

## ArevaEPRDCPEm Resource

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**From:** WILLIFORD Dennis (AREVA) [Dennis.Williford@areva.com]  
**Sent:** Wednesday, January 25, 2012 9:55 AM  
**To:** Tesfaye, Getachew  
**Cc:** BENNETT Kathy (AREVA); DELANO Karen (AREVA); ROMINE Judy (AREVA); RYAN Tom (AREVA); Miernicki, Michael  
**Subject:** Response to U.S. EPR Design Certification Application RAI No. 155, FSAR Ch 3, Supplement 15

Getachew,

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

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

| Question #            | Response Date            |
|-----------------------|--------------------------|
| RAI 155 — 03.08.01-24 | <b>February 21, 2012</b> |
| RAI 155 — 03.08.04-06 | <b>February 21, 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:** Wednesday, December 14, 2011 10:32 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. 155, FSAR Ch 3, Supplement 14

Getachew,

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

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

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

Sincerely,

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

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

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**From:** WILLIFORD Dennis (RS/NB)  
**Sent:** Friday, July 08, 2011 9:22 AM  
**To:** Tesfaye, Getachew  
**Cc:** BENNETT Kathy (RS/NB); DELANO Karen (RS/NB); ROMINE Judy (RS/NB); RYAN Tom (RS/NB)  
**Subject:** Response to U.S. EPR Design Certification Application RAI No. 155, FSAR Ch 3, Supplement 13

Getachew,

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

and 03.08.04-06 in Supplements 9, 10 and 11 on June 24, 2010, February 11, 2011 and May 2, 2011, respectively. AREVA NP submitted a revised response for Question 03.08.01-06 in Supplement 12 on May 20, 2011.

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

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

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

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

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

Sincerely,

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

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

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**From:** WILLIFORD Dennis (RS/NB)  
**Sent:** Friday, May 20, 2011 11:28 AM  
**To:** Tesfaye, Getachew  
**Cc:** BENNETT Kathy (RS/NB); DELANO Karen (RS/NB); ROMINE Judy (RS/NB); RYAN Tom (RS/NB); CORNELL Veronica (External RS/NB); WELLS Russell (RS/NB)  
**Subject:** Response to U.S. EPR Design Certification Application RAI No. 155, FSAR Ch 3, Supplement 12

Getachew,

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

the response on May 29, 2009, to address 20 of the remaining 44 questions. AREVA NP submitted Supplement 4 to the response on June 30, 2009, to address 8 of the remaining 24 questions. AREVA NP submitted Supplement 5 to the response on July 31, 2009, to address 11 of the remaining 16 questions. AREVA NP submitted Supplement 6 to the response on October 30, 2009, to provide new dates for 5 of the remaining 5 questions. AREVA NP submitted Supplement 7 to the response on January 28, 2010, to answer 1 of the remaining 5 questions and provide a new date for 1 of the remaining 5 questions. AREVA NP submitted Supplement 8 to the response on April 21, 2010, to answer 2 of the remaining 4 questions. AREVA NP submitted a revised schedule for Questions 03.08.01-24 and 03.08.04-06 in Supplements 9, 10 and 11 on June 24, 2010, February 11, 2011 and May 2, 2011, respectively.

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

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

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

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

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

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

Sincerely,

**Dennis Williford, P.E.**  
**U.S. EPR Design Certification Licensing Manager**  
**AREVA NP Inc.**  
7207 IBM Drive, Mail Code CLT 2B  
Charlotte, NC 28262  
Phone: 704-805-2223  
Email: [Dennis.Williford@areva.com](mailto:Dennis.Williford@areva.com)

---

**From:** WELLS Russell (RS/NB)  
**Sent:** Monday, May 02, 2011 7:26 AM  
**To:** Tesfaye, Getachew  
**Cc:** CORNELL Veronica (External RS/NB); BENNETT Kathy (RS/NB); DELANO Karen (RS/NB); ROMINE Judy (RS/NB); RYAN Tom (RS/NB)  
**Subject:** Response to U.S. EPR Design Certification Application RAI No. 155, FSAR Ch 3, Supplement 11

