

REQUEST FOR ADDITIONAL INFORMATION 666-5128 REVISION 2

11/22/2010

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

SRP Section: 09.04.05 - Engineered Safety Feature Ventilation System

Application Section: 6.5.1 and 9.4.5

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

09.04.05-13

**SRP 6.5.1, Revision 3, states that the “component design criteria, qualification requirements, and qualification testing of heaters, demisters, prefilters, and high-efficiency particulate air (HEPA) filters, design requirements of the filter and adsorber mounting frames, system filter and adsorber housings, and water drains, the adsorbent used for removal of gaseous iodides (in the preliminary safety analysis report (PSAR)), the physical properties of the adsorbent, and the design of the adsorber section of the filter trains (in the final safety analysis report (FSAR))” are to be reviewed.**

- (a) SRP 6.5.1 section III. “Review Procedures” 3.G lists demisters (a.k.a. moisture separators) as a component that may be required in ESF atmospheric cleanup systems. The ESF emergency filter trains of the US-APWR do not contain demisters as a component. ASME N509-2002 section 4 “Functional Design” 4.1 (d) reads: “*Moisture separators (demisters) are required when entrained water droplet concentration may be greater than 1 lb (0.45 kg) of water per 1,000 cfm (1,700 m<sup>3</sup>/hr) of airflow.*”**

**What criteria did the applicant use to conclude that all future US-APWR plants (i.e. regardless of the plant’s location within the United States) will not need demisters to remove entrained moisture from the air stream to the Annulus Emergency ESF filter trains to fulfill their safety function?**