

US-APWRRAlSPeM Resource

From: Ciocco, Jeff
Sent: Tuesday, October 09, 2012 8:47 AM
To: us-apwr-rai@mhi.co.jp; US-APWRRAlSPeM Resource
Cc: Phan, Hanh; Mrowca, Lynn; Reyes, Ruth; Snyder, Amy; Hamzehee, Hossein
Subject: US-APWR Design Certification Application RAI 967-6790 (19)
Attachments: US-APWR DC RAI 967 SPRA 6790.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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REQUEST FOR ADDITIONAL INFORMATION 967-9790

Issue Date: 10/9/2012

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

Operating Company: Mitsubishi Heavy Industries

Docket No. 52-021

Review Section: 19 - Probabilistic Risk Assessment and Severe Accident Evaluation
Application Section:

QUESTIONS

19-573

The staff's review finds that the transferring of plant control from MCR to RSC, including the transfer switches and operator actions, is important to the main control room fire risk model and is the key contributor to the fire risk estimate. Thus, please enhance DCD Table 19.1-119 "Key Insights and Assumptions" to reflect the staff finding associated with the control transfer from MCR to RSC, ensuring that all important assumptions and insights remain valid for future plants.

19-574

(Follow-up to Questions 19-507, 19-509, 19-559, and 19-564) Currently, in Section 19.3 of the US-APWR DCD Revision 3, there are only three COL Action Items for the entire Chapter 19. During the staff's review, the staff finds that the list of COL action items is incomplete due to the use of generic information and bounding assumptions. The staff requests MHI to finalize the list of COL action items in DCD Section 19.3 to ensure that the COL applicant or holder referencing the certified US-APWR design, in conformance with the guidance provided in the SRP 19.0 and RG 1.206, as minimum, will:

- (COL applicant and holder) evaluate and address the "key sources of uncertainty and key assumptions" identified in US-APWR DCD Table 19.1-38 as new or more detailed information becomes available. The COL holder should also address these items as the site-specific PRA is developed.
- (COL applicant and holder) assess, confirm, and update the "key insights and assumptions" identified in US-APWR DCD Table 19.1-119, ensuring that they are complete and applicable to the plant. The COL holder should also address these items as the site-specific PRA is developed.
- (COL holder) review as-designed and as-built information and conduct walk-downs as necessary to confirm that important assumptions made in the PRA about design features and characteristics (e.g., routing and location of piping and cables, flood propagations, HCLPF fragilities, etc.) and operator actions remain valid with respect to all applicable events and modes of operation.
- (COL holder) upgrade the PRA to industry standards to meet the technical adequacy requirements needed to support certain risk-informed applications during operation (e.g., risk-managed technical specifications).
- (COL applicant) ensure that asymmetric conditions due to modeling simplicity will be addressed or properly accounted for when the PRA is used for decision making.

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- (COL holder) revise and update the evaluations of identified operator actions and human error probabilities as detailed design information becomes available and plant-specific EOPs are developed.

19-575

Please clarify the statement in Section 19.1.2.3, which says that “The PRA has been developed in accordance with industry consensus standards as described in Section 19.0,” since no information regarding the PRA technical adequacy is provided in Section 19.0 of the DCD (e.g., Is this reference to Section 19.0 of the SRP or Section 19.0 of RG 1.206?) and describe how this was verified to be in accordance with the standards (e.g., by a peer review, self assessment, or in-house review, etc.). In addition, clarify the statement in Section 19.1.2.3, which states that “The PRA ...has been subjected to a peer review process as defined in ASME/ANS RA-S-2008 and associated addenda.”

