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TOKYO, JAPAN

July 11, 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-12185

Subject: **MHI's Response to US-APWR DCD RAI No. 935-6464 Revision 3 (SRP 14.03.03)**

Reference: 1) "Request for Additional Information No. 935-6464 Revision 3, SRP Section **14.03.03 – Piping Systems and Components Inspections, Tests, Analyses, and Acceptance Criteria** - Application Section: Tier 1 Section 2.3", dated May 29, 2012.

With this letter, Mitsubishi Heavy Industries, Ltd. ("MHI") transmits to the U.S. Nuclear Regulatory Commission ("NRC") a document entitled "Response to Request for Additional Information No. 935-6464 Revision 3 (SRP 14.03.03)."

Enclosed is the response to the question contained within Reference 1.

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 provided below.

Sincerely,

Y. Ogata

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

Enclosure:

1. Response to Request for Additional Information No. 935-6464 Revision 3 (SRP 14.03.03)

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NRO

CC: J. A. Ciocco
J. Tapia

Contact Information

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Enclosure 1

UAP-HF- 12185
Docket No. 52-021

Response to Request for Additional Information No. 935-6464
Revision 3 (SRP 14.03.03)

July 2012

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

7/11/2012

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

RAI NO.:	**NO. 935-6464 REVISION 3**
SRP SECTION:	**14.03.03 – PIPING SYSTEMS AND COMPONENTS INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA**
APPLICATION SECTION:	**TIER 1 SECTION 2.3**
DATE OF RAI ISSUE:	**5/29/2012**

QUESTION NO.: 14.03.03-28

In Tier 1 Table 2.3-2, ITAAC 5, the ITA should require both inspection and analysis, not just analysis.

ANSWER:

MHI will revise DCD Tier 1, Table 2.3-2, item 5 to add "inspection" to the ITA. Additionally, in order to clarify the ITAAC, the Design Commitment will be revised to make it more consistent with the ITA and Acceptance Criteria.

Impact on DCD

DCD Tier 1, Subsection 2.3.1 and Table 2.3-2, item 5 will be revised as shown in 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 the Technical / Topical Reports.

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

the reactor can be shut down safely and maintained in a safe, cold shutdown condition without offsite power.

5. Safety-related SSCs are ~~reconciled with the analyses results of~~protected against postulated pipe rupture as described in the as-designed pipe break hazard analysis report(s). DCD_14.03.03-28

2.3.2 Inspections, Tests, Analyses, and Acceptance Criteria

Table 2.3-2 describes the design ITAAC for piping systems and components.

Table 2.3-2 Piping Systems and Components Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 3 of 3)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
4. Safety-related SSCs are designed to be protected against or are qualified to withstand the dynamic and environmental effects associated with analyses of postulated failures in high-energy piping and moderate-energy piping systems identified in Table 2.3-1 so that the reactor can be shut down safely and maintained in a safe, cold shutdown condition without offsite power.	4.i Dynamic effects analysis will be performed for the high-energy piping systems identified in Table 2.3-1. The analysis includes the evaluation of pipe whip and jet impingement.	4.i Pipe break hazard analysis report(s) exist and conclude that for each postulated piping failure for the high-energy piping systems identified in Table 2.3-1: (A) piping stresses in the containment penetration area are within allowable stress limits, (B) pipe whip restraints and jet shield designs can mitigate pipe break loads, and (C) loads on safety-related SSCs are within design load limits.
	4.ii Environmental effects analysis will be performed for the high-energy piping and moderate-energy piping systems identified in Table 2.3-1. The analysis includes the evaluation for wetting from spray, flooding, room pressurization, and temperature effects, as applicable.	4.ii Pipe break hazard analysis report(s) exist and conclude that for each postulated piping failure of the high-energy and moderate-energy systems identified in Table 2.3-1, the safety related SSCs are protected against or are qualified to withstand the environmental effects of postulated failures.
5. Safety-related SSCs are ~~reconciled with the analyses results of~~protected against postulated pipe rupture as described in the as-designed pipe break hazard analysis report(s).	5. ~~A~~Inspection and reconciliation analysis of the as-built high-energy piping and moderate-energy piping using as-designed pipe break hazard analysis report(s) and as-built information will be performed.	5. Pipe break hazard analysis report(s) exist and conclude that the as-built high-energy piping systems including the protective features and moderate-energy piping systems are installed in the as-built plant as described in the as-designed pipe break hazard analysis report(s).

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