

## ArevaEPRDCPEm Resource

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**From:** WILLIFORD Dennis (AREVA) [Dennis.Williford@areva.com]  
**Sent:** Friday, April 19, 2013 5:42 PM  
**To:** Snyder, Amy  
**Cc:** Miernicki, Michael; DELANO Karen (AREVA); LEIGHLITER John (AREVA); ROMINE Judy (AREVA); RYAN Tom (AREVA); WILLS Tiffany (AREVA); HONMA George (EXTERNAL AREVA)  
**Subject:** Response to U.S. EPR Design Certification Application RAI No. 505 (5902,5735,5869,5754,5803,5950,5744), FSAR Ch. 7, Supplement 29

Amy,

AREVA NP Inc. letter NRC:13:019 dated April 19, 2013 provides a technically correct and complete final response to RAI 505 Question 07.01-35. Enclosed with the letter as a part of the response are affected pages of the U.S. EPR Final Safety Analysis Report in redline-strikeout format. The enclosure also includes a red line-strikeout version of affected pages in AREVA Technical Reports ANP-10315P, ANP-10309 and ANP-10310, which support the Response to RAI 505 Question 07.01-35. AREVA NP, Inc. has determined that some of the material contained in the response is proprietary. An affidavit is provided, as required by 10 CFR 2.390(b), to support the withholding of the information from public disclosure. A proprietary version of the enclosure to this letter is provided separately.

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

Question #	Start Page	End Page
RAI 505 —07.01-35	2	20

The schedule for a technically correct and complete final response to the remaining question is unchanged as shown in the following table.

Question #	Response Date
RAI 505 — 07.01-33	July 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](mailto:Dennis.Williford@areva.com)

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**From:** WILLIFORD Dennis (RS/NB)  
**Sent:** Monday, April 01, 2013 10:27 AM  
**To:** [Amy.Snyder@nrc.gov](mailto:Amy.Snyder@nrc.gov)  
**Cc:** [Michael.Canova@nrc.gov](mailto:Michael.Canova@nrc.gov); DELANO Karen (RS/NB); LEIGHLITER John (RS/NB); ROMINE Judy (RS/NB); RYAN Tom (RS/NB); WILLS Tiffany (CORP/QP); HONMA George (EXT)

**Subject:** Response to U.S. EPR Design Certification Application RAI No. 505 (5902,5735,5869,5754,5803,5950,5744), FSAR Ch. 7, Supplement 28

Amy,

On September 29, 2011, AREVA NP Inc. provided a schedule for technically correct and complete responses to the 34 questions in RAI 505. In Supplement 1 sent on October 27, 2011, and Supplement 2 sent on November 17, 2011, AREVA NP provided a revised schedule for technically correct and complete responses to 33 questions and a preliminary revised schedule for Question 07.01-33. AREVA NP provided Supplement 3 on November 22, 2011 to provide a final response to 4 questions. On December 9, 2011, AREVA NP provided Supplement 4 to revise the schedule for 7 questions. On December 14, 2011, AREVA NP provided Supplement 5 to revise the schedule for 5 questions. On December 15, 2011, AREVA NP provided Supplement 6 to provide a complete and final response to 6 questions. On January 10, 2012, AREVA NP provided Supplement 7 to provide a complete and final response to 2 questions. On January 19, 2012, AREVA NP provided Supplement 8 to provide a complete and final response to one question and a revised preliminary schedule for the response to Question 07.01-33. On February 9, 2012, AREVA NP provided Supplement 9 to revise the schedule for 11 questions. On February 17, 2012, AREVA NP provided Supplement 10 to revise the schedule for 20 questions. On February 21, 2012, AREVA NP provided Supplement 11 to revise the schedule for Question 07.01-33. On March 16, 2012, AREVA NP provided Supplement 12 to provide a complete and final response to 2 of the remaining questions (07.01-41 and 07.05-10), and a revised response to 2 questions (07.08-46 and 07.09-72). On April 3, 2012, AREVA NP provided Supplement 13 to provide a complete and final response to one of the remaining questions (07.08-47). On April 11, 2012, AREVA NP provided Supplement 14 to provide a complete and final response to one of the remaining questions (07.01-38). On April 17, 2012, AREVA NP provided Supplement 15 to provide a complete and final response to 2 of the remaining questions (07.01-37 and 07.03-38). On April 18, 2012, AREVA NP provided Supplement 16 to provide a correct and complete final response to one of the remaining questions (07.01-50) and a revised final response to another question (07.09-72) based on NRC staff comments. On April 19, 2012, AREVA NP provided Supplement 17 to provide a correct and complete final response to one of the remaining questions (07.01-45). On April 27, 2012, AREVA NP provided Supplement 18 to provide a correct and complete final response to three of the remaining questions. On May 9, 2012, AREVA NP provided Supplement 19 to provide a correct and complete final response to three of the remaining questions. On May 22, 2012, AREVA NP provided Supplement 20 to provide a correct and complete final response to four of the remaining questions. On May 29, 2012, AREVA NP provided Supplement 21 to provide a correct and complete final response to one of the remaining questions. On May 30, 2012, AREVA NP provided Supplement 22 to provide an interim response to one of the remaining questions (07.01-35). On July 6, 2012, AREVA NP provided Supplement 23 to provide a revised final response to one question (07.01-48). On July 20, 2012, AREVA NP provided Supplement 24 to provide a revised final response to one question (07.01-48). On August 15, 2012, AREVA NP provided Supplement 25 to provide a revised interim response to one of the remaining questions (07.01-35). On December 5, 2012, AREVA NP provided Supplement 26 to provide a revised schedule to one of the remaining questions. On December 19, 2012, AREVA NP provided Supplement 27 to provide a revised final response to three questions.

The schedule for a technically correct and complete response to Question 07.01-35 has been changed based on discussions with NRC staff on March 27th, and is provided below. The date for a final response to this question has been extended until after the April 15th audit. The schedule for a final response to Question 07.01-33 is unchanged.

Question #	Interim Response Date	Response Date
RAI 505 — 07.01-33	N/A	July 30, 2013
RAI 505 — 07.01-35	May 30, 2012 (Actual) August 15, 2012 (Actual)	<b>May 14, 2013</b>

Sincerely,

**Dennis Williford, P.E.**  
**U.S. EPR Design Certification Licensing Manager**  
**AREVA NP Inc.**

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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 3:30 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); [Michael.Canova@nrc.gov](mailto:Michael.Canova@nrc.gov)  
**Subject:** Response to U.S. EPR Design Certification Application RAI No. 505 (5902,5735,5869,5754,5803,5950,5744), FSAR Ch. 7, Supplement 27

Amy,

AREVA NP Inc. letter NRC:12:066 dated December 19, 2012 provides a technically correct and complete final response to three of the remaining five questions in RAI 505. AREVA NP has determined that some of the material contained in the response is proprietary. An affidavit is provided, as required by 10 CFR 2.390(b), to support the withholding of the information from public disclosure. Proprietary and non-proprietary versions of the enclosure to this letter are provided separately.

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

Question #	Start Page	End Page
RAI 505 — 07.01-36	2	8
RAI 505 — 07.01-39	9	14
RAI 505 — 07.01-44	15	18

The schedule for a technically correct and complete final response to the remaining two questions is unchanged as shown in the following table.

Question #	Interim Response Date	Response Date
RAI 505 — 07.01-33	N/A	July 30, 2013
RAI 505 — 07.01-35	May 30, 2012 (Actual) August 15, 2012 (Actual)	April 18 , 2013

Sincerely,

**Dennis Williford, P.E.**  
**U.S. EPR Design Certification Licensing Manager**  
**AREVA NP Inc.**

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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 05, 2012 10:06 PM

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

**Cc:** BENNETT Kathy (RS/NB); DELANO Karen (RS/NB); LEIGHLITER John (RS/NB); ROMINE Judy (RS/NB); RYAN Tom (RS/NB); [Michael.Miernicki@nrc.gov](mailto:Michael.Miernicki@nrc.gov)

**Subject:** Response to U.S. EPR Design Certification Application RAI No. 505 (5902,5735,5869,5754,5803,5950,5744), FSAR Ch. 7, Supplement 26

Amy,

On September 29, 2011, AREVA NP Inc. provided a schedule for technically correct and complete responses to the 34 questions in RAI 505. In Supplement 1 sent on October 27, 2011, and Supplement 2 sent on November 17, 2011, AREVA NP provided a revised schedule for technically correct and complete responses to 33 questions and a preliminary revised schedule for Question 07.01-33. AREVA NP provided Supplement 3 on November 22, 2011 to provide a final response to 4 questions. On December 9, 2011, AREVA NP provided Supplement 4 to revise the schedule for 7 questions. On December 14, 2011, AREVA NP provided Supplement 5 to revise the schedule for 5 questions. On December 15, 2011, AREVA NP provided Supplement 6 to provide a complete and final response to 6 questions. On January 10, 2012, AREVA NP provided Supplement 7 to provide a complete and final response to 2 questions. On January 19, 2012, AREVA NP provided Supplement 8 to provide a complete and final response to one question and a revised preliminary schedule for the response to Question 07.01-33. On February 9, 2012, AREVA NP provided Supplement 9 to revise the schedule for 11 questions. On February 17, 2012, AREVA NP provided Supplement 10 to revise the schedule for 20 questions. On February 21, 2012, AREVA NP provided Supplement 11 to revise the schedule for Question 07.01-33. On March 16, 2012, AREVA NP provided Supplement 12 to provide a complete and final response to 2 of the remaining questions (07.01-41 and 07.05-10), and a revised response to 2 questions (07.08-46 and 07.09-72). On April 3, 2012, AREVA NP provided Supplement 13 to provide a complete and final response to one of the remaining questions (07.08-47). On April 11, 2012, AREVA NP provided Supplement 14 to provide a complete and final response to one of the remaining questions (07.01-38). On April 17, 2012, AREVA NP provided Supplement 15 to provide a complete and final response to 2 of the remaining questions (07.01-37 and 07.03-38). On April 18, 2012, AREVA NP provided Supplement 16 to provide a correct and complete final response to one of the remaining questions (07.01-50) and a revised final response to another question (07.09-72) based on NRC staff comments. On April 19, 2012, AREVA NP provided Supplement 17 to provide a correct and complete final response to one of the remaining questions (07.01-45). On April 27, 2012, AREVA NP provided Supplement 18 to provide a correct and complete final response to three of the remaining questions. On May 9, 2012, AREVA NP provided Supplement 19 to provide a correct and complete final response to three of the remaining questions. On May 22, 2012, AREVA NP provided Supplement 20 to provide a correct and complete final response to four of the remaining questions. On May 29, 2012, AREVA NP provided Supplement 21 to provide a correct and complete final response to one of the remaining questions. On May 30, 2012, AREVA NP provided Supplement 22 to provide an interim response to one of the remaining questions (07.01-35). On July 6, 2012, AREVA NP provided Supplement 23 to provide a revised final response to one question (07.01-48). On July 20, 2012, AREVA NP provided Supplement 24 to provide a revised final response to one question (07.01-48). On August 15, 2012, AREVA NP provided Supplement 25 to provide a revised interim response to one of the remaining questions (07.01-35).

The schedule for a technically correct and complete final response to Question 07.01-35 has been changed as provided below. The schedule for a response to question (07.01-33) is unchanged. Also included are the dates for revised technically correct and complete final responses to three other questions as discussed during the 11/15/2012 Public Meeting on I&C Chapter 7 Path Forward for Closure of Open Items.

Question #	Interim Response Date	Response Date
RAI 505 — 07.01-33	N/A	July 30, 2013
RAI 505 — 07.01-35	May 30, 2012 (Actual)	<b>April 18 , 2013</b>

	August 15, 2012 (Actual)	
RAI 505 — 07.01-36	N/A	<b>December 19, 2012</b>
RAI 505 — 07.01-39	N/A	<b>December 19, 2012</b>
RAI 505 — 07.01-44	N/A	<b>December 19, 2012</b>

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:** Tuesday, November 13, 2012 1:11 PM  
**To:** [Amy.Snyder@nrc.gov](mailto:Amy.Snyder@nrc.gov)  
**Cc:** [Michael.Canova@nrc.gov](mailto:Michael.Canova@nrc.gov); RYAN Tom (RS/NB); GARDNER Darrell (RS/NB); VANCE Brian (RS/NB); LEIGHLITER John (RS/NB); ROMINE Judy (RS/NB)  
**Subject:** Response to U.S. EPR Design Certification Application RAI No. 505 (5902,5735,5869,5754,5803,5950,5744), FSAR Ch. 7, Question 07.01-35 - STATUS

Amy,  
AREVA appreciates the discussion we just held with you and NRC staff via telecon to review the status of the DRAFT RAI response for Question 07.01-35 submitted on October 11<sup>th</sup>. We understand that the NRC staff needs additional time to complete their review and provide full and complete feedback. AREVA has received partial NRC feedback related to the CCW crosstie SAS interlock design and is working to address this issue. Once we receive complete feedback on the Oct. 11<sup>th</sup> Draft response – which we understand will be transmitted no later than Nov. 21<sup>st</sup>, AREVA will provide a revised schedule for submittal of the final response to this question after evaluation of the additional NRC staff comments.

