

## ArevaEPRDCPEm Resource

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**From:** BRYAN Martin (EXTERNAL AREVA) [Martin.Bryan.ext@areva.com]  
**Sent:** Wednesday, October 27, 2010 2:41 PM  
**To:** Tesfaye, Getachew  
**Cc:** DELANO Karen (AREVA); ROMINE Judy (AREVA); BENNETT Kathy (AREVA); KOWALSKI David (AREVA); RYAN Tom (AREVA)  
**Subject:** Response to U.S. EPR Design Certification Application RAI No. 390, FSAR Ch. 9, Supplement 7  
**Attachments:** RAI 390 Supplement 7 Response US EPR DC.pdf

Getachew,

AREVA NP Inc. provided a schedule for technically correct and complete responses to the seven questions in RAI No. 390 on May 27, 2010. Supplement 1, Supplement 2, Supplement 3, Supplement 4 and Supplement 5 responses to RAI No. 390 were sent on June 25, 2010, August 3, 2010, August 19, 2010, September 2, 2010 and September 30, 2010, respectively, to provide a revised schedule. Supplement 6 response to RAI No. 390 was sent on October 15, 2010 to provide a technically correct and complete response to one of the seven questions.

The attached file, "RAI 390 Supplement 7 Response US EPR DC.pdf" provides a technically correct and complete response to one of the six remaining questions, 09.01.02-39.

The following table indicates the respective pages in the response document, "RAI 390 Supplement 7 Response US EPR DC.pdf," that contain AREVA NP's response to the subject question.

| Question #            | Start Page | End Page |
|-----------------------|------------|----------|
| RAI 390 — 09.01.02-39 | 2          | 2        |

To allow additional time to interact with the NRC, the schedule is being revised for the remaining responses.

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

| Question #            | Response Date    |
|-----------------------|------------------|
| RAI 390 — 09.05.04-21 | December 2, 2010 |
| RAI 390 — 09.05.04-22 | December 2, 2010 |
| RAI 390 — 09.05.04-23 | December 2, 2010 |
| RAI 390 — 09.05.04-24 | December 2, 2010 |
| RAI 390 — 09.05.04-25 | December 2, 2010 |

Sincerely,

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

**From:** BRYAN Martin (External RS/NB)  
**Sent:** Friday, October 15, 2010 12:25 PM  
**To:** 'Tefaye, Getachew'  
**Cc:** DELANO Karen (RS/NB); ROMINE Judy (RS/NB); BENNETT Kathy (RS/NB); KOWALSKI David (RS/NB)  
**Subject:** Response to U.S. EPR Design Certification Application RAI No. 390, FSAR Ch. 9, Supplement 6

Getachew,

AREVA NP Inc. provided a schedule for technically correct and complete responses to the seven questions in RAI No. 390 on May 27, 2010. Supplement 1, Supplement 2, Supplement 3, Supplement 4 and Supplement 5 responses to RAI No. 390 were sent on June 25, 2010, August 3, 2010, August 19, 2010, September 2, 2010 and September 30, 2010, respectively, to provide a revised schedule.

The attached file, "RAI 390 Supplement 6 Response US EPR DC.pdf" provides a technically correct and complete response to one of the seven questions.

Appended to this file are affected pages of the U.S. EPR Final Safety Analysis Report in redline-strikeout format which supports the response to RAI 390 Question 09.02.02-106.

The following table indicates the respective pages in the response document, "RAI 390 Supplement 6 Response US EPR DC.pdf," that contain AREVA NP's response to the subject question.

| Question #             | Start Page | End Page |
|------------------------|------------|----------|
| RAI 390 — 09.02.02-106 | 2          | 9        |

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

| Question #            | Response Date    |
|-----------------------|------------------|
| RAI 390 — 09.01.02-39 | October 27, 2010 |
| RAI 390 — 09.05.04-21 | October 27, 2010 |
| RAI 390 — 09.05.04-22 | October 27, 2010 |
| RAI 390 — 09.05.04-23 | October 27, 2010 |
| RAI 390 — 09.05.04-24 | October 27, 2010 |
| RAI 390 — 09.05.04-25 | October 27, 2010 |

