

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

May 15, 2012

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-12123

**Subject: Transmittal of Technical Report MUAP-10017 Revision 3 "US-APWR Methodology of Pipe Break Hazard Analysis" and MUAP-10022 Revision 2 "Evaluation on Jet Impingement Issues Associated with Postulated Pipe Rupture"**

With this letter, Mitsubishi Heavy Industries, Ltd. ("MHI") transmits to the U.S. Nuclear Regulatory Commission ("NRC") technical reports MUAP-10017 Revision 3 "US-APWR Methodology of Pipe Break Hazard Analysis" and MUAP-10022 Revision 2 "Evaluation on Jet Impingement Issues Associated with Postulated Pipe Rupture". The Reports are being submitted electronically in compact discs (CDs).

As indicated in the enclosed materials, these documents contain information that MHI considers proprietary, and therefore the reports should be withheld from disclosure pursuant to 10 C.F.R. § 2.390 (a)(4) as trade secrets and commercial or financial information which is privileged or confidential. Accordingly, the technical reports are being submitted in two versions, on separate compact discs. One version (in CD 1 of Enclosure 2 and CD 3 of Enclosure 4) contains the complete proprietary version of the technical reports. A non-proprietary version of the technical reports is enclosed on CD 2 and 4 (Enclosure 3 and 5). In the non-proprietary version, the proprietary information, bracketed in the proprietary version, is replaced by the designation "[ ]". In accordance with the NRC submittal procedures, this letter includes an Affidavit (Enclosure 1) that identifies the reasons why the proprietary version of the Report should be withheld from disclosure pursuant to 10 C.F.R. § 2.390 (a)(4).

Please contact Mr. Joseph Tapia, General Manager of Mitsubishi Nuclear Energy Systems, Inc. if the NRC has questions concerning any aspect of this submittal. His contact information is provided below.

Sincerely,



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

DOB1  
NPD

Enclosures:

1. Affidavit of Yoshiki Ogata
2. CD 1: Technical Report, MUAP-10017-P Revision 3, "US-APWR Methodology of Pipe Break Hazard Analysis (Proprietary)"
3. CD 2: Technical Report, MUAP-10017-NP Revision 3, "US-APWR Methodology of Pipe Break Hazard Analysis (Non-Proprietary)"
4. CD 3: Technical Report, MUAP-10022-P Revision 2, "Evaluation on Jet Impingement Issues Associated with Postulated Pipe Rupture (Proprietary)"
5. CD 4: Technical Report, MUAP-10022-NP Revision 2, "Evaluation on Jet Impingement Issues Associated with Postulated Pipe Rupture (Non-Proprietary)"

The file contained in each CD is listed in Attachments 1 hereto.

CC: J. A. Ciocco  
J. Tapia

Contact Information

Joseph Tapia, General Manager of Licensing Department  
Mitsubishi Nuclear Energy Systems, Inc.  
1001 19th Street North, Suite 710  
Arlington, VA 22209  
E-mail: joseph\_tapia@mnes-us.com  
Telephone: (703) 908 – 8055

## ENCLOSURE 1

Docket No. 52-021  
MHI Ref: UAP-HF-12123

### MITSUBISHI HEAVY INDUSTRIES, LTD.

#### AFFIDAVIT

I, Yoshiki Ogata, state as follows:

1. I am Director, 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 documents listed in Attachment 1, and have determined that portions of the document contain proprietary information that should be withheld from public disclosure. All pages contain proprietary information as 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 documents 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 it describes the unique design and methodology developed by MHI for performing the plant design of protection against postulated piping failures.
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 the development of the methodology related to the analysis.

- B. Loss of competitive advantage of the US-APWR created by the benefits of the approach to jet expansion modeling that maintains the desired level of conservatism.

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 15th day of May, 2012.

A handwritten signature in black ink, appearing to read "Y. Ogata". The signature is written in a cursive, somewhat stylized font.

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

**ATTACHMENT 1**

**FILES CONTAINED IN CDs**

**CD 1: Technical Report, MUAP-10017-P (R3) "US-APWR Methodology of Pipe Break Hazard Analysis (Proprietary)"**

Contents of CD

<u>File Name</u>	<u>Size</u>	<u>Sensitivity Level</u>
MUAP-10017-P_R3_PBHA.pdf	961KB	Proprietary

**CD 2: Technical Report, MUAP-10017-NP (R3) "US-APWR Methodology of Pipe Break Hazard Analysis (Non-Proprietary)"**

Contents of CD

<u>File Name</u>	<u>Size</u>	<u>Sensitivity Level</u>
MUAP-10017-NP_R3_PBHA.pdf	181KB	Non-Proprietary

**CD 3: Technical Report, MUAP-10022-P Revision 2, "Evaluation on Jet Impingement Issues Associated with Postulated Pipe Rupture (Proprietary)"**

Contents of CD

<u>File Name</u>	<u>Size</u>	<u>Sensitivity Level</u>
MUAP-10022-P_R2_JET-1.pdf	20,494KB	Proprietary
MUAP-10022-P_R2_JET-2.pdf	45,731KB	Proprietary

**CD 4: Technical Report, MUAP-10022-NP Revision 2, "Evaluation on Jet Impingement Issues Associated with Postulated Pipe Rupture (Non-Proprietary)"**

Contents of CD

<u>File Name</u>	<u>Size</u>	<u>Sensitivity Level</u>
MUAP-10022-NP_R2_JET.pdf	684KB	Non-Proprietary