


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

ORIGINAL

December 18, 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-09563

Subject: MHI's Responses to US-APWR DCD RAI No.477-3697 Revision 0

References: 1) "Request for Additional Information 477-3697 Revision 0, SRP Section: 04.02, Application Section: Chapter 04.02 – Fuel System Design," dated October 20, 2009

With this letter, Mitsubishi Heavy Industries, Ltd. ("MHI") transmits to the U.S. Nuclear Regulatory Commission ("NRC") a document entitled "MHI's Responses to US-APWR DCD RAI No.477-3697 Revision 0"

Enclosed are the responses to RAIs contained within Reference 1.

As indicated in the enclosed materials, this document contains information that MHI considers proprietary, and therefore should be withheld from public disclosure pursuant to 10 C.F.R. § 2.390 (a)(4) as trade secrets and commercial or financial information which is privileged or confidential.

This letter includes a copy of the proprietary version (Enclosure 2), and the Affidavit of Yoshiki Ogata (Enclosure 1) which identifies the reasons MHI respectfully requests that all materials designated as "Proprietary" in Enclosure 2 be withheld from public disclosure pursuant to 10 C.F.R. § 2.390 (a)(4).

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.

*DOSI
URO*

Enclosures:

1. Affidavit of Yoshiki Ogata
2. MHI's Responses to the NRC's Requests for Additional Information on DCD RAI No. 477-3697 Revision 0" (proprietary)
- 3 CD 1: "Responses to RAI's 04.02-***3, 6, 7 and 13 of NRC Requests in UAP-HF-09563 Rev.0"

The files contained in this CD1 are listed in Attachment 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
Telephone: (412) 373-6466

Enclosure 1

Docket No. 52-021
MHI Ref: UAP-HF-09563

MITSUBISHI HEAVY INDUSTRIES, LTD.

AFFIDAVIT

I, Yoshiki Ogata, state as follows:

1. I am General Manager, APWR Promoting Department, of Mitsubishi Heavy Industries, LTD ("MHI"), and have been delegated the function of reviewing MHI's US-APWR documentation to determine whether it contains information that should be withheld from public disclosure pursuant to 10 C.F.R. § 2.390 (a)(4) as trade secrets and commercial or financial information which is privileged or confidential.
2. In accordance with my responsibilities, I have reviewed the enclosed document entitled "MHI's Responses to US-APWR DCD RAI No. 477-3697 Revision 0" dated December 2009, and have determined that portions of the document contain proprietary information that should be withheld from public disclosure. Those pages containing proprietary information are identified with the label "Proprietary" on the top of the page and the proprietary information has been bracketed with an open and closed bracket as shown here "[]". The first page of the document indicates that all information identified as "Proprietary" should be withheld from public disclosure pursuant to 10 C.F.R. § 2.390 (a)(4).
3. The information identified as proprietary in the enclosed document has in the past been, and will continue to be, held in confidence by MHI and its disclosure outside the company is limited to regulatory bodies, customers and potential customers, and their agents, suppliers, and licensees, and others with a legitimate need for the information, and is always subject to suitable measures to protect it from unauthorized use or disclosure.
4. The basis for holding the referenced information confidential is that the unique design and manufacturing technology developed by MHI for the fuel of the US-APWR. These technologies were developed at significant cost to MHI, since they required the performance of detailed calculations, analyses, and testing extending over several years. The referenced information is not available in public sources and could not be gathered readily from other publicly available information.
5. The referenced information is being furnished to the Nuclear Regulatory Commission ("NRC") in confidence and solely for the purpose of information to the NRC staff.
6. The referenced information is not available in public sources and could not be gathered readily from other publicly available information. Other than through the provisions in paragraph 3 above, MHI knows of no way the information could be lawfully acquired by organizations or individuals outside of MHI.
7. Public disclosure of the referenced information would assist competitors of MHI in their design of new nuclear power plants without incurring the costs or risks associated with

the design of the subject systems. Therefore, disclosure of the information contained in the referenced document would have the following negative impacts on the competitive position of MHI in the U.S. nuclear plant market:

- A. Loss of competitive advantage due to the costs associated with establishments of design and manufacturing technology, and development of the fuel system. Providing public access to such information permits competitors to duplicate or mimic the technology without incurring the associated costs.
- B. Loss of competitive advantage of the US-APWR created by benefits of enhanced safety and reliability and reduced manufacturing costs of the fuel system.