Sincerely,

Martin (Marty) C. Bryan  
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**From:** BRYAN Martin (External RS/NB)  
**Sent:** Thursday, September 30, 2010 12:51 PM  
**To:** 'Tefaye, Getachew'  
**Cc:** DELANO Karen (RS/NB); ROMINE Judy (RS/NB); BENNETT Kathy (RS/NB); LENTZ Tony (External RS/NB); RYAN Tom (RS/NB)  
**Subject:** Response to U.S. EPR Design Certification Application RAI No. 390, FSAR Ch. 9, Supplement 5

Getachew,

AREVA NP Inc. (AREVA NP) provided a schedule for technically correct and complete responses to the seven questions in RAI No. 390 on May 27, 2010. Supplement 1, Supplement 2, Supplement 3, and Supplement 4 responses to RAI No. 390 were sent on June 25, 2010, August 3, 2010, August 19, 2010, and September 2, 2010 respectively, to provide a revised schedule.

To provide additional time for interaction and feedback from the staff, a revised schedule is provided in this email for the response to the questions 09.01.02-39, 09.05.04-21, 09.05.04-22, 09.05.04-23, 09.05.04-24, and 09.05.04-25. The response to question 09.02.02-106 is being processed, a revised schedule is provided.

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

| <b>Question #</b>      | <b>Response Date</b> |
|------------------------|----------------------|
| RAI 390 — 09.01.02-39  | October 27, 2010     |
| RAI 390 — 09.02.02-106 | October 15, 2010     |
| RAI 390 — 09.05.04-21  | October 27, 2010     |
| RAI 390 — 09.05.04-22  | October 27, 2010     |
| RAI 390 — 09.05.04-23  | October 27, 2010     |
| RAI 390 — 09.05.04-24  | October 27, 2010     |
| RAI 390 — 09.05.04-25  | October 27, 2010     |

Sincerely,

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**From:** BRYAN Martin (External RS/NB)  
**Sent:** Thursday, September 02, 2010 4:12 PM  
**To:** 'Tesfaye, Getachew'  
**Cc:** DELANO Karen (RS/NB); ROMINE Judy (RS/NB); BENNETT Kathy (RS/NB); KOWALSKI David (RS/NB)  
**Subject:** Response to U.S. EPR Design Certification Application RAI No. 390, FSAR Ch. 9, Supplement 4

Getachew,

AREVA NP Inc. (AREVA NP) provided a schedule for technically correct and complete responses to the seven questions in RAI No. 390 on May 27, 2010. Supplement 1, Supplement 2 and Supplement 3 responses to RAI No. 390 were sent on June 25, 2010, August 3, 2010 and August 19, 2010 respectively, to provide a revised schedule.

On July 8, 2010, AREVA NP provided a DRAFT response to Question 09.01.02-39 for NRC review and comment. AREVA NP received NRC comments on August 30, 2010. To allow time for further interaction between AREVA NP and the NRC staff, a revised schedule for the response to Question 09.01.02-39 is provided in this e-mail. The response dates for the remaining questions have not changed.

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

| Question #             | Response Date             |
|------------------------|---------------------------|
| RAI 390 — 09.01.02-39  | <b>September 30, 2010</b> |
| RAI 390 — 09.02.02-106 | September 30, 2010        |
| RAI 390 — 09.05.04-21  | September 30, 2010        |
| RAI 390 — 09.05.04-22  | September 30, 2010        |
| RAI 390 — 09.05.04-23  | September 30, 2010        |
| RAI 390 — 09.05.04-24  | September 30, 2010        |
| RAI 390 — 09.05.04-25  | September 30, 2010        |

