

REQUEST FOR ADDITIONAL INFORMATION 466-3715 REVISION 0

10/6/2009

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

SRP Section: 06.02.02 - Containment Heat Removal Systems

Application Section: DCD FSAR 6.2 and 6.3

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

06.02.02-53

Provide additional information that demonstrates MHIs analysis approach to strainer debris accumulation is conservative as compared to the approved methodology (NEI 04-07 and associated SE). This is a follow-up to RAI 354 (2585) Question 06.02.02-23 – basis for uniform debris assumption - and was discussed in a conference call on 9/3/2009.

06.02.02-54

Air ingestion due to deaeration of the fluid as it passes through the debris bed may occur at containment sump strainers. Air ingestion due to deaeration is a plant specific or load specific issue. If strainer submergence is less than the head loss some deaeration may occur. Therefore, request MHI to evaluate the potential for US APWR to experience deaeration. If deaeration is predicted to occur, assess the impact on required NPSH. This is a follow-up to RAI 354 (2585) Question 06.02.02-28 and was discussed in a conference call on 9/3/2009.

06.02.02-55

Many design requirements for the containment sump strainer performance evaluation such as break selection, debris generation, ZOI, debris sizing, debris transport etc, are detailed in technical report MUAP 08001. Much of this information should be part of the FSAR description required by 10CFR52.47 (a)(2) to permit sufficient understanding of the strainer performance design basis. Explain the basis for not including this type of information in the DCD FSAR or why MUAP 08001 is not treated as incorporated by reference (IBR) in DCD Chapter 1.