35	November 4, 2010
RAI 345 — 09.02.01-36	November 4, 2010
RAI 345 — 09.02.01-38	November 4, 2010
RAI 345 — 09.02.01-39	November 4, 2010
RAI 345 — 09.02.01-41	November 4, 2010
RAI 345 — 09.02.01-42	November 4, 2010
RAI 345 — 09.02.01-46	November 4, 2010
RAI 345 — 09.02.01-48	November 4, 2010
RAI 345 — 09.02.01-49	November 4, 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](mailto:Martin.Bryan.ext@areva.com)

---

**From:** BRYAN Martin (External RS/NB)  
**Sent:** Wednesday, September 29, 2010 5:19 PM  
**To:** 'Tesyfaye, Getachew'  
**Cc:** DELANO Karen (RS/NB); ROMINE Judy (RS/NB); BENNETT Kathy (RS/NB); GARDNER Darrell (RS/NB); KOWALSKI David (RS/NB); RYAN Tom (RS/NB)  
**Subject:** Response to U.S. EPR Design Certification Application RAI No. 345, FSAR Ch. 9, Supplement 7

Getachew,

AREVA NP Inc. provided a schedule for technically correct and complete responses to the 25 questions in RAI No. 345 on April 2, 2010. Supplement 1 response to RAI No. 345 was sent on June 4, 2010 to provide a revised schedule. Supplement 2 response to RAI No. 345 was sent on June 22, 2010 to address two of the questions. Supplement 3 response to RAI No. 345 was sent on July 8, 2010 to provide a revised schedule. Supplement 4 response to RAI No. 345 was sent on July 20, 2010 to provide technically correct and complete response to four questions and a technically correct and partial response to one question. Supplement 5 response to RAI No. 345 was sent on August 31, 2010 to provide a revised schedule. Supplement 6 response to RAI No. 345 was sent on September 14, 2010 to provide technically correct and complete response to six questions.

To provide additional time for interaction and feedback from the staff and to process the responses, a revised schedule is provided in this email for the response to the remaining 13 questions.

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

Question #	Response Date
RAI 345 — 09.02.01-28	October 29, 2010

RAI 345 — 09.02.01-29	October 29, 2010
RAI 345 — 09.02.01-32	October 29, 2010
RAI 345 — 09.02.01-34 (a, b and c)	October 29, 2010
RAI 345 — 09.02.01-35	October 29, 2010
RAI 345 — 09.02.01-36	October 29, 2010
RAI 345 — 09.02.01-38	October 29, 2010
RAI 345 — 09.02.01-39	October 29, 2010
RAI 345 — 09.02.01-41	October 29, 2010
RAI 345 — 09.02.01-42	October 29, 2010
RAI 345 — 09.02.01-46	October 29, 2010
RAI 345 — 09.02.01-48	October 29, 2010
RAI 345 — 09.02.01-49	October 29, 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](mailto:Martin.Bryan.ext@areva.com)

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**From:** BRYAN Martin (External RS/NB)  
**Sent:** Tuesday, September 14, 2010 5:33 PM  
**To:** 'Tefsaye, Getachew'  
**Cc:** DELANO Karen (RS/NB); ROMINE Judy (RS/NB); BENNETT Kathy (RS/NB); KOWALSKI David (RS/NB)  
**Subject:** Response to U.S. EPR Design Certification Application RAI No. 345, FSAR Ch. 9, Supplement 6

Getachew,

AREVA NP Inc. provided a schedule for technically correct and complete responses to the 25 questions in RAI No. 345 on April 2, 2010. Supplement 1 response to RAI No. 345 was sent on June 4, 2010 to provide a revised schedule. Supplement 2 response to RAI No. 345 was sent on June 22, 2010 to address two of the questions. Supplement 3 response to RAI No. 345 was sent on July 8, 2010 to provide a revised schedule. Supplement 4 response to RAI No. 345 was sent on July 20, 2010 to provide technically correct and complete response to four questions and a technically correct and partial response to one question. Supplement 5 response to RAI No. 345 was sent on August 31, 2010 to provide a revised schedule.

The attached file, "RAI 345 Supplement 6 Response US EPR DC.pdf" provides technically correct and complete responses to six questions.

