

# REQUEST FOR ADDITIONAL INFORMATION SBPA 5753 REVISION 3

5/11/2011

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

SRP Section: 09.01.03 - Spent Fuel Pool Cooling and Cleanup System  
Application Section: 8.3.1 and 9.1.3

QUESTIONS for Balance of Plant Branch 1 (SBPA)

09.01.03-8

DCD Tier 2 Section 8.3.1.1.3.6 "Load Shedding and Sequencing Circuits" states that when a loss of coolant accident (LOCA) occurs concurrent or following a loss of offsite power (LOOP):

- the emergency core cooling system (ECCS) actuation signal would initiate the ECCS load sequence;
- the load sequence would shed all loads not needed by the ECCS (Except the motor control center (MCC));
- the spent fuel pool (SFP) cooling system is not needed by the ECCS, therefore, this sequence will shutdown the SFPCS pumps.

This scenario is not consistent with system description presented in DCD Tier 2 Section 9.1.3, "Spent Fuel Pit Cooling and Purification System," which states that:

*During a loss of offsite power (LOOP), the emergency power sources supply power to the SFP pumps so that the SFP cooling function is maintained.*

The staff requests that the applicant clarify this apparent discrepancy. If the description in DCD Tier 2 Section 9.1.3 is not correct and the SFP cooling is stopped by the ECCS actuation signal, the applicant needs to modify DCD Tier 2 Section 9.1.3 to address this scenario and the following:

- a) The applicant should describe the safety related instruments credited to monitor the SFP conditions (e.g., temperature and water level) while the SFP cooling system is shutdown;
- b) The applicant should describe the minimum time available to re-establish SFP cooling;
- c) The applicant should describe the operator actions required to re-establish SFP cooling in a timely manner.