16-5, KONAN 2-CHOME, MINATO-KU TOKYO, JAPAN

August 4, 2010

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-10226

Subject: MHI's 12<sup>th</sup> Response to NRC's Requests for Additional Information on

US-APWR Topical Report: Non-LOCA Methodology, MUAP-07010-P (R0)

**References:** 1) "REQUEST FOR ADDITIONAL INFORMATION, US-APWR Topical Report: Non-LOCA Methodology, MUAP-07010-P(R0)", dated July 19, 2010.

2) "NOTICE OF FORTHCOMING PUBLIC AND CLOSED MEETING WITH MITSUBISHI HEAVY INDUSTRIES, LTD. TO DISCUSS THE OPEN ITEMS REMAINING FROM THE REVIEW OF THE NON-LOSS-OF-COOLANT ACCIDENT TOPICAL REPORT MUAP-07010, AND THE MARVEL-M

COMPUTER CODE", dated June 30, 2010.

Mitsubishi Heavy Industries, Ltd. ("MHI") transmits to the U.S. Nuclear Regulatory Commission ("NRC") the document entitled "MHI's 12<sup>th</sup> Response to NRC's Requests for Additional Information on US-APWR Topical Report: Non-LOCA Methodology, MUAP-07010-P (R0)". The enclosed materials provide MHI's responses to the NRC's Request for Additional Information ("RAI") (Reference 1). MHI has previously responded to RAIs on the Non-LOCA Topical Report in MHI letters: UAP-HF-08141 dated August 22, 2008, UAP-HF-08170 dated September 12, 2008, UAP-HF-08245 dated November 19, 2008, UAP-HF-09040 dated February 12, 2009, UAP-HF-09358 dated July 10, 2009, UAP-HF-10001 dated January 7, 2010, UAP-HF-10101 dated May 10, 2010, and UAP-HF-10159 dated July 8, 2010.

Additional supporting materials for the RAI responses are provided on an Optical Storage Medium ("OSM"). MHI previously submitted the MARVEL-M manual (GEN0-LP-480) Revision 9 as an enclosure to MHI letter UAP-HF-10101, dated May 10, 2010. As discussed during the July 13-14, 2010 public meeting (Reference 2) MHI issued an internal version of the MARVEL-M manual (Revision 10) which was not previously submitted to the NRC. To support the current RAI responses, the OSM contains the latest two revisions (R10 and R11) of the document "MARVEL-M: A Digital Computer Code for Transient Analysis of a Multi-Loop PWR System GEN0-LP-480". Since Revision 10 was not previously submitted to the NRC, MHI has also provided a description of the Revision 10 changes and discussion of their effect on the review of the MARVEL-M manual, Non-LOCA Methodology Topical Report, and DCD Chapter 15. The specific files contained on the OSM are listed on the associated enclosure cover sheet.

As indicated in the enclosed materials, Enclosures 2 and 3 contain 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.

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This letter includes a copy of the proprietary version of the RAI responses (Enclosure 2), additional proprietary supporting documentation provided on an OSM (Enclosure 3), and the Affidavit of Yoshiki Ogata (Enclosure 1) which identifies the reasons MHI respectfully requests that all material designated as "Proprietary" in Enclosures 2 and 3 be withheld from 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 this submittal. His contact information is provided below.

Sincerely,

Yoshiki Oqata

General Manager- APWR Promoting Department

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Mitsubishi Heavy Industries, Ltd.

## **Enclosures:**

1. Affidavit of Yoshiki Ogata

2. MHI's 12<sup>th</sup> Response to NRC's Requests for Additional Information on US-APWR Topical Report: Non-LOCA Methodology, MUAP-07010-P (R0) (proprietary)

3. OSM: Additional Supporting Documentation (proprietary)

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: ckpaulson@mnes.com Telephone: (412) 373-6466

## **ENCLOSURE 1**

Docket No. 52-021

MHI Ref: UAP-HF-10226

## MITSUBISHI HEAVY INDUSTRIES, LTD. AFFIDAVIT

- I, Yoshiki Ogata, being duly sworn according to law, depose and 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 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 12<sup>th</sup> Response to NRC's Requests for Additional Information on US-APWR Topical Report: Non-LOCA Methodology, MUAP-07010-P (R0)", and the enclosed Optical Storage Medium ("OSM"), all dated August 4, 2010, and have determined that the documents contain proprietary information that should be withheld from public disclosure. The OSM contains the following proprietary documents: "Impact of MARVEL-M Manual Rev. 10 Changes on the NRC Review of the Non-LOCA Methodology Topical Report", Enclosure 3 File 2, "MARVEL-M: A Digital Computer Code for Transient Analysis of a Multi-Loop PWR System GEN0-LP-480(R10)", Enclosure 3 File 3, and "MARVEL-M: A Digital Computer Code for Transient Analysis of a Multi-Loop PWR System GEN0-LP-480(R11)", Enclosure 3 File 4. The first page of the documents and the label on the OSM indicates that information identified as "Proprietary" should be withheld from public disclosure pursuant to 10 C.F.R. § 2.390 (a)(4).
- 3. The basis for holding the referenced information confidential is that it describes the unique design of the safety analysis, developed by MHI (the "MHI Information").
- 4. The MHI Information is not used in the exact form by any of MHI's competitors. This information was developed at significant cost to MHI, since it required the performance of research and development and detailed design for its software and hardware extending over several years. Therefore public disclosure of the materials would adversely affect MHI's competitive position.
- 5. The referenced information has in the past been, and will continue to be, held in confidence by MHI and is always subject to suitable measures to protect it from unauthorized use or disclosure.
- 6. The referenced information is not available in public sources and could not be gathered readily from other publicly available information.
- 7. The referenced information is being furnished to the Nuclear Regulatory Commission ("NRC") in confidence and solely for the purpose of supporting the NRC staff's review of MHI's application for certification of its US-APWR Standard Plant Design.
- 8. Public disclosure of the referenced information would assist competitors of MHI in their

design of new nuclear power plants without the costs or risks associated with the design and testing of new systems and components. Disclosure of the information identified as proprietary would therefore have negative impacts on the competitive position of MHI in the U.S. nuclear plant market.

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 4<sup>th</sup> day of August, 2010.

Yoshiki Ogata

Yoshiki Ogata