Sincerely,

Martin (Marty) C. Bryan  
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**From:** BRYAN Martin (External RS/NB)  
**Sent:** Thursday, August 19, 2010 6:55 PM  
**To:** 'Tefsaye, Getachew'  
**Cc:** DELANO Karen (RS/NB); ROMINE Judy (RS/NB); BENNETT Kathy (RS/NB); KOWALSKI David (RS/NB)  
**Subject:** Response to U.S. EPR Design Certification Application RAI No. 390, FSAR Ch. 9, Supplement 3

Getachew,

AREVA NP Inc. provided a schedule for technically correct and complete responses to the seven questions in RAI No. 390 on May 27, 2010. Supplement 1 and Supplement 2 responses to RAI No. 390 were sent on June 25, 2010 and August 3, 2010 to provide a revised schedule. On July 8, 2010, AREVA provided a DRAFT response to Question 09.01.02-39 for NRC review. For the remainder of the questions, AREVA needs additional time to finalize the response and time to interact with the staff prior to the final response date provided below.

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

| Question #             | Response Date      |
|------------------------|--------------------|
| RAI 390 — 09.01.02-39  | September 02, 2010 |
| RAI 390 — 09.02.02-106 | September 30, 2010 |
| RAI 390 — 09.05.04-21  | September 30, 2010 |
| RAI 390 — 09.05.04-22  | September 30, 2010 |
| RAI 390 — 09.05.04-23  | September 30, 2010 |
| RAI 390 — 09.05.04-24  | September 30, 2010 |
| RAI 390 — 09.05.04-25  | September 30, 2010 |

Sincerely,

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

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

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**From:** BRYAN Martin (EXT)  
**Sent:** Tuesday, August 03, 2010 1:28 PM  
**To:** 'Tesfaye, Getachew'  
**Cc:** DELANO Karen (RS/NB); ROMINE Judy (RS/NB); BENNETT Kathy (RS/NB); KOWALSKI David (RS/NB)  
**Subject:** Response to U.S. EPR Design Certification Application RAI No. 390, FSAR Ch. 9, Supplement 2

Getachew,

AREVA NP Inc. provided a schedule for technically correct and complete responses to the seven questions in RAI No. 390 on May 27, 2010. Supplement 1 response to RAI No. 390 was sent on June 25, 2010 to provide a revised schedule. On July 8, 2010, AREVA provided a DRAFT response to Question 09.01.02-39 for NRC review and comment. As of today, AREVA has not received any feedback from the NRC staff and therefore the schedule for the final response has been extended.

To allow time for interaction between AREVA and the NRC staff, a revised schedule is provided in this e-mail for question 09.01.02-39.

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

| Question #             | Response Date     |
|------------------------|-------------------|
| RAI 390 — 09.01.02-39  | September 2, 2010 |
| RAI 390 — 09.02.02-106 | August 20, 2010   |
| RAI 390 — 09.05.04-21  | August 20, 2010   |
| RAI 390 — 09.05.04-22  | August 20, 2010   |
| RAI 390 — 09.05.04-23  | August 20, 2010   |
| RAI 390 — 09.05.04-24  | August 20, 2010   |
| RAI 390 — 09.05.04-25  | August 20, 2010   |

Sincerely,

Martin (Marty) C. Bryan  
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**From:** BRYAN Martin (EXT)  
**Sent:** Friday, June 25, 2010 7:19 PM  
**To:** 'Tesfaye, Getachew'  
**Cc:** DELANO Karen V (AREVA NP INC); ROMINE Judy (AREVA NP INC); BENNETT Kathy A (OFR) (AREVA NP INC); KOWALSKI David J (AREVA NP INC)  
**Subject:** Response to U.S. EPR Design Certification Application RAI No. 390, FSAR Ch. 9, Supplement 1

Getachew,

AREVA NP Inc. provided a schedule for technically correct and complete responses to the seven questions in RAI No. 390 on May 27, 2010.