Getachew,

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

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

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

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

*Sincerely,*

*Russ Wells*

*U.S. EPR Design Certification Licensing Manager*

*AREVA NP, Inc.*

*3315 Old Forest Road, P.O. Box 10935*

*Mail Stop OF-57*

*Lynchburg, VA 24506-0935*

*Phone: 434-832-3884 (work)*

*434-942-6375 (cell)*

*Fax: 434-382-3884*

*[Russell.Wells@Areva.com](mailto:Russell.Wells@Areva.com)*

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**From:** BRYAN Martin (External RS/NB)

**Sent:** Friday, February 11, 2011 2:32 PM

**To:** 'Tefaye, Getachew'

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

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

Getachew,

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

Supplement 4 to the response on June 30, 2009, to address 8 of the remaining 24 questions. AREVA NP submitted Supplement 5 to the response on July 31, 2009, to address 11 of the remaining 16 questions. AREVA NP submitted Supplement 6 to the response on October 30, 2009, to provide new dates for 5 of the remaining 5 questions. AREVA NP submitted Supplement 7 to the response on January 28, 2010, to answer 1 of the remaining 5 questions and provide a new date for 1 of the remaining 5 questions. AREVA NP submitted Supplement 8 to the response on April 21, 2010, to answer 2 of the remaining 4 questions. On June 24, 2010, AREVA NP submitted Supplement 9 to provide a revised schedule for Questions 03.08.01-24 and 03.08.04-06.

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

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

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

Sincerely,

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

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**From:** BRYAN Martin (EXT)  
**Sent:** Thursday, June 24, 2010 1:02 PM  
**To:** 'Tefaye, Getachew'  
**Cc:** DELANO Karen (RS/NB); ROMINE Judy (RS/NB); BENNETT Kathy (RS/NB); VAN NOY Mark (EXT); CORNELL Veronica (External RS/NB); RYAN Tom (RS/NB); GARDNER Darrell (RS/NB)  
**Subject:** Response to U.S. EPR Design Certification Application RAI No. 155, FSAR Ch 3, Supplement 9

Getachew,

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

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

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

| Question #            | Response Date |
|-----------------------|---------------|
| RAI 155 — 03.08.01-24 | May 25, 2011  |
| RAI 155 — 03.08.04-06 | May 25, 2011  |

Sincerely,

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

---

**From:** BRYAN Martin (EXT)  
**Sent:** Wednesday, April 21, 2010 12:56 PM  
**To:** 'Tefaye, Getachew'  
**Cc:** DELANO Karen V (AREVA NP INC); ROMINE Judy (AREVA NP INC); BENNETT Kathy A (OFR) (AREVA NP INC); VAN NOY Mark (EXT)  
**Subject:** Response to U.S. EPR Design Certification Application RAI No. 155, FSAR Ch 3, Supplement 8

Getachew,

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

Appended to this file are affected pages of the U.S. EPR Final Safety Analysis Report in redline-strikeout format which support the response to RAI 155 Questions 03.08.01-3 and 03.08.01-6.

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

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

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

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

Sincerely,

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

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**From:** DUNCAN Leslie E (AREVA NP INC)  
**Sent:** Thursday, January 28, 2010 7:40 PM  
**To:** 'Tefaye, Getachew'  
**Cc:** DELANO Karen V (AREVA NP INC); BENNETT Kathy A (OFR) (AREVA NP INC); VAN NOY Mark (EXT)  
**Subject:** Response to U.S. EPR Design Certification Application RAI No. 155, FSAR Ch 3, Supplement 7

Getachew,

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

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

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

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

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

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

Sincerely,

Les Duncan  
Licensing Engineer  
**AREVA NP Inc.**  
An AREVA and Siemens Company  
Tel: (434) 832-2849  
[Leslie.Duncan@areva.com](mailto:Leslie.Duncan@areva.com)

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**From:** WELLS Russell D (AREVA NP INC)  
**Sent:** Friday, October 30, 2009 12:57 PM  
**To:** 'Getachew Tesfaye'  
**Cc:** Pederson Ronda M (AREVA NP INC); BENNETT Kathy A (OFR) (AREVA NP INC); DELANO Karen V (AREVA NP INC)  
**Subject:** Response to U.S. EPR Design Certification Application RAI No. 155, FSAR Ch 3, Supplement 6

Getachew,

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

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

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

Sincerely,

(Russ Wells on behalf of)

*Ronda Pederson*

[ronda.pederson@areva.com](mailto:ronda.pederson@areva.com)