The schedule for a technically correct and complete final response to the remaining question in RAI 505 remains unchanged as shown below.

Question #	Interim Response Date	Response Date
RAI 505 — 07.01-33	N/A	July 30, 2013
RAI 505 — 07.01-35	May 30, 2012 (Actual) August 15, 2012 (Actual)	<b>TBD</b>

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

**From:** RYAN Tom (RS/NB)

**Sent:** Wednesday, August 15, 2012 11:15 AM

**To:** Tesfaye, Getachew

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

**Subject:** Response to U.S. EPR Design Certification Application RAI No. 505 (5902,5735,5869,5754,5803,5950,5744), FSAR Ch. 7, Supplement 25

Getachew,

On September 29, 2011, AREVA NP Inc. provided a schedule for technically correct and complete responses to the 34 questions in RAI 505. In Supplement 1 sent on October 27, 2011, and Supplement 2 sent on November 17, 2011, AREVA NP provided a revised schedule for technically correct and complete responses to 33 questions and a preliminary revised schedule for Question 07.01-33. AREVA NP provided Supplement 3 on November 22, 2011 to provide a final response to 4 questions. On December 9, 2011, AREVA NP provided Supplement 4 to revise the schedule for 7 questions. On December 14, 2011, AREVA NP provided Supplement 5 to revise the schedule for 5 questions. On December 15, 2011, AREVA NP provided Supplement 6 to provide a complete and final response to 6 questions. On January 10, 2012, AREVA NP provided Supplement 7 to provide a complete and final response to 2 questions. On January 19, 2012, AREVA NP provided Supplement 8 to provide a complete and final response to one question and a revised preliminary schedule for the response to Question 07.01-33. On February 9, 2012, AREVA NP provided Supplement 9 to revise the schedule for 11 questions. On February 17, 2012, AREVA NP provided Supplement 10 to revise the schedule for 20 questions. On February 21, 2012, AREVA NP provided Supplement 11 to revise the schedule for Question 07.01-33. On March 16, 2012, AREVA NP provided Supplement 12 to provide a complete and final response to 2 of the remaining questions (07.01-41 and 07.05-10), and a revised response to 2 questions (07.08-46 and 07.09-72). On April 3, 2012, AREVA NP provided Supplement 13 to provide a complete and final response to one of the remaining questions (07.08-47). On April 11, 2012, AREVA NP provided Supplement 14 to provide a complete and final response to one of the remaining questions (07.01-38). On April 17, 2012, AREVA NP provided Supplement 15 to provide a complete and final response to 2 of the remaining questions (07.01-37 and 07.03-38). On April 18, 2012, AREVA NP provided Supplement 16 to provide a correct and complete final response to one of the remaining questions (07.01-50) and a revised final response to another question (07.09-72) based on NRC staff comments. On April 19, 2012, AREVA NP provided Supplement 17 to provide a correct and complete final response to one of the remaining questions (07.01-45). On April 27, 2012, AREVA NP provided Supplement 18 to provide a correct and complete final response to three of the remaining questions. On May 9, 2012, AREVA NP provided Supplement 19 to provide a correct and complete final response to three of the remaining questions. On May 22, 2012, AREVA NP provided Supplement 20 to provide a correct and complete final response to four of the remaining questions. On May 29, 2012, AREVA NP provided Supplement 21 to provide a correct and complete final response to one of the remaining questions. On May 30, 2012, AREVA NP provided Supplement 22 to provide an interim response to one of the remaining questions (07.01-35). On July 6, 2012, AREVA NP provided Supplement 23 to provide a revised final response to one question (07.01-48). On July 20, 2012, AREVA NP provided Supplement 24 to provide a revised final response to one question (07.01-48).

The attached file, "RAI 505 Supplement 25 Response US EPR DC - INTERIM.pdf," provides a second interim response to one of the remaining two questions (07.01-35). 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 this question. Note that additional details of the U. S. EPR FSAR Section 7.6 mark-ups and associated figures will be provided in the final response to Question 07.01-35.

The following table indicates the respective pages in the response document, "RAI 505 Supplement 25 Response US EPR DC - INTERIM.pdf," that contain AREVA NP's response to the subject question.

Question #	Start Page	End Page
RAI 505 — 07.01-35	2	3

The schedule for a technically correct and complete final response to Question 07.01-35 has been changed as provided below. The schedule for a response to the other question (07.01-33) is unchanged.

Question #	Interim Response Date	Response Date
RAI 505 — 07.01-33	N/A	July 30, 2013
RAI 505 — 07.01-35	May 30, 2012 (Actual) August 15, 2012 (Actual)	<b>November 13, 2012</b>

Sincerely,

**Tom Ryan for  
Dennis Williford, P.E.  
U.S. EPR Design Certification Licensing Manager  
AREVA NP Inc.**

7207 IBM Drive, Mail Code CLT 2B  
Charlotte, NC 28262  
Phone: 704-805-2223  
Email: [Dennis.Williford@areva.com](mailto:Dennis.Williford@areva.com)

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**From:** WILLIFORD Dennis (RS/NB)  
**Sent:** Friday, July 20, 2012 10:27 AM  
**To:** [Getachew.Tesfaye@nrc.gov](mailto: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. 505 (5902,5735,5869,5754,5803,5950,5744), FSAR Ch. 7, Supplement 24

Getachew,

On September 29, 2011, AREVA NP Inc. provided a schedule for technically correct and complete responses to the 34 questions in RAI 505. In Supplement 1 sent on October 27, 2011, and Supplement 2 sent on November 17, 2011, AREVA NP provided a revised schedule for technically correct and complete responses to 33 questions and a preliminary revised schedule for Question 07.01-33. AREVA NP provided Supplement 3 on November 22, 2011 to provide a final response to 4 questions. On December 9, 2011, AREVA NP provided Supplement 4 to revise the schedule for 7 questions. On December 14, 2011, AREVA NP provided Supplement 5 to revise the schedule for 5 questions. On December 15, 2011, AREVA NP provided Supplement 6 to provide a complete and final response to 6 questions. On January 10, 2012, AREVA NP provided Supplement 7 to provide a complete and final response to 2 questions. On January 19, 2012, AREVA NP provided Supplement 8 to provide a complete and final response to one question and a revised preliminary schedule for the response to Question 07.01-33. On February 9, 2012, AREVA NP provided Supplement 9 to revise the schedule for 11 questions. On February 17, 2012, AREVA NP provided Supplement 10 to revise the schedule for 20 questions. On February 21, 2012, AREVA NP provided Supplement 11 to revise the schedule for Question 07.01-33. On March 16, 2012, AREVA NP provided Supplement 12 to provide a complete and final response to 2 of the remaining questions (07.01-41 and 07.05-10), and a revised response to 2 questions (07.08-46 and 07.09-72). On April 3, 2012, AREVA NP provided Supplement 13 to provide a complete and final response to one of the remaining questions (07.08-47). On April 11, 2012, AREVA NP provided Supplement 14 to provide a complete and final response to one of the remaining questions (07.01-38). On April 17, 2012, AREVA NP provided Supplement 15 to provide a complete and final response to 2 of the remaining questions (07.01-37 and 07.03-38). On April 18, 2012, AREVA NP provided Supplement 16 to provide a correct and complete final response to one of the remaining questions

(07.01-50) and a revised final response to another question (07.09-72) based on NRC staff comments. On April 19, 2012, AREVA NP provided Supplement 17 to provide a correct and complete final response to one of the remaining questions (07.01-45). On April 27, 2012, AREVA NP provided Supplement 18 to provide a correct and complete final response to three of the remaining questions. On May 9, 2012, AREVA NP provided Supplement 19 to provide a correct and complete final response to three of the remaining questions. On May 22, 2012, AREVA NP provided Supplement 20 to provide a correct and complete final response to four of the remaining questions. On May 29, 2012, AREVA NP provided Supplement 21 to provide a correct and complete final response to one of the remaining questions. On May 30, 2012, AREVA NP provided Supplement 22 to provide an interim response to one of the remaining questions (07.01-35). On July 6, 2012, AREVA NP provided Supplement 23 to provide a revised final response to one question (07.01-48).

The attached file, "RAI 505 Supplement 24 Response US EPR DC.pdf," provides a revised final response to Question 07.01-48 based on recent discussion with NRC staff. This response supersedes the prior response to Question 07.01-48 in its entirety. This revised response addresses clarification in U. S. EPR FSAR Sections 7.1 and 7.4 for RSS capability to achieve and maintain safe shutdown conditions. Appended to this file are affected pages of the U.S. EPR Final Safety Analysis Report (FSAR) in redline-strikeout format which support the response to this question.

The following table indicates the respective pages in the response document, "RAI 505 Supplement 24 Response US EPR DC.pdf," that contain AREVA NP's response to the subject question.

Question #	Start Page	End Page
RAI 505 — 07.01-48	2	5

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

Question #	Interim Response Date	Response Date
RAI 505 — 07.01-33	N/A	July 30, 2013
RAI 505 — 07.01-35	May 30, 2012 (Actual)	August 15 , 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](mailto:Dennis.Williford@areva.com)

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**From:** WILLIFORD Dennis (RS/NB)  
**Sent:** Friday, July 06, 2012 1:29 PM  
**To:** [Getachew.Tesfaye@nrc.gov](mailto: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. 505 (5902,5735,5869,5754,5803,5950,5744), FSAR Ch. 7, Supplement 23

Getachew,

On September 29, 2011, AREVA NP Inc. provided a schedule for technically correct and complete responses to the 34 questions in RAI 505. In Supplement 1 sent on October 27, 2011, and Supplement 2 sent on November 17, 2011, AREVA NP provided a revised schedule for technically correct and complete responses to 33 questions and a preliminary revised schedule for Question 07.01-33. AREVA NP provided Supplement 3 on November 22, 2011 to provide a final response to 4 questions. On December 9, 2011, AREVA NP provided Supplement 4 to revise the schedule for 7 questions. On December 14, 2011, AREVA NP provided Supplement 5 to revise the schedule for 5 questions. On December 15, 2011, AREVA NP provided Supplement 6 to provide a complete and final response to 6 questions. On January 10, 2012, AREVA NP provided Supplement 7 to provide a complete and final response to 2 questions. On January 19, 2012, AREVA NP provided Supplement 8 to provide a complete and final response to one question and a revised preliminary schedule for the response to Question 07.01-33. On February 9, 2012, AREVA NP provided Supplement 9 to revise the schedule for 11 questions. On February 17, 2012, AREVA NP provided Supplement 10 to revise the schedule for 20 questions. On February 21, 2012, AREVA NP provided Supplement 11 to revise the schedule for Question 07.01-33. On March 16, 2012, AREVA NP provided Supplement 12 to provide a complete and final response to 2 of the remaining questions (07.01-41 and 07.05-10), and a revised response to 2 questions (07.08-46 and 07.09-72). On April 3, 2012, AREVA NP provided Supplement 13 to provide a complete and final response to one of the remaining questions (07.08-47). On April 11, 2012, AREVA NP provided Supplement 14 to provide a complete and final response to one of the remaining questions (07.01-38). On April 17, 2012, AREVA NP provided Supplement 15 to provide a complete and final response to 2 of the remaining questions (07.01-37 and 07.03-38). On April 18, 2012, AREVA NP provided Supplement 16 to provide a correct and complete final response to one of the remaining questions (07.01-50) and a revised final response to another question (07.09-72) based on NRC staff comments. On April 19, 2012, AREVA NP provided Supplement 17 to provide a correct and complete final response to one of the remaining questions (07.01-45). On April 27, 2012, AREVA NP provided Supplement 18 to provide a correct and complete final response to three of the remaining questions. On May 9, 2012, AREVA NP provided Supplement 19 to provide a correct and complete final response to three of the remaining questions. On May 22, 2012, AREVA NP provided Supplement 20 to provide a correct and complete final response to four of the remaining questions. On May 29, 2012, AREVA NP provided Supplement 21 to provide a correct and complete final response to one of the remaining questions. On May 30, 2012, AREVA NP provided Supplement 22 to provide an interim response to one of the remaining questions (07.01-35).

The attached file, "RAI 505 Supplement 23 Response US EPR DC.pdf," provides a revised final response to Question 07.01-48. This response supersedes the prior response to Question 07.01-48 in its entirety. This revised response addresses clarification in U. S. EPR FSAR Sections 7.1 and 7.4 for RSS capability to achieve and maintain safe shutdown conditions. Appended to this file are affected pages of the U.S. EPR Final Safety Analysis Report (FSAR) in redline-strikeout format which support the response to this question.

The following table indicates the respective pages in the response document, "RAI 505 Supplement 23 Response US EPR DC.pdf," that contain AREVA NP's response to the subject question.

