**MITSUBISHI HEAVY INDUSTRIES, LTD.**
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TOKYO, JAPAN

July 27, 2010

Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Attention: Mr. Jeffery A. Ciocco

Docket No. 52-021
MHI Ref: UAP-HF-10219

**Subject:** MHI's Response to US-APWR DCD RAI No. 602-4665

**Reference:** 1) "Request for Additional Information No. 602-4665 Revision 2, SRP Section: 03.07.01 - Seismic Design Parameters," dated 6/25/2010.

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. 602-4665, Revision 2."

Enclosed is the response to 1 RAI contained within Reference 1. This transmittal completes the response to this RAI.

Please contact Dr. C. Keith Paulson, Senior Technical Manager, 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,
General Manager- APWR Promoting Department
Mitsubishi Heavy Industries, LTD.

Enclosure:

1. Response to Request for Additional Information No. 602-4665, Revision 2

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

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Docket No. 52-021
MHI Ref: UAP-HF-10219

Enclosure 1

UAP-HF-10219
Docket No. 52-021

Response to Request for Additional Information No. 602-4665,
Revision 2

July, 2010

## RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

**7/27/2010**

**US-APWR Design Certification**

**Mitsubishi Heavy Industries**

**Docket No. 52-021**

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|---|---|
| **RAI NO.:** | **NO. 602-4665 REVISION 2** |
| **SRP SECTION:** | **03.07.01 - Seismic Design Parameters** |
| **APPLICATION SECTION:** | **3.7.1** |
| **DATE OF RAI ISSUE:** | **06/25/2010** |

**QUESTION NO. RAI 03.07.01-5:**

RAI 211-1946, question 3.7.1-1 was generated because the response spectra corresponding to the synthetic time histories fell short of the SRP 3.7.1 design ground motion acceptance criteria for Option 1, Approach 2, item (c). Although the applicant has replaced the original synthetic time histories with modified recorded time histories, the corresponding vertical response spectrum still does not meet the aforementioned acceptance criterion that the 5% damped response spectra shall not be allowed to fall below the target spectra at more than nine adjacent frequency points. The revised 5% damped vertical spectrum falls below the target spectrum at ten consecutive frequency points as shown in item (c) on p. 5-7 and in Table 5.1-1 of MUAP-10001 (R0). Provide the technical basis for not complying with the SRP guidelines.

[SEB RAI 3.7.1-11]

Reference: MHI response to US-APWR DCD RAI No. 211-1946; UAP-HF-09112; dated March 25, 2009; ML090890516.

**ANSWER:**

Revision 1 of MUAP-10001 incorporates a change to comply with SRP 3.7.1 design ground motion acceptance criteria for Option 1, Approach 2, item (c). On page 5-6 of MUAP-10001, item (c) states that no more than nine (9) adjacent frequency points fall below the CSDRS target spectra for frequencies between 01 Hz and 100 Hz. This is demonstrated and summarized in Tables 5.1-1 and 5.1-2 on pages 5-7 and 5-8 of MUAP-10001 (R1), and the time histories therefore comply with the guidelines of SRP 3.7.1.

**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.

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This completes MHI's responses to the NRC's questions.