

REQUEST FOR ADDITIONAL INFORMATION NO. 69-1150 REVISION 0

9/8/2008

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

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

Application Section: 19.1.5.2

SPLA Branch

QUESTIONS

19-111

Chapter 19, Section 19.1.5.2, Internal Fire Risk Evaluation:

The fire PRA methodology for the US-APWR is based on NUREG/CR-6850. The applicant listed the 16 tasks in developing the fire PRA based on this methodology. It was not clear to the staff how many of these tasks were actually carried out by the applicant.

Please provide a brief summary in Section 19.1.5.2 discussing how many of these tasks were employed in the design phase and what assumptions/rationale were made if some of the tasks were not used in the design phase.

19-112

Chapter 19, Section 19.1.5.2.1, Description of Internal Fire Risk Evaluation:

In the paragraph discussing the assumptions and engineering judgments (Page 19.1-73):

Item a, All fire doors provided to the fire barriers between the redundant safety train fire compartments are normally closed.

If these doors are normally closed, when and how often might they be opened? Please clarify if these fire doors are assumed closed all the time in the course of the PRA fire evaluation.

19-113

Chapter 19, Section 19.1.5.2.2, Results from the Internal Fires Risk Evaluation:

In the paragraph describing the ten fire compartments after screening, it is stated that “.. Within these 10 compartments, detailed fire modeling is judged to be unnecessary for those with contribution to CDF less than 1.0E-7/year.” (Page 19.1-76)

REQUEST FOR ADDITIONAL INFORMATION NO. 69-1150 REVISION 0

Please provide the basis for this judgment that detailed fire modeling is not necessary.

19-114

Chapter 19, Section 19.1.5.2.2, Results from the Internal Fires Risk Evaluation:

It is stated that the design of the fire compartment FA601-03 (T/B electric room) was improved by using fire PRA (Page 19.1-76).

- a. There was no fire compartment FA601-03 listed in the Fire Compartment Table, there is an FA6-101-03 listed in the Table. Please verify if this is the correct compartment.
- b. Please discuss what the original design was in the fire compartment FA601-03 before the fire PRA evaluation and the specific improvements that were made.

19-115

Chapter 19, Section 19.1.5.2, Internal Fire Risk Evaluation:

Please provide the risk insights from the fire PRA evaluation per Standard Review Plan (NUREG 0800) Section 19.0 (III.1.B).