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**RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION**

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03/22/2013

**US-APWR Design Certification**

**Mitsubishi Heavy Industries**

**Docket No. 52-021**

**RAI NO.:** NO. 766-5819 REVISION 3  
**SRP SECTION:** 03.07.02 – Seismic System Analysis  
**APPLICATION SECTION:** 3.7.2  
**DATE OF RAI ISSUE:** 06/09/2011

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**QUESTION NO. RAI 03.07.02-41:**

In MUAP-11002 (R0) Subsection 6.1, "Model Validation Methodology," the second bullet of the first paragraph (page 19) states, "The fine mesh GT STRUDL models used for structural design responds similarly to the coarse mesh GT STRUDL models translated into ACS SASSI." The staff disagrees with the applicant's conclusion that fine mesh model responds similarly to the coarse mesh used in ACS SASSI analyses. In Subsection 6.3 of the report, the applicant stated that due to software and hardware constraints, the modal analyses for the fine mesh could be performed up to a frequency of 21 Hz. The response spectra shown in Figure 6-17 to 6-19 of the report clearly indicated that the applicant's position could not be confirmed at high frequency range. The SRP Acceptance Criteria 1.A.(iv) of SRP 3.7.2 states, "Use of an adequate number of discrete mass degrees of freedom in dynamic modeling." The applicant, therefore, cannot claim that the coarse mesh used in SSI analyses meets this acceptance criterion. The applicant is requested to refine its approach and to provide data that shows the coarse mesh is adequate for the SSI analyses.

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**ANSWER:**

This answer revises and replaces the previous MHI answer that was transmitted by letter UAP-HF-11249, dated August 1, 2011 (ML11215A104).

In Technical Report MUAP-11002 Rev. 2, the analysis of the fine and coarse mesh models have been reanalyzed using ANSYS to achieve analysis cutoff frequencies greater than 100 Hz for both models. The results, including comparison in the high frequency range, are included in Section 3.0 of Technical Report MUAP-11002 Rev. 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.

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