Licensing Manager, U.S. EPR Design Certification

## New Plants Deployment

### **AREVA NP, Inc.**

An AREVA and Siemens company

3315 Old Forest Road

Lynchburg, VA 24506-0935

Phone: 434-832-3694

Cell: 434-841-8788

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**From:** Pederson Ronda M (AREVA NP INC)

**Sent:** Friday, July 31, 2009 4:15 PM

**To:** 'Tsfaye, Getachew'

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

**Subject:** Response to U.S. EPR Design Certification Application RAI No. 155, FSAR Ch 3, Supplement 5

Getachew,

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

Appended to this file are affected pages of the U.S. EPR Final Safety Analysis Report in redline-strikeout format which support the response to RAI 155 Supplement 5 Questions 03.08.02-2, 03.08.02-7, 03.08.03-4, 03.08.03-17, 03.08.05-1, 03.08.05-8, and 03.08.05-12.

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

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

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

| Question RAI 155 #    | Response Date    |
|-----------------------|------------------|
| RAI 155 — 03.08.01-03 | October 30, 2009 |
| RAI 155 — 03.08.01-06 | October 30, 2009 |
| RAI 155 — 03.08.01-20 | October 30, 2009 |
| RAI 155 — 03.08.01-24 | October 30, 2009 |
| RAI 155 — 03.08.04-06 | October 30, 2009 |

Sincerely,

*Ronda Pederson*

[ronda.pederson@areva.com](mailto:ronda.pederson@areva.com)

Licensing Manager, U.S. EPR Design Certification

**AREVA NP Inc.**

An AREVA and Siemens company

3315 Old Forest Road

Lynchburg, VA 24506-0935

Phone: 434-832-3694

Cell: 434-841-8788

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**From:** WELLS Russell D (AREVA NP INC)

**Sent:** Tuesday, June 30, 2009 8:34 PM

**To:** 'Getachew Tesfaye'; Miernicki, Michael

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

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

Getachew,

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

Appended to this file are affected pages of the U.S. EPR Final Safety Analysis Report in redline-strikeout format which support the response to RAI 155 Questions 03.08.05-14 and 03.08.02-1.

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

| Question #            | Start Page | End Page |
|-----------------------|------------|----------|
| RAI 155 — 03.08.01-11 | 2          | 2        |
| RAI 155 — 03.08.02-1  | 3          | 3        |
| RAI 155 — 03.08.02-4  | 4          | 4        |
| RAI 155 — 03.08.05-7  | 5          | 8        |

|                       |    |    |
|-----------------------|----|----|
| RAI 155 — 03.08.05-13 | 9  | 10 |
| RAI 155 — 03.08.05-14 | 11 | 13 |
| RAI 155 — 03.08.05-15 | 14 | 14 |
| RAI 155 — 03.08.05-16 | 15 | 15 |
| RAI 155 — 03.08.05-18 | 16 | 16 |

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

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

Sincerely,

(Russ Wells on behalf of)

*Ronda Pederson*

[ronda.pederson@areva.com](mailto:ronda.pederson@areva.com)

Licensing Manager, U.S. EPR Design Certification

New Plants Deployment

**AREVA NP, Inc.**

An AREVA and Siemens company

3315 Old Forest Road

Lynchburg, VA 24506-0935

---

**From:** Pederson Ronda M (AREVA NP INC)  
**Sent:** Friday, May 29, 2009 9:49 PM  
**To:** Getachew Tesfaye  
**Cc:** BENNETT Kathy A (OFR) (AREVA NP INC); DELANO Karen V (AREVA NP INC); VAN NOY Mark (EXT)  
**Subject:** Response to U.S. EPR Design Certification Application RAI No. 155, Supplement 3

Getachew,

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

Appended to this file are affected pages of the U.S. EPR Final Safety Analysis Report in redline-strikeout format which support the response to RAI 155 Questions 03.08.01-8, 03.08.01-10, 03.08.01-12, 03.08.03-3, 03.08.03-6, 03.08.03-10, 03.08.04-3, and 03.08.05-6.