Question #	Start Page	End Page
RAI 505 — 07.01-48	2	5

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

Question #	Interim Response Date	Response Date
RAI 505 — 07.01-33	N/A	July 30, 2013
RAI 505 — 07.01-35	May 30, 2012 (Actual)	August 15 , 2012

Sincerely,

**Dennis Williford, P.E.**  
**U.S. EPR Design Certification Licensing Manager**  
**AREVA NP Inc.**

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Charlotte, NC 28262  
Phone: 704-805-2223  
Email: [Dennis.Williford@areva.com](mailto:Dennis.Williford@areva.com)

---

**From:** WILLIFORD Dennis (RS/NB)  
**Sent:** Wednesday, May 30, 2012 5:31 PM  
**To:** [Getachew.Tesfaye@nrc.gov](mailto: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. 505  
(5902,5735,5869,5754,5803,5950,5744), FSAR Ch. 7, Supplement 22

Getachew,

On September 29, 2011, AREVA NP Inc. provided a schedule for technically correct and complete responses to the 34 questions in RAI 505. In Supplement 1 sent on October 27, 2011, and Supplement 2 sent on November 17, 2011, AREVA NP provided a revised schedule for technically correct and complete responses to 33 questions and a preliminary revised schedule for Question 07.01-33. AREVA NP provided Supplement 3 on November 22, 2011 to provide a final response to 4 questions. On December 9, 2011, AREVA NP provided Supplement 4 to revise the schedule for 7 questions. On December 14, 2011, AREVA NP provided Supplement 5 to revise the schedule for 5 questions. On December 15, 2011, AREVA NP provided Supplement 6 to provide a complete and final response to 6 questions. On January 10, 2012, AREVA NP provided Supplement 7 to provide a complete and final response to 2 questions. On January 19, 2012, AREVA NP provided Supplement 8 to provide a complete and final response to one question and a revised preliminary schedule for the response to Question 07.01-33. On February 9, 2012, AREVA NP provided Supplement 9 to revise the schedule for 11 questions. On February 17, 2012, AREVA NP provided Supplement 10 to revise the schedule for 20 questions. On February 21, 2012, AREVA NP provided Supplement 11 to revise the schedule for Question 07.01-33. On March 16, 2012, AREVA NP provided Supplement 12 to provide a complete and final response to 2 of the remaining questions (07.01-41 and 07.05-10), and a revised response to 2 questions (07.08-46 and 07.09-72). On April 3, 2012, AREVA NP provided Supplement 13 to provide a complete and final response to one of the remaining questions (07.08-47). On April 11, 2012, AREVA NP provided Supplement 14 to provide a complete and final response to one of the remaining questions (07.01-38). On April 17, 2012, AREVA NP provided Supplement 15 to provide a complete and final response to 2 of the remaining questions (07.01-37 and 07.03-38). On April 18, 2012, AREVA NP provided Supplement 16 to provide a correct and complete final response to one of the remaining questions (07.01-50) and a revised final response to another question (07.09-72) based on NRC staff comments. On April 19, 2012, AREVA NP provided Supplement 17 to provide a correct and complete final response to one of the remaining questions (07.01-45). On April 27, 2012, AREVA NP provided Supplement 18 to provide a correct and complete final response to three of the remaining questions. On May 9, 2012, AREVA NP provided Supplement 19 to provide a correct and complete final response to three of the remaining questions. On May 22, 2012, AREVA NP provided Supplement 20 to provide a correct and complete final response to four of the remaining questions. On May 29, 2012, AREVA NP provided Supplement 21 to provide a correct and complete final response to one of the remaining questions.

The attached file, "RAI 505 Supplement 22 Response US EPR DC - INTERIM.pdf," provides an interim response to one of the remaining two questions (07.01-35). 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 this question. Note that the details of the U. S. EPR FSAR Section 7.6 mark-ups and associated figures will be provided in the final response to Question 07.01-35.

The following table indicates the respective pages in the response document, "RAI 505 Supplement 22 Response US EPR DC - INTERIM.pdf," that contain AREVA NP's response to the subject question.

Question #	Start Page	End Page
RAI 505 — 07.01-35	2	3

The schedule for a technically correct and complete final response to Question 07.01-35 has been changed as provided below. The schedule for a response to the other question (07.01-33) is unchanged.

Question #	Interim Response Date	Response Date
RAI 505 — 07.01-33	N/A	July 30, 2013
RAI 505 — 07.01-35	<b>May 30, 2012 (Actual)</b>	<b>August 15 , 2012</b>

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)

---

**From:** WILLIFORD Dennis (RS/NB)  
**Sent:** Tuesday, May 29, 2012 11:23 AM  
**To:** [Getachew.Tesfaye@nrc.gov](mailto: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. 505  
(5902,5735,5869,5754,5803,5950,5744), FSAR Ch. 7, Supplement 21

Getachew,

On September 29, 2011, AREVA NP Inc. provided a schedule for technically correct and complete responses to the 34 questions in RAI 505. In Supplement 1 sent on October 27, 2011, and Supplement 2 sent on November 17, 2011, AREVA NP provided a revised schedule for technically correct and complete responses to 33 questions and a preliminary revised schedule for Question 07.01-33. AREVA NP provided Supplement 3 on November 22, 2011 to provide a final response to 4 questions. On December 9, 2011, AREVA NP provided Supplement 4 to revise the schedule for 7 questions. On December 14, 2011, AREVA NP provided Supplement 5 to revise the schedule for 5 questions. On December 15, 2011, AREVA NP provided Supplement 6 to provide a complete and final response to 6 questions. On January 10, 2012, AREVA NP provided Supplement 7 to provide a complete and final response to 2 questions. On January 19, 2012, AREVA NP provided Supplement 8 to provide a complete and final response to one question and a revised preliminary schedule for the response to Question 07.01-33. On February 9, 2012, AREVA NP provided Supplement 9 to revise the schedule for 11 questions. On February 17, 2012, AREVA NP provided Supplement 10 to revise the schedule for 20 questions. On February 21, 2012, AREVA NP provided Supplement 11 to revise the schedule for Question 07.01-33. On March 16, 2012, AREVA NP provided Supplement 12 to provide a complete and final response to 2 of the remaining questions (07.01-41 and 07.05-10), and a revised response to 2 questions (07.08-46 and 07.09-72). On April 3, 2012, AREVA NP provided Supplement 13 to provide a complete and final response to one of the remaining questions (07.08-47). On April 11, 2012, AREVA NP provided Supplement 14 to provide a complete and final response to one of the remaining questions (07.01-38). On April 17, 2012, AREVA NP provided Supplement 15 to provide a complete and final response to 2 of the remaining questions (07.01-37 and 07.03-38). On April 18, 2012, AREVA NP provided Supplement 16 to provide a correct and complete final response to one of the remaining questions

(07.01-50) and a revised final response to another question (07.09-72) based on NRC staff comments. On April 19, 2012, AREVA NP provided Supplement 17 to provide a correct and complete final response to one of the remaining questions (07.01-45). On April 27, 2012, AREVA NP provided Supplement 18 to provide a correct and complete final response to three of the remaining questions. On May 9, 2012, AREVA NP provided Supplement 19 to provide a correct and complete final response to three of the remaining questions. On May 22, 2012, AREVA NP provided Supplement 20 to provide a correct and complete final response to four of the remaining questions.

The attached file, "RAI 505 Supplement 21 Response US EPR DC.pdf" provides a technically correct and complete final response to one of the remaining three questions (07.01-49). 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 this question.

The following table indicates the respective pages in the response document, "RAI 505 Supplement 21 Response US EPR DC.pdf," that contain AREVA NP's response to the subject question.

Question #	Start Page	End Page
RAI 505 — 07.01-49	2	3

The schedule for a technically correct and complete final response to the remaining 2 questions remains unchanged as provided below.

Question #	Response Date
RAI 505 — 07.01-33	July 30, 2013
RAI 505 — 07.01-35	May 30, 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](mailto:Dennis.Williford@areva.com)

---

**From:** WILLIFORD Dennis (RS/NB)  
**Sent:** Tuesday, May 22, 2012 4:53 PM  
**To:** [Getachew.Tesfaye@nrc.gov](mailto: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. 505 (5902,5735,5869,5754,5803,5950,5744), FSAR Ch. 7, Supplement 20

Getachew,

AREVA NP Inc. letter NRC:12:030 dated May 22, 2012 provides a technically correct and complete final response to 4 questions (Questions 07.01-39, 07.01-40, 07.01-47 and 07.01-51) in RAI 505.

Enclosed with the letter as a part of the response are affected pages of ANP-10315P, "U.S. EPR Protection System Surveillance Testing and TELEPERM XS Self-Monitoring Technical Report," in redline-strikeout format which support the response to RAI 505, Questions 07.01-39, 07.01-40, 07.01-47 and 07.01-51. A complete

revision to the technical report will be submitted after the final submittal of all responses to RAI 505 that impact the report are completed. Since AREVA NP considers some of the material contained in the response to be proprietary, an affidavit is included with the letter, as required by 10 CFR 2.390(b), to support the withholding of the information from public disclosure. Proprietary and non-proprietary versions of the enclosure to this letter are provided separately.

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

Question #	Start Page	End Page
RAI 505 — 07.01-39	2	4
RAI 505 — 07.01-40	5	6
RAI 505 — 07.01-47	7	7
RAI 505 — 07.01-51	8	16

The schedule for a technically correct and complete response to Question 07.01-33 has been changed as provided below. The response schedule for the other questions remains unchanged. This schedule was transmitted to the NRC in AREVA NP letter 12:024 dated May 10, 2012.

Question #	Response Date
RAI 505 — 07.01-33	<b>July 30, 2013</b>
RAI 505 — 07.01-35	May 30, 2012
RAI 505 — 07.01-49	May 30, 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](mailto:Dennis.Williford@areva.com)

**From:** WILLIFORD Dennis (RS/NB)  
**Sent:** Wednesday, May 09, 2012 10:02 PM  
**To:** [Getachew.Tesfaye@nrc.gov](mailto: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. 505  
(5902,5735,5869,5754,5803,5950,5744), FSAR Ch. 7, Supplement 19

Getachew,

AREVA NP Inc. letter NRC:12:027 dated May 9, 2012 provides a technically correct and complete final response to 3 questions (Questions 07.01-34, 07.01-44, and 07.01-48) in RAI 505.

Enclosed with the letter as a part of the response are affected pages of ANP-10315P, "U.S. EPR Protection System Surveillance Testing and TELEPERM XS Self-Monitoring Technical Report," Revision 2, in redline-strikeout format which support the response to RAI 505, Questions 07.01-34, 07.01-44, and 07.01-48. A complete revision to the technical report will be submitted after the final submittal of all responses to RAI 505 that impact the report are completed. Since AREVA NP considers some of the material contained in the

response to be proprietary, an affidavit is enclosed, as required by 10 CFR 2.390(b), to support the withholding of the information from public disclosure. Proprietary and non-proprietary versions of the enclosure to this letter are provided separately.

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

Question #	Start Page	End Page
RAI 505 — 07.01-34	2	4
RAI 505 — 07.01-44	5	6
RAI 505 — 07.01-48	7	10

The schedule for a technically correct and complete final response to the remaining 7 questions remains unchanged as provided below.

Question #	Response Date
RAI 505 — 07.01-33	August 30, 2013
RAI 505 — 07.01-35	May 30, 2012
RAI 505 — 07.01-39	May 22, 2012
RAI 505 — 07.01-40	May 22, 2012
RAI 505 — 07.01-47	May 22, 2012
RAI 505 — 07.01-49	May 30, 2012
RAI 505 — 07.01-51	May 22, 2012

Sincerely,

***Dennis Williford, P.E.***  
***U.S. EPR Design Certification Licensing Manager***  
***AREVA NP Inc.***

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Charlotte, NC 28262  
Phone: 704-805-2223  
Email: [Dennis.Williford@areva.com](mailto:Dennis.Williford@areva.com)

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

**Sent:** Friday, April 27, 2012 2:51 PM

**To:** [Getachew.Tesfaye@nrc.gov](mailto: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. 505  
(5902,5735,5869,5754,5803,5950,5744), FSAR Ch. 7, Supplement 18

Getachew,

On September 29, 2011, AREVA NP Inc. provided a schedule for technically correct and complete responses to the 34 questions in RAI 505. In Supplement 1 sent on October 27, 2011, and Supplement 2 sent on November 17, 2011, AREVA NP provided a revised schedule for technically correct and complete responses to 33 questions and a preliminary revised schedule for Question 07.01-33. AREVA NP provided Supplement 3 on November 22, 2011 to provide a final response to 4 questions. On December 9, 2011, AREVA NP provided Supplement 4 to revise the schedule for 7 questions. On December 14, 2011, AREVA NP provided Supplement 5 to revise the schedule for 5 questions. On December 15, 2011, AREVA NP provided Supplement 6 to provide a complete and final response to 6 questions. On January 10, 2012, AREVA NP provided Supplement 7 to provide a complete and final response to 2 questions. On January 19, 2012, AREVA NP provided Supplement 8 to provide a complete and final response to one question and a revised preliminary schedule for the response to Question 07.01-33. On February 9, 2012, AREVA NP provided Supplement 9 to revise the schedule for 11 questions. On February 17, 2012, AREVA NP provided Supplement 10 to revise the schedule for 20 questions. On February 21, 2012, AREVA NP provided Supplement 11 to revise the schedule for Question 07.01-33. On March 16, 2012, AREVA NP provided Supplement 12 to provide a complete and final response to 2 of the remaining questions (07.01-41 and 07.05-

10), and a revised response to 2 questions (07.08-46 and 07.09-72). On April 3, 2012, AREVA NP provided Supplement 13 to provide a complete and final response to one of the remaining questions (07.08-47). On April 11, 2012, AREVA NP provided Supplement 14 to provide a complete and final response to one of the remaining questions (07.01-38). On April 17, 2012, AREVA NP provided Supplement 15 to provide a complete and final response to 2 of the remaining questions (07.01-37 and 07.03-38). On April 18, 2012, AREVA NP provided Supplement 16 to provide a correct and complete final response to one of the remaining questions (07.01-50) and a revised final response to another question (07.09-72) based on NRC staff comments. On April 19, 2012, AREVA NP provided Supplement 17 to provide a correct and complete final response to one of the remaining questions (07.01-45).

