

REQUEST FOR ADDITIONAL INFORMATION 484-3850 REVISION 1

11/9/2009

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

SRP Section: 09.04.01 - Control Room Area Ventilation System
Application Section: DCD section 9.4.1

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

09.04.01-15

FOLLOW-UP RAI

The staff finds the applicant's response to Question 09.04.01-10 for RAI No. 442-3378, Revision 1 dated September 18, 2009 (MHI Ref. UAP-HF-09456, ML092650173) as incomplete.

The staff has reviewed the applicant's response to Question 09.04.01-10 and performed a summarily review of the differences between ASME AG-1-2003 and ASME AG-1-1997.

The staff notes that the applicant in its response did not include a review of the changes incorporated into ASME AG-1-2003 by the Addenda of AG-1a-2000. This addenda, added to the standard Section HA which pertains to the Housings of the ESF filter trains and air handling units of the MCR HVAC system. The effects of using Section HA in the design of the components that comprise the MCR HVAC system are comprehensive in scope. The applicant noted and the staff concurs that "...ASME AG-1a-2000 addenda added Section HA..." and applies and is suitable for use in the design Non-ESF filter trains per Revision 2 of RG 1.140. However, this staff endorsement is not applicable to ESF filter trains and other components that comprise the MCR HVAC system.

Substantive changes were made to Section FB "Medium Efficiency Filters" in ASME AG-1-2003 from Section FB of AG-1-1997. Section FB impacts the design pre-filters of both ESF and Non-ESF filter trains and the MCR air handling units. In its response to Question 09.04.01-10 the applicant summarily described these changes with the Comment, "Errata to the 2003 edition re-instated the 1997 edition version of this section". These changes are substantive and can not be considered errata. The RAI response comment is a confusing statement that provides no technical justification as to why Section FB is suitable for use in the design of the US-APWR.

In addition, as the applicant noted in its RAI response, ASTM A90 and ASTM A653 have superseded the ASTM standards of AG-1-1997 for the zinc coated (galvanized) materials of Tables CA-3230, CA-3310 and CA-3410. Again, the applicant failed to provide technical justification as to why these newer ASTM standards are suitable for use in the design of the US-APWR.

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To date, the staff has not endorsed the use of AG-1-2003. The SRP acceptance criteria includes the following words:

“The SRP is not a substitute for the NRC’s regulations, and compliance with it is not required. However, an applicant is required to identify differences between the design features, analytical techniques, and procedural measures proposed for its facility and the SRP acceptance criteria and evaluate how the proposed alternatives to the SRP acceptance criteria provide acceptable methods of compliance with the NRC regulations.” (from page 6.4-4 of SRP 6.4).

The staff notes that in its review of the DCD, that Chapters 6 and 9 invoke AG-1-2003 directly or by reference in the following subsections and tables 6.4.5, 6.5.1.5, 6.5.1.5.1, Table 6.4-2, Table 6.5-3, 9.4.1, 9.4.1.1.1, 9.4.1.4, 9.4.3.4.4, 9.4.5.1.1.1, 9.4.5.4.1, 9.4.6.4.4.1 and 9.4.6.4.4.2.

Consistent with the above SRP excerpt, the staff requests that the applicant provide a comprehensive technical justification (as applicable) for the use of AG-1-2003 and AG-1a-2000, in lieu of AG-1-1997, in the design of the US-APWR for the above DCD subsections and Tables. In addition, the staff requests that the applicant amend (as necessary) the relevant DCD subsections and Tables to bring closure to these issues identified.