

REQUEST FOR ADDITIONAL INFORMATION 349-2586 REVISION 0

4/28/2009

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

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

06.02.02-18

It appears that the strainer test evaluation provided does not demonstrate applicability to regulatory requirements and guidance. APWR elected to use operating plant head loss testing to serve as the APWR design basis. The analysis which documented this approach is referred to as a comparative evaluation. In this comparative evaluation, APWR concluded that the APWR strainer design is bounded by an operating plant test on the basis of "debris" per unit area of strainer screen (see MUAP 08001-NP (R2) page 7 of 24). The following items present some concerns with this comparative evaluation:

- Test facility not scaled to APWR design
- Reduction in APWR strainer hole size
- Changes in APWR strainer module configuration, geometry, and orientation
- Significant differences in debris types and quantities (sufficient fiber remains available to achieve a thin-bed)
- Operating Experience that brings into question the more "debris" per unit area bounding assertion
- APWR Design Bases assumes 70% debris load on the strainer as the worst case
- Prototypicality issues with operating plant test used for comparative evaluation

Therefore, the NRC staff requests APWR provide strainer test data that demonstrates applicability to regulatory requirements and guidance.