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-08292

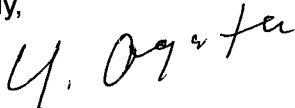**Subject:** **MHI's Response to US-APWR DCD RAI No. 120-793 Revision 0**

Reference: 1) "Request for Additional Information No. 120-793 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. 120-793 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,

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

Enclosure:

1. Response to Request for Additional Information No. 120-793 Revision 0

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

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Enclosure 1

UAP-HF-08292
Docket Number 52-021

Response to Request for Additional Information
No. 120-793 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.:	120-793
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. : 06.02.01.05-6

6.2.1.5: The exponent of the heat transfer coefficient, shown on page 6.2-38 of the DCD, is -0.62 instead of the value of -0.025 recommended in BTP 6-2, Figure 2. The exponent of -0.62 will reduce the heat transfer coefficient more rapidly than the exponent of -0.025, which is not conservative. However, Fig. 6.2.1-83 suggests the use of the value around -0.025. Please, clarify the discrepancy.

ANSWER:

The exponent of -0.62 in the equation on page 6.2-38 (the same equation is presented below) of the DCD is by a typo and -0.025 is correct. The value of -0.025 is used for the minimum containment pressure analysis actually as is confirmed from Figure 6.2.1-83.

$$H_{cond}(t) = 1.2 \times H_{Uchida} + \left\{ H_{Tagami}(t_{end}) - 1.2 \times H_{Uchida} \right\} \exp\left\{ -0.62(t - t_{eob}) \right\}$$

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 6.2-38 instead of the equation in the Answer.

$$H_{cond}(t) = 1.2 \times H_{Uchida} + \left\{ H_{Tagami}(t_{end}) - 1.2 \times H_{Uchida} \right\} \exp\left\{ -\cancel{0.62}0.025(t - t_{eob}) \right\}$$

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.