

ArevaEPRDCPEm Resource

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Sent: Friday, May 25, 2012 3:43 PM
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Subject: Draft - U.S. EPR Design Certification Application RAI No. 551 (6513), FSAR Ch. 6
Attachments: Draft RAI_551_SPCV_6513.doc

Attached please find draft RAI No. 551 regarding your application for standard design certification of the U.S. EPR. If you have any question or need clarifications regarding this RAI, please let me know as soon as possible, I will have our technical Staff available to discuss them with you.

Please also review the RAI to ensure that we have not inadvertently included proprietary information. If there are any proprietary information, please let me know within the next ten days. If I do not hear from you within the next ten days, I will assume there are none and will make the draft RAI publicly available.

Thanks,
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Request for Additional Information No. 551 (6513), Revision 0

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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 to RAI No. 82, Question 06.02.01.02, after reviewing the RAI responses received on November 3, 2008 and May 22, 2009, respectively. The staff has identified 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. It is known that the current GOTHIC models for subcompartment analysis do not take any credit of heat sinks. Similarly, the response to Question 06.02.01.02-1 a.8 described that one second delay was assumed in the GOTHIC models after the vent path burst pressure is reached. As a matter of fact, none of the delay times shown in Tier 2 FSAR (Rev. 3) Table 6.2.1-17 is greater than one second. Furthermore, the response to Question 06.02.01.02-1 a.9 stated that the GOTHIC model used approximately 30 nodes for the containment building. The current GOTHIC models used more than 30 nodes for the subcompartment analysis. 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.

Resolve all of the above mentioned inconsistencies.

Perform extent of condition evaluation to provide a reasonable assurance that all RAI responses, not limited to RAI No. 82, Supplement 3 response be consistent with the current record of design and FSAR.