

DRAFT REQUEST FOR ADDITIONAL INFORMATION CQVP 658 REVISION 0

July 16, 2008

US-APWR Design Certification
Mitsubishi Heavy Industries
Docket No. 52-021

SRP Section: 14.02 - Initial Plant Test Program - Design Certification and New License Applicants
Application Section: 14.2 Initial Plant Test Program

QUESTIONS

14.02-***

Section 14.2.8.1 of the US-APWR DCD designates certain tests as first-of-a-kind (FOAK), first-plant-only tests. These FOAK tests are documented in Subsections 14.2.12.1.7, 14.2.12.2.3.9 and 14.2.12.2.4.5 of the DCD.

To be consistent with the NRC staff's past treatment of first-plant-only tests, MHI needs to add a COL information item to Section 14.2.13 of the DCD that requires each COL holder to perform the tests documented in Section 14.2.8.1 of the DCD or provide justification that the results of the first-plant-only tests are applicable to subsequent plants.

14.02-***

Section 14.2.8.1 of the US-APWR DCD designates the Rod Cluster Control Assembly (RCCA) Misalignment Measurement and Radial Power Distribution Oscillation Test documented in DCD Section 14.2.12.2.4.5 as a "First-Plant-Only Test."

DCD Section 14.2.8.1.3 indicates that:

"RCCA misalignment measurements and radial power distribution oscillation tests are performed in the power ascension test phase for the first US-APWR. The test is required only for the first plant because the stability of the radial power distribution is dependent upon the core diameter only. This test validates the calculation tools and instrument responses."

The NRC staff notes that, while the stability of the radial power distribution is dependent upon the core diameter only, the instrument responses to the RCCA test may be plant-specific.

Accordingly, MHI is requested to provide additional information in the DCD to justify its basis for concluding (1) that the RCCA Misalignment Measurement and Radial Power Distribution Oscillation Test should be considered as new, unique, or special test for a new design feature, and (2) that a test that validates calculation tools and instrument responses should only be performed on the first plant. Otherwise, Section 14.2.12.2.4.5 needs to be revised to have this test conducted on all plants.