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## RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

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1/31/2013

### US-APWR Design Certification

### Mitsubishi Heavy Industries

Docket No. 52-021

**RAI NO.:** NO. 856-6094 REVISION 3  
**SRP SECTION:** 03.07.02 – Seismic System Analysis  
**APPLICATION SECTION:** 3.7.2  
**DATE OF RAI ISSUE:** 10/24/11

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#### QUESTION NO. RAI 03.07.02-170:

In Subsection 3.2 of MUAP-11011 (R0), "Combined Model of PS/B, R/B Complex and A/B," the second paragraph (Page 6) states, "Figure 3.2-1 presents the configuration of the combined SSSI model to be used for initial-phase SSSI analyses of the PS/B, R/B Complex and A/B. ACS SASSI is used for the time history frequency domain seismic response analyses of the combined model."

The staff is not able to find any analyses mentioned in this report that uses the model presented in Figure 3.2-1, nor is the staff able to find the ACS SASSI time history frequency domain seismic response analyses mentioned in the second sentence above quoted. The applicant is requested to provide information as to where these analyses are presented.

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#### ANSWER:

Technical Report MUAP-11011, Rev. 0 has been superseded and the relevant information on the structure-soil-structure interaction (SSSI) analysis methodology has been incorporated into Technical Report MUAP-10006, Rev. 3.

The soil-structure interaction (SSI) analyses are performed using dynamic finite element (FE) models of the reactor building (R/B) complex, which consists of the R/B, prestressed concrete containment vessel (PCCV), containment internal structure (CIS), east and west power source buildings (PS/Bs), auxiliary building (A/B), and essential service water pipe chase (ESWPC) supported on a combined basemat. The SSSI analysis uses the same model of the R/B complex as the SSI analysis, and a FE model of the non-seismic category I Turbine Building. The standard plant SSSI analysis methodology is discussed in Technical Report MUAP-10006, Rev. 3 Subsections 03.3.3 and 03.3.4, and the SSSI model is shown in Figure 03.3.4.2-1, Figure 03.3.4.2-2, and Figure 03.3.4.2-3. The analysis results are provided in Subsection 03.4.1.3.

In addition, as stated in Section 03.3.2 of Technical Report MUAP-10006, Rev. 3, the structure-soil-structure interaction analysis uses the same time histories as the SSI analysis.

#### 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.

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