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

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

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

| Question RAI 155 #    | Response Date    |
|-----------------------|------------------|
| RAI 155 — 03.08.01-03 | October 30, 2009 |
| RAI 155 — 03.08.01-06 | October 30, 2009 |
| RAI 155 — 03.08.01-11 | June 30, 2009    |
| RAI 155 — 03.08.01-20 | October 30, 2009 |
| RAI 155 — 03.08.01-24 | October 30, 2009 |
| RAI 155 — 03.08.02-01 | June 30, 2009    |
| RAI 155 — 03.08.02-02 | July 31, 2009    |
| RAI 155 — 03.08.02-04 | June 30, 2009    |
| RAI 155 — 03.08.02-07 | July 31, 2009    |
| RAI 155 — 03.08.02-08 | July 31, 2009    |
| RAI 155 — 03.08.03-04 | July 31, 2009    |
| RAI 155 — 03.08.03-16 | July 31, 2009    |
| RAI 155 — 03.08.03-17 | July 31, 2009    |
| RAI 155 — 03.08.04-06 | October 30, 2009 |
| RAI 155 — 03.08.05-01 | July 31, 2009    |
| RAI 155 — 03.08.05-07 | June 30, 2009    |
| RAI 155 — 03.08.05-08 | July 31, 2009    |
| RAI 155 — 03.08.05-10 | July 31, 2009    |
| RAI 155 — 03.08.05-12 | July 31, 2009    |
| RAI 155 — 03.08.05-13 | June 30, 2009    |
| RAI 155 — 03.08.05-14 | June 30, 2009    |
| RAI 155 — 03.08.05-15 | June 30, 2009    |
| RAI 155 — 03.08.05-16 | June 30, 2009    |
| RAI 155 — 03.08.05-18 | June 30, 2009    |

Sincerely,

*Ronda Pederson*

[ronda.pederson@areva.com](mailto:ronda.pederson@areva.com)

Licensing Manager, U.S. EPR Design Certification

**AREVA NP Inc.**

An AREVA and Siemens company

3315 Old Forest Road

Lynchburg, VA 24506-0935

Phone: 434-832-3694

Cell: 434-841-8788

**From:** Pederson Ronda M (AREVA NP INC)  
**Sent:** Thursday, April 30, 2009 9:16 PM  
**To:** Getachew Tesfaye ([gxt2@nrc.gov](mailto:gxt2@nrc.gov))  
**Cc:** BENNETT Kathy A (OFR) (AREVA NP INC); DELANO Karen V (AREVA NP INC); VAN NOY Mark (EXT)  
**Subject:** Response to U.S. EPR Design Certification Application RAI No. 155, Supplement 2 (part 4 of 4)

Getachew,

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

Sincerely,

*Ronda Pederson*

[ronda.pederson@areva.com](mailto:ronda.pederson@areva.com)

Licensing Manager, U.S. EPR Design Certification

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3315 Old Forest Road

Lynchburg, VA 24506-0935

Phone: 434-832-3694

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---

**From:** Pederson Ronda M (AREVA NP INC)  
**Sent:** Thursday, April 30, 2009 9:12 PM  
**To:** Getachew Tesfaye ([gxt2@nrc.gov](mailto:gxt2@nrc.gov))  
**Cc:** BENNETT Kathy A (OFR) (AREVA NP INC); DELANO Karen V (AREVA NP INC); VAN NOY Mark (EXT)  
**Subject:** Response to U.S. EPR Design Certification Application RAI No. 155, Supplement 2 (part 3 of 4)

Getachew,

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

Sincerely,

*Ronda Pederson*

[ronda.pederson@areva.com](mailto:ronda.pederson@areva.com)

Licensing Manager, U.S. EPR Design Certification

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3315 Old Forest Road

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Phone: 434-832-3694

Cell: 434-841-8788

---

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

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

Getachew,

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

Sincerely,

*Ronda Pederson*

[ronda.pederson@areva.com](mailto:ronda.pederson@areva.com)

Licensing Manager, U.S. EPR Design Certification

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3315 Old Forest Road

Lynchburg, VA 24506-0935

Phone: 434-832-3694

Cell: 434-841-8788

---

**From:** Pederson Ronda M (AREVA NP INC)

**Sent:** Thursday, April 30, 2009 9:09 PM

**To:** Getachew Tesfaye ([gxt2@nrc.gov](mailto:gxt2@nrc.gov))

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

**Subject:** Response to U.S. EPR Design Certification Application RAI No. 155, Supplement 2 (part 1 of 4)

Getachew,

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

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

Appended to this file are affected pages of the U.S. EPR Final Safety Analysis Report in redline-strikeout format which support the response to RAI 155 Questions 03.08.01-07, 03.08.02-03, 03.08.03-05, 03.08.03-14 and 03.08.03-15.

