

  
**MITSUBISHI HEAVY INDUSTRIES, LTD.**  
16-5, KONAN 2-CHOME, MINATO-KU  
TOKYO, JAPAN

May 27, 2009

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-09262

**Subject: MHI's Responses to US-APWR DCD RAI No. 332-2545 Revision 1**

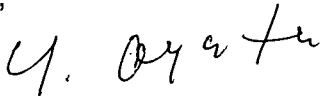
**Reference:** 1) "Request for Additional Information No. 332-2545 Revision 1, SRP  
Section: 18 - Human Factors Engineering, Application Section: 18.12  
Human Performance Monitoring," dated April 13<sup>th</sup>, 2009.

With this letter, Mitsubishi Heavy Industries, Ltd. ("MHI") transmits to the U.S. Nuclear Regulatory Commission ("NRC") a document entitled "Responses to Request for Additional Information No. 332-2545 Revision 1."

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,

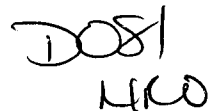


Yoshiaki Ogata,  
General Manager- APWR Promoting Department  
Mitsubishi Heavy Industries, LTD.

Enclosure:

1. Response to Request for Additional Information No. 332-2545 Revision 1

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



Contact Information

C. Keith Paulson, Senior Technical Manager  
Mitsubishi Nuclear Energy Systems, Inc.  
300 Oxford Drive, Suite 301  
Monroeville, PA 15146  
E-mail: [ck\\_paulson@mnes-us.com](mailto:ck_paulson@mnes-us.com)  
Telephone: (412) 373-6466

Docket No. 52-021  
MHI Ref: UAP-HF-09262

Enclosure 1

UAP-HF-09262  
Docket No. 52-021

Response to Request for Additional Information No. 332-2545  
Revision 1

May 2009

---

---

**RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION**

---

---

5/27/2009

**US-APWR Design Certification**

**Mitsubishi Heavy Industries**

**Docket No. 52-021**

**RAI NO.:** NO. 332-2545 REVISION 1  
**SRP SECTION:** 18 - HUMAN FACTORS ENGINEERING  
**APPLICATION SECTION:** 18.12 HUMAN PERFORMANCE MONITORING  
**DATE OF RAI ISSUE:** 4/13/2009

---

**QUESTION NO. 18-20**

Review criterion 2 found in NUREG-0711 section 13.4, Human Performance Monitoring, states:

A human performance monitoring strategy should be developed and documented. In section 18.12.2 of the US APWR DCD (MUAP-DC018) revision 1, MHI states:

A human performance monitoring strategy is developed and documented.

On June 17, 2008, the NRC staff submitted RAI (question number 18.0-83) asking MHI to clarify its human performance monitoring strategy. In its response, MHI stated that the following statement would be added to section 5.12 of the DCD:

"The human performance monitoring program is developed in cooperation with the training department of the COL or existing applicant. The human performance monitoring program will be described in plant licensing document."

The Staff is unsure of what section 5.12 has to do with Human Performance Monitoring.

Please clarify which section is being amended.

Please provide the human performance monitoring strategy that is referenced in section 18.12.2 of the APWR DCD.

---

**ANSWER:**

"The section 5.12 of the DCD" should have been "the HSI System Description and HFE Process (MUAP-07007, Rev.2) section 5.12". Section 5.12 of MUAP-07007 in conjunction with Section 18.12 of the DCD provides the human performance monitoring strategy for the US-APWR. The implementation procedure for human performance monitoring will be developed during Phase 2b of the US-APWR HFE program.

**Impact on DCD**

There is no impact on the COLA

**Impact on COLA**

There is no impact on the COLA

**Impact on PRA**

There is no impact on the PRA

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