I declare under penalty of perjury that the foregoing affidavit and the matters stated therein are true and correct to the best of my knowledge, information and belief.

Executed on this 18th day of December, 2009.



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

ATTACHMENT 1

FILES CONTAINED IN CD 1

CD 1: "Responses to RAI's 04.02-*3, 6, 7 and 13 of NRC Requests in UAP-HF-09563 Rev.0"**

-Proprietary information

Contents of CD

<u>File Name</u>	<u>Size</u>	<u>Sensitivity level</u>
- ReadMe.pdf (pdf format)	53KB	Proprietary
<RAI 04.02-***3(c) response>		
- USAP_CA_MOD_R3_1.dat	21KB	Proprietary
<RAI 04.02-***3(d) response>		
- BOL_FINDS_SSE_M1_00_X_17.dat	9KB	Proprietary
- BOL_FINDS_SSE_M1_00_Z_17.dat	9KB	Proprietary
- BOL_FINDS_SSE_M2_00_X_17.dat	9KB	Proprietary
- BOL_FINDS_SSE_M2_00_Z_17.dat	9KB	Proprietary
- BOL_FINDS_SSE_SOFT_00_X_17.dat	9KB	Proprietary
- BOL_FINDS_SSE_SOFT_00_Z_17.dat	9KB	Proprietary
- BOL_FINDS_SSE_HARD_00_X_17.dat	9KB	Proprietary
- BOL_FINDS_SSE_HARD_00_Z_17.dat	9KB	Proprietary
- BOL_FINDS_LOCA_CLB14B0_X_17.dat	9KB	Proprietary
- BOL_FINDS_LOCA_CLB14B0_Z_17.dat	9KB	Proprietary
- BOL_FINDS_LOCA_CLB14B102_X_17.dat	9KB	Proprietary
- BOL_FINDS_LOCA_CLB14B102_Z_17.dat	9KB	Proprietary
- BOL_FINDS_LOCA_CLB14B102LF_X_17.dat	9KB	Proprietary
- BOL_FINDS_LOCA_CLB14B102LF_Z_17.dat	9KB	Proprietary
- M1-00_AX.wav	530KB	Proprietary
- M1-00_AZ.wav	530KB	Proprietary
- M2-00_AX.wav	530KB	Proprietary
- M2-00_AZ.wav	530KB	Proprietary
- SOFT-00_AX.wav	530KB	Proprietary
- SOFT-00_AZ.wav	530KB	Proprietary
- HARD-00_AX.wav	530KB	Proprietary
- HARD-00_AZ.wav	530KB	Proprietary
- CLB14B0_AX.wav	25KB	Proprietary
- CLB14B0_AZ.wav	25KB	Proprietary
- CLB14B102_AX.wav	25KB	Proprietary
- CLB14B102_AZ.wav	25KB	Proprietary
- CLB14B102LF_AX.wav	25KB	Proprietary
- CLB14B102LF_AZ.wav	25KB	Proprietary
<RAI 04.02-***6(b) response>		
- USAP_hw_BOL_M1-00.dat	19KB	Proprietary
- USAP_hw_BOL_M1-00_17-10_grid.dat	19KB	Proprietary
- US-APWR_ax_trans_hw_r3_87.dat	5KB	Proprietary

- US-APWR_ax_hw_SSE_M1-00.dat	5KB	Proprietary
- USAP_hw_BOL_CLB14B102.dat	19KB	Proprietary
- US-APWR_ax_trans_hw_r3_168.dat	5KB	Proprietary
- US-APWR_ax_hw_LOCA.dat	5KB	Proprietary
<RAI 04.02-***7(a) response>		
- USAP_SSE-00_BOL_ALL-IN.dat	5KB	Proprietary
- USAP_SSE-00_BOL_ALL-OUT-VERTICAL.dat	6KB	Proprietary
- USAP_LOCA-CLB14B102_BOL_ALL-IN.dat	4KB	Proprietary
- USAP_LOCA-CLB14B102_BOL_ALL-OUT-VERTICAL.dat	6KB	Proprietary
<RAI 04.02-***13(c) response>		
- M1-00.xls	2.3MB	Proprietary
<RAI 04.02-***13(e) response>		
- SSE-M1_history_result.xls	23.9MB	Proprietary