Appended to this file are affected pages of the U.S. EPR Final Safety Analysis Report in redline-strikeout format which supports the responses to RAI 345 Questions 09.02.01-26, 09.02.01-31, 09.02.01-44, 09.02.01-45 and 09.02.01-47.

The following table indicates the respective pages in the response document, "RAI 345 Supplement 6 Response US EPR DC.pdf," that contain AREVA NP's response to the subject questions.

Question #	Start Page	End Page
RAI 345 — 09.02.01-26	2	4
RAI 345 — 09.02.01-31	5	5



RAI 345 — 09.02.01-44	6	7
RAI 345 — 09.02.01-45	8	9
RAI 345 — 09.02.01-47	10	11
RAI 345 — 09.02.01-50	12	12

The schedule for technically correct and complete responses to the remaining questions remains the same and is provided below.

Question #	Response Date
RAI 345 — 09.02.01-28	September 29, 2010
RAI 345 — 09.02.01-29	September 29, 2010
RAI 345 — 09.02.01-32	September 29, 2010
RAI 345 — 09.02.01-34 (a, b and c)	September 29, 2010
RAI 345 — 09.02.01-35	September 29, 2010
RAI 345 — 09.02.01-36	September 29, 2010
RAI 345 — 09.02.01-38	September 29, 2010
RAI 345 — 09.02.01-39	September 29, 2010
RAI 345 — 09.02.01-41	September 29, 2010
RAI 345 — 09.02.01-42	September 29, 2010
RAI 345 — 09.02.01-46	September 29, 2010
RAI 345 — 09.02.01-48	September 29, 2010
RAI 345 — 09.02.01-49	September 29, 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](mailto:Martin.Bryan.ext@areva.com)

---

**From:** BRYAN Martin (External RS/NB)  
**Sent:** Tuesday, August 31, 2010 2:44 PM  
**To:** 'Tefaye, Getachew'  
**Cc:** DELANO Karen (RS/NB); ROMINE Judy (RS/NB); BENNETT Kathy (RS/NB); KOWALSKI David (RS/NB)  
**Subject:** Response to U.S. EPR Design Certification Application RAI No. 345, FSAR Ch. 9, Supplement 5

Getachew,

AREVA NP Inc. provided a schedule for technically correct and complete responses to the 25 questions in RAI No. 345 on April 2, 2010. Supplement 1 response to RAI No. 345 was sent on June 4, 2010 to provide a revised schedule. Supplement 2 response to RAI No. 345 was sent on June 22, 2010 to address two of the questions. Supplement 3 response to RAI No. 345 was sent on July 8, 2010 to provide a revised schedule. Supplement 4 response to RAI No. 345 was sent on July 20, 2010 to provide technically correct and complete response to four questions and a technically correct and partial response to one question. Since responses to the remaining questions are being processed, a revised schedule is provided in this email.

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

Question #	Response Date
RAI 345 — 09.02.01-26	September 14, 2010
RAI 345 — 09.02.01-28	September 29, 2010
RAI 345 — 09.02.01-29	September 29, 2010
RAI 345 — 09.02.01-31	September 14, 2010
RAI 345 — 09.02.01-32	September 29, 2010
RAI 345 — 09.02.01-34 (a, b and c)	September 29, 2010
RAI 345 — 09.02.01-35	September 29, 2010
RAI 345 — 09.02.01-36	September 29, 2010
RAI 345 — 09.02.01-38	September 29, 2010
RAI 345 — 09.02.01-39	September 29, 2010
RAI 345 — 09.02.01-41	September 29, 2010
RAI 345 — 09.02.01-42	September 29, 2010
RAI 345 — 09.02.01-44	September 14, 2010
RAI 345 — 09.02.01-45	September 14, 2010
RAI 345 — 09.02.01-46	September 29, 2010
RAI 345 — 09.02.01-47	September 14, 2010
RAI 345 — 09.02.01-48	September 14, 2010
RAI 345 — 09.02.01-49	September 29, 2010
RAI 345 — 09.02.01-50	September 14, 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](mailto:Martin.Bryan.ext@areva.com)

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**From:** BRYAN Martin (EXT)  
**Sent:** Tuesday, July 20, 2010 5:24 PM  
**To:** 'Tefaye, Getachew'  
**Cc:** DELANO Karen V (AREVA NP INC); ROMINE Judy (AREVA NP INC); BENNETT Kathy A (OFR) (AREVA NP INC); KOWALSKI David J (AREVA NP INC)  
**Subject:** Response to U.S. EPR Design Certification Application RAI No. 345, FSAR Ch. 9, Supplement 4

Getachew,

AREVA NP Inc. provided a schedule for technically correct and complete responses to the 25 questions in RAI No. 345 on April 2, 2010. Supplement 1 response to RAI No. 345 was sent on June 4, 2010 to provide a revised schedule. Supplement 2 response to RAI No. 345 was sent on June 22, 2010 to address two of the questions. Supplement 3 response to RAI No. 345 was sent on July 8, 2010 to provide a revised schedule.

