

---

---

**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. 03.07.02-150:**

In reviewing the Applicant's technical report, MUAP-11006 (R0), the staff found several areas which need further clarification, additional information, or editorial revision. The applicant is requested to address the following requests and questions:

In the fifth paragraph of Section 4.0 of MUAP-11006 (R0), the applicant refers to Figure 4-1 in the context of refining stick elements of the R/B-FHA model. Figure 4-1 shows a finite element model plot of floor slabs. The applicant is requested to explain the relevance of Figure 4-1 to the refinement of stick elements.

In the first sentence of Section 5.2 of MUAP-11006 (R0), the applicant uses Reference 12 to refer to the ANSYS computer program. This reference appears as Reference 11 in the Reference section of the document. The applicant is requested to correct this discrepancy.

In numerous places in MUAP-11006 (R0), the applicant refers to MUAP-10001 (R3) as the basis for the properties of the dynamic FE models used as the benchmark for validating the LMSMs. However, the reference section of MUAP-11006 (R0) refers to Revision A of MUAP-10001. The applicant is requested to correct this discrepancy.

---

**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 Technical Report MUAP-11006 is withdrawn.

**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.