

Jeff Ciocco

From: Jeff Ciocco
Sent: Monday, July 28, 2008 1:04 PM
To: us-apwr-rai@mhi.co.jp
Cc: Andy duBouchet; Juan Peralta; Ngola Otto; Larry Burkhart; Harrison Botwin
Subject: US-APWR Design Certification Application RAI No. 31
Attachments: US-APWR DC RAI 31 CQVP 658.pdf

MHI,

Attached please find the subject request for additional information (RAI). This RAI was sent to you in draft form. The schedule we are establishing for review of your application assumes technically correct and complete responses within 30 days of receipt of RAIs. However, as you have requested, you are granted 45 days to respond to RAI 31. Please submit your RAI response to the NRC Document Control Desk.

Thanks,

Jeff Ciocco
Office: T-7F14
New Reactor Licensing
U.S. Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, MD 20852-2739
301.415.6391
jeff.ciocco@nrc.gov

REQUEST FOR ADDITIONAL INFORMATION NO. 31 REVISION 0

7/28/2008

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

CQVP Branch

QUESTIONS

14.02-23

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.

14.02-24

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

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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.