RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

03/29/2013

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

RAI NO.:	**NO. 858-6126 REVISION 3**
SRP SECTION:	**03.08.03 – Concrete and Steel Internal Structures of Steel or Concrete Containments**
APPLICATION SECTION:	**3.8.3**
DATE OF RAI ISSUE:	**10/25/2011**

QUESTION NO. 03.08.03-53:

Section 4.3 of MHI TR MUAP-11013-P (R1), which corresponds to Task 2-C, Anchorage/Connection Design and Adequacy Check, states that "For each individual demand type, a conservative connection design philosophy will be selected from the following: (i) full strength with respect to connected components, or (ii) overstrength with respect to seismic force demands, or (iii) ductile design providing adequate structure drift capability. Explain what each of these mean. For example, (a) clarify whether the full strength with respect to connected components means that the connection will be designed to be stronger than both of the connected parts, (b) for the overstrength with respect to seismic force demands approach what are the design criteria for the required overstrength and what are the bases for these criteria, (c) for ductile design providing adequate structure drift capability, why is this identified as an "or" option and not "and" along with the first two approaches, and what are the structure drift criteria and the bases for these criteria.

ANSWER:

This answer revises and replaces the previous MHI answer that was transmitted by letter UAP-HF-12051 (ML12075A108).

Technical Report MUAP-11020, Rev. 1, Sections 2 and 3, provide information regarding the conservative connection design philosophy. An example is included in Section 7.0 to illustrate the design methodology. As shown in the example, the connections are designed to be stronger than the weaker of the connected parts (in this case, the steel concrete (SC) wall above the basemat).

The third connection design option (ductile design) previously identified in Technical Report MUAP-11013, Rev. 1, has been removed from Technical Report MUAP-11013, 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 the Technical/Topical Report.

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