REQUEST FOR ADDITIONAL INFORMATION 811-5958 REVISION 0

8/22/2011

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

SRP Section: 15.01.01 - 15.01.04 - Decrease in Feedwater Temperature, Increase in Feedwater Flow, Increase in Steam Flow, and Inadvertent Opening of a Steam Generator Relief or Safety Valve
Application Section: 15.1.2

QUESTIONS for Reactor System, Nuclear Performance and Code Review (SRSB)

15.01.01 - 15.01.04-9

The increase in feedwater flow event (DCD 15.1.2) was performed with manual rod control. The findings of a sensitivity evaluation comparing results for manual and automatic rod control for the DCD 15.1.3 increase in steam flow event were used to explain why evaluation of automatic rod control was not required for 15.1.2. The staff is unable to reach the same conclusion. From DCD Figures 15.1.3-12, 15.1.3-18, and 15.1.3-24, it is seen that the automatic rod control cases have more limiting DNBRs than the manual rod control case for the 15.1.3 event. Because the 15.1.2 event with manual rod control has an even more limiting DNBR than the 15.1.3 event (DCD Figures 15.1.2-7 and 15.1.3-24), it is possible that the 15.1.2 event run with automatic rod control will become the most limiting DNBR event for the AOOs analyzed in 15.1.1 – 15.1.4. Similar arguments can be made that the limiting RCS pressure and main steam system pressure have not been captured for this series of events. In order to find that the most limiting event is identified in the DCD, explain why it is not necessary to consider the increase is feedwater flow event with automatic rod control.