The attached file, "RAI 505 Supplement 18 Response US EPR DC.pdf" provides a technically correct and complete final response to 3 of the remaining 13 questions (07.01-36, 07.01-46 and 07.09-71). 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 these questions.

The following table indicates the respective pages in the response document, "RAI 505 Supplement 18 Response US EPR DC.pdf," that contain AREVA NP's response to the subject questions.

Question #	Start Page	End Page
RAI 505 — 07.01-36	2	6
RAI 505 — 07.01-46	7	8
RAI 505 — 07.09-71	9	11

The schedule for a technically correct and complete final response to the remaining 10 questions remains unchanged as provided below.

Question #	Response Date
RAI 505 — 07.01-33	August 30, 2013
RAI 505 — 07.01-34	May 9, 2012
RAI 505 — 07.01-35	May 30, 2012
RAI 505 — 07.01-39	May 22, 2012
RAI 505 — 07.01-40	May 22, 2012
RAI 505 — 07.01-44	May 9, 2012
RAI 505 — 07.01-47	May 22, 2012
RAI 505 — 07.01-48	May 9, 2012
RAI 505 — 07.01-49	May 30, 2012
RAI 505 — 07.01-51	May 22, 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  
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Email: [Dennis.Williford@areva.com](mailto:Dennis.Williford@areva.com)

---

**From:** WILLIFORD Dennis (RS/NB)  
**Sent:** Thursday, April 19, 2012 11:13 AM

**To:** [Getachew.Tesfaye@nrc.gov](mailto: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. 505  
(5902,5735,5869,5754,5803,5950,5744), FSAR Ch. 7, Supplement 17

Getachew,

On September 29, 2011, AREVA NP Inc. provided a schedule for technically correct and complete responses to the 34 questions in RAI 505. In Supplement 1 sent on October 27, 2011, and Supplement 2 sent on November 17, 2011, AREVA NP provided a revised schedule for technically correct and complete responses to 33 questions and a preliminary revised schedule for Question 07.01-33. AREVA NP provided Supplement 3 on November 22, 2011 to provide a final response to 4 questions. On December 9, 2011, AREVA NP provided Supplement 4 to revise the schedule for 7 questions. On December 14, 2011, AREVA NP provided Supplement 5 to revise the schedule for 5 questions. On December 15, 2011, AREVA NP provided Supplement 6 to provide a complete and final response to 6 questions. On January 10, 2012, AREVA NP provided Supplement 7 to provide a complete and final response to 2 questions. On January 19, 2012, AREVA NP provided Supplement 8 to provide a complete and final response to one question and a revised preliminary schedule for the response to Question 07.01-33. On February 9, 2012, AREVA NP provided Supplement 9 to revise the schedule for 11 questions. On February 17, 2012, AREVA NP provided Supplement 10 to revise the schedule for 20 questions. On February 21, 2012, AREVA NP provided Supplement 11 to revise the schedule for Question 07.01-33. On March 16, 2012, AREVA NP provided Supplement 12 to provide a complete and final response to 2 of the remaining questions (07.01-41 and 07.05-10), and a revised response to 2 questions (07.08-46 and 07.09-72). On April 3, 2012, AREVA NP provided Supplement 13 to provide a complete and final response to one of the remaining questions (07.08-47). On April 11, 2012, AREVA NP provided Supplement 14 to provide a complete and final response to one of the remaining questions (07.01-38). On April 17, 2012, AREVA NP provided Supplement 15 to provide a complete and final response to 2 of the remaining questions (07.01-37 and 07.03-38). On April 18, 2012, AREVA NP provided Supplement 16 to provide a correct and complete final response to one of the remaining questions (07.01-50) and a revised final response to another question (07.09-72) based on NRC staff comments.

The attached file, "RAI 505 Supplement 17 Response - US EPR DC.pdf" provides a technically correct and complete final response to 1 of the remaining 14 questions (07.01-45). Appended to this file are affected pages of the U.S. EPR Technical Report ANP-10315P in redline-strikeout format which support the response to Question 07.01-45.

The following table indicates the respective pages in the response document, "RAI 505 Supplement 17 Response - US EPR DC.pdf," that contain AREVA NP's response to the subject question.

Question #	Start Page	End Page
RAI 505 — 07.01-45	2	3

The schedule for a technically correct and complete final response to the remaining 13 questions remains unchanged as provided below.

Question #	Response Date
RAI 505 — 07.01-33	August 30, 2013
RAI 505 — 07.01-34	May 9, 2012
RAI 505 — 07.01-35	May 30, 2012
RAI 505 — 07.01-36	May 1, 2012
RAI 505 — 07.01-39	May 22, 2012
RAI 505 — 07.01-40	May 22, 2012
RAI 505 — 07.01-44	May 9, 2012

RAI 505 — 07.01-46	May 1, 2012
RAI 505 — 07.01-47	May 22, 2012
RAI 505 — 07.01-48	May 9, 2012
RAI 505 — 07.01-49	May 30, 2012
RAI 505 — 07.01-51	May 22, 2012
RAI 505 — 07.09-71	May 9, 2012

Sincerely,

***Dennis Williford, P.E.***  
***U.S. EPR Design Certification Licensing Manager***  
***AREVA NP Inc.***

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

---

**From:** WILLIFORD Dennis (RS/NB)  
**Sent:** Wednesday, April 18, 2012 3:06 PM  
**To:** [Getachew.Tesfaye@nrc.gov](mailto: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. 505  
(5902,5735,5869,5754,5803,5950,5744), FSAR Ch. 7, Supplement 16

Getachew,

On September 29, 2011, AREVA NP Inc. provided a schedule for technically correct and complete responses to the 34 questions in RAI 505. In Supplement 1 sent on October 27, 2011, and Supplement 2 sent on November 17, 2011, AREVA NP provided a revised schedule for technically correct and complete responses to 33 questions and a preliminary revised schedule for Question 07.01-33. AREVA NP provided Supplement 3 on November 22, 2011 to provide a final response to 4 questions. On December 9, 2011, AREVA NP provided Supplement 4 to revise the schedule for 7 questions. On December 14, 2011, AREVA NP provided Supplement 5 to revise the schedule for 5 questions. On December 15, 2011, AREVA NP provided Supplement 6 to provide a complete and final response to 6 questions. On January 10, 2012, AREVA NP provided Supplement 7 to provide a complete and final response to 2 questions. On January 19, 2012, AREVA NP provided Supplement 8 to provide a complete and final response to one question and a revised preliminary schedule for the response to Question 07.01-33. On February 9, 2012, AREVA NP provided Supplement 9 to revise the schedule for 11 questions. On February 17, 2012, AREVA NP provided Supplement 10 to revise the schedule for 20 questions. On February 21, 2012, AREVA NP provided Supplement 11 to revise the schedule for Question 07.01-33. On March 16, 2012, AREVA NP provided Supplement 12 to provide a complete and final response to 2 of the remaining questions (07.01-41 and 07.05-10), and a revised response to 2 questions (07.08-46 and 07.09-72). On April 3, 2012, AREVA NP provided Supplement 13 to provide a complete and final response to one of the remaining questions (07.08-47). On April 11, 2012, AREVA NP provided Supplement 14 to provide a complete and final response to one of the remaining questions (07.01-38). On April 17, 2012, AREVA NP provided Supplement 15 to provide a complete and final response to 2 of the remaining questions (07.01-37 and 07.03-38).

The attached file, "RAI 505 Supplement 16 Response - US EPR DC.pdf" provides a technically correct and complete final response to 1 of the remaining 15 questions (07.01-50) and a revised final response to another question (07.09-72) based on NRC staff comments. 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 Question 07.01-50 and Question 07.09-72.

The following table indicates the respective pages in the response document, "RAI 505 Supplement 16 Response - US EPR DC.pdf," that contain AREVA NP's response to the subject questions.

Question #	Start Page	End Page
RAI 505 — 07.01-50	2	3
RAI 505 — 07.09-72	4	5

The schedule for a technically correct and complete final response to the remaining 14 questions remains unchanged as provided below.

Question #	Response Date
RAI 505 — 07.01-33	August 30, 2013
RAI 505 — 07.01-34	May 9, 2012
RAI 505 — 07.01-35	May 30, 2012
RAI 505 — 07.01-36	May 1, 2012
RAI 505 — 07.01-39	May 22, 2012
RAI 505 — 07.01-40	May 22, 2012
RAI 505 — 07.01-44	May 9, 2012
RAI 505 — 07.01-45	May 1, 2012
RAI 505 — 07.01-46	May 1, 2012
RAI 505 — 07.01-47	May 22, 2012
RAI 505 — 07.01-48	May 9, 2012
RAI 505 — 07.01-49	May 30, 2012
RAI 505 — 07.01-51	May 22, 2012
RAI 505 — 07.09-71	May 9, 2012

Sincerely,

***Dennis Williford, P.E.***  
***U.S. EPR Design Certification Licensing Manager***  
***AREVA NP Inc.***

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Charlotte, NC 28262  
Phone: 704-805-2223  
Email: [Dennis.Williford@areva.com](mailto:Dennis.Williford@areva.com)

**From:** WILLIFORD Dennis (RS/NB)  
**Sent:** Tuesday, April 17, 2012 12:05 PM  
**To:** [Getachew.Tesfaye@nrc.gov](mailto: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. 505  
(5902,5735,5869,5754,5803,5950,5744), FSAR Ch. 7, Supplement 15

Getachew,

On September 29, 2011, AREVA NP Inc. provided a schedule for technically correct and complete responses to the 34 questions in RAI 505. In Supplement 1 sent on October 27, 2011, and Supplement 2 sent on November 17, 2011, AREVA NP provided a revised schedule for technically correct and complete responses to 33 questions and a preliminary revised schedule for Question 07.01-33. AREVA NP provided Supplement 3

on November 22, 2011 to provide a final response to 4 questions. On December 9, 2011, AREVA NP provided Supplement 4 to revise the schedule for 7 questions. On December 14, 2011, AREVA NP provided Supplement 5 to revise the schedule for 5 questions. On December 15, 2011, AREVA NP provided Supplement 6 to provide a complete and final response to 6 questions. On January 10, 2012, AREVA NP provided Supplement 7 to provide a complete and final response to 2 questions. On January 19, 2012, AREVA NP provided Supplement 8 to provide a complete and final response to one question and a revised preliminary schedule for the response to Question 07.01-33. On February 9, 2012, AREVA NP provided Supplement 9 to revise the schedule for 11 questions. On February 17, 2012, AREVA NP provided Supplement 10 to revise the schedule for 20 questions. On February 21, 2012, AREVA NP provided Supplement 11 to revise the schedule for Question 07.01-33. On March 16, 2012, AREVA NP provided Supplement 12 to provide a complete and final response to 2 of the remaining questions (07.01-41 and 07.05-10), and a revised response to 2 questions (07.08-46 and 07.09-72). On April 3, 2012, AREVA NP provided Supplement 13 to provide a complete and final response to one of the remaining questions (07.08-47). On April 11, 2012, AREVA NP provided Supplement 14 to provide a complete and final response to one of the remaining questions (07.01-38).

The attached file, "RAI 505 Supplement 15 Response - US EPR DC.pdf" provides a technically correct and complete final response to 2 of the remaining 17 questions (07.01-37 and 07.03-38). 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 Questions 07.01-37 and Question 07.03-38.

The following table indicates the respective pages in the response document, "RAI 505 Supplement 15 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 505 — 07.01-37	2	2
RAI 505 — 07.03-38	3	35

The schedule for a technically correct and complete final response to the remaining 15 questions remains unchanged as provided below.

