REQUEST FOR ADDITIONAL INFORMATION 746-5721 REVISION 2

4/27/2011

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

SRP Section: 06.02.02 - Containment Heat Removal Systems
Application Section: 6.2.2.2

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

06.02.02-65

NPSH CAP risk assessment is discussed in technical report MUAP 08001 Appendix F. The staff requests the following additional information:

Question #1

Clarify what is meant by "the PRA conservatively assumed that one train of the [containment] isolation valves is inoperable" (page F-12 of report). Discuss why this assumption is conservative (e.g., a fire or a flood event could propagate and impact cables that provide power and actuation signals to both valves in a containment penetration line or fire-induced spurious actuations can open CI valves). What would prevent such failures? Why are such failures unlikely? As part of the response, request MHI assess the divisional separation feature of the US-APWR design and how this feature impacts the likelihood of an internal fire or flood event causing both CI valves in a containment penetration line to fail open.

Question #2

Please provide a discussion stating the arguments used to assess seismic events in the NPSH risk assessment. The staff believes that the following two cases must be addressed: (1) both containment isolation (CI) valves of a penetration line are closed when the seismic event occurs; and (2) both CI valves of a penetration line are open when the seismic event occurs