

## US-APWRRAlSPeM Resource

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**From:** Ciocco, Jeff  
**Sent:** Tuesday, May 29, 2012 10:56 AM  
**To:** us-apwr-rai@mhi.co.jp; US-APWRRAlSPeM Resource  
**Cc:** Wang, Weijun; Cook, Christopher; Roy, Tarun; Hamzehee, Hossein  
**Subject:** US-APWR Design Certification Application RAI 933-6440 (2.5.2)  
**Attachments:** US-APWR DC RAI 933 RGS2 6440.pdf

MHI,

The attachment contains the subject Request for Additional Information (RAI). This RAI was sent to you in draft form. Your licensing review schedule assumes technically correct and complete responses within 30 days of receipt of RAIs.

Please submit your RAI response to the NRC Document Control Desk.

Thank you,

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**From:** Ciocco, Jeff

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# REQUEST FOR ADDITIONAL INFORMATION 933-6440 REVISION 3

5/29/2012

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

SRP Section: 02.05.02 - Vibratory Ground Motion

Application Section: 2.5.2

QUESTIONS for Geosciences and Geotechnical Engineering Branch 2 (RGS2)

02.05.02-2

### **Question 2.5.2-2**

During a public meeting conducted on March 29, 2012, the MHI presented a resolution plan for the US-APWR design certification application review issues (ML12090A635). As part of this plan, the MHI proposes to revise the six soil profiles used in the SSI analyses. The MHI's proposed plan states that the generic curves provided in EPRI TR-102293 will be used for soil degradation properties. In order for the staff to fully evaluate the adequacy of the assumptions and input parameters to be used in the SSI analyses as well as to ensure the seismic stability of safety related structures, in accordance with 10 CFR Part 50, Appendix S, please provide the following:

- 1) Discussion on the basis of creating the 270-200, 270-500 and 560-500 soil profiles.
- 2) Clarification on the type of subsurface materials involved in the proposed soil profiles and justification for the applicability of EPRI TR-102293 soil degradation curves to those profiles.

02.05.02-3

### **Question 2.5.3**

In the proposed resolution plan of the US-APWR DCD review issues discussed during the public meeting on March 29, 2012 (ML12090A635), the MHI stated that DCD Chapter 2 Table 2.0-1 would be revised in the areas of soil profile descriptions and data, bearing capacity demands, and allowable settlements due to the changes in the foundation design and embedment conditions. The MHI also stated that new stability analyses would be performed. Since the static and dynamic lateral earth pressures will also be affected by the changes in the foundation design and embedment conditions, in accordance with 10 CFR 100.23 and 10 CFR Part 50, Appendix S, please clarify whether the lateral earth pressure parameters will also be revised based on the new foundation design and analyses results, as these are important parameters for structure stability evaluation.