The attached file, "RAI 345 Supplement 4 Response US EPR DC.pdf" provides a technically correct and complete response to four questions and a technically correct and partial response to one question.

Appended to this file are affected pages of the U.S. EPR Final Safety Analysis Report in redline-strikeout format which supports the responses to RAI 345 Questions 09.02.01-27, 09.02.01-30, 09.02.01-33, 09.02.01-34 and 09.02.01-43.

The following table indicates the respective pages in the response document, "RAI 345 Supplement 4 Response US EPR DC.pdf," that contain AREVA NP's response to the subject questions.

Question #	Start Page	End Page
RAI 345 — 09.02.01-27	2	3
RAI 345 — 09.02.01-30	4	5
RAI 345 — 09.02.01-33	6	6
RAI 345 — 09.02.01-34 (d and e)	7	9
RAI 345 — 09.02.01-43	10	11

To allow time for interaction between AREVA and the NRC staff, a revised schedule is provided in this e-mail.

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

Question #	Response Date
RAI 345 — 09.02.01-26	August 31, 2010
RAI 345 — 09.02.01-28	August 31, 2010
RAI 345 — 09.02.01-29	August 31, 2010
RAI 345 — 09.02.01-31	August 31, 2010
RAI 345 — 09.02.01-32	August 31, 2010
RAI 345 — 09.02.01-34 (a, b and c)	August 31, 2010
RAI 345 — 09.02.01-35	August 31, 2010
RAI 345 — 09.02.01-36	August 31, 2010
RAI 345 — 09.02.01-38	August 31, 2010
RAI 345 — 09.02.01-39	August 31, 2010
RAI 345 — 09.02.01-41	August 31, 2010
RAI 345 — 09.02.01-42	August 31, 2010
RAI 345 — 09.02.01-44	August 31, 2010
RAI 345 — 09.02.01-45	August 31, 2010
RAI 345 — 09.02.01-46	August 31, 2010
RAI 345 — 09.02.01-47	August 31, 2010
RAI 345 — 09.02.01-48	August 31, 2010
RAI 345 — 09.02.01-49	August 31, 2010
RAI 345 — 09.02.01-50	August 31, 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](mailto:Martin.Bryan.ext@areva.com)

---

**From:** BRYAN Martin (EXT)  
**Sent:** Thursday, July 08, 2010 3:55 PM  
**To:** 'Tesfaye, Getachew'  
**Cc:** DELANO Karen V (AREVA NP INC); ROMINE Judy (AREVA NP INC); BENNETT Kathy A (OFR) (AREVA NP INC); KOWALSKI David J (AREVA NP INC)  
**Subject:** Response to U.S. EPR Design Certification Application RAI No. 345, FSAR Ch. 9, Supplement 3

Getachew,

AREVA NP Inc. provided a schedule for technically correct and complete responses to the 25 questions in RAI No. 345 on April 2, 2010. Supplement 1 response to RAI No. 345 was sent on June 4, 2010 to provide a revised schedule. Supplement 2 response to RAI No. 345 was sent on June 22, 2010 to address two of the questions.

To allow time for interaction between AREVA and the NRC staff, a revised schedule is provided in this e-mail.

The schedule for technically correct and complete responses to the remaining 23 questions has been revised and is provided below.

