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TOKYO, JAPAN

December 25, 2008

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-08291

Subject: MHI's Response to US-APWR DCD RAI No. 118-791 Revision 0

Reference: 1) "Request for Additional Information No. 118-791 Revision 0, SRP Section: 06.02.01.05, Application Section: 6.2.1.5" dated December 3, 2008.

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. 118-791 Revision 0."

Enclosed is the response to one 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,

Y. Ogata

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

Enclosure:

1. Response to Request for Additional Information No. 118-791 Revision 0

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

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Enclosure 1

UAP-HF-08291
Docket Number 52-021

Response to Request for Additional Information
No. 118-791 Revision 0

December 2008

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

12/25/2008

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

RAI NO.:	**118-791**
SRP SECTION:	**06.02.01.05- MINIMUM CONTAINMENT PRESSURE ANALYSIS FOR EMERGENCY CORE COOLING SYSTEM PERFORMANCE CAPABILITY STUDIES**
APPLICATION SECTION:	**SRP 6.2.1.5**
DATE OF RAI ISSUE:	**12/3/2008**

QUESTION NO. : 06.02.01.05-4

6.2.1.5: The active heat sinks, subsection 6.2.1.5.5 and Table 6.2.1-29, employs 2 active safety injection systems (ASIS) instead of available 4. Demonstrate/justify that 2 ASIS yields a lower pressure than 4.

ANSWER:

Active safety injection system (ASIS) in the context of US-APWR is four (4) independent trains of the high head safety injection system (HHIS) that employs four (4) safety-injection (SI) pumps. The large-break LOCA analysis reported in Chapter 15 of the DCD assumes the unavailability of one (1) SI pump due to maintenance outage, and another SI pump due to single-failure criteria. The same approach has been adopted in the minimum containment pressure analysis for the ECCS performance evaluation (instead of assuming all SI pumps available). By assuming only two (2) SI pumps available, it yields the least (minimum) core-cooling capability that consequently results in the highest calculated peak-cladding temperature (PCT), local maximum cladding oxidation (LMO) and core wide cladding oxidation (CWO).

Impact on DCD

There is no impact on the DCD

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.