

REQUEST FOR ADDITIONAL INFORMATION 892-6169 REVISION 3

1/18/2012

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

SRP Section: 14.03.03 - Piping Systems and Components - Inspections, Tests, Analyses, and
Acceptance Criteria
Application Section: 14.3.3

QUESTIONS for Engineering Mechanics Branch 1 (AP1000/EPR Projects) (EMB1)

14.03.03-26

In Rev. 3 of US-APWR DCD Tier 1, Table 2.3.2, ITAAC Items 4) and 5), both as-designed and as-built pipe break hazard analysis reports are addressed. However, in DCD Tier 2 Chapter 14, Section 14.3.4.3 under Generic ITAAC, only as-built pipe break analysis report is discussed. The applicant is requested to correct this inconsistency between DCD Tier 1, Table 2.3.2 and DCD Tier 2 Section 14.3.4.3. Specifically, Bullet 3 of DCD Tier 2 Section 14.3.4.3 should address both as-designed and as-built pipe break hazard analysis reports.

14.03.03-27

In Rev. 3 of the US-APWR DCD, the applicant did not provide the complete piping design information because piping design was not completed when the application was submitted. As defined in SECY-92-053, design acceptance criteria (DAC) are "a set of prescribed limits, parameters, procedures, and attributes upon which the NRC relies, in a limited number of technical areas, in making a final safety determination to support a design certification." RG 1.206 identified four areas: radiation protection, piping, instrumentation and control, and human factor engineering, in which the use of DAC is acceptable because 1) providing detailed design information is not desirable for applicants using technologies that change so rapidly that the design may have become obsolete between the time the agency certifies the design and the time a plant is eventually built (e.g., digital I&C systems and HFE); and 2) completing the final design is impractical given the unavailability of sufficient as-built or as-procured information (e.g., in the radiation shielding and piping areas).

The applicant is requested to make clear, in the US-APWR DCD, whether the piping design including the pipe break hazard analysis will be completed before design certification, or the use of DAC will be utilized. In addition, if DAC is used, a section needs to be included in DCD Tier 2 to discuss the possible DAC closure processes, as well as the COL items in which future COL applicants are responsible for.