

US-APWRRRAIsPEm Resource

From: Buckberg, Perry
Sent: Wednesday, January 08, 2014 10:22 AM
To: 'us-apwr-rai@mhi.co.jp'; US-APWRRRAIsPEm Resource
Cc: Dixon-Herrity, Jennifer; Roy, Tarun; Hilsmeier, Todd; Caruso, Mark
Subject: US-APWR Design Certification Application RAI 1069-7354 (17 - Reliability Assurance Program)
Attachments: US-APWR DC RAI 1069 SPRA 7354.pdf

MHI,

The attachment contains the subject 'Reliability Assurance Program' related request for additional information (RAI). This RAI was sent to you in draft form on January 6, 2014 resulting in no need for clarification. Your licensing review schedule assumes technically correct and complete responses when the response is issued.

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

Thanks,

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U.S. Nuclear Regulatory Commission

Office of New Reactors

Mail Stop T-06C20M

Washington, DC, 20555-0001

Hearing Identifier: Mitsubishi_USAPWR_DCD_eRAI_Public
Email Number: 139

Mail Envelope Properties (44CD2E65B0FF0E499CB32BC30CF781F0014C3807DFF2)

Subject: US-APWR Design Certification Application RAI 1069-7354 (17 - Reliability Assurance Program)
Sent Date: 1/8/2014 10:22:00 AM
Received Date: 1/8/2014 10:22:16 AM
From: Buckberg, Perry

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Post Office: HQCLSTR01.nrc.gov

Files	Size	Date & Time
MESSAGE	729	1/8/2014 10:22:16 AM
US-APWR DC RAI 1069 SPRA 7354.pdf		126041

Options

Priority: Standard
Return Notification: No
Reply Requested: No
Sensitivity: Normal

Expiration Date:
Recipients Received:

REQUEST FOR ADDITIONAL INFORMATION 1069-7354

Issue Date: 1/6/2014

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

Operating Company: Mitsubishi Heavy Industries

Docket No. 52-021

17.04 - Reliability Assurance Program (RAP)

QUESTIONS:

17.04-69

The following systems, structures, and components (SSCs) are not included in the applicant's design reliability assurance program (D-RAP) (i.e., not included in Table 17.4-1, "Risk-Significant SSCs," of the US-APWR DCD Tier 2):

- SSCs associated with cavity water level and cumulative firewater flow amount, which appear in Table 19.2-10, "Equipment and Instruments Used in Severe Accident Management," of the US-APWR DCD Tier 2, and
- Dedicated batteries (and associated SSCs) for 11 out of the 20 hydrogen igniters.

From the regulatory audit of the applicant's D-RAP records and procedures on October 2, 2013, it is not clear whether the expert panel had evaluated these SSCs for inclusion in the D-RAP. These SSCs are included in the severe accident/equipment survivability evaluations discussed in Chapter 19 of the US-APWR DCD Tier 2, which suggests these SSCs should be included in D-RAP.

The staff requests that the applicant provide the basis for not including these SSCs in Table 17.4-1 of the US-APWR DCD Tier 2 (i.e., provide the expert panel's assessment of the risk significance of these SSCs).

17.04-70

The staff requests that the applicant address the following comments related to Section 17.4, "Reliability Assurance Program," of the US-APWR DCD Tier 2:

- Part a of Section 17.4.7.1, "SSCs Identification," in Revision 3 of the DCD states: "Component based FVs are also estimated and used to identify risk(-)significant SSCs." The staff found this statement acceptable. However, in Revision 4 of the DCD, this statement was changed to state: "Component based FVs are also estimated and used to identify site-specific SSCs." The staff found this change unacceptable, because component based Fussell-Vesely (FV) values are used to facilitate the identification of risk-significant SSCs and not site-specific SSCs.
- Section 17.4.7.2, "Expert Panel," in Revision 3 of the DCD states: "The level of education and experience of voting member of the RAP EP is defined in ..." The staff found this statement acceptable. However, in Revision 4 of the DCD, this statement was changed to state: "The level of education and experience of voting numbers of the D-RAP EP is defined in ..." It is unclear to the staff what is meant by "voting numbers" in the above statement.