

## ArevaEPRDCPEm Resource

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**From:** WILLIFORD Dennis (AREVA) [Dennis.Williford@areva.com]  
**Sent:** Friday, May 27, 2011 11:39 AM  
**To:** Tesfaye, Getachew  
**Cc:** BENNETT Kathy (AREVA); DELANO Karen (AREVA); ROMINE Judy (AREVA); RYAN Tom (AREVA); KOWALSKI David (AREVA)  
**Subject:** Response to U.S. EPR Design Certification Application RAI No. 482 (5611), FSAR Ch. 9  
**Attachments:** RAI 482 Response US EPR DC.pdf

Getachew,

Attached please find AREVA NP Inc.'s response to the subject request for additional information (RAI). The attached file, "RAI 482 Response US EPR DC.pdf," provides a schedule since a technically correct and complete response to the 4 questions is not provided.

The following table indicates the respective pages in the response document, "RAI 482 Response US EPR DC.pdf," that contain AREVA NP's response to the subject questions.

Question #	Start Page	End Page
RAI 482 — 09.05.01-82	2	2
RAI 482 — 09.05.01-83	3	3
RAI 482 — 09.05.01-84	4	4
RAI 482 — 09.05.01-85	5	5

A complete answer is not provided for the 4 questions. The schedule for a technically correct and complete response to these questions is provided below.

Question #	Response Date
RAI 482 — 09.05.01-82	July 29, 2011
RAI 482 — 09.05.01-83	July 29, 2011
RAI 482 — 09.05.01-84	July 29, 2011
RAI 482 — 09.05.01-85	July 29, 2011

Sincerely,

**Dennis Williford, P.E.**  
**U.S. EPR Design Certification Licensing Manager**  
**AREVA NP Inc.**  
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**From:** Tesfaye, Getachew [<mailto:Getachew.Tesfaye@nrc.gov>]  
**Sent:** Wednesday, April 27, 2011 3:13 PM  
**To:** ZZ-DL-A-USEPR-DL  
**Cc:** McCann, Edward; Dreisbach, Jason; Hearn, Peter; Clark, Phyllis; Colaccino, Joseph; ArevaEPRDCPEm Resource  
**Subject:** U.S. EPR Design Certification Application RAI No. 482 (5611), FSAR Ch. 9

Attached please find the subject requests for additional information (RAI). A draft of the RAI was provided to you on April 11, 2011, and discussed with your staff on April 26, 2011. Draft RAI Question 09.05.01-81 was deleted as a result of that discussion. The schedule we have established for review of your application assumes technically correct and complete responses within 30 days of receipt of RAIs. For any RAIs that cannot be answered within 30 days, it is expected that a date for receipt of this information will be provided to the staff within the 30 day period so that the staff can assess how this information will impact the published schedule.

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

**Hearing Identifier:** AREVA\_EPR\_DC\_RAIs  
**Email Number:** 3040

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**Subject:** Response to U.S. EPR Design Certification Application RAI No. 482 (5611),  
FSAR Ch. 9  
**Sent Date:** 5/27/2011 11:38:55 AM  
**Received Date:** 5/27/2011 11:40:18 AM  
**From:** WILLIFORD Dennis (AREVA)

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

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Tracking Status: None

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RAI 482 Response US EPR DC.pdf		63736

**Options**

**Priority:** Standard

**Return Notification:** No

**Reply Requested:** No

**Sensitivity:** Normal

**Expiration Date:**

**Recipients Received:**

**Response to**

**Request for Additional Information No. 482(5611), Revision 0**

**4/27/2011**

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

**AREVA NP Inc.**

**Docket No. 52-020**

**SRP Section: 09.05.01 - Fire Protection Program**

**Application Section: 9.5.1**

**QUESTIONS for Fire Protection Team (SFPT)**

**Question 09.05.01-82:**

U.S. EPR FSAR Revision 2 Figure 9.5.1-1, Fire Water Distribution System, Sheets 4, 7, 8, and 13 have drawing errors. Sheet 4 shows that point "T" connects to Sheet 11 but it should connect to sheet 13. Sheet 7 shows that point "P" connects to Sheet 11 but it should connect to sheet 13 and that point "R" connects to Sheet 6 but it should connect to Sheet 8. Sheet 8 shows that point "R" connects to Sheet 5 but it should connect to Sheet 7. Sheet 13 shows that point "T" connects to Sheet 2 but it should connect to sheet 4 and that point "P" connects to Sheet 5 but it should connect to sheet 7. The applicant needs to revise Figure 9.5.1-1 as per above and review Figure 9.5.1-1 for any other discrepancies and revise as needed.

