

REQUEST FOR ADDITIONAL INFORMATION 98-1587 REVISION 1

11/10/2008

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

SRP Section: 19 - Probabilistic Risk Assessment and Severe Accident Evaluation
Application Section: Chapter 19 -PRA

QUESTIONS for PRA Licensing, Operations Support and Maintenance Branch 1 (AP1000/EPR Projects) (SPLA)

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US-APWR DCD Rev. 1 Chapter 19, Table 19.1-54 and MUAP-07030(R1)- Proprietary Document, US-APWR Probabilistic Risk Assessment, Table 23.3-1:

These two tables describe the internal initiating events considered in the fire PRA. The descriptions and contents of the initiating events are not consistent in these two tables. Please clarify if these two tables address the same initiating events.

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US-APWR DCD Rev. 1 Chapter 19, Table 19.1-55 and MUAP-07030(R1)- Proprietary Document, US-APWR Probabilistic Risk Assessment, Table 23.10-1:

(a) The main control room is listed in Table 19.1-55 but it is not listed in Table 23.10-1. On page 23-43 of US-APWR PRA Chapter 23, FA2-203 is listed as one of the compartments after screening, but this compartment is not listed in Table 19.1-55 and Table 23.1-10. Please verify the accuracy of the tables and text.

(b) The results of the quantitative screening are listed in Table 23.10-1 which are extracted from Table 23.8-1 based on the screening criteria. The results are highly asymmetrical. For example, the CDF of FA1-101-17 (NW quadrant of C/V 3F) is about two orders of magnitude higher than that of other quadrants. Please provide explanations of the results.

Same for the following:

1. CDF of FA1-101-24 (SW quadrant of C/V 4F) is about two orders of magnitude higher than that of other quadrants.
2. CDF's of FA2-202('A' 1E), FA2-203('B' 1E), and FA2-205('D' 1E) are two orders of magnitude higher than that of FA2-204('C' 1E) for the SLBO event.
3. CDF's of FA2-304('A' 1E) and FA2-309('D' 1E) are three times higher than those of FA2-307('B' 1E) and FA2-312 ('C' 1E) for the TRANS event.
4. CDF's of FA3-104('A' 1E GTG) and FA3-111('D' 1E GTG) are about three times higher than those of FA3-103('B' 1E GTG) and FA3-109 ('C' 1E GTG).

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5. CDF's of FA3-117('A' Battery Charger Room) and FA3-123('D' Battery Charger Room) are four times higher than those of FA3-118 ('B' Battery Charger Room) and FA3-122('C' Battery Charger Room)