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

| Question #            | Start Page | End Page |
|-----------------------|------------|----------|
| RAI 155 — 03.08.01-07 | 2          | 5        |
| RAI 155 — 03.08.01-17 | 6          | 6        |
| RAI 155 — 03.08.02-03 | 7          | 7        |
| RAI 155 — 03.08.03-05 | 8          | 15       |
| RAI 155 — 03.08.03-14 | 16         | 16       |
| RAI 155 — 03.08.03-15 | 17         | 37       |

|                       |    |    |
|-----------------------|----|----|
| RAI 155 — 03.08.04-02 | 38 | 38 |
| RAI 155 — 03.08.05-05 | 39 | 42 |
| RAI 155 — 03.08.05-11 | 43 | 43 |
| RAI 155 — 03.08.05-12 | 44 | 44 |

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

| <b>Question RAI 155 #</b> | <b>Response Date</b> |
|---------------------------|----------------------|
| RAI 155 — 03.08.01-03     | October 30, 2009     |
| RAI 155 — 03.08.01-06     | October 30, 2009     |
| RAI 155 — 03.08.01-08     | May 29, 2009         |
| RAI 155 — 03.08.01-09     | May 29, 2009         |
| RAI 155 — 03.08.01-10     | May 29, 2009         |
| RAI 155 — 03.08.01-11     | June 30, 2009        |
| RAI 155 — 03.08.01-12     | May 29, 2009         |
| RAI 155 — 03.08.01-16     | May 29, 2009         |
| RAI 155 — 03.08.01-20     | October 30, 2009     |
| RAI 155 — 03.08.01-22     | May 29, 2009         |
| RAI 155 — 03.08.01-24     | October 30, 2009     |
| RAI 155 — 03.08.01-27     | May 29, 2009         |
| RAI 155 — 03.08.02-01     | June 30, 2009        |
| RAI 155 — 03.08.02-02     | July 31, 2009        |
| RAI 155 — 03.08.02-04     | June 30, 2009        |
| RAI 155 — 03.08.02-05     | May 29, 2009         |
| RAI 155 — 03.08.02-06     | May 29, 2009         |
| RAI 155 — 03.08.02-07     | July 31, 2009        |
| RAI 155 — 03.08.02-08     | July 31, 2009        |
| RAI 155 — 03.08.02-10     | May 29, 2009         |
| RAI 155 — 03.08.03-03     | May 29, 2009         |
| RAI 155 — 03.08.03-04     | July 31, 2009        |
| RAI 155 — 03.08.03-06     | May 29, 2009         |
| RAI 155 — 03.08.03-10     | May 29, 2009         |
| RAI 155 — 03.08.03-11     | May 29, 2009         |
| RAI 155 — 03.08.03-12     | May 29, 2009         |
| RAI 155 — 03.08.03-16     | July 31, 2009        |
| RAI 155 — 03.08.03-17     | July 31, 2009        |
| RAI 155 — 03.08.04-03     | May 29, 2009         |
| RAI 155 — 03.08.04-04     | May 29, 2009         |
| RAI 155 — 03.08.04-05     | May 29, 2009         |
| RAI 155 — 03.08.04-06     | October 30, 2009     |
| RAI 155 — 03.08.05-01     | July 31, 2009        |
| RAI 155 — 03.08.05-02     | May 29, 2009         |

|                       |               |
|-----------------------|---------------|
| RAI 155 — 03.08.05-06 | May 29, 2009  |
| RAI 155 — 03.08.05-07 | June 30, 2009 |
| RAI 155 — 03.08.05-08 | July 31, 2009 |
| RAI 155 — 03.08.05-10 | July 31, 2009 |
| RAI 155 — 03.08.05-12 | July 31, 2009 |
| RAI 155 — 03.08.05-13 | June 30, 2009 |
| RAI 155 — 03.08.05-14 | June 30, 2009 |
| RAI 155 — 03.08.05-15 | June 30, 2009 |
| RAI 155 — 03.08.05-16 | June 30, 2009 |
| RAI 155 — 03.08.05-18 | June 30, 2009 |

