
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. 03.07.02-186:

In Section 2.2 of MUAP-11002(R1), "Material Properties," (page 21), the 3rd paragraph states, "Since the equation for Young's modulus in ACI 349-01 (Reference 7) only applies to reinforced concrete with a unit weight up to 155 pounds per cubic foot, this upper bound unit weight is used in calculating Young's modulus for heavy concrete." The Applicant did not provide any rationale for this assumption that will indicate whether or not this assumption leads to conservative results. Thus, the Applicant is requested to provide a justification for this assumption, or to require the COL Applicant to perform tests in accordance with ASTM C469, "Standard Test Method for Static Modulus of Elasticity and Poisson's Ratio of Concrete in Compression," to determine the appropriate Young's modulus for the heavy concrete.

ANSWER:

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

Heavy weight concrete is no longer under consideration for the T/B complex. Heavy weight concrete discussion was removed from Subsection 2.2 of Technical Report MUAP-11002 Rev. 2.

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.