Jeff Ciocco

From: Jeff Ciocco
Sent: Thursday, July 24, 2008 8:34 AM
To: us-apwr-rai@mhi.co.jp
Cc: Amar Pal; Ronaldo Jenkins; William Ward; Larry Burkhart; Harrison Botwin
Subject: US-APWR Design Certification Application RAI No.34
Attachments: US-APWR DC RAI 34 EEB 780.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. Please submit your RAI response to the NRC Document Control Desk.

Thanks,

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REQUEST FOR ADDITIONAL INFORMATION NO. 34 REVISION 0

7/24/2008

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

SRP Section: 09.05.03 - Lighting Systems

Application Section: 9.5.3

EEB Branch

QUESTIONS

09.05.03-1

9.5.3-02 S01

In response to RAI 9.5.3-02 (MHI Reference UAP-HF-08095), you have provided typical illumination levels in various areas/rooms. The staff finds that nominal illumination level in certain areas (e.g.,Turbine Building, Reactor Building, etc.) is not consistent with recommended illumination level specified in NUREG-0700. Provide justification for not following recommended illumination level specified in NUREG-0700.

09.05.03-2

9.5.3-05 S01

In response to RAI 9.5.3-05, you have stated that Class 1E emergency lighting powered from redundant Class 1E dc is provided in RSC. However, DCD Section 9.5.3.2.2.1 states that Class 1E emergency lighting in the MCR are powered from redundant Class 1E dc. Class 1E emergency lighting in all other areas shown above is powered from the redundant Class 1E 480V ac motor control centers. As a result of the RAI response, the staff finds that this is a change from the DCD, Rev.0. The staff understands that this will be updated in a future DCD revision. Provide a copy of the information which will be presented in the DCD revision and identify the revision in which the change will appear.

09.05.03-3

9.5.3-06 S01

In response to RAI 9.5.3-06, you have stated that the DCD should be corrected to show that emergency lighting in the MCR is provided from Class 1E dc and ac systems. The staff understands that this will be updated in a future DCD revision. Provide a copy of the information which will be presented in the DCD revision and identify the revision in which the change will appear.

09.05.03-4

9.5.3-08 S01

In response to RAI 9.5.3-08, you have stated that single circuit breaker located in Class 1E motor control center is used as the isolation device. The isolation device meets the requirements of RG 1.75. RG 1.75, Position C(1) requires analysis and periodic testing. DCD Tier 1, Table 2.6.1-3 includes ITAAC of the item (Table 2.6.1-3, item 3). However, the ITAAC (Table 2.6.1-3, item 3) states that an inspection of the as-built Class 1E electric power distribution equipment will be performed. The staff does not understand how RG 1.75, Position C(1) will be verified by inspection.

Modify Table 2.6.1-3, item 3 to include testing ("... periodic testing of circuit breakers ... during every refueling must demonstrate that the overall coordination scheme under multiple faults of non-safety-related loads remains within the limits specified in the design criteria for the nuclear power plant.") and analysis (the breaker time-current trip characteristics, for circuit faults "under bolted or arcing fault conditions [assuming multiple faults of all non-safety-related loads and load current of all safety-related circuits] will cause the nearest circuit breaker ... to interrupt the fault current prior to initiation of a trip of any upstream protective device,") to verify that recommendations of RG 1.75 are met.

09.05.03-5

9.5.3-09 S01

In response to RAI 9.5.3-09, you have stated main control console is very small and thus the inside of the main control console is not accessible to people. So there is no panel lighting in the MCR at the safety-related panels for interior maintenance. Confirm that there are no safety-related panels besides main control console in the MCR that will require lighting for maintenance.

09.05.03-6

9.5.3-10 S01

In response to RAI 9.5.3-10, you have stated DCD, Tier 1, Table 2.6.6-1 will be revised. The staff understands that this will be updated in a future DCD revision. Provide a copy of the information which will be presented in the DCD revision and identify the revision in which the change will appear.