Sincerely,

*Ronda Pederson*

[ronda.pederson@areva.com](mailto:ronda.pederson@areva.com)

Licensing Manager, U.S. EPR Design Certification

**AREVA NP Inc.**

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3315 Old Forest Road

Lynchburg, VA 24506-0935

Phone: 434-832-3694

Cell: 434-841-8788

---

**From:** Pederson Ronda M (AREVA NP INC)

**Sent:** Tuesday, March 31, 2009 8:16 PM

**To:** Getachew Tesfaye

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

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

Getachew,

AREVA NP Inc. (AREVA NP) provided responses to 5 of the 78 questions of RAI No. 155 on February 13, 2009. The attached file, "RAI 155 Supplement 1 Response U.S. EPR DC" provides technically correct and complete responses to 20 of the remaining 73 questions, as committed.

Appended to this file are affected pages of the U.S. EPR Final Safety Analysis Report in redline-strikeout format which support the response to RAI 155 Supplement 1 Questions 03.08.01-04, 03.08.01-05, 03.08.01-21, 03.08.02-09, 03.08.03-02, 03.08.03-09, 03.08.05-03, and 03.08.05-04.

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

| Question #            | Start Page | End Page |
|-----------------------|------------|----------|
| RAI 155 — 03.08.01-01 | 2          | 2        |

|                       |    |    |
|-----------------------|----|----|
| RAI 155 — 03.08.01-02 | 3  | 9  |
| RAI 155 — 03.08.01-04 | 10 | 12 |
| RAI 155 — 03.08.01-05 | 13 | 16 |
| RAI 155 — 03.08.01-13 | 17 | 19 |
| RAI 155 — 03.08.01-21 | 20 | 20 |
| RAI 155 — 03.08.01-23 | 21 | 21 |
| RAI 155 — 03.08.01-25 | 22 | 22 |
| RAI 155 — 03.08.02-09 | 23 | 23 |
| RAI 155 — 03.08.03-01 | 24 | 31 |
| RAI 155 — 03.08.03-02 | 32 | 33 |
| RAI 155 — 03.08.03-07 | 34 | 34 |
| RAI 155 — 03.08.03-08 | 35 | 36 |
| RAI 155 — 03.08.03-09 | 37 | 37 |
| RAI 155 — 03.08.03-13 | 38 | 38 |
| RAI 155 — 03.08.04-01 | 39 | 40 |
| RAI 155 — 03.08.05-03 | 41 | 41 |
| RAI 155 — 03.08.05-04 | 42 | 46 |
| RAI 155 — 03.08.05-09 | 47 | 48 |
| RAI 155 — 03.08.05-17 | 49 | 53 |

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

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

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

Sincerely,

*Ronda Pederson*

[ronda.pederson@areva.com](mailto:ronda.pederson@areva.com)

Licensing Manager, U.S. EPR Design Certification

**AREVA NP Inc.**

An AREVA and Siemens company

3315 Old Forest Road

Lynchburg, VA 24506-0935

Phone: 434-832-3694

Cell: 434-841-8788

**From:** Pederson Ronda M (AREVA NP INC)

**Sent:** Friday, February 13, 2009 7:18 PM

**To:** 'Getachew Tesfaye'

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

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

Getachew,

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

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

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

| Question #            | Start Page | End Page |
|-----------------------|------------|----------|
| RAI 155 — 03.08.01-01 | 2          | 2        |
| RAI 155 — 03.08.01-02 | 3          | 3        |
| RAI 155 — 03.08.01-03 | 4          | 4        |
| RAI 155 — 03.08.01-04 | 5          | 5        |
| RAI 155 — 03.08.01-05 | 6          | 6        |
| RAI 155 — 03.08.01-06 | 7          | 7        |
| RAI 155 — 03.08.01-07 | 8          | 8        |
| RAI 155 — 03.08.01-08 | 9          | 9        |
| RAI 155 — 03.08.01-09 | 10         | 10       |
| RAI 155 — 03.08.01-10 | 11         | 11       |
| RAI 155 — 03.08.01-11 | 12         | 12       |
| RAI 155 — 03.08.01-12 | 13         | 13       |
| RAI 155 — 03.08.01-13 | 14         | 14       |
| RAI 155 — 03.08.01-14 | 15         | 17       |
| RAI 155 — 03.08.01-15 | 18         | 19       |
| RAI 155 — 03.08.01-16 | 20         | 20       |
| RAI 155 — 03.08.01-17 | 21         | 21       |
| RAI 155 — 03.08.01-18 | 22         | 22       |
| RAI 155 — 03.08.01-19 | 23         | 24       |
| RAI 155 — 03.08.01-20 | 25         | 25       |
| RAI 155 — 03.08.01-21 | 26         | 26       |
| RAI 155 — 03.08.01-22 | 27         | 27       |
| RAI 155 — 03.08.01-23 | 28         | 28       |

