

REQUEST FOR ADDITIONAL INFORMATION NO. 126-1558 REVISION 0

12/16/2008

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

SRP Section: 06.02.01 - Containment Functional Design

Application Section: 6.2.1

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

06.02.01-2

DCD Section 6.2.1.1.1, page 6.2-2, third paragraph states that Table 6.2.1-1 “summarizes containment temperature and pressure, for a broad range of postulated breaks”. However, this table includes only one break. Please, either include in the table all the cases that were analyzed, or change the table description in the text to something like “for the worst break or for the worst case.”

06.02.01-3

DCD, page 6.2-8, top states that the water in the RWSP is modeled as a pool at the bottom of containment, with “appropriate assumptions on the heat and mass transfer at the pool.” However, staff cannot find details of these assumptions, and sensitivities to these assumptions, in the DCD. Please provide details of these assumptions, including discussion on its basis and how sensitive results are to these assumptions.

06.02.01-4

Provide details regarding modeling of the solid structures in the GOTHIC model, including rationale for grouping various structures of different materials, as described in the DCD. In addition, please provide an assessment of how much error in the calculations this method of subdivision introduces into the results.

06.02.01-5

A statement is made that since evaporation rates are reasonably predicted by GOTHIC models, condensation rates should be as well. Please justify this statement, and justify the droplet condensation coefficients used in this analysis, including discussion on the sensitivity to this parameter.

06.02.01-6

Provide all of the LOCA and MSLB DBA long term calculations to determine the containment pressure at 24 hours into the accident.

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