<b>Question #</b>	<b>Response Date</b>
RAI 345 — 09.02.01-26	August 31, 2010
RAI 345 — 09.02.01-27	July 16, 2010
RAI 345 — 09.02.01-28	August 31, 2010
RAI 345 — 09.02.01-29	August 31, 2010
RAI 345 — 09.02.01-30	July 16, 2010
RAI 345 — 09.02.01-31	August 31, 2010
RAI 345 — 09.02.01-32	August 31, 2010
RAI 345 — 09.02.01-33	July 16, 2010
RAI 345 — 09.02.01-34	July 16, 2010
RAI 345 — 09.02.01-35	August 31, 2010
RAI 345 — 09.02.01-36	August 31, 2010
RAI 345 — 09.02.01-38	August 31, 2010
RAI 345 — 09.02.01-39	August 31, 2010
RAI 345 — 09.02.01-41	August 31, 2010
RAI 345 — 09.02.01-42	August 31, 2010
RAI 345 — 09.02.01-43	July 16, 2010
RAI 345 — 09.02.01-44	August 31, 2010
RAI 345 — 09.02.01-45	August 31, 2010
RAI 345 — 09.02.01-46	August 31, 2010
RAI 345 — 09.02.01-47	August 31, 2010
RAI 345 — 09.02.01-48	August 31, 2010
RAI 345 — 09.02.01-49	August 31, 2010
RAI 345 — 09.02.01-50	August 31, 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](mailto:Martin.Bryan.ext@areva.com)

---

**From:** BRYAN Martin (EXT)  
**Sent:** Tuesday, June 22, 2010 1:23 PM  
**To:** 'Tesyfaye, Getachew'  
**Cc:** DELANO Karen V (AREVA NP INC); ROMINE Judy (AREVA NP INC); BENNETT Kathy A (OFR) (AREVA NP INC);

KOWALSKI David J (AREVA NP INC)

**Subject:** Response to U.S. EPR Design Certification Application RAI No. 345, FSAR Ch. 9, Supplement 2

Getachew,

AREVA NP Inc. provided a schedule for technically correct and complete responses to the 25 questions in RAI No. 345 on April 2, 2010. Supplement 1 response to RAI No. 345 was sent on June 4, 2010 to provide a revised schedule.

The attached file, "RAI 345 Supplement 2 Response US EPR DC.pdf" provides technically correct and complete responses to two of the questions, as committed.

The following table indicates the respective pages in the response document, "RAI 345 Supplement 2 Response US EPR DC.pdf," that contain AREVA NP's response to the subject questions.

<b>Question #</b>	<b>Start Page</b>	<b>End Page</b>
RAI 345 — 09.02.01-37	2	3
RAI 345 — 09.02.01-40	4	4

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

<b>Question #</b>	<b>Response Date</b>
RAI 345 — 09.02.01-26	July 22, 2010
RAI 345 — 09.02.01-27	July 22, 2010
RAI 345 — 09.02.01-28	July 22, 2010
RAI 345 — 09.02.01-29	July 8, 2010
RAI 345 — 09.02.01-30	July 8, 2010
RAI 345 — 09.02.01-31	July 22, 2010
RAI 345 — 09.02.01-32	July 22, 2010
RAI 345 — 09.02.01-33	July 22, 2010
RAI 345 — 09.02.01-34	July 8, 2010
RAI 345 — 09.02.01-35	July 22, 2010
RAI 345 — 09.02.01-36	July 22, 2010
RAI 345 — 09.02.01-38	July 22, 2010
RAI 345 — 09.02.01-39	July 22, 2010
RAI 345 — 09.02.01-41	July 22, 2010
RAI 345 — 09.02.01-42	July 8, 2010
RAI 345 — 09.02.01-43	July 8, 2010
RAI 345 — 09.02.01-44	July 8, 2010
RAI 345 — 09.02.01-45	July 8, 2010
RAI 345 — 09.02.01-46	July 8, 2010
RAI 345 — 09.02.01-47	July 22, 2010
RAI 345 — 09.02.01-48	July 22, 2010
RAI 345 — 09.02.01-49	July 22, 2010
RAI 345 — 09.02.01-50	July 8, 2010

Sincerely,

Martin (Marty) C. Bryan  
U.S. EPR Design Certification Licensing Manager  
AREVA NP Inc.  
Tel: (434) 832-3016

---

**From:** BRYAN Martin (EXT)  
**Sent:** Friday, June 04, 2010 2:04 PM  
**To:** 'Tefaye, Getachew'  
**Cc:** DELANO Karen V (AREVA NP INC); ROMINE Judy (AREVA NP INC); BENNETT Kathy A (OFR) (AREVA NP INC); KOWALSKI David J (AREVA NP INC)  
**Subject:** Response to U.S. EPR Design Certification Application RAI No. 345, FSAR Ch. 9, Supplement 1

Getachew,

AREVA NP Inc. provided a schedule for technically correct and complete responses to the 25 questions in RAI No. 345 on April 2, 2010.

