

## ArevaEPRDCPEm Resource

---

**From:** Tesfaye, Getachew  
**Sent:** Monday, November 16, 2009 6:47 PM  
**To:** 'usepr@areva.com'  
**Cc:** Reddy, Devender; Hearn, Peter; Segala, John; Colaccino, Joseph; ArevaEPRDCPEm Resource  
**Subject:** U.S. EPR Design Certification Application RAI No. 329 (3824), FSAR Ch. 10 OPEN ITEM  
**Attachments:** RAI\_329\_SBPA\_3824.doc

Attached please find the subject requests for additional information (RAI). **Please note this open item is incorrectly identified in the Safety Evaluation Report with Open Items for Chapter 10 as RAI 91, Question 10.02-7. The new open item number RAI 329, Question 10.02-7 will replace Open Item RAI 91, Question 10.02-7.** A draft of the RAI was provided to you on November 16, 2009, and on the same day November 16, 2009, 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. The question in this RAI is an OPEN ITEM in the safety evaluation report for Chapter 10 for Phases 2 and 3 reviews. As such, the schedule we have established for your application assumes technically correct and complete responses prior to the start of Phase 4 review. For any RAI that cannot be answered prior to the start of Phase 4 review, it is expected that a date for receipt of this information will be provided so that the staff can assess how this information will impact the published schedule.

Thanks,

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

**Hearing Identifier:** AREVA\_EPR\_DC\_RAIs  
**Email Number:** 958

**Mail Envelope Properties** (0A64B42AAA8FD4418CE1EB5240A6FED107A3CADA3E)

**Subject:** U.S. EPR Design Certification Application RAI No. 329 (3824), FSAR Ch. 10  
OPEN ITEM  
**Sent Date:** 11/16/2009 6:47:27 PM  
**Received Date:** 11/16/2009 6:47:29 PM  
**From:** Tesfaye, Getachew

**Created By:** Getachew.Tesfaye@nrc.gov

**Recipients:**

"Reddy, Devender" <Devender.Reddy@nrc.gov>  
Tracking Status: None  
"Hearn, Peter" <Peter.Hearn@nrc.gov>  
Tracking Status: None  
"Segala, John" <John.Segala@nrc.gov>  
Tracking Status: None  
"Colaccino, Joseph" <Joseph.Colaccino@nrc.gov>  
Tracking Status: None  
"ArevaEPRDCPEm Resource" <ArevaEPRDCPEm.Resource@nrc.gov>  
Tracking Status: None  
"usepr@areva.com" <usepr@areva.com>  
Tracking Status: None

**Post Office:** HQCLSTR02.nrc.gov

| <b>Files</b>          | <b>Size</b> | <b>Date &amp; Time</b> |
|-----------------------|-------------|------------------------|
| MESSAGE               | 1170        | 11/16/2009 6:47:29 PM  |
| RAI_329_SBPA_3824.doc | 30202       |                        |

**Options**

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

Request for Additional Information No. 329 (3824), Revision 1  
11/16/2009  
U. S. EPR Standard Design Certification  
AREVA NP Inc.  
Docket No. 52-020  
SRP Section: 10.02 - Turbine Generator  
Application Section: 10.2

QUESTIONS for Balance of Plant Branch 1 (AP1000/EPR Projects) (SBPA)

10.02-7

**OPEN ITEM (This open item replaces Open Item RAI 91, Question 10.02-7 in the Safety Evaluation with Open Item for Chapter 10.)**

**Follow Up to RAI 243, Question 10.02-6**

With respect to turbine-generator (T-G) overspeed control systems of U.S. EPR FSAR, the staff issued Supplemental RAI 243 Question 10.2 -6 as a follow-up to EPR RAI 91, Question 10.2-1. In this supplemental RAI, the staff requested AREVA (the applicant) to provide additional information and revise the FSAR to include: a) a COL information item in the FSAR to instruct the COL applicants, that use the EPR T-G design, to provide schematics and logic diagrams of the digital overspeed control systems, and b) full justification that the EPR T-G control systems meet the single-failure criteria as described in Item 1A of the Standard Review Plan (SRP) Acceptance Criteria in Section II of the SRP Section 10.2 for T-G systems.

AREVA responded to Question 10.2-6 in its response to RAI 243, Revision 0 dated 6/15/2009, and provided the additional information the staff requested. In its response, AREVA provided a new COL information item in Tier 2 FSAR (Table 1.8 -2, Item 10.2-4) to instruct the COL applicants to provide schematics and logic diagrams for the T-G overspeed control systems. The applicant also provided additional details regarding single-failure criteria for the overspeed systems, as described in the SRP.

The staff evaluated AREVA's response regarding the single-failure acceptance criterion, and concluded that the proposed FSAR mark-ups to Revision 2 of the FSAR meet the SRP guidance. The staff also finds the addition of COL information item in the FSAR for the schematics and logic diagrams are acceptable.

In accordance with 10 CFR 52.47(b)(1), the staff requests the applicant to provide Tier 1 inspection, test, analysis and acceptance criteria (ITAAC) for the two redundant electrical overspeed protection systems to confirm that the design diversity between the two redundant electrical overspeed protection systems exists as described within the FSAR mark-ups provided in RAI No. 243 (2991), Revision 0, question 10.02-6.

In accordance with 10 CFR 52.47(a), the NRC staff also requests that the applicant revise the U.S EPR FSAR to include the two below listed figures provided in the response to Request for Additional Information No. 243 (2991), Revision 0, Question 10.02-6:

- Figure 10.02-6-1—Overspeed Trip System Schematic
- Figure 10.02-6-2—Turbine Trip Block Schematic