
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

02/27/2013

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

RAI NO.: NO. 853-6029 REVISION 3
SRP SECTION: 03.07.02 – Seismic System Analysis
APPLICATION SECTION: 3.7.2
DATE OF RAI ISSUE: 10/24/2011

QUESTION NO. 03.07.02-142:

In Section 3.0 of MUAP-11006 (R0), the applicant states, in part, that, “a set of validation analyses are performed to demonstrate the ability of the R/B Complex LMSM to adequately represent the global dynamic properties of the structure.” The applicant is requested to define what constitute the global dynamic properties; provide the criteria for determining the adequacy of the global dynamic properties; and state how the criteria is met.

ANSWER:

A lumped mass stick model of the seismic category I structures is no longer used for the associated studies (Structure-Soil-Structure Interaction (SSSI) in Technical Report MUAP-11011 and embedment and water table in Technical Report MUAP-11007). Technical Report MUAP-11006 is withdrawn.

In the Soil-Structure Interaction (SSI) analysis of the Reactor Building (R/B) complex, a lumped mass stick model is used for the Reactor Coolant System (RCS). The RCS lumped mass stick model is coupled to the Finite Element (FE) model used for the R/B complex structure. Details of the RCS lumped mass stick model are provided in Technical Report MUAP-10006, Rev 3, Section 02.5.1.2.

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 a Technical/Topical Report.

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