
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

1/31/2013

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

RAI NO.: NO. 776-5851 REVISION 3
SRP SECTION: 03.07.02 – Seismic Systems Analysis
APPLICATION SECTION: 3.7.2
DATE OF RAI ISSUE: 06/15/11

QUESTION NO. RAI 03.07.02-72:

Subsection 2.3.3 of MUAP-11001 (R0), "Equivalent Dynamic Mass," states that "The equivalent mass consists of permanent equipment self-weight, 25% live load and piping load (or 75% snow load for roof, whichever is greater). The loads including equipment self-weight, piping load and live load for the A/B are obtained from "Load Distribution Auxiliary Building" and "Component Weight List Auxiliary Building" (References 7.5, 7.6 respectively)."

Per SRP Acceptance Criteria D of SRP 3.7.2, in addition to the structural mass, the mass equivalent to a floor load of 50 pounds per square foot (psf) should be included in the equivalent dynamic mass. Since the staff does not have access to References 7.5 and 7.6 mentioned in the above quoted sentences, the Applicant is requested to confirm that the mass equivalent to a floor load of 50 pounds per square foot (psf) is included in the model for analyses. If this 50 psf mass is not included, the Applicant is requested to provide the technical basis and justification for its exclusion from the seismic analysis.

ANSWER:

This answer revises and replaces the previous MHI answer that was transmitted by letter UAP-HF-11281 (ML11243A163).

Technical Report MUAP-11001 has been superseded and the relevant information incorporated into Technical Report MUAP-10006, Rev. 3. The reactor building (R/B), prestressed concrete containment vessel (PCCV), containment internal structure (CIS), east and west power source buildings (PS/Bs), auxiliary building (A/B), and essential service water pipe chase (ESWPC) are now structurally integrated and supported on a common basemat to form the R/B complex. Technical Report MUAP-10006, Rev. 3, presents the information relevant to the added A/B and PS/Bs as well as the other buildings that make up the R/B complex.

Section 02.4.1.1.4 of Technical Report MUAP-10006, Rev. 3 states that a 50 psf dead load is applied on all R/B complex slabs to account for miscellaneous pipe, minor equipment, and raceways as part of the equivalent dynamic mass except those identified as having higher values. This is consistent with Subsection 3.7.2.3.6 of the DCD.

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.