REQUEST FOR ADDITIONAL INFORMATION NO. 198-2069 REVISION 0

2/9/2009

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

SRP Section: 14.03.11 - Containment Systems and Severe Accidents - Inspections, Tests, Analyses, and Acceptance Criteria
Application Section: DCD Section 2.11

QUESTIONS for Construction Inspection and Allegations Branch (CCIB)

14.03.11-18

The following typographical or editorial errors were noted in US-APWR Tier 2, Chapter 6, Section 6.2 and Tier 1, Chapter 2, Section 2.11:

1. Page 6.2-3, top paragraph, last sentence: "The effects of maximum injection flow…" should be "The effects of minimum injection flow…"

14.03.11-19

Discuss the verification of proper post-tensioning of the containment tendons prior to performance of the containment Structural Integrity Test (SIT).

Design commitment noted in item 1 of Table 2.11.1-2 states that the PCCV pressure boundary is designed to meet ASME Code, Section III requirements and Refers to Section 2.2 ITAAC for the appropriate Inspections, Tests and Analyses. A critical part of the containment performance capabilities is the post-tensioning of the installed tendons. Neither Section 2.2 ITAAC nor Section 2.11 ITAAC discusses the verification of proper post-tensioning prior to the performance of the SIT.

Also applicable to the following ITAAC:

ITAAC Item 2 in Table 2.11.1-2

14.03.11-20

ITAAC Item 5.b in Table 2.11.2-2

This ITAAC should be configured with same three sub-steps as Item 5.a in this same table.

Applicable to the following ITAAC:

ITAAC Item 5.b in Table 2.11.3-5

14.03.11-21

ITAAC Item 6.a.i in Table 2.11.2-2

The design commitment is more definitive than the acceptance criteria for this ITAAC. The acceptance criterion can be more definitive than the design commitment, but not vice versa.

Applicable also to the following ITAAC:

ITAAC Item 6.a.i in Table 2.11.3-5

14.03.11-22

ITAAC Item 6.b in Table 2.11.2-2

Revise the inspection, test, and analysis and the associated acceptance criteria to more closely verify the design commitment in item 6.b in Table 2.11.2-2.

The design commitment is to verify that components listed in Table 2.11.2-1 are powered from their respective Class 1E divisions. Injection of a test signal does not verify where the components derive their power by itself. The presence of a test signal at a component does not verify a component will operate.

The acceptance criterion should state that the signal is present only for the equipment associated with the division being tested.

The ITA should state that the divisions are tested one at a time.

Applicable also to the following ITAAC:

ITAAC Item 6.b in Table 2.11.3-5

14.03.11-23

ITAAC Item 6.c in Table 2.11.2-2

The design commitment is concerned with separation between Class 1E divisions and between those divisions and non-Class 1E cable. The acceptance criterion is concerned only with raceways. What about those other plant installations other than raceways where separation has to be maintained between Class 1E divisions?

14.03.11-24

ITAAC Items 8 and 9 in Table 2.11.2-2

The acceptance criteria of these two ITAAC state that the closure times and the leakage of the valves are within design limits. What are those design limits, and why are they not stated?

14.03.11-25

ITAAC Item 7.a in Table 2.11.3-5

The ITA rand acceptance criterion eference sections of the design description in subsection 2.11.2. The ITAAC states that the CSS system provides containment isolation, whereas it is the CIS systems that does that. In addition, the ITAAC should reference another ITAAC not a section of the design description.

14.03.11-26

ITAAC Items 10.c and 10.d in Table 2.11.3-5

The design commitments reference an interlock that prevents the stated conditions from occurring. The acceptance criteria should state that an interlock prevents the stated conditions from occuring also. The operating procedures could prevent the stated conditons from occuring by operator actions. The acceptance criteria need to be clarified.

Revise the acceptance criteria listed in item 10d in Table 2.11.3-5 to identify the required condition of the two in-series CS/RHR pump hot leg isolation valves.

The design commitment is to provide an interlock that permits opening the containment spray header isolation valve only if the corresponding two in-series CS/RHR pump hot leg isolation valves are closed. The current acceptance criteria do not require these valves to be closed.

14.03.11-27

ITAAC Item 12 in Table 2.11.3-5

This ITAAC is concerned with RSC displays/and or controls for the CSS are identified in Table 2.11.3-4. The acceptance criteria only is concerned with controls at the RSC, however there should also be controls and alarms at the MCR panels. Revise this ITAAC according to whether controls and alarms are available at the MCR panels.