<b>Question #</b>	<b>Response Date</b>
RAI 505 — 07.01-33	August 30, 2013
RAI 505 — 07.01-34	May 9, 2012
RAI 505 — 07.01-35	May 30, 2012
RAI 505 — 07.01-36	May 1, 2012
RAI 505 — 07.01-39	May 22, 2012
RAI 505 — 07.01-40	May 22, 2012
RAI 505 — 07.01-44	May 9, 2012
RAI 505 — 07.01-45	May 1, 2012
RAI 505 — 07.01-46	May 1, 2012
RAI 505 — 07.01-47	May 22, 2012
RAI 505 — 07.01-48	May 9, 2012
RAI 505 — 07.01-49	May 30, 2012
RAI 505 — 07.01-50	May 30, 2012
RAI 505 — 07.01-51	May 22, 2012
RAI 505 — 07.09-71	May 9, 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](mailto:Dennis.Williford@areva.com)

---

**From:** WILLIFORD Dennis (RS/NB)  
**Sent:** Wednesday, April 11, 2012 11:00 AM  
**To:** [Getachew.Tesfaye@nrc.gov](mailto: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. 505  
(5902,5735,5869,5754,5803,5950,5744), FSAR Ch. 7, Supplement 14

Getachew,

On September 29, 2011, AREVA NP Inc. provided a schedule for technically correct and complete responses to the 34 questions in RAI 505. In Supplement 1 sent on October 27, 2011, and Supplement 2 sent on November 17, 2011, AREVA NP provided a revised schedule for technically correct and complete responses to 33 questions and a preliminary revised schedule for Question 07.01-33. AREVA NP provided Supplement 3 on November 22, 2011 to provide a final response to 4 questions. On December 9, 2011, AREVA NP provided Supplement 4 to revise the schedule for 7 questions. On December 14, 2011, AREVA NP provided Supplement 5 to revise the schedule for 5 questions. On December 15, 2011, AREVA NP provided Supplement 6 to provide a complete and final response to 6 questions. On January 10, 2012, AREVA NP provided Supplement 7 to provide a complete and final response to 2 questions. On January 19, 2012, AREVA NP provided Supplement 8 to provide a complete and final response to one question and a revised preliminary schedule for the response to Question 07.01-33. On February 9, 2012, AREVA NP provided Supplement 9 to revise the schedule for 11 questions. On February 17, 2012, AREVA NP provided Supplement 10 to revise the schedule for 20 questions. On February 21, 2012, AREVA NP provided Supplement 11 to revise the schedule for Question 07.01-33. On March 16, 2012, AREVA NP provided Supplement 12 to provide a complete and final response to 2 of the remaining questions (07.01-41 and 07.05-10), and a revised response to 2 questions (07.08-46 and 07.09-72). On April 3, 2012, AREVA NP provided Supplement 13 to provide a complete and final response to one of the remaining questions (07.08-47).

The attached file, "RAI 505 Supplement 14 Response - US EPR DC.pdf" provides a technically correct and complete response to 1 of the remaining 18 questions (07.01-38). 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 Question 07.01-38.

The following table indicates the respective pages in the response document, "RAI 505 Supplement 14 Response - US EPR DC.pdf," that contain AREVA NP's response to the subject question.

Question #	Start Page	End Page
RAI 505 — 07.01-38	2	3

The schedule for a technically correct and complete response to the remaining 17 questions remains unchanged as provided below.

Question #	Response Date
RAI 505 — 07.01-33	August 30, 2013
RAI 505 — 07.01-34	May 9, 2012

RAI 505 — 07.01-35	May 30, 2012
RAI 505 — 07.01-36	May 1, 2012
RAI 505 — 07.01-37	April 17, 2012
RAI 505 — 07.01-39	May 22, 2012
RAI 505 — 07.01-40	May 22, 2012
RAI 505 — 07.01-44	May 9, 2012
RAI 505 — 07.01-45	May 1, 2012
RAI 505 — 07.01-46	May 1, 2012
RAI 505 — 07.01-47	May 22, 2012
RAI 505 — 07.01-48	May 9, 2012
RAI 505 — 07.01-49	May 30, 2012
RAI 505 — 07.01-50	May 30, 2012
RAI 505 — 07.01-51	May 22, 2012
RAI 505 — 07.03-38	April 17, 2012
RAI 505 — 07.09-71	May 9, 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](mailto:Dennis.Williford@areva.com)

---

**From:** WILLIFORD Dennis (RS/NB)  
**Sent:** Tuesday, April 03, 2012 3:27 PM  
**To:** [Getachew.Tesfaye@nrc.gov](mailto: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. 505  
(5902,5735,5869,5754,5803,5950,5744), FSAR Ch. 7, Supplement 13

Getachew,

On September 29, 2011, AREVA NP Inc. provided a schedule for technically correct and complete responses to the 34 questions in RAI 505. In Supplement 1 sent on October 27, 2011, and Supplement 2 sent on November 17, 2011, AREVA NP provided a revised schedule for technically correct and complete responses to 33 questions and a preliminary revised schedule for Question 07.01-33. AREVA NP provided Supplement 3 on November 22, 2011 to provide a final response to 4 questions. On December 9, 2011, AREVA NP provided Supplement 4 to revise the schedule for 7 questions. On December 14, 2011, AREVA NP provided Supplement 5 to revise the schedule for 5 questions. On December 15, 2011, AREVA NP provided Supplement 6 to provide a complete and final response to 6 questions. On January 10, 2012, AREVA NP provided Supplement 7 to provide a complete and final response to 2 questions. On January 19, 2012, AREVA NP provided Supplement 8 to provide a complete and final response to one question and a revised preliminary schedule for the response to Question 07.01-33. On February 9, 2012, AREVA NP provided Supplement 9 to revise the schedule for 11 questions. On February 17, 2012, AREVA NP provided Supplement 10 to revise the schedule for 20 questions. On February 21, 2012, AREVA NP provided Supplement 11 to revise the schedule for Question 07.01-33. On March 16, 2012, AREVA NP provided Supplement 12 to provide a complete and final response to 2 of the remaining questions (07.01-41 and 07.05-10), and a revised response to 2 questions (07.08-46 and 07.09-72).

The attached file, "RAI 505 Supplement 13 Response - US EPR DC.pdf" provides a technically correct and complete response to 1 of the remaining 19 questions (07.08-47). 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 Question 07.08-47. Also appended to this file are affected pages of Technical Report ANP-10315P. The revision to this technical report will be submitted by separate letter after completion of all responses to RAI 505.

The following table indicates the respective pages in the response document, "RAI 505 Supplement 13 Response - US EPR DC.pdf," that contain AREVA NP's response to the subject question.

Question #	Start Page	End Page
RAI 505 — 07.08-47	2	7

The schedule for a technically correct and complete response to the remaining 18 questions remains unchanged as provided below.

Question #	Response Date
RAI 505 — 07.01-33	August 30, 2013
RAI 505 — 07.01-34	May 9, 2012
RAI 505 — 07.01-35	May 30, 2012
RAI 505 — 07.01-36	May 1, 2012
RAI 505 — 07.01-37	April 17, 2012
RAI 505 — 07.01-38	May 1, 2012
RAI 505 — 07.01-39	May 22, 2012
RAI 505 — 07.01-40	May 22, 2012
RAI 505 — 07.01-44	May 9, 2012
RAI 505 — 07.01-45	May 1, 2012
RAI 505 — 07.01-46	May 1, 2012
RAI 505 — 07.01-47	May 22, 2012
RAI 505 — 07.01-48	May 9, 2012
RAI 505 — 07.01-49	May 30, 2012
RAI 505 — 07.01-50	May 30, 2012
RAI 505 — 07.01-51	May 22, 2012
RAI 505 — 07.03-38	April 17, 2012
RAI 505 — 07.09-71	May 9, 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](mailto:Dennis.Williford@areva.com)

---

**From:** WILLIFORD Dennis (RS/NB)  
**Sent:** Friday, March 16, 2012 12:59 PM  
**To:** [Getachew.Tesfaye@nrc.gov](mailto: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. 505  
(5902,5735,5869,5754,5803,5950,5744), FSAR Ch. 7, Supplement 12

Getachew,

On September 29, 2011, AREVA NP Inc. provided a schedule for technically correct and complete responses to the 34 questions in RAI 505. In Supplement 1 sent on October 27, 2011, and Supplement 2 sent on November 17, 2011, AREVA NP provided a revised schedule for technically correct and complete responses to 33 questions and a preliminary revised schedule for Question 07.01-33. AREVA NP provided Supplement 3 on November 22, 2011 to provide a final response to 4 questions. On December 9, 2011, AREVA NP provided Supplement 4 to revise the schedule for 7 questions. On December 14, 2011, AREVA NP provided Supplement 5 to revise the schedule for 5 questions. On December 15, 2011, AREVA NP provided Supplement 6 to provide a complete and final response to 6 questions. On January 10, 2012, AREVA NP provided Supplement 7 to provide a complete and final response to 2 questions. On January 19, 2012, AREVA NP provided Supplement 8 to provide a complete and final response to one question and a revised preliminary schedule for the response to Question 07.01-33. On February 9, 2012, AREVA NP provided Supplement 9 to revise the schedule for 11 questions. On February 17, 2012, AREVA NP provided Supplement 10 to revise the schedule for 20 questions. On February 21, 2012, AREVA NP provided Supplement 11 to revise the schedule for Question 07.01-33.

The attached file, "RAI 505 Supplement 12 Response - US EPR DC.pdf" provides technically correct and complete responses to 2 of the remaining 21 questions (07.01-41 and 07.05-10), and a revised response to 2 questions (07.08-46 and 07.09-72). 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 Question 07.01-41, 07.05-10, 07.08-46, and 07.09-72. Also appended to this file are affected pages of Technical Reports ANP-10304, ANP-10309P and ANP-10315P. Revisions to these Technical Reports will be submitted by separate letter after completion of all responses to RAI 505.

The following table indicates the respective pages in the response document, "RAI 505 Supplement 12 Response - US EPR DC.pdf," that contain AREVA NP's response to the subject questions.

Question #	Start Page	End Page
RAI 505 — 07.01-41	2	5
RAI 505 — 07.05-10	6	9
RAI 505 — 07.08-46	10	10
RAI 505 — 07.09-72	11	12

The schedule for a technically correct and complete response to the remaining 19 questions remains unchanged as provided below.

Question #	Response Date
RAI 505 — 07.01-33	August 30, 2013
RAI 505 — 07.01-34	May 9, 2012
RAI 505 — 07.01-35	May 30, 2012
RAI 505 — 07.01-36	May 1, 2012
RAI 505 — 07.01-37	April 17, 2012
RAI 505 — 07.01-38	May 1, 2012
RAI 505 — 07.01-39	May 22, 2012
RAI 505 — 07.01-40	May 22, 2012
RAI 505 — 07.01-44	May 9, 2012

RAI 505 — 07.01-45	May 1, 2012
RAI 505 — 07.01-46	May 1, 2012
RAI 505 — 07.01-47	May 22, 2012
RAI 505 — 07.01-48	May 9, 2012
RAI 505 — 07.01-49	May 30, 2012
RAI 505 — 07.01-50	May 30, 2012
RAI 505 — 07.01-51	May 22, 2012
RAI 505 — 07.03-38	April 17, 2012
RAI 505 — 07.08-47	May 30, 2012
RAI 505 — 07.09-71	May 9, 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](mailto:Dennis.Williford@areva.com)

---

**From:** WILLIFORD Dennis (RS/NB)  
**Sent:** Tuesday, February 21, 2012 9:31 PM  
**To:** [Getachew.Tesfaye@nrc.gov](mailto: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. 505  
(5902,5735,5869,5754,5803,5950,5744), FSAR Ch. 7, Supplement 11

Getachew,

On September 29, 2011, AREVA NP Inc. provided a schedule for technically correct and complete responses to the 34 questions in RAI 505. In Supplement 1 sent on October 27, 2011, and Supplement 2 sent on November 17, 2011, AREVA NP provided a revised schedule for technically correct and complete responses to 33 questions and a preliminary revised schedule for Question 07.01-33. AREVA NP provided Supplement 3 on November 22, 2011 to provide a final response to 4 questions. On December 9, 2011, AREVA NP provided Supplement 4 to revise the schedule for 7 questions. On December 14, 2011, AREVA NP provided Supplement 5 to revise the schedule for 5 questions. On December 15, 2011, AREVA NP provided Supplement 6 to provide a complete and final response to 6 questions. On January 10, 2012, AREVA NP provided Supplement 7 to provide a complete and final response to 2 questions. On January 19, 2012, AREVA NP provided Supplement 8 to provide a complete and final response to one question and a revised preliminary schedule for the response to Question 07.01-33. On February 9, 2012, AREVA NP provided Supplement 9 to revise the schedule for 11 questions. On February 17, 2012, AREVA NP provided Supplement 10 to revise the schedule for 20 questions.

