

## US-APWRRAlSPeM Resource

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**From:** Ciocco, Jeff  
**Sent:** Monday, February 25, 2013 3:23 PM  
**To:** us-apwr-rai@mhi.co.jp; US-APWRRAlSPeM Resource  
**Cc:** VanWert, Christopher; Donoghue, Joseph; Reyes, Ruth; Hamzehee, Hossein  
**Subject:** US-APWR Design Certification Application RAI 997-7033 (6.3 & 6.2.2)  
**Attachments:** US-APWR DC RAI 997 SRSB 7033.pdf

MHI,

The attachment contains the subject request for additional information (RAI). This RAI was sent to you in draft form. Your licensing review schedule assumes technically correct and complete responses within 30 days of receipt of RAIs.

Please submit your RAI response to the NRC Document Control Desk.

Thank you,

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**Hearing Identifier:** Mitsubishi\_USAPWR\_DCD\_eRAI\_Public  
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**Received Date:** 2/25/2013 3:23:21 PM  
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# REQUEST FOR ADDITIONAL INFORMATION 997-7033

Issue Date: 2/25/2013

Application Title: US-APWR Design Certification - Docket Number 52-021

Operating Company: Mitsubishi Heavy Industries

Docket No. 52-021

Review Section: 06.03 - Emergency Core Cooling System

Application Section: 6.3 and 6.2.2

## QUESTIONS

06.03-112

RG 1.206 (June 2007) Regulatory Position, Part IV: Miscellaneous Topics, describes the following:

The creation of, and restrictions on, changing Tier 2\* information resulted from the development of Tier 1 information for the advanced BWR design certification (Appendix A to 10 CFR Part 52) and the Asea Brown Boveri-Combustion Engineering System 80+ reactor design certification (Appendix B, "Design Certification Rule for the System 80+ Design," to 10 CFR Part 52). During this development process, these applicants requested that the agency minimize the amount of information in Tier 1 to allow additional flexibility for an applicant or licensee who references these appendices. Tier 2 also specified many codes, standards, and design processes that Tier 1 does not specify but that are acceptable for meeting ITAAC. As a result, certain significant information only exists in Tier 2, and the Commission does not want this significant information to be changed without prior NRC approval. The generic DCD identifies this Tier 2\* information with italicized text and brackets.

NUREG-1792 "Final Safety Evaluation Report Related to Certification of the AP1000 Standard Plant Design", describes the following:

The ACRS review for the AP1000 highlighted the significance of certain assumptions about debris in containment to the adequacy of long-term core cooling, and a concern that the values not be revised without substantial additional testing and analysis. As a means of emphasizing this, the applicant proposed to designate the key information as Tier 2\*, to require prior NRC approval, in a letter dated February 23, 2011. This change is included in Revision 19. The NRC agrees that this is a prudent change and will modify the final rule language to reflect this addition, as a Tier 2\* item without expiration at fuel load.

(Note, in an amendment, dated December 2011, to Appendix D to Part 52 "Design Certification Rule for the AP1000 Design" the Tier 2\* change was put into effect.)

Given the information provided in Technical Report MUAP-08013 "US-APWR Sump Strainer Downstream Effects," Revision 4 and containment debris limits in DCD Section 6.2.2 (as modified by GSI-191 Tracking Report dated August 2012), it appears that the US-APWR is similar to the AP1000 regarding assumptions about debris in containment to the adequacy of long term core cooling, specifically the debris limits for core inlet blockage evaluations. Therefore, the NRC staff request that the applicant evaluate the appropriateness of applying

## **REQUEST FOR ADDITIONAL INFORMATION 997-7033**

Tier 2\* designation to items associated with long term core cooling and/or the appropriateness of establishing a technical specification. If information related to long term core cooling is designated as Tier 2\* , then the staff request the applicant to identify this information in the DCD to ensure that the appropriate change process and limits are followed.