

REQUEST FOR ADDITIONAL INFORMATION 842-5863 REVISION 3

10/18/2011

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

SRP Section: 03.04.01 - Internal Flood Protection for Onsite Equipment Failures
Application Section: 3.4.1 - Flood Protection

QUESTIONS for Balance of Plant Branch 1 (SBPA)

03.04.01-31

In response to Question 3.4.1-25, the applicant stated that that postulated breaks and cracks are defined in DCD Subsection 3.6.2.1.3, and for the moderate energy fluid systems piping, leakage cracks are not postulated in one inch nominal diameter and smaller piping, therefore the cracks were not postulated for in the sanitary piping in the main control room (MCR) internal flooding evaluation.

SRP 3.4.1 Section II, "Acceptance Criteria," provides guidance as to how the requirements of GDC 2 may be met. Item 1 of that SRP states that "meeting the requirements of GDC 2 includes evaluating the effects of flooding from full circumferential failures of non-seismic, moderate-energy piping, which is not considered in SRP Section 3.6.2." A break of small diameter piping in the MCR that could result in equipment failure if the design (piping routing, drains, etc) does not take adequate measures to prevent wetting of equipment due to spray or flooding.

In regards to protection of the safety-related SSCs in the MCR from wetting and/or flooding in the event of a break or crack in the small diameter lines, such as sanitary piping, describe the flood protection features incorporated in the design of the control room and discuss why they provide adequate protection.

03.04.01-32

In response to Questions 3.4.1-1 and 3.4.1-27, the applicant stated that several means are used to assure the functionality of watertight doors, and that these methods include remote indication of door positions provided to operators, and periodic visual inspections and functional tests. However, the DCD does not contain a COL information item requiring the the COL applicant to implement inspection and testing of the watertight doors, or on developing maintenance programs to ensure seal integrity is maintained. The applicant is requested to:

(a) Discuss in detail what constitutes acceptable maintenance, and what inspections and test should be conducted by the COL applicant. A discussion of the essential elements of the maintenance, and what inspections and test for the watertight doors/seals should be provided in the DCD.

(b) Identify in the DCD, a COL information item, requiring that the COL applicant address testing, inspection and maintenance of watertight doors/seals in the COL application.

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