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TOKYO, JAPAN

July 25, 2012

Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Attention: Mr. Jeffrey A. Ciocco

Docket No. 52-021
MHI Ref: UAP-HF-12212

Subject: MHI's Revised Response to US-APWR DCD RAI No. 892-6169 Revision 3 (SRP 14.03.03), Question 14.03.03-26

Reference: 1) "Request for Additional Information No. 892-6169 Revision 3, SRP Section 14.03.03 – Piping Systems and Components – Inspections, Tests, Analyses, and Acceptance Criteria - Application Section: 14.3.3", dated January 18, 2012 (ML120250638).
2) "MHI's Response to US-APWR DCD RAI No. 892-6169 Revision 3 (SRP 14.03.03)", UAP-HF-12045, dated February 17, 2012 (ML12053A066).

With this letter, Mitsubishi Heavy Industries, Ltd. ("MHI") transmits to the U.S. Nuclear Regulatory Commission ("NRC") a document entitled "Revised Response to Request for Additional Information No. 892-6169 Revision 3, Question 14.03.03-26."

Enclosure 1 contains the revised response to Question 14.03.03-26 that is contained within Reference 1. The revision of the response was made to address additional NRC staff concerns that were specified during a conference call on June 28, 2012 related to the proposed markup for DCD Section 14.3.4.3 attached to Reference 2. This revised response supersedes the previously submitted response to RAI 892-6169, Question 14.03.03-26 in Reference 2 in its entirety.

Please contact Mr. Joseph Tapia, General Manager of Licensing Department, Mitsubishi Nuclear Energy Systems, Inc. if the NRC has questions concerning any aspect of this submittal. His contact information is below.

Sincerely,

Y. Ogata

Yoshiki Ogata,
Director- APWR Promoting Department
Mitsubishi Heavy Industries, LTD.

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NRO

Enclosure:

1. Revised Response to Request for Additional Information No. 892-6169 Revision 3, Question 14.03.03-26

CC: J. A. Ciocco
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Enclosure 1

UAP-HF- 12212
Docket No. 52-021

Revised Response to Request for Additional Information
No. 892-6169 Revision 3, Question 14.03.03-26

July 2012

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

07/25/2012

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

RAI NO.:	**NO. 892-6169 REVISION 3**
SRP SECTION:	**14.03.03 – PIPING SYSTEMS AND COMPONENTS INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA**
APPLICATION SECTION:	**14.03.03**
DATE OF RAI ISSUE:	**1/18/2012**

QUESTION NO.: 14.03.03-26

In Rev. 3 of US-APWR DCD Tier 1, Table 2.3.2, ITAAC Items 4) and 5), both as-designed and as-built pipe break hazard analysis reports are addressed. However, in DCD Tier 2 Chapter 14, Section 14.3.4.3 under Generic ITAAC, only as-built pipe break analysis report is discussed. The applicant is requested to correct this inconsistency between DCD Tier 1, Table 2.3.2 and DCD Tier 2 Section 14.3.4.3. Specifically, Bullet 3 of DCD Tier 2 Section 14.3.4.3 should address both as-designed and as-built pipe break hazard analysis reports.

ANSWER:

Tier 2 Section 14.3.4.3, "Generic ITAAC," bullets are revised to provide consistency with Tier 1 Table 2.3-2 ITAAC by addressing both as-designed and as-built pipe break hazard analyses. The bullet specifies that the pipe break hazard analysis report reconciles the differences between the as-designed and as-built configurations, if any.

The ASME Code Section III PSC reconciliation and LBB evaluation description is moved from "Generic ITAAC" to "ITAAC for specific systems" to be consistent with Tier 1 where they are found in Tier 1 Sections 2.4, 2.7 and 2.11, rather than Tier 1 Section 2.3 on generic ITAAC.

Impact on DCD

Tier 2 Section 14.3.4.3 is revised as discussed in the answer above and shown on the attached markup. (See Attachment-1.)

Impact on R-COLA

There is no impact on the R-COLA.

Impact on S-COLA

There is no impact on the S-COLA.

Impact on PRA

There is no impact on the PRA.

Impact on Technical / Topical Reports

There is no impact on any Technical / Topical Reports.

This completes MHI's response to the NRC's question.

designed to retain their pressure boundary integrity and functional capability under internal design and operating pressures and design-basis loads.

- Requiring the existence of an as-designed pipe break hazard analysis report that documents dynamic effects analysis results for high-energy piping systems and environmental effects analysis results for the high-energy and moderate-energy piping systems. DCD_14.03.03-26 DCD_14.03.03-26 S01

- Requiring the existence of a pipe break analysis report that documents that ~~the~~ as-built high-energy piping systems including protective features and moderate-energy piping systems are installed in accordance with the as-designed pipe break hazard analysis~~SSCs that are required to be functional during and following a safe shutdown earthquake have adequate high-energy pipe break mitigation features~~. The report also reconciles the differences between the as-designed and as-built configurations, if any. DCD_14.03.03-26 S01 DCD_14.03.03-26 S01

- Requiring the existence of an LBB evaluation report that documents that ~~the as-built~~ piping stress values~~and piping materials~~ comply with the LBB acceptance criteria for the systems to which LBB is applied.

- ~~Requiring the existence of a report that documents the results of an as-built reconciliation confirming that the piping systems are built in accordance with the ASME Code certified stress report.~~ DCD_14.03.03-26

ITAAC for specific systems typically verify the following:

- Reconciliation analysis using as-designed and as-built information confirming that the as-built piping systems and components are built in accordance with the ASME Code Section III design report DCD_14.03.03-26 S01 DCD_14.03.03-26

- Existence of an LBB evaluation report that documents that the as-built piping and piping materials comply with the as-designed LBB acceptance criteria

- Requirements such as piping and component safety classification

- Fabrication, especially pressure-boundary weld quality

- Hydrostatic testing

- Equipment seismic and dynamic qualification

- Design qualification of valves

Such ITAAC also address the verification of applicable dynamic qualification records and vendor test records, as well as performance of appropriate in-situ tests. All of these matters are addressed for safety-related systems, and appropriate ones are addressed for non-safety systems.