
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

1/31/2013

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

RAI NO.: NO. 625-4924 REVISION 0
SRP SECTION: 03.07.02 – Seismic System Analysis
APPLICATION SECTION: 3.7.2
DATE OF RAI ISSUE: 08/30/10

QUESTION NO. RAI 03.07.02-23:

This request for additional information (RAI) is necessary for the staff to determine if the application meets the requirements of 10 CFR Part 50, Appendix A, General Design Criteria 2; 10 CFR Part 50 Appendix S; and 10 CFR Part 100; as well as the guidance in NUREG-0800, 'Standard Review Plan for the Review of Safety Analysis for Nuclear Power Plants,' Chapter 3.7.2, 'Seismic Design Parameters.

The first sentence of Section 5.2.2 of MUAP-10001, Rev, 1 refers to the nine combinations of soil profile categories and depths to hard or soft rock material that are shown in Table 5.2-1. In that table, only eight combinations are shown. Explain why the combination of Vs30=100 m/sec, and depth to rock=100 feet is not shown in Table 5.2-1.

Clarify whether the soil profiles used in the SSI analysis are consistent with the nine combinations of soil profiles developed for the analysis, and also determine if the description and implementation of the Supporting Media for Seismic Category I Structures is acceptable per the guidelines of SRP 3.7.1 .II.3.

Reference: USAPWR Seismic Design Report MUAP-10001, rev 1; dated May 13, 2010; ML101400073

ANSWER:

This answer revises and replaces the previous answer that was transmitted by letter UAP-HF-10300 (ML103120403).

The US-APWR seismic response analysis currently uses six generic subgrade conditions, developed to cover the range of generic site conditions from deep soft soil to firm rock that may exist across the Central Eastern United States.

The soil profiles used in the soil-structure interaction analysis are consistent with the combinations of soil profiles developed and implemented in the analysis, as discussed in Technical Report MUAP-10006, Rev. 3, Sections 01.4.2, 01.4.2.1, 01.4.2.2, and 01.5.2.2. The development and implementation of the soil profiles as described in Technical Report MUAP-

10006, Rev. 3 meet the guidelines of SRP 3.7.1.II.3 by providing a detailed description of the supporting media for seismic category I structures. This information is summarized in DCD Section 3.7.1.3.

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.