The responses to the questions in RAI 345 are in various stages of preparation or review with the NRC. The revised response dates below are relative to the where the question is in this process.

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

Question #	Response Date
RAI 345 — 09.02.01-26	July 22, 2010
RAI 345 — 09.02.01-27	July 22, 2010
RAI 345 — 09.02.01-28	July 22, 2010
RAI 345 — 09.02.01-29	July 8, 2010
RAI 345 — 09.02.01-30	July 8, 2010
RAI 345 — 09.02.01-31	July 22, 2010
RAI 345 — 09.02.01-32	July 22, 2010
RAI 345 — 09.02.01-33	July 22, 2010
RAI 345 — 09.02.01-34	July 8, 2010
RAI 345 — 09.02.01-35	July 22, 2010
RAI 345 — 09.02.01-36	July 22, 2010
RAI 345 — 09.02.01-37	June 22, 2010
RAI 345 — 09.02.01-38	July 22, 2010
RAI 345 — 09.02.01-39	July 22, 2010
RAI 345 — 09.02.01-40	June 22, 2010
RAI 345 — 09.02.01-41	July 22, 2010
RAI 345 — 09.02.01-42	July 8, 2010
RAI 345 — 09.02.01-43	July 8, 2010
RAI 345 — 09.02.01-44	July 8, 2010
RAI 345 — 09.02.01-45	July 8, 2010
RAI 345 — 09.02.01-46	July 8, 2010
RAI 345 — 09.02.01-47	July 22, 2010
RAI 345 — 09.02.01-48	July 22, 2010
RAI 345 — 09.02.01-49	July 22, 2010
RAI 345 — 09.02.01-50	July 8, 2010

Sincerely,

Martin (Marty) C. Bryan  
U.S. EPR Design Certification Licensing Manager  
AREVA NP Inc.  
Tel: (434) 832-3016  
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---

**From:** BRYAN Martin (EXT)  
**Sent:** Friday, April 02, 2010 5:34 PM  
**To:** 'Tefaye, Getachew'  
**Cc:** DELANO Karen V (AREVA NP INC); ROMINE Judy (AREVA NP INC); BENNETT Kathy A (OFR) (AREVA NP INC); KOWALSKI David J (AREVA NP INC); WILLIFORD Dennis C (AREVA NP INC)  
**Subject:** Response to U.S. EPR Design Certification Application RAI No. 345 (4021), FSAR Ch. 9

Getachew,

Attached please find AREVA NP Inc.'s response to the subject request for additional information (RAI). The attached file, "RAI 345 Response US EPR DC," provides a schedule since technically correct and complete responses to the twenty five questions are not provided.

The following table indicates the respective pages in the response document, "RAI 345 Response US EPR DC.pdf," that contain AREVA NP's response to the subject questions.

Question #	Start Page	End Page
RAI 345 — 09.02.01-26	2	3
RAI 345 — 09.02.01-27	4	4
RAI 345 — 09.02.01-28	5	6
RAI 345 — 09.02.01-29	7	7
RAI 345 — 09.02.01-30	8	8
RAI 345 — 09.02.01-31	9	9
RAI 345 — 09.02.01-32	10	10
RAI 345 — 09.02.01-33	11	11
RAI 345 — 09.02.01-34	12	13
RAI 345 — 09.02.01-35	14	15
RAI 345 — 09.02.01-36	16	17
RAI 345 — 09.02.01-37	18	18
RAI 345 — 09.02.01-38	19	19
RAI 345 — 09.02.01-39	20	20
RAI 345 — 09.02.01-40	21	21
RAI 345 — 09.02.01-41	22	22
RAI 345 — 09.02.01-42	23	23
RAI 345 — 09.02.01-43	24	24
RAI 345 — 09.02.01-44	25	25
RAI 345 — 09.02.01-45	26	26
RAI 345 — 09.02.01-46	27	27
RAI 345 — 09.02.01-47	28	28
RAI 345 — 09.02.01-48	29	29
RAI 345 — 09.02.01-49	30	31
RAI 345 — 09.02.01-50	32	32