**Response to Question 09.05.01-82:**

A response to this question will be provided by July 29, 2011.

**Question 09.05.01-83:**

U.S. EPR FSAR Revision 2 Section 9.5.1.2.1 Subsection Manual Fire Suppression Systems states that "In the inner Reactor Containment Building the inboard and outboard containment isolation, motor-operated control valves are normally kept closed and are only opened during a fire emergency requiring the use of the standpipe system in the Reactor Containment Building." RG 1.189 Regulatory Position 3.5.1.3 states that the prefire plans should include fire brigade actions such as operating instructions for use of the fire suppression systems and references NFPA 1620 which states that the pre-incident plan for all standpipe systems should include location and identification of control valves. Due to fire effects inside Containment the inboard valve may not be operable and MCR indication may not be available and the fire brigade may need to manually operate this valve. Applicant needs to ensure the inboard valve can be manually operated and that the prefire plans include this fire brigade action.

**Response to Question 09.05.01-83:**

A response to this question will be provided by July 29, 2011.

**Question 09.05.01-84:**

The staff reviewed U.S. EPR FSAR Tier 1 Table 2.1.1-8, Reactor Building ITAAC, and finds the following ITAAC Issues:

- a. There is no ITAAC identified for the separation of the RCB from the RBA for fire. This ITAAC needs to address a fire protection analysis. The fire protection analysis includes barriers, doors, dampers, and penetrations separating the RCB from the RBA and internal features of the RCB, an as-built inspection of barriers, doors, dampers, and penetrations separating the RCB from the RBA and of the internal features of the RCB, testing of dampers, and a post-fire safe shutdown analysis that indicates that at least one success path for safe shutdown is available including the internal aspects of the RCB. The applicant needs to develop an ITAAC for the RCB and update Table 2.1.1-8 as needed or provide the justification for not providing the ITAAC.
- b. ITAAC # 2.7 for the separation of the RBA from the SBs and FB does not address the mitigation of the propagation of smoke. Furthermore, it is unclear if the ITAAC item for post-fire safe shutdown analysis includes internal separation aspects of the RBA. It is also unclear if the ITAAC item for fire protection analysis includes internal fire protection features of the RBA. The applicant needs to revise this ITAAC for the separation of the RBA from the SBs and FB and update Table 2.1.1-8 as needed or provide the justification for not updating the ITAAC.

**Response to Question 09.05.01-84:**

A response to this question will be provided by July 29, 2011.

**Question 09.05.01-85:**

U.S. EPR FSAR Section 9.5.1.2.1 Subsection, Shutdown/Low Power Operations, states that "The U.S. EPR design provides reasonable assurance that fuel integrity is protected by permanent plant systems during refueling operations or maintenance outages. The primary fuel cooling systems are spent fuel cooling and the residual heat removal system." RG 1.189 Regulatory Position 5.6 states that " During shutdown operations (i.e., maintenance or refueling outages), fire risk may increase significantly as a result of work activities. In addition, redundant systems important to safety may not be available as allowed by plant technical specifications and plant procedures. The FPP should be reviewed to verify that fire protection systems, features, and procedures will minimize the potential for fire events to impact safety functions (e.g., reactivity control, reactor decay heat removal, spent fuel pool cooling) or result in the unacceptable release of radioactive materials, under the differing conditions that may be present during shutdown operations." U.S. EPR FSAR Section 9.5.1.2.1 Subsection, Shutdown/Low Power Operations, does not provide any FPP systems, features, and procedures that would minimize the potential for fire events to impact safety functions (e.g., reactivity control, reactor decay heat removal, spent fuel pool cooling) or result in the unacceptable release of radioactive materials, under the differing conditions that may be present during shutdown operations. The applicant needs to revise the FSAR to include any FPP systems, features, and procedures that would minimize the potential for fire events to impact safety functions (e.g., reactivity control, reactor decay heat removal, spent fuel pool cooling) or result in the unacceptable release of radioactive materials, under the differing conditions that may be present during shutdown operations.

**Response to Question 09.05.01-85:**

A response to this question will be provided by July 29, 2011.