


MITSUBISHI HEAVY INDUSTRIES, LTD.
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TOKYO, JAPAN

April 9, 2010

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-10098

Subject: MHI's Response to US-APWR DCD RAI No. 549-4390 REVISION 2

Reference: 1) "Request for Additional Information 549-4390 Revision 2, SRP Section: 05.02.05 - Reactor Coolant Pressure Boundary Leakage Detection, Application Section: 5.2.5," dated March 15, 2010.

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. 549-4390 Revision 2."

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

Please contact Dr. C. Keith Paulson, Senior Technical Manager, Mitsubishi Nuclear Energy Systems, Inc. if the NRC has questions concerning any aspect of the submittals. His contact information is below.

Sincerely,



Yoshiaki Ogata
General Manager- APWR Promoting Department
Mitsubishi Heavy Industries, LTD.

Enclosure:

1. Response to Request for Additional Information No. 549-4390 Revision 2

CC: J. A. Ciocco
C. K. Paulson

Contact Information

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Docket No. 52-021
MHI Ref: UAP-HF-10098

Enclosure 1

UAP-HF-10098
Docket Number 52-021

Response to Request for Additional Information
No. 549-4390 Revision 2

April 2010

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

4/9/2010

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

RAI NO.: NO. 549-4390 REVISION 2
SRP SECTION: 05.02.05 – Reactor Coolant Pressure Boundary Leakage Detection
APPLICATION SECTION: 5.2.5
DATE OF RAI ISSUE: 3/15/2010

QUESTION NO. : 05.02.05-12

Revision 2 of the DCD updated reference 5.2-15 for RG 1.45 to show Rev. 1, May 2008. However, with Revision 1 of RG 1.45, the title also changed to "Guidance on Monitoring and Responding to Reactor Coolant System Leakage."

In addition, the applicant states the compliance with "positions 5 and 7 of regulatory guide 1.45" as part of the discussion in Section 5.2.5.4.1.1 about leak rate sensitivity, response and alarm in the main control room (MCR). The staff noted that these Regulatory Position Numbers 5 and 7 appear to be taken from Revision 0 (May 1973) of RG 1.45. Similarly, the statement made in DCD, Tier 2 Section 5.2.5.8 about the limiting condition for reactor coolant leakage in the Technical Specifications (Chapter 16) being "In accordance with the position 9 of regulatory guide 1.45," also appears to be in reference to Revision 0 (May 1973) of the regulatory guide.

It appears that the DCD was not fully updated in reference to RG 1.45 as evidenced by the mixing of Revision 1 and Revision 0. Therefore, the staff requests the applicant to update Chapter 5 (and anywhere else in the DCD) to be consistent in reference to RG 1.45. Revise the references to the title of Regulatory Guide 1.45, Revision 1, in the entry for reference 5.2-15, section 5.2.5.1 and throughout the DCD and correct the regulatory position identifiers within the DCD.

ANSWER:

The DCD will be revised as shown under "Impact on DCD" below to correct the title and revision of RG 1.45. Note that the changes for DCD Tier 2, Revision 2, Table 1.9.1-1 and Subsection 11.5.6 have been described in the response to RAI No. 522-4247, Revision 2, Question 11.05-18 (MHI letter UAP-HF-10071, dated March 8, 2010).

In addition, the references in Technical Specification Bases 3.4.13 and 3.4.15 have been revised to specify Revision 1 as the applicable RG 1.45 reference. The DCD Tier 2, Revision 2, Subsection 5.2.5 has also been revised to refer to the regulatory position of RG 1.45, Revision 1. These changes have been described in the response to RAI No. 521-4248, Revision 0, Question 14.02-120 (MHI letter UAP-HF-10035, dated February 5, 2010), and there is no additional change for the regulatory position.

Impact on DCD

DCD Tier 2, Revision 2, Subsection 3.6.5, Reference 3.6-21 will be revised as follows:

- 3.6-21 ~~Reactor Coolant Pressure Boundary Leakage Detection Systems, Guidance on Monitoring and Responding to Reactor Coolant System Leakage, Regulatory Guide 1.45, Rev.1, U.S. Nuclear Regulatory Commission, Washington, DC, May 1973 2008.~~

DCD Tier 2, Revision 2, Subsection 5.2.5.1, 2nd bullet will be revised as follows:

- ~~Regulatory Guide 1.45, "Reactor Coolant Pressure Boundary Leakage Detection Systems Guidance on Monitoring and Responding to Reactor Coolant System Leakage" (Ref.5.2-15).~~

DCD Tier 2, Revision 2, Subsection 5.2.7, Reference 5.2-15 will be revised as follows:

- 5.2-15 ~~Reactor Coolant Pressure Boundary Leakage Detection Systems, Guidance on Monitoring and Responding to Reactor Coolant System Leakage, Regulatory Guide 1.45, Rev.1, May 2008.~~

DCD Tier 2, Revision 2, Table 14.2-2 (Sheet 2 of 2) will be revised as follows:

- 20 ~~RG 1.45, "Reactor Coolant Pressure Boundary Leakage Detection Systems Guidance on Monitoring and Responding to Reactor Coolant System Leakage," Rev.1, May 2008~~

Impact on COLA

There is no impact on the COLA.

Impact on PRA

There is no impact on the PRA.

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