The schedule for a technically correct and complete response to question 07.01-33 has been changed as provided below. The response schedule for the other questions remains unchanged. This schedule was transmitted to the NRC in AREVA NP letter 12:008 dated February 21, 2012.

<b>Question #</b>	<b>Response Date</b>
RAI 505 — 07.01-33	<b>August 30, 2013</b>
RAI 505 — 07.01-34	May 9, 2012

RAI 505 — 07.01-35	May 30, 2012
RAI 505 — 07.01-36	May 1, 2012
RAI 505 — 07.01-37	April 17, 2012
RAI 505 — 07.01-38	May 1, 2012
RAI 505 — 07.01-39	May 22, 2012
RAI 505 — 07.01-40	May 22, 2012
RAI 505 — 07.01-41	April 17, 2012
RAI 505 — 07.01-44	May 9, 2012
RAI 505 — 07.01-45	May 1, 2012
RAI 505 — 07.01-46	May 1, 2012
RAI 505 — 07.01-47	May 22, 2012
RAI 505 — 07.01-48	May 9, 2012
RAI 505 — 07.01-49	May 30, 2012
RAI 505 — 07.01-50	May 30, 2012
RAI 505 — 07.01-51	May 22, 2012
RAI 505 — 07.03-38	April 17, 2012
RAI 505 — 07.05-10	April 17, 2012
RAI 505 — 07.08-47	May 30, 2012
RAI 505 — 07.09-71	May 9, 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](mailto:Dennis.Williford@areva.com)

---

**From:** WILLIFORD Dennis (RS/NB)  
**Sent:** Friday, February 17, 2012 4:09 PM  
**To:** [Getachew.Tesfaye@nrc.gov](mailto: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. 505  
(5902,5735,5869,5754,5803,5950,5744), FSAR Ch. 7, Supplement 10

Getachew,

On September 29, 2011, AREVA NP Inc. provided a schedule for technically correct and complete responses to the 34 questions in RAI 505. In Supplement 1 sent on October 27, 2011, and Supplement 2 sent on November 17, 2011, AREVA NP provided a revised schedule for technically correct and complete responses to 33 questions and a preliminary revised schedule for Question 07.01-33. AREVA NP provided Supplement 3 on November 22, 2011 to provide a final response to 4 questions. On December 9, 2011, AREVA NP provided Supplement 4 to revise the schedule for 7 questions. On December 14, 2011, AREVA NP provided Supplement 5 to revise the schedule for 5 questions. On December 15, 2011, AREVA NP provided Supplement 6 to provide a complete and final response to 6 questions. On January 10, 2012, AREVA NP provided Supplement 7 to provide a complete and final response to 2 questions. On January 19, 2012, AREVA NP provided Supplement 8 to provide a complete and final response to one question and a revised

preliminary schedule for the response to Question 07.01-33. On February 9, 2012, AREVA NP provided Supplement 9 to revise the schedule for 11 questions.

The schedule for a technically correct and complete response to 20 of the remaining 21 questions has been changed as provided below. The response schedule to the other question remains unchanged.

Question #	Response Date
RAI 505 — 07.01-33	February 21, 2012
RAI 505 — 07.01-34	<b>May 9, 2012</b>
RAI 505 — 07.01-35	<b>May 30, 2012</b>
RAI 505 — 07.01-36	<b>May 1, 2012</b>
RAI 505 — 07.01-37	<b>April 17, 2012</b>
RAI 505 — 07.01-38	<b>May 1, 2012</b>
RAI 505 — 07.01-39	<b>May 22, 2012</b>
RAI 505 — 07.01-40	<b>May 22, 2012</b>
RAI 505 — 07.01-41	<b>April 17, 2012</b>
RAI 505 — 07.01-44	<b>May 9, 2012</b>
RAI 505 — 07.01-45	<b>May 1, 2012</b>
RAI 505 — 07.01-46	<b>May 1, 2012</b>
RAI 505 — 07.01-47	<b>May 22, 2012</b>
RAI 505 — 07.01-48	<b>May 9, 2012</b>
RAI 505 — 07.01-49	<b>May 30, 2012</b>
RAI 505 — 07.01-50	<b>May 30, 2012</b>
RAI 505 — 07.01-51	<b>May 22, 2012</b>
RAI 505 — 07.03-38	<b>April 17, 2012</b>
RAI 505 — 07.05-10	<b>April 17, 2012</b>
RAI 505 — 07.08-47	<b>May 30, 2012</b>
RAI 505 — 07.09-71	<b>May 9, 2012</b>

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)

---

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

**Sent:** Thursday, February 09, 2012 8:15 AM

**To:** [Getachew.Tesfaye@nrc.gov](mailto: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. 505

(5902,5735,5869,5754,5803,5950,5744), FSAR Ch. 7, Supplement 9

Getachew,

On September 29, 2011, AREVA NP Inc. provided a schedule for technically correct and complete responses to the 34 questions in RAI 505. In Supplement 1 sent on October 27, 2011, and Supplement 2 sent on November 17, 2011, AREVA NP provided a revised schedule for technically correct and complete responses to 33 questions and a preliminary revised schedule for Question 07.01-33. AREVA NP provided Supplement 3 on November 22, 2011 to provide a final response to 4 questions. On December 9, 2011, AREVA NP provided Supplement 4 to revise the schedule for 7 questions. On December 14, 2011, AREVA NP provided Supplement 5 to revise the schedule for 5 questions. On December 15, 2011, AREVA NP provided Supplement 6 to provide a complete and final response to 6 questions. On January 10, 2012, AREVA NP provided Supplement 7 to provide a complete and final response to 2 questions. On January 19, 2012, AREVA NP provided Supplement 8 to provide a complete and final response to one question and a revised preliminary schedule for the response to Question 07.01-33.

The schedule for a technically correct and complete response to 11 of the remaining 21 questions has been changed as provided below. The response schedule to the other 10 questions remains unchanged.

<b>Question #</b>	<b>Response Date</b>
RAI 505 — 07.01-33	February 21, 2012
RAI 505 — 07.01-34	April 5, 2012
RAI 505 — 07.01-35	April 26, 2012
RAI 505 — 07.01-36	<b>April 5, 2012</b>
RAI 505 — 07.01-37	March 8, 2012
RAI 505 — 07.01-38	<b>April 5, 2012</b>
RAI 505 — 07.01-39	<b>April 26, 2012</b>
RAI 505 — 07.01-40	<b>April 26, 2012</b>
RAI 505 — 07.01-41	<b>March 8, 2012</b>
RAI 505 — 07.01-44	<b>April 5, 2012</b>
RAI 505 — 07.01-45	April 26, 2012
RAI 505 — 07.01-46	April 26, 2012
RAI 505 — 07.01-47	<b>April 5, 2012</b>
RAI 505 — 07.01-48	<b>April 5, 2012</b>
RAI 505 — 07.01-49	<b>April 26, 2012</b>
RAI 505 — 07.01-50	April 26, 2012
RAI 505 — 07.01-51	<b>April 26, 2012</b>
RAI 505 — 07.03-38	<b>March 8, 2012</b>
RAI 505 — 07.05-10	March 8, 2012
RAI 505 — 07.08-47	April 26, 2012
RAI 505 — 07.09-71	April 5, 2012

Sincerely,

***Dennis Williford, P.E.***  
***U.S. EPR Design Certification Licensing Manager***  
***AREVA NP Inc.***

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Charlotte, NC 28262  
Phone: 704-805-2223  
Email: [Dennis.Williford@areva.com](mailto:Dennis.Williford@areva.com)

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

**Sent:** Thursday, January 19, 2012 11:19 AM

**To:** [Getachew.Tesfaye@nrc.gov](mailto: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. 505

(5902,5735,5869,5754,5803,5950,5744), FSAR Ch. 7, Supplement 8

Getachew,

On September 29, 2011, AREVA NP Inc. provided a schedule for technically correct and complete responses to the 34 questions in RAI 505. In Supplement 1 sent on October 27, 2011, and Supplement 2 sent on November 17, 2011, AREVA NP provided a revised schedule for technically correct and complete responses to 33 questions and a preliminary revised schedule for Question 07.01-33. AREVA NP provided Supplement 3 on November 22, 2011 to provide a final response to 4 questions. On December 9, 2011, AREVA NP provided Supplement 4 to revise the schedule for 7 questions. On December 14, 2011, AREVA NP provided Supplement 5 to revise the schedule for 5 questions. On December 15, 2011, AREVA NP provided Supplement 6 to provide a complete and final response to 6 questions. On January 10, 2012, AREVA NP provided Supplement 7 to provide a complete and final response to 2 questions.

The attached file, "RAI 505 Supplement 8 Response US EPR DC.pdf" provides a technically correct and complete final response to 1 of the remaining 22 questions.

The following table indicates the respective pages in the response document, "RAI 505 Supplement 8 Response US EPR DC.pdf," that contain AREVA NP's response to the subject question.

Question #	Start Page	End Page
RAI 505 — 07.01-42	2	2

The schedule for a technically correct and complete response to the remaining 21 questions is provided below. The preliminary schedule for the response to Question 07.01-33 has been revised and is being reevaluated and a new supplement with a revised schedule will be transmitted by February 21, 2012.

Question #	Response Date
RAI 505 — 07.01-33	<b>February 21, 2012</b>
RAI 505 — 07.01-34	April 5, 2012
RAI 505 — 07.01-35	April 26, 2012
RAI 505 — 07.01-36	February 9, 2012
RAI 505 — 07.01-37	March 8, 2012
RAI 505 — 07.01-38	February 9, 2012
RAI 505 — 07.01-39	February 9, 2012
RAI 505 — 07.01-40	February 9, 2012
RAI 505 — 07.01-41	February 9, 2012
RAI 505 — 07.01-44	February 9, 2012
RAI 505 — 07.01-45	April 26, 2012
RAI 505 — 07.01-46	April 26, 2012
RAI 505 — 07.01-47	February 9, 2012
RAI 505 — 07.01-48	February 9, 2012
RAI 505 — 07.01-49	February 9, 2012
RAI 505 — 07.01-50	April 26, 2012

RAI 505 — 07.01-51	February 9, 2012
RAI 505 — 07.03-38	April 26, 2012
RAI 505 — 07.05-10	March 8, 2012
RAI 505 — 07.08-47	April 26, 2012
RAI 505 — 07.09-71	April 5, 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](mailto:Dennis.Williford@areva.com)

---

**From:** WILLIFORD Dennis (CORP/QP)  
**Sent:** Tuesday, January 10, 2012 5:21 PM  
**To:** [Getachew.Tesfaye@nrc.gov](mailto: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. 505  
(5902,5735,5869,5754,5803,5950,5744), FSAR Ch. 7, Supplement 7

Getachew,

On September 29, 2011, AREVA NP Inc. provided a schedule for technically correct and complete responses to the 34 questions in RAI 505. In Supplement 1 sent on October 27, 2011, and Supplement 2 sent on November 17, 2011, AREVA NP provided a revised schedule for technically correct and complete responses to 33 questions and a preliminary revised schedule for Question 07.01-33. AREVA NP provided Supplement 3 on November 22, 2011 to provide a final response to 4 questions. On December 9, 2011, AREVA NP provided Supplement 4 to revise the schedule for 7 questions. On December 14, 2011, AREVA NP provided Supplement 5 to revise the schedule for 5 questions. On December 15, 2011, AREVA NP provided Supplement 6 to provide a complete and final response to 6 questions.

The attached file, "RAI 505 Supplement 7 Response US EPR DC.pdf" provides technically correct and complete final responses to 2 of the remaining 24 questions. Appended to this file are affected pages of the U.S. EPR Final Safety Analysis Report in redline-strikeout format which support the response to RAI 505 Question 07.08-48.

The following table indicates the respective pages in the response document, "RAI 505 Supplement 7 Response US EPR DC.pdf," that contain AREVA NP's response to the subject questions.

Question #	Start Page	End Page
RAI 505 — 07.08-44	2	3
RAI 505 — 07.08-48	4	5

The schedule for a technically correct and complete response to the remaining 22 questions has changed as provided below. The preliminary schedule for the response to Question 07.01-33 is being reevaluated and a new supplement with a revised schedule will be transmitted by January 25, 2012.

