

REQUEST FOR ADDITIONAL INFORMATION 927-6460 REVISION 3

5/8/2012

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

SRP Section: 06.04 - Control Room Habitability System

Application Section: 9.3.3, 6.4 & 9.4.1

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

06.04-16

The following Request for Additional Information is based on the requirements of 10CFR50 Appendix A Criteria 2, 4 and 19.

The staff notes that the equipment drain lines for collecting condensate from the four Main Control Room Air Handling Unit (AHU) cooling coils are neither identified on DCD Tier 2 Figure 9.4.1-1 nor on Figure 9.3.3-1.

The portions of the equipment drain lines that connect to the Air Handling Units would have to be Safety Related and Seismic Category I since they form part of the Control Room Envelope (CRE) boundary. Since these equipment drain lines tie into the four AHUs just upstream of the respective AHU fan, the drain lines most likely will be below atmospheric pressure and provide unfiltered paths for radioactive containments into CRE in a post accident plant environment.

The staff references the Open Item associated with RAI 883-6063 Question 09.04.01-32. The capability of these equipment drains lines to drain 45 gpm in the event of a Essential Chilled Water system leak internal to an AHU, would require these equipment drain lines to be of sufficient size (e.g. 2' to 4") to mitigate the effects of this worst case internal leak in an AHU.

Given the above, the staff requests additional information about how the design of the four AHU equipment drain lines will satisfy the requirements of GDC 2, GDC 4 and GDC19. The staff requests that the applicant appropriately amend the DCD (e.g. Tier 2 Sections 6.4, 9.3.3 and 9.4.1) to capture the applicant's response.