RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

03/22/2013

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

RAI NO.:	**NO. 909-6315 REVISION 3**
SRP SECTION:	**03.07.02 - SEISMIC SYSTEM ANALYSIS**
APPLICATION SECTION:	**3.7.2**
DATE OF RAI ISSUE:	**03/05/2012**

QUESTION NO.: 03.07.02-190

In Section 4.0 of MUAP-11002(R1), "Soil-Structure Interaction Analysis," (Page 31) there is no reference that considers the effects that the high water table in the US-APWR standard plant design may have on the SSI analysis results for the Turbine Island (TI).

The Applicant is requested to address the effects of variations in the water table in the SSI analyses for the TI, including a water table level from the bottom of the TI foundation up to one foot below finished grade.

ANSWER:

This answer revises the previous MHI answer that was transmitted by letter UAP-HF-12124 dated June 5, 2012 (ML12158A478).

The design of the T/B and E/R has been modified in accordance with the DCD Seismic Closure Plan (UAP-HF-13034, 2/15/2013).
The conclusions provided in of Technical Report MUAP-11007 Rev. 2 (submitted to the NRC on November 30, 2012) state the following:

> "*The results of the parametric study presented in this report demonstrate that effects of groundwater level on the seismic design basis response from MUAP-10006 for the R/B complex are minor*."
>
> "*It is concluded that the use of saturated soil profiles as a site independent analysis parameter will result in a standard plant design that envelopes the seismic demands at a majority of candidate sites within the CEUS*."

The SSI analyses of the TI are performed using identical subsurface profiles as used in the NI SSI analyses. In addition, the TI SSI input motions are developed based on the same CSDRS as the NI SSI analyses. Therefore, the conclusions of MUAP-11007 Rev. 2 regarding the effects of variation in groundwater level are applicable to the TI SSI analyses. No additional study of the effects of variation in groundwater level is needed for the TI SSI analyses.

Impact on DCD

There is no current 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.