Question #	Response Date
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RAI 505 — 07.01-33	January 25, 2012
RAI 505 — 07.01-34	<b>April 5, 2012</b>
RAI 505 — 07.01-35	<b>April 26, 2012</b>
RAI 505 — 07.01-36	<b>February 9, 2012</b>
RAI 505 — 07.01-37	<b>March 8, 2012</b>
RAI 505 — 07.01-38	<b>February 9, 2012</b>
RAI 505 — 07.01-39	<b>February 9, 2012</b>
RAI 505 — 07.01-40	<b>February 9, 2012</b>
RAI 505 — 07.01-41	<b>February 9, 2012</b>
RAI 505 — 07.01-42	<b>February 9, 2012</b>
RAI 505 — 07.01-44	<b>February 9, 2012</b>
RAI 505 — 07.01-45	<b>April 26, 2012</b>
RAI 505 — 07.01-46	<b>April 26, 2012</b>
RAI 505 — 07.01-47	<b>February 9, 2012</b>
RAI 505 — 07.01-48	<b>February 9, 2012</b>
RAI 505 — 07.01-49	<b>February 9, 2012</b>
RAI 505 — 07.01-50	<b>April 26, 2012</b>
RAI 505 — 07.01-51	<b>February 9, 2012</b>
RAI 505 — 07.03-38	<b>April 26, 2012</b>
RAI 505 — 07.05-10	<b>March 8, 2012</b>
RAI 505 — 07.08-47	<b>April 26, 2012</b>
RAI 505 — 07.09-71	<b>April 5, 2012</b>

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)

---

**From:** WILLIFORD Dennis (RS/NB)  
**Sent:** Thursday, December 15, 2011 1:49 PM  
**To:** [Getachew.Tesfaye@nrc.gov](mailto: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. 505  
(5902,5735,5869,5754,5803,5950,5744), FSAR Ch. 7, Supplement 6

Getachew,

On September 29, 2011, AREVA NP Inc. provided a schedule for technically correct and complete responses to the 34 questions in RAI 505. In Supplement 1 sent on October 27, 2011, and Supplement 2 sent on November 17, 2011, AREVA NP provided a revised schedule for technically correct and complete responses to 33 questions and a preliminary revised schedule for Question 07.01-33. AREVA NP provided Supplement 3 on November 22, 2011 to provide a final response to 4 questions. On December 9, 2011, AREVA NP provided Supplement 4 to revise the schedule for 7 questions. On December 14, 2011, AREVA NP provided Supplement 5 to revise the schedule for 5 questions.

The attached file, "RAI 505 Supplement 6 Response US EPR DC.pdf" provides technically correct and complete responses to 6 of the remaining 30 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. Also appended to this file are affected pages of Technical Reports ANP-10304 and ANP-10309P. Revisions to these Technical Reports will be submitted by separate letter after completion of all responses to RAI 505.

The following table indicates the respective pages in the response document, "RAI 505 Supplement 6 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 505 — 07.03-37	2	3
RAI 505 — 07.04-15	4	5
RAI 505 — 07.05-11	6	6
RAI 505 — 07.08-43	7	8
RAI 505 — 07.08-45	9	10
RAI 505 — 07.08-49	11	12

The schedule for a technically correct and complete response to the remaining 24 questions remains unchanged. The preliminary schedule for the response to Question 07.01-33 is being reevaluated and a new supplement with a revised schedule will be transmitted by January 25, 2012.

<b>Question #</b>	<b>Response Date</b>
RAI 505 — 07.01-33	January 25, 2012
RAI 505 — 07.01-34	January 10, 2012
RAI 505 — 07.01-35	February 9, 2012
RAI 505 — 07.01-36	January 10, 2012
RAI 505 — 07.01-37	January 19, 2012
RAI 505 — 07.01-38	January 10, 2012
RAI 505 — 07.01-39	January 10, 2012
RAI 505 — 07.01-40	January 10, 2012
RAI 505 — 07.01-41	January 10, 2012
RAI 505 — 07.01-42	January 10, 2012
RAI 505 — 07.01-44	January 10, 2012
RAI 505 — 07.01-45	February 9, 2012
RAI 505 — 07.01-46	February 9, 2012
RAI 505 — 07.01-47	January 10, 2012
RAI 505 — 07.01-48	January 10, 2012
RAI 505 — 07.01-49	January 10, 2012
RAI 505 — 07.01-50	January 10, 2012
RAI 505 — 07.01-51	January 10, 2012
RAI 505 — 07.03-38	February 9, 2012
RAI 505 — 07.05-10	January 19, 2012
RAI 505 — 07.08-44	January 10, 2012
RAI 505 — 07.08-47	January 10, 2012
RAI 505 — 07.08-48	January 10, 2012
RAI 505 — 07.09-71	January 10, 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](mailto:Dennis.Williford@areva.com)

---

**From:** WILLIFORD Dennis (RS/NB)  
**Sent:** Wednesday, December 14, 2011 11:30 AM  
**To:** [Getachew.Tesfaye@nrc.gov](mailto: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. 505  
(5902,5735,5869,5754,5803,5950,5744), FSAR Ch. 7, Supplement 5

Getachew,

On September 29, 2011, AREVA NP Inc. provided a schedule for technically correct and complete responses to the 34 questions in RAI 505. In Supplement 1 sent on October 27, 2011, and Supplement 2 sent on November 17, 2011, AREVA NP provided a revised schedule for technically correct and complete responses to 33 questions and a preliminary revised schedule for Question 07.01-33. AREVA NP provided Supplement 3 on November 22, 2011 to provide a final response to 4 questions. On December 9, 2011, AREVA NP provided a revised schedule for 7 questions.

The schedule for the response to four questions (Questions 7.1-35, 7.1-45, 7.1-46, and 7.3-38) is being changed, as indicated in bold below. In addition, the preliminary schedule for the response to Question 07.01-33 has been revised as indicated. This schedule is being reevaluated and a new supplement with a revised schedule will be transmitted by January 25, 2012. The schedule for a technically correct and complete response to the remaining 25 questions remains unchanged.

Question #	Response Date
RAI 505 — 07.01-33	<b>January 25, 2012</b>
RAI 505 — 07.01-34	January 10, 2012
RAI 505 — 07.01-35	<b>February 9, 2012</b>
RAI 505 — 07.01-36	January 10, 2012
RAI 505 — 07.01-37	January 19, 2012
RAI 505 — 07.01-38	January 10, 2012
RAI 505 — 07.01-39	January 10, 2012
RAI 505 — 07.01-40	January 10, 2012
RAI 505 — 07.01-41	January 10, 2012
RAI 505 — 07.01-42	January 10, 2012
RAI 505 — 07.01-44	January 10, 2012
RAI 505 — 07.01-45	<b>February 9, 2012</b>
RAI 505 — 07.01-46	<b>February 9, 2012</b>
RAI 505 — 07.01-47	January 10, 2012
RAI 505 — 07.01-48	January 10, 2012

RAI 505 — 07.01-49	January 10, 2012
RAI 505 — 07.01-50	January 10, 2012
RAI 505 — 07.01-51	January 10, 2012
RAI 505 — 07.03-37	January 19, 2012
RAI 505 — 07.03-38	<b>February 9, 2012</b>
RAI 505 — 07.04-15	January 19, 2012
RAI 505 — 07.05-10	January 19, 2012
RAI 505 — 07.05-11	January 19, 2012
RAI 505 — 07.08-43	January 19, 2012
RAI 505 — 07.08-44	January 10, 2012
RAI 505 — 07.08-45	January 10, 2012
RAI 505 — 07.08-47	January 10, 2012
RAI 505 — 07.08-48	January 10, 2012
RAI 505 — 07.08-49	January 19, 2012
RAI 505 — 07.09-71	January 10, 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](mailto:Dennis.Williford@areva.com)

---

**From:** RYAN Tom (RS/NB)  
**Sent:** Friday, December 09, 2011 8:35 AM  
**To:** [Getachew.Tesfaye@nrc.gov](mailto:Getachew.Tesfaye@nrc.gov)  
**Cc:** BENNETT Kathy (RS/NB); DELANO Karen (RS/NB); ROMINE Judy (RS/NB); RYAN Tom (RS/NB); WILLIFORD Dennis (RS/NB)  
**Subject:** Response to U.S. EPR Design Certification Application RAI No. 505 (5902,5735,5869,5754,5803,5950,5744), FSAR Ch. 7, Supplement 4

Getachew,

On September 29, 2011, AREVA NP Inc. provided a schedule for technically correct and complete responses to the 34 questions in RAI 505. On October 27, 2011, and November 17, 2011, AREVA NP provided a revised schedule for technically correct and complete responses to 33 questions and a preliminary revised schedule for Question 07.01-33. On November 22, 2011, AREVA NP provided a final response to four questions.

The schedule for the response to the questions 7.1-37, 7.3-37, 7.4-15, 7.5-10, 7.5-11, 7.8-43, and 7.8-49 is being changed and indicated in bold below, the remaining 23 questions remains unchanged, as indicated below. In addition, the preliminary schedule for a response to Question 07.01-33 remains unchanged. The schedule for Question 07.01-33 is being reevaluated and a new supplement with a revised schedule will be transmitted by December 14, 2011.

<b>Question #</b>	<b>Response Date</b>
RAI 505 — 07.01-33	December 14, 2011

RAI 505 — 07.01-34	January 10, 2012
RAI 505 — 07.01-35	January 10, 2012
RAI 505 — 07.01-36	January 10, 2012
RAI 505 — 07.01-37	<b>January 19, 2012</b>
RAI 505 — 07.01-38	January 10, 2012
RAI 505 — 07.01-39	January 10, 2012
RAI 505 — 07.01-40	January 10, 2012
RAI 505 — 07.01-41	January 10, 2012
RAI 505 — 07.01-42	January 10, 2012
RAI 505 — 07.01-44	January 10, 2012
RAI 505 — 07.01-45	January 10, 2012
RAI 505 — 07.01-46	January 10, 2012
RAI 505 — 07.01-47	January 10, 2012
RAI 505 — 07.01-48	January 10, 2012
RAI 505 — 07.01-49	January 10, 2012
RAI 505 — 07.01-50	January 10, 2012
RAI 505 — 07.01-51	January 10, 2012
RAI 505 — 07.03-37	<b>January 19, 2012</b>
RAI 505 — 07.03-38	January 10, 2012
RAI 505 — 07.04-15	<b>January 19, 2012</b>
RAI 505 — 07.05-10	<b>January 19, 2012</b>
RAI 505 — 07.05-11	<b>January 19, 2012</b>
RAI 505 — 07.08-43	<b>January 19, 2012</b>
RAI 505 — 07.08-44	January 10, 2012
RAI 505 — 07.08-45	January 10, 2012
RAI 505 — 07.08-47	January 10, 2012
RAI 505 — 07.08-48	January 10, 2012
RAI 505 — 07.08-49	<b>January 19, 2012</b>
RAI 505 — 07.09-71	January 10, 2012

Sincerely,

**Tom Ryan for  
Dennis Williford, P.E.  
U.S. EPR Design Certification Licensing Manager  
AREVA NP Inc.**

7207 IBM Drive, Mail Code CLT 2B

Charlotte, NC 28262

Phone: 704-805-2223

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

---

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

**Sent:** Tuesday, November 22, 2011 2:51 PM

**To:** [Getachew.Tesfaye@nrc.gov](mailto: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. 505

(5902,5735,5869,5754,5803,5950,5744), FSAR Ch. 7, Supplement 3

Getachew,

On September 29, 2011, AREVA NP Inc. provided a schedule for technically correct and complete responses to the 34 questions in RAI 505. On October 27, 2011, and November 17, 2011, AREVA NP provided a revised schedule for technically correct and complete responses to 33 questions and a preliminary revised schedule for Question 07.01-33.

After discussions with NRC staff, the attached file, "RAI 505 Supplement 3 Response US EPR DC.pdf" provides technically correct and complete responses to 4 of the 34 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 505 Question 07.07-23, Question 07.08 -46 and Question 07.09.02-72.

The following table indicates the respective pages in the response document, "RAI 505 Supplement 3 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 505 — 07.01-43	2	3
RAI 505 — 07.07-23	4	4
RAI 505 — 07.08-46	5	5
RAI 505 — 07.09-72	6	7

The schedule for the response to the remaining 30 questions remains unchanged, as indicated below. In addition, the preliminary revised schedule for a response to Question 07.01-33 remains unchanged. The schedule for Question 07.01-33 is being reevaluated and a new supplement with a revised schedule will be transmitted by December 14, 2011.