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

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

| Question #             | Response Date   |
|------------------------|-----------------|
| RAI 390 — 09.01.02-39  | August 3, 2010  |
| RAI 390 — 09.02.02-106 | August 20, 2010 |
| RAI 390 — 09.05.04-21  | August 20, 2010 |
| RAI 390 — 09.05.04-22  | August 20, 2010 |
| RAI 390 — 09.05.04-23  | August 20, 2010 |
| RAI 390 — 09.05.04-24  | August 20, 2010 |
| RAI 390 — 09.05.04-25  | August 20, 2010 |

Sincerely,

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**From:** BRYAN Martin (EXT)  
**Sent:** Thursday, May 27, 2010 12:43 PM  
**To:** 'Tefsaye, Getachew'  
**Cc:** DELANO Karen V (AREVA NP INC); ROMINE Judy (AREVA NP INC); BENNETT Kathy A (OFR) (AREVA NP INC); KOWALSKI David J (AREVA NP INC)  
**Subject:** Response to U.S. EPR Design Certification Application RAI No. 390, FSAR Ch. 9

Getachew,

Attached please find AREVA NP Inc.'s response to the subject request for additional information (RAI). The attached file, "RAI 390 Response US EPR DC," provides a schedule since technically correct and complete responses to the seven questions are not provided.

The following table indicates the respective pages in the response document, "RAI 390 Response US EPR DC.pdf," that contain AREVA NP's response to the subject questions.

| Question #             | Start Page | End Page |
|------------------------|------------|----------|
| RAI 390 — 09.01.02-39  | 2          | 2        |
| RAI 390 — 09.02.02-106 | 3          | 4        |
| RAI 390 — 09.05.04-21  | 5          | 5        |
| RAI 390 — 09.05.04-22  | 6          | 6        |
| RAI 390 — 09.05.04-23  | 7          | 7        |
| RAI 390 — 09.05.04-24  | 8          | 8        |
| RAI 390 — 09.05.04-25  | 9          | 9        |

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

| Question #             | Response Date |
|------------------------|---------------|
| RAI 390 — 09.01.02-39  | June 25, 2010 |
| RAI 390 — 09.02.02-106 | June 25, 2010 |
| RAI 390 — 09.05.04-21  | June 25, 2010 |
| RAI 390 — 09.05.04-22  | June 25, 2010 |
| RAI 390 — 09.05.04-23  | June 25, 2010 |
| RAI 390 — 09.05.04-24  | June 25, 2010 |
| RAI 390 — 09.05.04-25  | June 25, 2010 |

Sincerely,

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**From:** Tesfaye, Getachew [mailto:Getachew.Tesfaye@nrc.gov]  
**Sent:** Tuesday, April 27, 2010 3:07 PM  
**To:** ZZ-DL-A-USEPR-DL  
**Cc:** Bernal, Sara; Roach, Edward; Wheeler, Larry; Lee, Samuel; Radlinski, Robert; Segala, John; Hearn, Peter; Colaccino, Joseph; ArevaEPRDCPEm Resource  
**Subject:** U.S. EPR Design Certification Application RAI No. 390(4614,4620,4616), FSAR Ch. 9

Attached please find the subject requests for additional information (RAI). A draft of the RAI was provided to you on April 20, 2010, and on April 27, 2010, you informed us that the RAI is clear and no further clarification is needed. As a result, no change is made to the draft RAI except to correct a typographical error you identified in Draft RAI Question 09.05.04-24. The schedule we have established for review of your application assumes technically correct and complete responses within 30 days of receipt of RAIs. For any RAIs that cannot be answered within 30 days, it is expected that a date for receipt of this information will be provided to the staff within the 30 day period so that the staff can assess how this information will impact the published schedule.

