REQUEST FOR ADDITIONAL INFORMATION 857-6110 REVISION 3

10/25/2011

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

SRP Section: 06.02.02 - Containment Heat Removal Systems
Application Section: 6.2.2, 6.3

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

06.02.02-86

MUAP-08001-P Revision 5 was issued, in part, to provide revised design basis strainer qualification information. Technical report MUAP-08001, Table 3-6, "Debris Head Loss" provides head loss values for measured strainer head loss (at a given temperature) and predicts strainer head loss and debris head loss at various temperatures.

The March 2008 staff guidance regarding closure in the area of strainer head loss and vortexing, in Appendix A, Section 8.1, discusses temperature scaling of test results because head loss testing is typically performed at relatively low temperatures when compared to plant sump temperatures following a postulated LOCA. The methods for temperature scaling have ranged from simply applying the ratio of water viscosities to applying a head loss correlation both of which are based on debris bed uniformity. The staff requests that MHI provide the scaling method used to predict strainer head loss and debris head loss values at temperatures different from the measured temperature and a justification for the scaling method applied.