

## ArevaEPRDCPEm Resource

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**From:** Tesfaye, Getachew  
**Sent:** Friday, August 31, 2012 8:04 AM  
**To:** 'usepr@areva.com'  
**Cc:** Peng, Shie-Jeng; McKirgan, John; Gleaves, Bill; Segala, John; ArevaEPRDCPEm Resource  
**Subject:** U.S. EPR Design Certification Application RAI No. 551 (6513), FSAR Ch. 6  
**Attachments:** RAI\_551\_SPCV\_6513.doc

Attached please find the subject requests for additional information (RAI). A draft of the RAI was provided to you on May 25, 2012, and discussed with your staff on June 14, August 14, and August 20, 2012. Draft RAI Question 06.02.01.02-18 was modified as a result of those discussions. 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,  
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**Hearing Identifier:** AREVA\_EPR\_DC\_RAIs  
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Request for Additional Information No. 551 (6513), Revision 0

8/31/2012

U. S. EPR Standard Design Certification  
AREVA NP Inc.  
Docket No. 52-020  
SRP Section: 06.02.01.02 - Subcompartment Analysis  
Application Section: SRP 6.2.1.2

QUESTIONS for Containment and Ventilation Branch 1 (AP1000/EPR Projects) (SPCV)

06.02.01.02-18

Follow-up to RAI 82, Question 06.02.01.02-1 (Supplement 3 Response)

Based on GDC 4 and 50, the purpose of this RAI is to ensure that the components important to safety be designed to accommodate the effects of postulated accidents. The following is a follow-up request made in the audit topic #14 of the audit report (ML112061092), "Audit Report for the May 9 and 10, 2011, Audit to Review Selected Areas Related to the Safety Evaluation of U.S. EPR FSAR Chapter 6 and Supporting Technical Reports." Note that, during the audit exit meeting, the applicant agreed to evaluate previous RAI responses as to which ones are no longer valid and to upgrade them as needed. It is found that the responses of RAI No. 82, Revision 0 and Supplement 3 Question 06.02.01.02, as received on November 3, 2008 and May 22, 2009, respectively, might be invalid. Details are as follows.

*Inconsistencies among RAI response, Tier 2 FSAR (Rev. 3), and current GOTHIC models.*

The information as provided in the responses to RAI No. 82, Revision 0 and Supplement 3 for Question 06.02.01.02-1 are not consistent with the information as provided in Tier 2 FSAR (Rev. 3) and GOTHIC models as reviewed in Year 2011. For example, Question 06.02.01.02-1 a.7 requested a justification for conservative heat transfer assumptions that were used in the GOTHIC models for subcompartment analysis. The response described that a direct contact heat transfer with Uchida heat transfer coefficient was applied. A review of the current GOTHIC models shows that the subcompartment analysis do not take any credit of heat sinks. In addition, Tier 2 FSAR (Rev. 3) Table 6.2.1-10 does not use the "accident pressure" as described in the response to Question 06.02.01.02-1 b.1.

Although the response of RAI 266, Supplement 8, to Question 06.02.01.02-2 described that the subcompartment analyses had been revised due to the mass and energy release data, it did not mention any disposition that the above identified information as provided in the previous RAI responses had still been applied or disregarded. Even though a review of GOTHIC models can reveal if the credit of heat sinks has been taken, the reviewer who has not had the

proprietary GOTHIC models to review will not get the accurate information. Note that FSAR does not describe whether the credit of heat sinks has been taken or not. Similarly, although the “accident pressure” is not described in the current FSAR (Rev. 3) Table 6.2.1-10, the additional information obtained from the RAI response will make the reviewer to consider that the “accident pressure” as provided in the RAI response is supplemented to the FSAR.

The concern raised in this RAI is that if the applicant does not provide consistent, accurate and complete information among all information, a confusing and inaccurate conclusion can be easily made. The applicant should address all of the above mentioned inconsistencies and evaluate the validation of previous RAI responses that the applicant had agreed to perform during the audit.