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

**Hearing Identifier:** AREVA\_EPR\_DC\_RAIs  
**Email Number:** 2182

**Mail Envelope Properties** (BC417D9255991046A37DD56CF597DB71080FBD26)

**Subject:** Response to U.S. EPR Design Certification Application RAI No. 390, FSAR Ch. 9, Supplement 7  
**Sent Date:** 10/27/2010 2:40:52 PM  
**Received Date:** 10/27/2010 2:41:37 PM  
**From:** BRYAN Martin (EXTERNAL AREVA)

**Created By:** Martin.Bryan.ext@areva.com

**Recipients:**

"DELANO Karen (AREVA)" <Karen.Delano@areva.com>  
Tracking Status: None  
"ROMINE Judy (AREVA)" <Judy.Romine@areva.com>  
Tracking Status: None  
"BENNETT Kathy (AREVA)" <Kathy.Bennett@areva.com>  
Tracking Status: None  
"KOWALSKI David (AREVA)" <David.Kowalski@areva.com>  
Tracking Status: None  
"RYAN Tom (AREVA)" <Tom.Ryan@areva.com>  
Tracking Status: None  
"Tsfaye, Getachew" <Getachew.Tsfaye@nrc.gov>  
Tracking Status: None

**Post Office:** AUSLYNCMX02.adom.ad.corp

| <b>Files</b>                                | <b>Size</b> | <b>Date &amp; Time</b> |
|---|-------------|------------------------|
| MESSAGE                                     | 15015       | 10/27/2010 2:41:37 PM  |
| RAI 390 Supplement 7 Response US EPR DC.pdf |             | 68727                  |

**Options**

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



**Response to**

**Request for Additional Information No. 390, Supplement 7**

**4/27/2010**

**U.S. EPR Standard Design Certification**

**AREVA NP Inc.**

**Docket No. 52-020**

**SRP Section: 09.01.02 - New and Spent Fuel Storage**

**SRP Section: 09.02.02 - Reactor Auxiliary Cooling Water Systems**

**SRP Section: 09.05.04 - Emergency Diesel Engine Fuel Oil Storage and Transfer  
System**

**Application Section: 9.5.4**

**QUESTIONS for Balance of Plant Branch 1 (SBPA)**

**QUESTIONS for Health Physics Branch (CHPB)**

**Question 09.01.02-39:**

The following items appear to be errors in the FSAR:

- a. In FSAR Section 9.1.2.1, Design Basis, the statement "Gaseous radioactivity above the SFP is maintained below the limits as defined in 10 CFR 20, Appendix b, table 1, column 1," incorrectly references column 1. Column 1 refers to oral ingestion ALI, while Column 3 lists the applicable DAC for each radionuclide. Please correct the column number or justify an alternative.
- b. The last sentence in FSAR Section 12.3.4.2.1, Normal Operations, refers to Table 12.3-2, U.S. EPR Radiation Zone Designation, as including the normal operations airborne radioactivity monitoring instrumentation. This table reference is incorrect, please replace with correct reference.
- c. FSAR Table 12.3-2, Radiation Monitor Detector Parameters, lists the radioactive waste processing building monitors under the heading "post accident monitoring." Please confirm whether this is correct, or move the radwaste building monitors to another part of the table.

**Response to Question 09.01.02-39:**

- a) The referenced sentence in U.S. EPR FSAR Tier 2, Section 9.1.2.1 was revised in U.S. EPR FSAR, Revision 2 to read as follows:

"Gaseous radioactivity above the SFP is maintained below the limits as defined in 10 CFR 20, Appendix B, Table 1, Column 3.

- b) The referenced sentence in U.S. EPR FSAR Tier 2, Section 12.3.4.2.1 was revised in U.S. EPR FSAR, Revision 2 to read as follows:

"Table 12.3-4—Airborne Radioactivity Detector Parameters includes the normal operations airborne radioactivity monitoring instrumentation."

- c) Question 09.01.02-39 incorrectly refers to U.S. EPR FSAR Tier 2, Table 12.3-2—Radiation Monitor Detector Parameters as the table number and title combination that lists the radioactive waste processing building monitors under the heading "post accident monitoring." The correct table number and title combination is U.S. EPR FSAR Tier 2, Table 12.3-3—Radiation Monitor Detector Parameters.

The table was revised in U.S. EPR FSAR, Revision 2 to eliminate the subdivision. The detector parameters for the radiation monitors in the Reactor Building and Radioactive Waste Processing Building (previously under Post-Accident Monitoring) are now included with the remainder of the monitors.

**FSAR Impact:**

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