
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

1/31/2013

**US-APWR Design Certification
Mitsubishi Heavy Industries
Docket No. 52-021**

RAI NO.: NO. 542-4262 REVISION 2
SRP SECTION: 03.07.02 – Seismic System Analysis
APPLICATION SECTION: 3.7.2
DATE OF RAI ISSUE: 03/02/10

QUESTION NO. RAI 03.07.02-08 (03.07.02-35):

In the response to RAIs 3.7.2-3, 3.7.2-17, and 3.7.2-10, demonstration of sufficient resolution in the various finite element models and comparison and validation of lumped mass stick models with distributed mass finite element models was deferred until Rev 2 of the DCD. However, this information has not been provided in Rev 2 of the DCD. In order to close out several open RAIs, the requests that the applicant provide this information.

ANSWER:

This answer revises and replaces the previous MHI answer that was transmitted by letter UAP-HF-10086 (ML100950104).

Lumped mass stick model methodology is no longer used for the reactor building (R/B) complex dynamic model, with the exception of the reactor coolant loop (RCL), which is a mechanical system coupled to the reactor building (R/B) complex finite element (FE) model.

Technical Report MUAP-10006, Rev. 3, Sections 02.3.2 and 02.4.1.1, describe the analysis methodology for the US-APWR soil-structure interaction analysis, now performed using an ACS SASSI three-dimensional dynamic FE model of the R/B complex including the coupled RCL lumped mass stick model. Technical Report MUAP-10006, Rev. 3, Subsections 02.4.1.2 and 02.5.1.3, and DCD Subsection 3.7.2.3.10, describe the methodology used for validation of the R/B complex dynamic FE model and how the validation conforms to SRP 3.7.2.II.3.C.ii and iii guidelines.

Impact on DCD

There is no impact on the DCD.

Impact on R-COLA

There is no impact on the COLA.

Impact on S-COLA

There is no impact on the COLA.

Impact on PRA

There is no impact on the PRA.

Impact on Technical/Topical Report

There is no impact on a Technical/Topical Report.

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