

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

December 24, 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-09577

Subject: Transmittal of the Materials in Support of the MHI US-APWR CFD Analysis for

Advanced Accumulator Review

References: 1) Letter MHI Ref. UAP-HF-09550 from Y. Ogata (MHI) to U.S. NRC, "Transmittal

of the Technical Report entitled "CFD Analysis for Advanced Accumulator"

(MUAP-09025)" dated on December 11, 2009

Mitsubishi Heavy Industries, Ltd. ("MHI") submits to the U.S. Nuclear Regulatory Commission ("NRC") the data for the US-APWR Advanced Accumulator CFD analysis supporting Technical Report "CFD Analysis for Advanced Accumulator" (MUAP-09025), which was submitted to the NRC in support of MHI's US-APWR Design Certification Application ("DCA") (Reference 1). The Referenced Materials are being submitted electronically in the Optical Storage Media ("OSM") enclosure. The file contained on OSM is listed on the associated enclosure cover sheet.

These files 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 and 3), and the Affidavit of Yoshiki Ogata (Enclosure 1) which identifies the reasons MHI respectfully requests that the material 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 this submittal. His contact information is provided below.

Sincerely,

Yoshiki Oqata

General Manager- APWR Promoting Department

Mitsubishi Heavy Industries, Ltd.

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Enclosures:

- 1. Affidavit of Yoshiki Ogata
- OSM: Materials for CFD Analysis for Advanced Accumulator Disk 1 (Proprietary) 2. The files contained in this OSM are listed in Attachment 1.
- OSM: Materials for CFD Analysis for Advanced Accumulator Disk 2 (Proprietary) The files contained in this OSM are listed in Attachment 1. 3.

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

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ENCLOSURE 1

Docket No. 52-021

MHI Ref: UAP-HF-09577

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MITSUBISHI HEAVY INDUSTRIES, LTD. AFFIDAVIT

- I, Yoshiki Ogata, being duly sworn according to law, depose and state as follows:
- 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 Optical Storage Medium ("OSM") dated December 24, 2009, and have determined that the OSM contains proprietary information that should be withheld from public disclosure. 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 basis for holding the referenced information confidential is that it describes the unique design of the advanced accumulator, 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 24th day of December, 2009.

Yoshiki Ogata

ATTACHMENT 1FILES Contained in OSM

OSM: Materials for CFD Analysis for Advanced Accumulator Disk 1 (Proprietary)

Contents of OSM (Disk 1 contains 1/1 scale analysis data)

Folder/File Name	<u>Size</u>	Sensitivity Level
• 1_1_Large_Flow_Case_3_05sec 1_1_case3_005sec_RSM.cas.gz 1_1_case3_005sec_RSM.dat.gz	42,810KB 161,444KB	Proprietary Proprietary
• 1_1_Large_Flow_Case_3_20sec 1_1_case3_020sec_RSM.cas.gz 1_1_case3_020sec_RSM.dat.gz	42,809KB 160,379KB	Proprietary Proprietary
• 1_1_Large_Flow_Case_3_34sec 1_1_case3_034sec_RSM.cas.gz 1_1_case3_034sec_RSM.dat.gz	42,810KB 160,302KB	Proprietary Proprietary
• 1_1_Large_Flow_Case_6_05sec 1_1_case6_005sec_RSM.cas.gz 1_1_case6_005sec_RSM.dat.gz	42,810KB 158,512KB	Proprietary Proprietary
• 1_1_Large_Flow_Case_6_20sec 1_1_case6_020sec_RSM.cas.gz 1_1_case6_020sec_RSM.dat.gz	42,810KB 156,053KB	Proprietary Proprietary
• 1_1_Large_Flow_Case_6_50sec 1_1_case6_050sec_RSM.cas.gz 1_1_case6_050sec_RSM.dat.gz	42,811KB 154,175KB	Proprietary Proprietary
• 1_1_Small_Flow_Case_3_43sec 1_1_case3_043sec_RSM.cas.gz 1_1_case3_043sec_RSM.dat.gz	108,573KB 406,970KB	Proprietary Proprietary
• 1_1_Small_Flow_Case_3_100sec 1_1_case3_100sec_RSM.cas.gz 1_1_case3_100sec_RSM.dat.gz	108,546KB 439,524KB	Proprietary Proprietary
• 1_1_Small_Flow_Case_6_82sec 1_1_case6_082sec_RSM.cas.gz 1_1_case6_082sec_RSM.dat.gz	108,546KB 412,848KB	Proprietary Proprietary
• 1_1_Small_Flow_Case_6_200sec 1_1_case6_200sec_RSM.cas.gz 1_1_case6_200sec_RSM.dat.gz	108,546KB 412,035KB	Proprietary Proprietary

OSM: Materials for CFD Analysis for Advanced Accumulator Disk 2 (Proprietary)

Contents of OSM (Disk 2 contains 1/2 scale analysis data)

Folder/File Name	<u>Size</u>	Sensitivity Level
• 1_2_Large_Flow_Case_3_05sec 1_2_case3_005sec_RSM.cas.gz 1_2_case3_005sec_RSM.dat.gz	44,581KB 171,426KB	Proprietary Proprietary
• 1_2_Large_Flow_Case_3_20sec 1_2_case3_020sec_RSM.cas.gz 1_2_case3_020sec_RSM.dat.gz	44,581KB 171,549KB	Proprietary Proprietary
• 1_2_Large_Flow_Case_3_34sec 1_2_case3_034sec_RSM.cas.gz 1_2_case3_034sec_RSM.dat.gz	44,581KB 173,962KB	Proprietary Proprietary
• 1_2_Large_Flow_Case_6_05sec 1_2_case6_005sec_RSM.cas.gz 1_2_case6_005sec_RSM.dat.gz	44,581KB 170,027KB	Proprietary Proprietary
• 1_2_Large_Flow_Case_6_20sec 1_2_case6_020sec_RSM.cas.gz 1_2_case6_020sec_RSM.dat.gz	44,581KB 172,146KB	Proprietary Proprietary
• 1_2_Large_Flow_Case_6_50sec 1_2_case6_050sec_RSM.cas.gz 1_2_case6_050sec_RSM.dat.gz	44,581KB 171,776KB	Proprietary Proprietary
• 1_2_Small_Flow_Case_3_43sec 1_2_case3_043sec_RSM.cas.gz 1_2_case3_043sec_RSM.dat.gz	108,574KB 447,008KB	Proprietary Proprietary
• 1_2_Small_Flow_Case_3_100sec 1_2_case3_100sec_RSM.cas.gz 1_2_case3_100sec_RSM.dat.gz	108,630KB 446,426KB	Proprietary Proprietary
• 1_2_Small_Flow_Case_6_82sec 1_2_case6_082sec_RSM.cas.gz 1_2_case6_082sec_RSM.dat.gz	108,627KB 415,419KB	Proprietary Proprietary
• 1_2_Small_Flow_Case_6_200sec 1_2_case6_200sec_RSM.cas.gz 1_2_case6_200sec_RSM.dat.gz	108,627KB 412,987KB	Proprietary Proprietary

Notes:

- All data are compressed as "XXXX.gz" file. This compression format is FLUENT standard. When you use these data, you can just use them without decompression. "XXXX.cas" file is input data including analytical models, physicality such as density
- and viscosity, and boundary conditions.
- "XXXX.dat" file is output data of CFD analysis.