



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

August 28, 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-09434

Subject: Input Manuals, Executable Files, and Sample Input Decks for MARVEL-M and VIPRE-01M US-APWR Non-LOCA Analysis Computer Programs

- References:**
- 1) Letter MHI Ref: UAP-HF-09099 from Y. Ogata (MHI) to U.S. NRC, "MHI's Non-LOCA Response to NRC's Request for Additional Information on Topical Reports MUAP-07010, MUAP-07011, and MUAP-07013," dated March 24, 2009.
 - 2) Letter MHI Ref: UAP-HF-08092 from Y. Ogata (MHI) to U.S. NRC, "VIPRE-01M Computer Program with its Input Deck Referenced in the US-APWR Design Control Document and Supporting Technical Reports," dated May 30, 2008.
 - 3) Letter MHI Ref: UAP-HF-09425 from Y. Ogata (MHI) to U.S. NRC, "Additional Information Concerning Minor Safety Analysis Input/Code Errors in the US-APWR Design Certification Analysis," dated August 19, 2009.

Mitsubishi Heavy Industries, Ltd. ("MHI") transmits to the U.S. Nuclear Regulatory Commission ("NRC") the document entitled "Input Manuals, Executable Files, and Sample Input Decks for MARVEL-M and VIPRE-01M US-APWR Non-LOCA Analysis Computer Programs." MHI has previously submitted input files, input manuals, and executable programs for the MARVEL-M and VIPRE-01M non-LOCA safety analysis computer codes to the NRC (References 1 and 2, respectively). Some minor input/code errors were discovered by MHI and reported to the NRC (Reference 3). As indicated in Reference 3, MHI is submitting revised versions of the input/codes affected by these minor errors. This submittal includes also the input/codes not affected by these minor errors. Those input/codes are exactly the same as previous submittals which were already sent by References 1 and 2.

The enclosed materials provide the revised versions of the MARVEL-M and VIPRE-01M input/codes previously submitted in References 1 and 2, respectively. The other revised input/codes described in Reference 3 are being submitted by separate letter. The enclosed materials include an Optical Storage Medium ("OSM") that contains electronic versions of the revised information related to MARVEL-M, such as input files and executable programs. In addition to the data files, the MARVEL-M OSM also contains the two documents "MARVEL-M A Digital Computer Code for Transient Analysis of a Multi-Loop PWR System (R7)" and "US-APWR Summary of Calculation Memo for SLB, LOL, and SGTR in DCD Ch. 15", both of which are proprietary. The enclosed materials also include a second OSM that contains electronic versions of the revised information related to VIPRE-01M, such as input files and executable programs. In addition to the data files, the VIPRE-01M OSM also contains the document "Descriptions on the Sample Input of VIPRE-01M Analysis for the US-APWR (R2)", which is proprietary. The specific files contained on each OSM are individually listed on the

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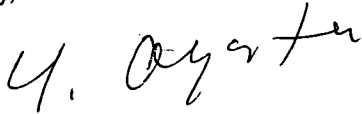
associated enclosure cover sheet.

As indicated in the enclosed materials, the two OSM 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.

This letter includes the OSM containing the MARVEL-M electronic files (Enclosure 2), the OSM containing the VIPRE-01M electronic files (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,

A handwritten signature in black ink, appearing to read "Y. Ogata". The signature is written in a cursive style with a large initial "Y" and a long, sweeping tail.

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

Enclosures:

1. Affidavit of Yoshiki Ogata
2. OSM: MARVEL-M Related Files (proprietary)
3. OSM: VIPRE-01M Related Files (proprietary)

CC: J. A. Ciocco
C. K. Paulson

Contact Information

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ENCLOSURE 1

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MITSUBISHI HEAVY INDUSTRIES, LTD.

AFFIDAVIT

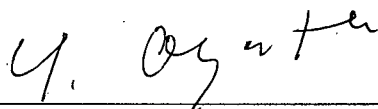
I, Yoshiki Ogata, being duly sworn according to law, depose and state as follows:

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 "Input Manuals, Executable Files, and Sample Input Decks for MARVEL-M and VIPRE-01M US-APWR Non-LOCA Analysis Computer Programs" and the two enclosed Optical Storage Medium ("OSM") dated August 28, 2009, and have determined that the two OSM contain proprietary information that should be withheld from public disclosure. The MARVEL-M OSM (Enclosure 2) also contains the two documents "MARVEL-M A Digital Computer Code for Transient Analysis of a Multi-Loop PWR System (R7)", Enclosure 2 File 3, and "US-APWR Summary of Calculation Memo for SLB, LOL, and SGTR in DCD Ch. 15", Enclosure 2 File 14, which are proprietary. The VIPRE-01M OSM (Enclosure 3) contains the document "Descriptions on the Sample Input of VIPRE-01M Analysis for the US-APWR (R2)", Enclosure 3 File 3, which is proprietary. The labels on each 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 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 28th day of August, 2009.



Yoshiaki Ogata

Enclosure 2

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Contents of OSM: MARVEL-M Related Files

<u>File Name</u>	<u>Size</u>	<u>Sensitivity Level</u>
1. 001_Readme (MARVEL-M)_R1.pdf	84 KB	Proprietary
2. 002_MarvelmV28.exe	1740 KB	Proprietary
3. 003_Input Guide (MARVEL-M)R7.pdf	1819 KB	Proprietary
4. 004_conv.exe	373 KB	Proprietary
5. 005_conv.f	3 KB	Proprietary
6. 006_IPLIST.txt	1 KB	Non-Proprietary
7. 007_input_file (RWP)_R1.mar	17 KB	Proprietary
8. 008_input_file (PLOF).mar	12 KB	Proprietary
9. 009_input_file (CLOF).mar	12 KB	Proprietary
10. 010_input_file (LR).mar	12 KB	Proprietary
11. 011_input_file (SLB)_R1.mar	21 KB	Proprietary
12. 012_input_file (LOL).mar	15 KB	Proprietary
13. 013_input_file (SGTR).mar	23 KB	Proprietary
14. 014_calc_memo_summary.pdf	325 KB	Proprietary
15. 015_input_file (SLB_at_power)_R1.mar	24 KB	Proprietary
16. 016_input_file (SLB_ME)_R1.mar	26 KB	Proprietary

Enclosure 3

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Contents of OSM: VIPRE-01M Related Files

<u>File Name</u>	<u>Size</u>	<u>Sensitivity Level</u>
1. 001_Readme (VIPRE-01M)_R1.pdf	37 KB	Proprietary
2. 002_executable module (VIPRE-01M).exe	2524 KB	Proprietary
3. 003_Input Guide (VIPRE-01M)_R2.pdf	410 KB	Proprietary
4. 004_input file_R1	7 KB	Proprietary
5. 005_vbcfil file	56 KB	Proprietary