<b>Question #</b>	<b>Response Date</b>
RAI 505 — 07.01-33	December 14, 2011
RAI 505 — 07.01-34	January 10, 2012
RAI 505 — 07.01-35	January 10, 2012
RAI 505 — 07.01-36	January 10, 2012
RAI 505 — 07.01-37	December 11, 2011
RAI 505 — 07.01-38	January 10, 2012
RAI 505 — 07.01-39	January 10, 2012
RAI 505 — 07.01-40	January 10, 2012
RAI 505 — 07.01-41	January 10, 2012
RAI 505 — 07.01-42	January 10, 2012
RAI 505 — 07.01-44	January 10, 2012
RAI 505 — 07.01-45	January 10, 2012
RAI 505 — 07.01-46	January 10, 2012
RAI 505 — 07.01-47	January 10, 2012
RAI 505 — 07.01-48	January 10, 2012
RAI 505 — 07.01-49	January 10, 2012
RAI 505 — 07.01-50	January 10, 2012
RAI 505 — 07.01-51	January 10, 2012
RAI 505 — 07.03-37	December 11, 2011
RAI 505 — 07.03-38	January 10, 2012

RAI 505 — 07.04-15	December 11, 2011
RAI 505 — 07.05-10	December 11, 2011
RAI 505 — 07.05-11	December 11, 2011
RAI 505 — 07.08-43	December 11, 2011
RAI 505 — 07.08-44	January 10, 2012
RAI 505 — 07.08-45	January 10, 2012
RAI 505 — 07.08-47	January 10, 2012
RAI 505 — 07.08-48	January 10, 2012
RAI 505 — 07.08-49	December 11, 2011
RAI 505 — 07.09-71	January 10, 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](mailto:Dennis.Williford@areva.com)

---

**From:** WILLIFORD Dennis (RS/NB)  
**Sent:** Thursday, November 17, 2011 5:44 PM  
**To:** [Getachew.Tesfaye@nrc.gov](mailto: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. 505  
(5902,5735,5869,5754,5803,5950,5744), FSAR Ch. 7, Supplement 2

Getachew,

On September 29, 2011, AREVA NP Inc. provided a schedule for technically correct and complete responses to the 34 questions in RAI 505. On October 27, 2011, AREVA NP provided a revised schedule for technically correct and complete responses to 13 questions and a preliminary revised schedule for Question 07.01-33.

The schedule for the final responses has been revised, as indicated in bold below. In addition, the preliminary revised schedule for a response to Question 07.01-33 has been revised. The schedule for Question 07.01-33 is being reevaluated and a new supplement with a revised schedule will be transmitted by December 14, 2011.

Question #	Response Date
RAI 505 — 07.01-33	<b>December 14, 2011</b>
RAI 505 — 07.01-34	<b>January 10, 2012</b>
RAI 505 — 07.01-35	<b>January 10, 2012</b>
RAI 505 — 07.01-36	<b>January 10, 2012</b>
RAI 505 — 07.01-37	<b>December 11, 2011</b>
RAI 505 — 07.01-38	January 10, 2012
RAI 505 — 07.01-39	<b>January 10, 2012</b>
RAI 505 — 07.01-40	<b>January 10, 2012</b>

RAI 505 — 07.01-41	<b>January 10, 2012</b>
RAI 505 — 07.01-42	<b>January 10, 2012</b>
RAI 505 — 07.01-43	<b>December 11, 2011</b>
RAI 505 — 07.01-44	January 10, 2012
RAI 505 — 07.01-45	January 10, 2012
RAI 505 — 07.01-46	January 10, 2012
RAI 505 — 07.01-47	January 10, 2012
RAI 505 — 07.01-48	January 10, 2012
RAI 505 — 07.01-49	January 10, 2012
RAI 505 — 07.01-50	January 10, 2012
RAI 505 — 07.01-51	January 10, 2012
RAI 505 — 07.03-37	<b>December 11, 2011</b>
RAI 505 — 07.03-38	January 10, 2012
RAI 505 — 07.04-15	<b>December 11, 2011</b>
RAI 505 — 07.05-10	<b>December 11, 2011</b>
RAI 505 — 07.05-11	<b>December 11, 2011</b>
RAI 505 — 07.07-23	<b>December 11, 2011</b>
RAI 505 — 07.08-43	<b>December 11, 2011</b>
RAI 505 — 07.08-44	<b>January 10, 2012</b>
RAI 505 — 07.08-45	<b>January 10, 2012</b>
RAI 505 — 07.08-46	<b>December 11, 2011</b>
RAI 505 — 07.08-47	January 10, 2012
RAI 505 — 07.08-48	January 10, 2012
RAI 505 — 07.08-49	<b>December 11, 2011</b>
RAI 505 — 07.09-71	<b>January 10, 2012</b>
RAI 505 — 07.09-72	<b>January 10, 2012</b>

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, October 27, 2011 11:22 AM  
**To:** [Getachew.Tesfaye@nrc.gov](mailto: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. 505  
(5902,5735,5869,5754,5803,5950,5744), FSAR Ch. 7, Supplement 1

Getachew,

On September 29, 2011, AREVA NP Inc. provided a schedule for a technically correct and complete response to the 34 questions in RAI 505.

The schedule for the final response to Questions 07.01-38, 07.01-44, 07.01-45, 07.01-46, 07.01-47, 07.01-48, 07.01-49, 07.01-50, 07.01-51, 07.03-38, 07.08-43, 07.08-47, 07.08-48 has been revised, as indicated in bold below. In addition, a preliminary revised schedule for a technically correct and complete response to Question 07.01-33 is provided below. The schedule for Question 07.01-33 is being reevaluated and a new supplement with a revised schedule will be transmitted by November 17, 2011.

<b>Question #</b>	<b>Response Date</b>
RAI 505 — 07.01-33	<b>November 17, 2011</b>
RAI 505 — 07.01-34	December 8, 2011
RAI 505 — 07.01-35	November 17, 2011
RAI 505 — 07.01-36	December 8, 2011
RAI 505 — 07.01-37	December 8, 2011
RAI 505 — 07.01-38	<b>January 10, 2012</b>
RAI 505 — 07.01-39	December 8, 2011
RAI 505 — 07.01-40	December 8, 2011
RAI 505 — 07.01-41	November 17, 2011
RAI 505 — 07.01-42	December 20, 2011
RAI 505 — 07.01-43	November 17, 2011
RAI 505 — 07.01-44	<b>January 10, 2012</b>
RAI 505 — 07.01-45	<b>January 10, 2012</b>
RAI 505 — 07.01-46	<b>January 10, 2012</b>
RAI 505 — 07.01-47	<b>January 10, 2012</b>
RAI 505 — 07.01-48	<b>January 10, 2012</b>
RAI 505 — 07.01-49	<b>January 10, 2012</b>
RAI 505 — 07.01-50	<b>January 10, 2012</b>
RAI 505 — 07.01-51	<b>January 10, 2012</b>
RAI 505 — 07.03-37	November 17, 2011
RAI 505 — 07.03-38	<b>January 10, 2012</b>
RAI 505 — 07.04-15	November 17, 2011
RAI 505 — 07.05-10	November 17, 2011
RAI 505 — 07.05-11	November 17, 2011
RAI 505 — 07.07-23	November 17, 2011
RAI 505 — 07.08-43	<b>January 10, 2012</b>
RAI 505 — 07.08-44	December 8, 2011
RAI 505 — 07.08-45	December 8, 2011
RAI 505 — 07.08-46	December 8, 2011
RAI 505 — 07.08-47	<b>January 10, 2012</b>
RAI 505 — 07.08-48	<b>January 10, 2012</b>
RAI 505 — 07.08-49	November 17, 2011
RAI 505 — 07.09-71	December 8, 2011
RAI 505 — 07.09-72	December 8, 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](mailto:Dennis.Williford@areva.com)

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**From:** WILLIFORD Dennis (RS/NB)  
**Sent:** Thursday, September 29, 2011 11:04 AM  
**To:** [Getachew.Tesfaye@nrc.gov](mailto: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. 505  
(5902,5735,5869,5754,5803,5950,5744), FSAR Ch. 7

Getachew,

Attached please find AREVA NP Inc.'s response to the subject request for additional information (RAI). The attached file, "RAI 505 Response US EPR DC.pdf," provides a schedule since a technically correct and complete response to the 34 questions cannot be provided at this time.

The following table indicates the respective pages in the response document, "RAI 505 Response US EPR DC.pdf," that contain AREVA NP's response to the subject questions.

Question #	Start Page	End Page
RAI 505 — 07.01-33	2	2
RAI 505 — 07.01-34	3	3
RAI 505 — 07.01-35	4	4
RAI 505 — 07.01-36	5	5
RAI 505 — 07.01-37	6	6
RAI 505 — 07.01-38	7	7
RAI 505 — 07.01-39	8	8
RAI 505 — 07.01-40	9	9
RAI 505 — 07.01-41	10	10
RAI 505 — 07.01-42	11	11
RAI 505 — 07.01-43	12	12
RAI 505 — 07.01-44	13	13
RAI 505 — 07.01-45	14	14
RAI 505 — 07.01-46	15	15
RAI 505 — 07.01-47	16	16
RAI 505 — 07.01-48	17	18
RAI 505 — 07.01-49	19	19
RAI 505 — 07.01-50	20	20
RAI 505 — 07.01-51	21	22
RAI 505 — 07.03-37	23	23
RAI 505 — 07.03-38	24	24
RAI 505 — 07.04-15	25	25
RAI 505 — 07.05-10	26	26
RAI 505 — 07.05-11	27	27

RAI 505 — 07.07-23	28	28
RAI 505 — 07.08-43	29	29
RAI 505 — 07.08-44	30	30
RAI 505 — 07.08-45	31	31
RAI 505 — 07.08-46	32	32
RAI 505 — 07.08-47	33	33
RAI 505 — 07.08-48	34	34
RAI 505 — 07.08-49	35	35
RAI 505 — 07.09-71	36	36
RAI 505 — 07.09-72	37	37

A complete answer is not provided for the 34 questions. The schedule for a technically correct and complete response to these questions is provided below.

Please note that the date for the response to Question 07.01-33 is a commitment date to provide a final schedule for the response in a follow-up letter.

<b>Question #</b>	<b>Response Date</b>
RAI 505 — 07.01-33	October 27, 2011
RAI 505 — 07.01-34	December 8, 2011
RAI 505 — 07.01-35	November 17, 2011
RAI 505 — 07.01-36	December 8, 2011
RAI 505 — 07.01-37	December 8, 2011
RAI 505 — 07.01-38	December 20, 2011
RAI 505 — 07.01-39	December 8, 2011
RAI 505 — 07.01-40	December 8, 2011
RAI 505 — 07.01-41	November 17, 2011
RAI 505 — 07.01-42	December 20, 2011
RAI 505 — 07.01-43	November 17, 2011
RAI 505 — 07.01-44	December 20, 2011
RAI 505 — 07.01-45	December 20, 2011
RAI 505 — 07.01-46	December 20, 2011
RAI 505 — 07.01-47	December 8, 2011
RAI 505 — 07.01-48	December 20, 2011
RAI 505 — 07.01-49	December 20, 2011
RAI 505 — 07.01-50	December 20, 2011
RAI 505 — 07.01-51	December 20, 2011
RAI 505 — 07.03-37	November 17, 2011
RAI 505 — 07.03-38	December 20, 2011
RAI 505 — 07.04-15	November 17, 2011
RAI 505 — 07.05-10	November 17, 2011
RAI 505 — 07.05-11	November 17, 2011
RAI 505 — 07.07-23	November 17, 2011
RAI 505 — 07.08-43	December 20, 2011
RAI 505 — 07.08-44	December 8, 2011
RAI 505 — 07.08-45	December 8, 2011

RAI 505 — 07.08-46	December 8, 2011
RAI 505 — 07.08-47	December 20, 2011
RAI 505 — 07.08-48	December 20, 2011
RAI 505 — 07.08-49	November 17, 2011
RAI 505 — 07.09-71	December 8, 2011
RAI 505 — 07.09-72	December 8, 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](mailto:Dennis.Williford@areva.com)

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**From:** Tesfaye, Getachew [\[mailto:Getachew.Tesfaye@nrc.gov\]](mailto:Getachew.Tesfaye@nrc.gov)

**Sent:** Tuesday, August 30, 2011 1:23 PM

**To:** ZZ-DL-A-USEPR-DL

**Cc:** Zhang, Deanna; Morton, Wendell; Spaulding, Deirdre; Mott, Kenneth; Truong, Tung; Zhao, Jack; Mills, Daniel; Jackson, Terry; Canova, Michael; Colaccino, Joseph; ArevaEPRDCPEm Resource

**Subject:** U.S. EPR Design Certification Application RAI No. 505 (5902,5735,5869,5754,5803,5950,5744), FSAR Ch. 7

Attached please find the subject requests for additional information (RAI). A draft of the RAI was provided to you on August 12, 2011, and discussed with your staff on August 22 and 25, 2011. No change is made to the draft RAI as a result of those discussions. 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

***Tom Ryan***  
Project Engineer  
Regulatory Affairs  
**AREVA NP**  
**An AREVA and Siemens company**

7207 IBM Drive - CLT2B  
Charlotte, NC 28262  
Phone: 704-805-2643, Cell : 704-292-5627  
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**Hearing Identifier:** AREVA\_EPR\_DC\_RAIs  
**Email Number:** 4334

**Mail Envelope Properties** (554210743EFE354B8D5741BEB695E65612233D)

**Subject:** Response to U.S. EPR Design Certification Application RAI No. 505  
(5902,5735,5869,5754,5803,5950,5744), FSAR Ch. 7, Supplement 29  
**Sent Date:** 4/19/2013 5:42:10 PM  
**Received Date:** 4/19/2013 5:42:25 PM  
**From:** WILLIFORD Dennis (AREVA)

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

**Recipients:**

"Miernicki, Michael" <Michael.Miernicki@nrc.gov>  
Tracking Status: None  
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Tracking Status: None

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MESSAGE	112461	4/19/2013 5:42:25 PM

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