|                       |    |    |
|-----------------------|----|----|
| RAI 155 — 03.08.01-24 | 29 | 30 |
| RAI 155 — 03.08.01-25 | 31 | 31 |
| RAI 155 — 03.08.01-26 | 32 | 34 |
| RAI 155 — 03.08.01-27 | 35 | 35 |
| RAI 155 — 03.08.02-01 | 36 | 36 |
| RAI 155 — 03.08.02-02 | 37 | 37 |
| RAI 155 — 03.08.02-03 | 38 | 38 |
| RAI 155 — 03.08.02-04 | 39 | 39 |
| RAI 155 — 03.08.02-05 | 40 | 40 |
| RAI 155 — 03.08.02-06 | 41 | 41 |
| RAI 155 — 03.08.02-07 | 42 | 42 |
| RAI 155 — 03.08.02-08 | 43 | 43 |
| RAI 155 — 03.08.02-09 | 44 | 44 |
| RAI 155 — 03.08.02-10 | 45 | 45 |
| RAI 155 — 03.08.03-01 | 46 | 46 |
| RAI 155 — 03.08.03-02 | 47 | 47 |
| RAI 155 — 03.08.03-03 | 48 | 48 |
| RAI 155 — 03.08.03-04 | 49 | 49 |
| RAI 155 — 03.08.03-05 | 50 | 50 |
| RAI 155 — 03.08.03-06 | 51 | 51 |
| RAI 155 — 03.08.03-07 | 52 | 52 |
| RAI 155 — 03.08.03-08 | 53 | 53 |
| RAI 155 — 03.08.03-09 | 54 | 54 |
| RAI 155 — 03.08.03-10 | 55 | 55 |
| RAI 155 — 03.08.03-11 | 56 | 56 |
| RAI 155 — 03.08.03-12 | 57 | 57 |
| RAI 155 — 03.08.03-13 | 58 | 58 |
| RAI 155 — 03.08.03-14 | 59 | 59 |
| RAI 155 — 03.08.03-15 | 60 | 60 |
| RAI 155 — 03.08.03-16 | 61 | 61 |
| RAI 155 — 03.08.03-17 | 62 | 63 |
| RAI 155 — 03.08.04-01 | 64 | 64 |
| RAI 155 — 03.08.04-02 | 65 | 65 |
| RAI 155 — 03.08.04-03 | 66 | 67 |
| RAI 155 — 03.08.04-04 | 68 | 68 |
| RAI 155 — 03.08.04-05 | 69 | 69 |
| RAI 155 — 03.08.04-06 | 70 | 70 |
| RAI 155 — 03.08.05-01 | 71 | 71 |
| RAI 155 — 03.08.05-02 | 72 | 72 |
| RAI 155 — 03.08.05-03 | 73 | 73 |
| RAI 155 — 03.08.05-04 | 74 | 75 |
| RAI 155 — 03.08.05-05 | 76 | 76 |
| RAI 155 — 03.08.05-06 | 77 | 77 |
| RAI 155 — 03.08.05-07 | 78 | 78 |

|                       |    |    |
|-----------------------|----|----|
| RAI 155 — 03.08.05-08 | 79 | 80 |
| RAI 155 — 03.08.05-09 | 81 | 81 |
| RAI 155 — 03.08.05-10 | 82 | 82 |
| RAI 155 — 03.08.05-11 | 83 | 83 |
| RAI 155 — 03.08.05-12 | 84 | 84 |
| RAI 155 — 03.08.05-13 | 85 | 85 |
| RAI 155 — 03.08.05-14 | 86 | 86 |
| RAI 155 — 03.08.05-15 | 87 | 87 |
| RAI 155 — 03.08.05-16 | 88 | 88 |
| RAI 155 — 03.08.05-17 | 89 | 89 |
| RAI 155 — 03.08.05-18 | 90 | 90 |

