REQUEST FOR ADDITIONAL INFORMATION 809-5957 REVISION 3

8/22/2011

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

SRP Section: 15 - Introduction - Transient and Accident Analyses
Application Section: 15.0

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

15-33

The application states it is not necessary to include the loss of offsite power (LOOP) case for all events because the three second delay between the reactor/turbine trip and LOOP assures that the minimum DNBR is captured, which is the principal concern with LOOP. The response to RAI 2287, Question 15.0.0-2 demonstrates that this approach is bounding with respect to minimum DNBR, peak RCS pressure, peak fuel centerline temperature and peak cladding temperature, but not peak secondary side pressure. Provide justification that this approach bounds peak secondary side pressure. Because the staff could not find a case designed to maximize secondary side pressure, include a discussion of how the peak secondary side pressure event was identified.

15-34

As seen in Table 15.0.0-10.2 (from response to RAI 2287, Question 15.0.0-10), the Chapter 15 transient analyses models set the main steam safety valves (MSSV) to open at 1236 psia(1221.3 psig) . In order to find that input to the Chapter 15 safety analyses is consistent with the range of values specified in the technical specifications (TS), justify the selection of a setpoint that does not bound all the MSSV lift settings defined in TS 3.7.1 (1185-1244 psig plus 1% uncertainty) .