

## ArevaEPRDCPEm Resource

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**From:** Snyder, Amy  
**Sent:** Thursday, January 10, 2013 6:03 PM  
**To:** 'usepr@areva.com'  
**Cc:** Stutzcage, Edward; McCoppin, Michael; Ford, Tanya; Segala, John; ArevaEPRDCPEm Resource; Clark, Phyllis  
**Subject:** U.S. EPR Design Certification Application FINAL RAI No. 562 (6825), FSAR Ch. 14  
**Attachments:** RAI\_562\_RPAC\_6825.doc

Attached please find the subject request for additional information (RAI). A draft of the RAI was provided to you on October 2, 2012, and discussed with your staff on October 18, 2012 and January 10, 2013. The Draft RAI Question 14.03.08-6 was not modified as a result of those discussions. On January 10, 2013, you informed us that the draft RAI is clear and no further clarification is needed and that the draft RAI does not contain AREVA Proprietary information or SGI information. The schedule we have established for review of your application assumes technically correct and complete responses within 30 days of receipt of this Final RAI. If this RAI question 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

Thank You,

Amy

Amy Snyder, U.S. EPR Design Certification Lead Project Manager  
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**Hearing Identifier:** AREVA\_EPR\_DC\_RAIs  
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**Sent Date:** 1/10/2013 6:02:54 PM  
**Received Date:** 1/10/2013 6:02:56 PM  
**From:** Snyder, Amy  
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Request for Additional Information 562(6825), Revision 0

Issue Date: 1/10/2013

Application Title: U. S. EPR Standard Design Certification - Docket Number 52-020

AREVA NP Inc.

Review Section: 14.03.08 - Radiation Protection Inspections, Tests, Analyses, and Acceptance Criteria

Application Section: Tier 1, Section 2.4.22

## QUESTIONS

14.03.08-6

Open Item

Follow-up to RAI 543, Question 14.03.08-5 (Supplement 2 response)

10 CFR 52.47(b)(1) requires that applications contain, “the proposed inspections, tests, analyses, and acceptance criteria that are necessary and sufficient to provide reasonable assurance that, if the inspections, tests, and analysis are performed and the acceptance criteria met, a facility that incorporates the design certification has been constructed and will be operated in conformity with the design certification, the provisions of the Act, and the Commission’s rules and regulations.”

Also, SRP Section 14.3.8 states that, “the reviewer should ensure that Tier 1 identifies and describes, commensurate with their safety significance, those SSCs that provide radiation shielding, confinement or containment of radioactivity, ventilation of airborne contamination, or radiation (or radioactivity concentration) monitoring for normal operations and during accidents.” It also states that, “Tier 1 contains ITAAC that ensure that the identified SSCs will function in a manner consistent with the certified design.”

In the response to Question 14.03.08-5, item e, the applicant identified a series of different ITAAC items, that when combined, provide a series of overlapping tests that provide verification of the functionality of the instrument loop for the safety-related radiation monitors from sensor to actuator. However, successful functionality of the system as a whole is not necessarily ensured by the successful testing of each of the individual parts. NRC Bulletin 74-11 (ML 1117202310) provides one example of past operating experience in which safety related equipment did not function as designed because the system was tested in parts and never tested as a whole.

AREVA is requested to update U.S. EPR FSAR Tier 1, to include an ITAAC which tests the function of the safety-related radiation monitors as a whole, from radiation detection to actual protection system actuation or engineered safety function actuation. This ITAAC is necessary in order to ensure that these safety-related systems will function as designed, and to demonstrate compliance with 10 CFR 52.47(b)(1).