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TOKYO, JAPAN

October 7, 2011

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-11349

Subject: Amended MHI's Response to US-APWR DCD RAI No.161-1812 Revision 0, (SRP 16)

References: 1) "Request for Additional Information No. 161-1812 Revision 0, SRP Section: 16 – Technical Specifications Application Section: TS Sections 1.0, 3.0, 4.0, and 5.0" January 21, 2009.

2) "MHI's Response to US-APWR DCD RAI No. 161-1812 Revision 0" dated February 20, 2009.

With this letter, Mitsubishi Heavy Industries, Ltd. ("MHI") transmits to the U.S. Nuclear Regulatory Commission ("NRC") a document entitled "Amended Response to Request for Additional Information No. 161-1812 Revision 0". This amended response is submitted to revise the description of DCD.

Enclosed is the amended response to Question No. 16-136, Question No.16-136 of the RAI contained within Reference 1. The initial response was provided in Reference 2. MHI replaces the previous letters (Reference 2) with this amended response letter.

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,

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



Enclosure:

1. Amended Response to Request for Additional Information No. 161-1812, Revision 0

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 Telephone: (412) 373-6466

Docket No. 52-021 MHI Ref: UAP-HF-11349

Enclosure 1

UAP-HF-11349 Docket Number 52-021

Amended Response to Request for Additional Information No. 161-1812, Revision 0

Octorber, 2011

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RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

10/7/2011

US-APWR Design Certification Mitsubishi Heavy Industries Docket No. 52-021

RAI NO.:NO. 161-1812 REVISION 0SRP SECTION:16 - TECHNICAL SPECIFICATIONSAPPLICATION SECTION:16DATE OF RAI ISSUE:1/21/2009

QUESTION NO.: 16-136

TS 5.5.11, Ventilation Filter Testing Program (VFTP).

Confirm that the face velocity provided for the MCREFS in TS 5.5.11.c is 2400 fps (feet per second).

The expressed unit for the face velocity in APWR TS is in "fps". The Westinghouse STS shows the face velocity in "fpm". A typical face velocity in current operating filtration units is in the order 500 fpm (feet per minute) or lower. 2400 fps is equivalent to 14400 fpm which appears to be very high.

ANSWER:

The face velocity of charcoal adsorber for the MCREFS is designed as 40 fps. This face velocity is based on the charcoal adsorber residence time (0.25 seconds per 2 inches of adsorbent bed) recommended by RG 1.52.

The DCD Chapter 16, 5.5.11 will be revised to reflect these correct informations.

Impact on DCD

The DCD Chapter 16, 5.5.11 will be revised as follows (See Attachment-1):

c. Demonstrate for each of the ESF systems that a laboratory test of a sample of the charcoal adsorber, when obtained as described in Regulatory Guide 1.52, Revision 3, shows the methyl iodide penetration less than the value specified below when tested in accordance with ASTM D3803-1989 at a temperature of 30°C (86°F) and the relative humidity specified below.

ESF Ventilation System	Penetration	RH	Face Velocity
MCREFS	2.5%	70%	<u>2400 fpm</u>

Impact on R-COLA

There are impacts on the R-COLA to incorporate the DCD change.

Impact on S-COLA

There are impacts on the S-COLA to incorporate the DCD change.

Impact on PRA

There is no impact on the PRA.

5.5 Programs and Manuals

5.5.11 <u>Ventilation Filter Testing Program (VFTP)</u>

A program shall be established to implement the following required testing of Engineered Safety Feature (ESF) filter ventilation systems at the frequencies specified in accordance with Regulatory Guide 1.52, Revision 3, ASME N510-1989, and AG-1.

Demonstrate for each of the ESF systems that an inplace test of the high efficiency particulate air (HEPA) filters shows a penetration and system bypass < 0.05% when tested in accordance with Regulatory Guide 1.52, Revision 3, and ASME N510-1989 at the system flowrate specified below ± 10%.

ESF Ventilation System	Flowrate
Main Control Room Emergency Filtration System (MCREFS)	3600 cfm
Annulus Emergency Exhaust System (AEES)	5600 cfm

Demonstrate for each of the ESF systems that an inplace test of the charcoal adsorber shows a penetration and system bypass < 0.05% when tested in accordance with Regulatory Guide 1.52, Revision 3, and ASME N510-1989 at the system flowrate specified below ± 10%.

ESF Ventilation System	Flowrate
MCREFS	3600 cfm

c. Demonstrate for each of the ESF systems that a laboratory test of a sample of the charcoal adsorber, when obtained as described in Regulatory Guide 1.52, Revision 3, shows the methyl iodide penetration less than the value specified below when tested in accordance with ASTM D3803-1989 at a temperature of 30°C (86°F) and the relative humidity specified below.

ESF Ventilation System	Penetration	RH	Face Velocity	^{DCD_16-136}
MCREFS	2.5%	70%	<u>2400 fpm</u>	DCD_16-136