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

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

|                       |                  |
|-----------------------|------------------|
| RAI 155 — 03.08.02-07 | July 31, 2009    |
| RAI 155 — 03.08.02-08 | July 31, 2009    |
| RAI 155 — 03.08.02-09 | March 31, 2009   |
| RAI 155 — 03.08.02-10 | May 29, 2009     |
| RAI 155 — 03.08.03-01 | March 31, 2009   |
| RAI 155 — 03.08.03-02 | March 31, 2009   |
| RAI 155 — 03.08.03-03 | May 29, 2009     |
| RAI 155 — 03.08.03-04 | July 31, 2009    |
| RAI 155 — 03.08.03-05 | April 30, 2009   |
| RAI 155 — 03.08.03-06 | May 29, 2009     |
| RAI 155 — 03.08.03-07 | March 31, 2009   |
| RAI 155 — 03.08.03-08 | March 31, 2009   |
| RAI 155 — 03.08.03-09 | March 31, 2009   |
| RAI 155 — 03.08.03-10 | May 29, 2009     |
| RAI 155 — 03.08.03-11 | May 29, 2009     |
| RAI 155 — 03.08.03-12 | May 29, 2009     |
| RAI 155 — 03.08.03-13 | March 31, 2009   |
| RAI 155 — 03.08.03-14 | April 30, 2009   |
| RAI 155 — 03.08.03-15 | April 30, 2009   |
| RAI 155 — 03.08.03-16 | July 31, 2009    |
| RAI 155 — 03.08.03-17 | July 31, 2009    |
| RAI 155 — 03.08.04-01 | March 31, 2009   |
| RAI 155 — 03.08.04-02 | April 30, 2009   |
| RAI 155 — 03.08.04-03 | May 29, 2009     |
| RAI 155 — 03.08.04-04 | May 29, 2009     |
| RAI 155 — 03.08.04-05 | May 29, 2009     |
| RAI 155 — 03.08.04-06 | October 30, 2009 |
| RAI 155 — 03.08.05-01 | July 31, 2009    |
| RAI 155 — 03.08.05-02 | May 29, 2009     |
| RAI 155 — 03.08.05-03 | March 31, 2009   |
| RAI 155 — 03.08.05-04 | March 31, 2009   |
| RAI 155 — 03.08.05-05 | April 30, 2009   |
| RAI 155 — 03.08.05-06 | May 29, 2009     |
| RAI 155 — 03.08.05-07 | June 30, 2009    |
| RAI 155 — 03.08.05-08 | July 31, 2009    |
| RAI 155 — 03.08.05-09 | March 31, 2009   |
| RAI 155 — 03.08.05-10 | July 31, 2009    |
| RAI 155 — 03.08.05-11 | April 30, 2009   |
| RAI 155 — 03.08.05-12 | April 30, 2009   |
| RAI 155 — 03.08.05-13 | June 30, 2009    |
| RAI 155 — 03.08.05-14 | June 30, 2009    |
| RAI 155 — 03.08.05-15 | June 30, 2009    |
| RAI 155 — 03.08.05-16 | June 30, 2009    |
| RAI 155 — 03.08.05-17 | March 31, 2009   |

Sincerely,

*Ronda Pederson*

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Licensing Manager, U.S. EPR Design Certification

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

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

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

**Cc:** Jim Xu; Samir Chakrabarti; Sujit Samaddar; Michael Miernicki; Joseph Colaccino; ArevaEPRDCPEm Resource

**Subject:** U.S. EPR Design Certification Application RAI No. 155 (1671, 1831,1672, 1834, 1833, 1836), FSAR Ch. 3

Attached please find the subject requests for additional information (RAI). A draft of the RAI was provided to you on December 12, 2008, and discussed with your staff on January 13, 2009. No changes were made to the Draft RAI Questions as a result of that discussion. The schedule we have established for review of your application assumes technically correct and complete responses within 30 days of receipt of RAIs. For any RAIs that cannot be answered within 30 days, it is expected that a date for receipt of this information will be provided to the staff within the 30 day period so that the staff can assess how this information will impact the published schedule.

Thanks,

Getachew Tesfaye

Sr. Project Manager

NRO/DNRL/NARP

(301) 415-3361

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