

## REQUEST FOR ADDITIONAL INFORMATION 691-5410 REVISION 2

02/07/2011

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

SRP Section: 06.04 - Control Room Habitability System  
Application Section: 6.4

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

06.04-14

This is a follow-up RAI to the DCD (MHI) RAI series RAI No. 49-895 Question No. 06.04-19 and RAI 338-2325, Question No. 06.04-6 ([ML091700682](#)); RAI No. 559-4387; Question No. 06.04-13 ([ML101450224](#)) (NRC ID 4387, Q#16732).

This is also a follow-up RAI to the R-COLA (Luminant) RAI series: RAI No. 3968, Question No. 06.04-7 ([ML100550345](#)); RAI No. 4678, Question No. 06.04-11 ([ML102810224](#))

Due to the expected plant design impact of the resolution of the issues associated with this RAI, it is being issued simultaneously to both DCD applicant, MHI and the R-COL applicant, Luminant.

In response to Question No.: 06.04-13, **OPEN ITEM** - Follow-up RAI (NRC ID 4387, Q#16732), dated May 20, 2010, the FSAR was revised in a confusing and potentially ambiguous manner. Specifically, the FSAR commits to design the enclosure and chillers in accordance with ANSI/ASHRAE Standard 15-2007. The staff can accept essential and non-essential chillers located in proximity of other important equipment if they are designed in accordance with a robust consensus standard like ANSI/ASHRAE Standard 15. Unfortunately, compliance with the standard was made ambiguous with the recent revision to the FSAR. The specific or detailed design of the chillers has not been finalized and it is not possible at this time to demonstrate compliance with STD 15. It is also not possible to conclude whether a dedicated ventilation for each machinery room is necessary to comply with STD 15. The recent FSAR revision has precluded the use of dedicated ventilation and instead indicated that the auxiliary building ventilation would be used. STD 15 clearly requires dedicated ventilation under certain conditions. Specifically, Section 8.11.4 reads, "*Air and supply and exhaust ducts to the machinery room shall serve no other area.*"

Please justify why a dedicated ventilation and the other requirements of STD 15 Sections 8.11 and 8.12 are not necessary for compliance with STD 15 for all possible chiller configurations permitted by the FSAR. If additional design commitments for the chillers (size, refrigerant type, refrigerant volume, refrigerant amount ....) are necessary to justify this assertion please include these design commitments in the FSAR.