
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

03/29/2013

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

RAI NO.: NO. 958-6608 REVISION 1

SRP SECTION: 03.08.03 – Concrete and Steel Internal Structures of Steel or Concrete Containments

APPLICATION SECTION: 3.8.3

DATE OF RAI ISSUE: 09/05/2012

QUESTION NO. 03.08.03-95:

The staff evaluated the applicant's response to RAI 858-6126, Question 03.08.03-49, dated February 28, 2012, regarding the consideration of concrete cracking in the design of APWR CIS structures. Sufficient information was provided regarding the questions raised in the RAI regarding the two stiffness conditions "A" and "B." However, the staff notes that the RAI response indicated that the information provided does not have any impact on the DCD or the technical report. Since this response provided important analysis and design information, revise the technical report to incorporate, and revise the DCD to summarize, the important information provided in the RAI response which has not yet been included in the technical report and DCD.

ANSWER:

This answer supplements the previous MHI answer that was transmitted by letter UAP-HF-12295 (ML12331A337). For clarity, the original response is repeated below and the supplemental information follows.

MHI concurs with the staff's assessment that the response to RAI 858-6126, Question 03.08.03-49 contains important analysis and design information. Thus the applicable DCD and technical report sections will be revised as stated below.

Impact on DCD

Subsection 3.8.3 will be updated to include the summary given in the RAI 858-6126 Question 03.08.03-49 response concerning the use of both stiffness Conditions 'A' and 'B' in the development of the Containment Internal Structure design load cases and combinations. This summary will also clarify that the Condition 'A' and 'B' analysis results will be enveloped to generate in-structure response spectra as well as member forces for structural design.

Impact on R-COLA

There is no impact on the R-COLA.

Impact on S-COLA

There is no impact on the S-COLA.

Impact on PRA

There is no impact on the PRA.

Impact on Technical/Topical Report

Technical Report MUAP-11013, Rev. 2 will be revised to incorporate a summary of the procedures described in the response to RAI 858-6126 Question 03.08.03-49 for generating load cases and load combinations using both stiffness conditions, and enveloping the results to generate maximum forces for member design.

SUPPLEMENTAL INFORMATION:

Subsections 3.8.3.4 and 3.8.3.4.1 have been revised to summarize the use of both stiffness Conditions 'A' and 'B' in the development of the containment internal structure (CIS) design load cases and combinations. This summary clarifies that the Condition 'A' and 'B' analysis results will be enveloped to generate in-structure response spectra (ISRS) as well as member forces for structural design.

Technical Report MUAP-11013, Rev. 2, Section 3.2 has been revised to incorporate a summary of the procedures for generating load cases and load combinations using both stiffness conditions, and enveloping the results to generate maximum forces for member design.

Impact on DCD

There is no impact on the DCD.

Impact on R-COLA

There is no impact on the R-COLA.

Impact on S-COLA

There is no impact on the S-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.