

US-APWRRRAIsPEm Resource

From: Ciocco, Jeff
Sent: Monday, March 04, 2013 10:24 AM
To: us-apwr-rai@mhi.co.jp; US-APWRRRAIsPEm Resource
Cc: Walker, Jacqwan; Junge, Michael; Ward, William; Hamzehee, Hossein
Subject: US-APWR Design Certification Application RAI 1004-6995 (18)
Attachments: US-APWR DC RAI 1004 COLP 6995.pdf

MHI,

The attachment contains the subject request for additional information (RAI). This RAI was sent to you in draft form. Your licensing review schedule assumes technically correct and complete responses within 30 days of receipt of RAIs. However, MHI is currently working to provide the NRC with a schedule of ongoing HFE work. The schedule will include dates for the submission of this RAI response. We will adjust the schedule accordingly.

Please submit your RAI response to the NRC Document Control Desk.

Thank you,

Jeff Ciocco
US-APWR Projects
New Nuclear Reactor Licensing
301.415.6391
jeff.ciocco@nrc.gov



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Created By: Jeff.Ciocco@nrc.gov

Recipients:

"Walker, Jacqwan" <Jacqwan.Walker@nrc.gov>
Tracking Status: None
"Junge, Michael" <Michael.Junge@nrc.gov>
Tracking Status: None
"Ward, William" <William.Ward@nrc.gov>
Tracking Status: None
"Hamzehee, Hossein" <Hossein.Hamzehee@nrc.gov>
Tracking Status: None
"us-apwr-rai@mhi.co.jp" <us-apwr-rai@mhi.co.jp>
Tracking Status: None
"US-APWRRRAIsPEm Resource" <US-APWRRRAIsPEm.Resource@nrc.gov>
Tracking Status: None

Post Office: HQCLSTR01.nrc.gov

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Request for Additional Information 1004-6995

Issue Date: 3/4/2013

Application Title: US-APWR Design Certification - Docket Number 52-021

Operating Company: Mitsubishi Heavy Industries

Docket No. 52-021

Review Section: 18 - Human Factors Engineering
Application Section:

QUESTIONS

18-242

10 CFR 50.120(b)(ii)(2) states:

The training program must be derived from a systems approach to training as defined in 10 CFR 55.4, and must provide for the training and qualification of the following categories of nuclear power plant personnel:

- (i) Non-licensed operator.
- (ii) Shift supervisor.
- (iii) Shift technical advisor.
- (iv) Instrument and control technician.
- (v) Electrical maintenance personnel.
- (vi) Mechanical maintenance personnel.
- (vii) Radiological protection technician.
- (viii) Chemistry technician.
- (ix) Engineering support personnel.

In the proposed revision (strikeout version provided following the September 6, 2012 public meeting) of DCD Section 18.5.2 "Methodology," it states:

The plant personnel who are addressed by the HFE program include licensed control room operators (ROs and SRO) as defined in 10 CFR 55 (Reference 18.5-4), and the following categories of personnel defined in 10 CFR 50.120 (Reference 18.5-5):

The revision then provides the same list as 10 CFR 50.120, with the exception that it removes "Shift supervisors" and provides "Shift managers" as one of the categories of personnel addressed by the HFE program. This category of personnel category is not listed in 10 CFR 50.120. Thus, there is concern that shift supervisors are being excluded from the requirements of 10 CFR 50.120, and that they are not being designated as licensed control room operators in the US-APWR HFE program. Please clarify the use of this category within the DCD.

18-243

There are various instances within the S&Q IP (MUAP-10008), Revision 2, where some of the text appears to be out of place, or that is unclear. Please see the below occurrences:

Section 4.2.1.1 "Minimum and Maximum Operating Staff Numbers"

In the second to the last paragraph that starts with "The second RO," the fourth sentence describes additional duties of the second RO. Is this sentence trying to communicate that the second RO will be used at the local control stations in instances where there is a loss of all

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non-safety HSI, and where, during that time, continued plant operation is needed?

Section 4.2.1.1 "Minimum and Maximum Operating Staff Numbers"

In the second to the last paragraph that starts with "The second RO," there is text within brackets that states "This tells me we will only evaluate the role of the second RO for a single most limiting condition. This is not correct. We need to ensure that a single second RO is sufficient for all conditions where local actions are required. This will come out of the TA." Is this sentence saying that there will not be a second RO used for any/all conditions? This seems to contradict what the paragraph itself is describing... that the second RO is used during abnormal conditions. Please clarify.

Section 4.3.1 "Operating Experience Review"

In the third paragraph there is text within brackets that states "this section is not related to operating staff." Is this statement saying that the S&Q operating experience review does not take into account operating staff?

Section 4.3.1 "Operating Experience Review"

In the third paragraph there is text within brackets that states "There is no reason to delete the following examples. These are good examples that help to explain the sentence above."

Section 4.3.1 "Functional Requirements Analysis and Function Allocations"

This section has the same paragraph number as the previous section.

