


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

August 1, 2008

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-08138

Subject: Input Manuals, Executable Files and Sample Input Decks for MARVEL-M and TWINKLE-M US-APWR Non-LOCA Analysis Computer Programs

Mitsubishi Heavy Industries, Ltd. ("MHI") is submitting to the U.S. Nuclear Regulatory Commission ("NRC") code input manuals, executable files, and sample input decks for the MARVEL-M and TWINKLE-M programs used in the US-APWR Non-LOCA analysis (collectively the "Referenced Materials") referenced in the "Design Control Document for the US-APWR" ("DCD") and supporting Topical Report "Non-LOCA Methodology" (MUAP-07010). These Referenced Materials are being submitted electronically in two Optical Storage Media ("OSM") enclosures, one for each computer code. For the ease and convenience of the NRC staff's review of the Design Certification Application ("DCA"), identical copies of the executable files previously transmitted in MHI letter UAP-HF-07189 are included on these OSMs, as well as the most recent English translations of the MARVEL-M and TWINKLE-M input manuals. The MARVEL-M input deck for the "Complete Loss of Forced Reactor Coolant Flow" is consistent with the VIPRE-01M input file previously submitted by MHI letter UAP-HF-08092 in May, 2008. The files contained on each OSM are listed on the associated enclosure cover sheet.

The Referenced Materials are being furnished to the 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.

This letter includes a copy of the proprietary version (Enclosure 2 Attachment 1 and Enclosure 3 Attachment 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) and 10 C.F.R. § 9.17 (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 Ogata
General Manager- APWR Promoting Department
Mitsubishi Heavy Industries, Ltd.

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NRO

Enclosures:

1. Affidavit of Yoshiki Ogata
2. MARVEL-M OSM
3. TWINKLE-M OSM

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

**UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION**

In the Matter of)
MITSUBISHI HEAVY INDUSTRIES, Ltd.)
US-APWR)
Standard Plant Design Certification Application)
)

AFFIDAVIT OF YOSHIKI OGATA

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) and 10 CFR § 9.17 (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 contents of the Optical Storage Media ("OSM") provided under MHI Reference UAP-HF-08138 on August 1, 2008, which include code input manuals, executable files, and sample input decks for the MARVEL-M and TWINKLE-M programs used in the US-APWR Non-LOCA analysis (collectively the "Referenced Materials") referenced in the "Design Control Document for the US-APWR" ("DCD") and supporting Topical Report "Non-LOCA Methodology" (MUAP-07010), and have determined that the Referenced Materials contain proprietary information that should be withheld from public disclosure. Accordingly, the labels on the OSM have been marked to indicate that the entire contents of the OSM should be withheld from public disclosure pursuant to 10 C.F.R. § 2.390 (a)(4).
3. The bases for holding the Referenced Materials confidential are as follows:
 - A. They include the information that is provided to MHI pursuant to licensing agreements with third parties (the "Licensors") for MHI's use and under the obligation to maintain their confidentiality. Furthermore, MHI has an ownership interest in the Referenced Materials by having paid significant sums of money to the Licensors for the rights to the intellectual property therein such that public disclosure of the materials would adversely affect MHI's competitive position.
 - B. They include the information that was developed at significant cost to MHI.
4. Pursuant to the licensing agreements with the Licensors, the Referenced Materials have in the past been, and will continue to be, held in confidence by MHI, and are subject to suitable measures to protect them from unauthorized use or disclosure.
5. The Referenced Materials are generally not available in public sources and could not be gathered readily from other publicly available information.
6. Public disclosure of the Referenced Materials would assist competitors of MHI and the Licensor in their design of new nuclear power plants without the costs or risks associated with the design of new systems and components. Disclosure of the information identified

as proprietary would therefore have negative impacts on the competitive position of MHI and the Licensors in the U.S. nuclear plant market.

7. The Referenced Materials are 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.

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 1st day of August, 2008.

A handwritten signature in black ink, appearing to read "Y. Ogata".

Yoshiki Ogata

ENCLOSURE 2

FILES CONTAINED IN CD 1

**CD 1: "MARVEL-M OSM"
-Proprietary information**

Contents of CD

<u>File Name</u>	<u>Size</u>	<u>Sensitivity level</u>
1. Guidance for using OSM (File name: 001_Readme (MARVEL-M)R2.pdf,)	31KB	Proprietary
2. MARVEL-M Computer Program (File name: 002_executable module (MARVEL-M).exe)	1,620KB	Proprietary
3. Description of the Input Parameters (File name: 003_Input Guide (MARVEL-M)R3.pdf)	1,651KB	Proprietary
4. Input file for "Complete Loss of Forced Reactor Coolant Flow" used for the US-APWR DCD Section 15.3.1.2 analysis (File name: 004_input_file.mar)	12KB	Proprietary

ENCLOSURE 3

FILES CONTAINED IN CD 2

**CD 2: "TWINKLE-M OSM"
-Proprietary information**

Contents of CD

<u>File Name</u>	<u>Size</u>	<u>Sensitivity level</u>
1. Guidance for using OSM (File name: 001_Readme (TWINKLE-M)R1.pdf)	32KB	Proprietary
2. TWINKLE-M Computer Program (File name: 002_executable module (TWINKLE-M).exe)	8,880KB	Proprietary
3. Description of the Input Parameters (File name: 003_Input Guide (TWINKLE-M).pdf)	319KB	Proprietary
4. Input file for "Spectrum of Rod Ejection Accidents - EOC HZP Case" used for the US-APWR DCD Section 15.4.8 analysis (File name: 004_input_file.twi)	2,488KB	Proprietary
5. Xenon distribution input file for "Spectrum of Rod Ejection Accidents - EOC HZP Case" used for the US-APWR DCD Section 15.4.8 analysis (File name: 004_input_file.XEN)	517KB	Proprietary