MITSUBISHI HEAVY INDUSTRIES, LTD.
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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-08293

Subject: MHI's Response to US-APWR DCD RAI No. 121-794 Revision 0

Reference: 1) "Request for Additional Information No. 121-794 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. 121-794 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. 121-794 Revision 0

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

Contact Information
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Docket No. 52-021
MHI Ref: UAP-HF-08293

Enclosure 1

UAP-HF-08293
Docket Number 52-021

Response to Request for Additional Information
No. 121-794 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.:	**121-794**
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. : 06.02.01.05-7

6.2.1.5: The transition from the heat transfer coefficient at time zero to the value at the end of blow-down appears to be linear in Fig. 6.2.1-83 instead of exponential, as reported in section 6.2.1.5.8. Thus, the linear transition in Fig.6.2.1-83 appears not to correspond to the formula of page 6.2-37 of the DCD report. Please explain and/or clarify.

ANSWER:

The exponent of 0.025 in the equation on page 6.2-37 (the same equation is presented below) of the DCD Revision 0 is by a typo and no exponent is correct. The condensation heat transfer coefficient by Tagami during blowdown is linear. The correct equation is used for the minimum containment pressure analysis actually as is confirmed from Figure 6.2.1-83.

$$H_{cond}(t) = H_{init} + \left\{H_{Tagami}(t_{eob}) - H_{init}\right\}\left(\frac{t}{t_{eob}}\right)^{0.025}$$

This will be modified to the correct description in the next revision of the DCD.

Impact on DCD

Editorial: Correlation will be replaced.

The following equation will be presented in the subsection 6.2.1.5.8 on page 6.2-37 instead of the equation in the Answer.

$$H_{cond}(t) = H_{init} + \left\{H_{Tagami}(t_{eob}) - H_{init}\right\}\left(\frac{t}{t_{eob}}\right)^{\sout{0.025}}$$

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.