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

Question #	Response Date
RAI 345 — 09.02.01-26	June 4, 2010
RAI 345 — 09.02.01-27	June 4, 2010
RAI 345 — 09.02.01-28	June 4, 2010
RAI 345 — 09.02.01-29	June 4, 2010
RAI 345 — 09.02.01-30	June 4, 2010
RAI 345 — 09.02.01-31	June 4, 2010
RAI 345 — 09.02.01-32	June 4, 2010
RAI 345 — 09.02.01-33	June 4, 2010
RAI 345 — 09.02.01-34	June 4, 2010
RAI 345 — 09.02.01-35	June 4, 2010
RAI 345 — 09.02.01-36	June 4, 2010
RAI 345 — 09.02.01-37	June 4, 2010
RAI 345 — 09.02.01-38	June 4, 2010
RAI 345 — 09.02.01-39	June 4, 2010
RAI 345 — 09.02.01-40	June 4, 2010
RAI 345 — 09.02.01-41	June 4, 2010
RAI 345 — 09.02.01-42	June 4, 2010
RAI 345 — 09.02.01-43	June 4, 2010
RAI 345 — 09.02.01-44	June 4, 2010
RAI 345 — 09.02.01-45	June 4, 2010
RAI 345 — 09.02.01-46	June 4, 2010
RAI 345 — 09.02.01-47	June 4, 2010
RAI 345 — 09.02.01-48	June 4, 2010
RAI 345 — 09.02.01-49	June 4, 2010
RAI 345 — 09.02.01-50	June 4, 2010

Sincerely,

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

---

**From:** Tesfaye, Getachew [<mailto:Getachew.Tesfaye@nrc.gov>]  
**Sent:** Thursday, March 04, 2010 2:49 PM  
**To:** ZZ-DL-A-USEPR-DL  
**Cc:** Wheeler, Larry; Lee, Samuel; Segala, John; Hearn, Peter; Colaccino, Joseph; ArevaEPRDCPEm Resource  
**Subject:** U.S. EPR Design Certification Application RAI No. 345 (4021), FSAR Ch. 9

Attached please find the subject requests for additional information (RAI). A draft of the RAI was provided to you on December 10, 2009, and discussed with your staff on March 4, 2010. Drat RAI Questions 09.02.01-31, 09.02.01-47, and 09.02.01-48 were modified as a result of that discussion. The schedule we have established for review of your application assumes technically correct and complete responses within 30 days of receipt of RAIs. For any RAIs that cannot be answered within 30 days, it is expected that a date for receipt of this information will be provided to the staff within the 30 day period so that the staff can assess how this information will impact the published schedule.

Thanks,



Getachew Tesfaye  
Sr. Project Manager  
NRO/DNRL/NARP  
(301) 415-3361

**Hearing Identifier:** AREVA\_EPR\_DC\_RAIs  
**Email Number:** 4238

**Mail Envelope Properties** (554210743EFE354B8D5741BEB695E6560E77D3)

**Subject:** Response to U.S. EPR Design Certification Application RAI No. 345, FSAR Ch. 9, Supplement 14  
**Sent Date:** 2/26/2013 8:45:42 PM  
**Received Date:** 2/27/2013 1:03:32 AM  
**From:** WILLIFORD Dennis (AREVA)

**Created By:** Dennis.Williford@areva.com

**Recipients:**

"Hearn, Peter" <Peter.Hearn@nrc.gov>  
Tracking Status: None  
"DELANO Karen (AREVA)" <Karen.Delano@areva.com>  
Tracking Status: None  
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Tracking Status: None  
"ROMINE Judy (AREVA)" <Judy.Romine@areva.com>  
Tracking Status: None  
"RYAN Tom (AREVA)" <Tom.Ryan@areva.com>  
Tracking Status: None  
"WILLS Tiffany (AREVA)" <Tiffany.Wills@areva.com>  
Tracking Status: None  
"KOWALSKI David (AREVA)" <David.Kowalski@areva.com>  
Tracking Status: None  
"Snyder, Amy" <Amy.Snyder@nrc.gov>  
Tracking Status: None

**Post Office:** FUSLYNCMX03.fdom.ad.corp

<b>Files</b>	<b>Size</b>	<b>Date &amp; Time</b>
MESSAGE	40479	2/27/2013 1:03:32 AM

**Options**

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