REQUEST FOR ADDITIONAL INFORMATION 610-4761 REVISION 2

7/20/2010

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

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

QUESTIONS for PRA and Severe Accidents Branch (SPRA)

19-442

The staff reviewed MHI's response to RAI 19-140 and RAI 19-408 regarding the management of shutdown risk using the Maintenance Rule and implementation of a Configuration Risk Management Program. The staff reviewed NUMARC 93-01, Section 11, Revision 2, dated February 22, 2000, Scope of Assessment for Shutdown Conditions. The method of assessment for shutdown conditions is based on NUMARC 91-06 which involves qualitative assessments with regard to key safety functions. Qualitative assessments do not assure that the reported low shutdown risk core damage frequency estimates reported in the USAPWR DCD will be achieved, and therefore, are not a substitute for TS. As discussed in Standard Review Plan (NUREG-0800) Chapter 19, the design phase PRA is used to identify and support the development of Technical Specifications (TS).

Furthermore, in SECY 97-168, the staff identified that, "a significant level of safety is dependent upon measures that are not traceable to specific underlying regulations, and that could, therefore be withdrawn by the licensee without prior staff approval." Therefore, in understanding how this design represents a reduction in risk compared to operating plants, the staff requests:

(1) a sensitivity study which removes all credit for systems not required in TS.
(2) a discussion why a standby injection capability (such as the safety injection pumps) is not covered by TS.