

REQUEST FOR ADDITIONAL INFORMATION 284-2214 REVISION 1

3/24/2009

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

SRP Section: 05.03.01 - Reactor Vessel Materials

Application Section: 5.3.1

QUESTIONS for Component Integrity, Performance, and Testing Branch 1 (AP1000/EPR Projects)
(CIB1)

05.03.01-1

US-APWR DCD Section 5.3.1.6.2, "Neutron Flux and Fluence Calculations," makes reference to DCD Section 4.3.2.8 in providing the methodology used to calculate the fluence. However, the methodology should also be reviewed and approved by the NRC. Discuss your plans for submitting to the NRC your methodology used to calculate fluence.

05.03.01-2

Table 5.3-1 limits copper, nickel, phosphorous, and vanadium content for weld and base material being used in the beltline region of the reactor vessel. But Regulatory Guide 1.99 recommends that sulfur content also be controlled to low levels, and base material specifications such as ASME (ASTM) SA-508 (A508) and SA-533 (A533) have supplementary requirements that recommend that lower sulfur content limits be imposed on material used in the nuclear reactor beltline or when otherwise agreed upon between the manufacturer and the purchaser.

Describe how controls on sulfur will be imposed on weld and base materials purchased for use in the beltline (i.e. adding sulfur content restrictions to the DCD, or mandating base material specification supplementary requirements such as S9.2 to SA-508).