

## US-APWRRAlSPeM Resource

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**Sent:** Wednesday, October 31, 2012 9:22 AM  
**To:** us-apwr-rai@mhi.co.jp; US-APWRRAlSPeM Resource  
**Cc:** Hernandez, Raul; Lee, Samuel; Kallan, Paul; Hamzehee, Hossein  
**Subject:** US-APWR Design Certification Application RAI 973-6906 (9.1.2)  
**Attachments:** US-APWR DC RAI 973 BFPF 6906.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 973-6906

Issue Date: 10/31/2012

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

Operating Company: Mitsubishi Heavy Industries

Docket No. 52-021

Review Section: 09.01.02 - New and Spent Fuel Storage  
Application Section: Section 9.1.2

## QUESTIONS

09.01.02-27

In response to the staff's question 9.1.2-8 (MHI's Responses to US-APWR DCD RAI No. 132-1538 Revision 1), the applicant proposed to include a note in DCD Tier 2 Figure 9.1.3-1 "Schematic of Spent Fuel Pit Purification and Cooling System (Cooling Portion)" specifying the elevation of the spent fuel pool cooling system return line siphon breakers. This information was added to revision 2 of the DCD; however, it was deleted from Revision 3 of the DCD. This was the only location on the DCD where the actual elevation of the siphon breaker devices was clearly stated.

DCD Tier 2, Section 9.1.2.2.2 "Spent fuel storage" states that:

*"Pipes which discharge into the spent fuel pool include a siphon break between the normal water level and the level of the SFP pumps' suction connection".*

In absence of the specific elevation provided by the deleted note, the statement in DCD Tier 2, Section 9.1.2.2.2 needs to be further clarified to state that the pipes which discharge into the spent fuel pool include a siphon break between the normal water level and a level above the SFP pumps' suction connection to ensure that adequate net positive suction head (NPSH) is available for the SFP pumps to perform their safety function.

The staff requests the applicant to identify the lowest elevation of the siphon breaker, the level above the minimum elevation of the SFP pump suction connection that would ensure adequate NPSH for the SFP pumps.

