
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

08/13/2013

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

RAI NO.: NO. 223-1996 REVISION 0
SRP SECTION: 03.08.01 – Concrete Containment
APPLICATION SECTION: 3.8.1
DATE OF RAI ISSUE: 02/26/2009

QUESTION NO. 03.08.01-11:

In DCD Subsection 3.8.1.4.6, the paragraph (Page 3.8-14) states: “A Design Report of the PCCV is provided separately from the DCD. In accordance with ASME Code, Section III (Reference 3.8-2), Subarticle NCA-3350, the Design Report has sufficient detail to show that the applicable stress limitations are satisfied when components are subjected to the design loading conditions.”

The applicant is requested to provide a summary of the ‘Design Report of the PCCV’ showing how the PCCV Concrete Containment design meets the stress limitations subjected to design loading conditions. The summary should include the main parts and the major elements of the containment and provide the margins to the design limits.

ANSWER:

This answer revises and replaces the previous MHI answer that was transmitted by letter UAP-HF-09161 (ML091060749).

A summary of the “Design Report of the PCCV” is provided in DCD Appendix 3L, “Critical Sections for Reactor Building Complex”. This appendix provides specific detail for critical sections of the prestressed concrete containment vessel (PCCV).

Appendix 3L provides structural analysis and design approaches taken to determine the stresses in the concrete and reinforcing steel. Design results indicate the required reinforcement and the maximum demand to capacity ratios (DCR) for the applicable design limits. The demand to capacity ratios (DCR) reported provides an indication of the design margin that is maintained in the design of the PCCV component when subjected to the design loading conditions.

Impact on DCD

There is no impact on the DCD.

Impact on R-COLA

There is no impact on the R-COLA.

Impact on PRA

There is no impact on the PRA.

Impact on Technical/Topical Report

There is no impact on the Technical/Topical Report.

This completes MHI's response to the NRC's question.