



**MITSUBISHI HEAVY INDUSTRIES, LTD.**  
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TOKYO, JAPAN

June 20, 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-08110

**Subject: MHI Technical Report MUAP-07014 "Defense-in-Depth and Diversity Coping Analysis Revision 1" and MHI Topical Report MUAP-07006 "Defense-in-Depth and Diversity Revision 2"**

- References:**
- 1 Letter MHI Ref. UAP-HF-08070 from Y. Ogata ("MHI") to U.S. NRC, "MHI's Responses to NRC's Requests for Additional Information on Topical Report MUAP-07006-P(R1) Defense-in-Depth and Diversity," dated April 25, 2008,
  - 2 Letter MHI Ref. UAP-HF-08099, from Y. Ogata ("MHI") to U.S. NRC, "Supplemental Information Committed by MHI RAI Response Letter UAP-HF-08070 Related to Defense-in-Depth and Diversity Topical Report," dated June 2, 2008

With this letter, Mitsubishi Heavy Industries, LTD. ("MHI") transmits to the U.S. Nuclear Regulatory Commission ("NRC") the Technical Report MUAP-07014 entitled "Defense-in-Depth and Diversity Coping Analysis Revision 1", which was previously submitted on December 31, 2007, and the Topical Report MUAP-07006 entitled "Defense-in-Depth and Diversity Revision 2", which was previously submitted on April 10, 2007 and revised on July 3, 2007. These reports supersede each previous revision of the same reports incorporated by reference in MHI's US-APWR DCD in December 2007. The enclosed versions provide new and updated information as a follow-up to the Reference 1 and 2 RAI responses. The Technical Report and Topical Report are being submitted electronically in the two enclosed compact discs (CDs), one for the proprietary versions and one for the non-proprietary versions.

The enclosed reports 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) and 10 CFR § 9.17 (a)(4) as trade secrets and commercial or financial information which is privileged or confidential. Accordingly, the Reports are being submitted in two versions, in separate compact discs. One version (in CD 1) contains the complete proprietary version of the Reports. Non-proprietary version of the Reports are enclosed in CD 2. In the non-proprietary versions, the proprietary information, bracketed in the proprietary versions, is replaced by the designation "[ ]". In accordance with the NRC submittal procedures, this letter includes an Affidavit that identifies the reasons why the proprietary version of the Reports should be withheld from disclosure pursuant to 10 C.F.R. § 2.390 (a)(4) and 10 CFR § 9.17 (a)(4).

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Please contact Dr. C. Keith Paulson, Senior Technical Manager, Mitsubishi Nuclear Energy Systems, Inc. if the NRC has questions concerning any aspect of the submittal. His contact information is below.

Sincerely,



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

Enclosures:

1. Affidavit of Yoshiki Ogata
2. CD 1: "Technical Report MUAP-07014-P(R1) Defense-in-Depth and Diversity Coping Analysis" and "Topical Report MUAP-07006-P(R2) Defense-in-Depth and Diversity"  
– Version containing Proprietary information
3. CD 2: "Technical Report MUAP-07014-NP(R1) Defense-in-Depth and Diversity Coping Analysis" and "Topical Report MUAP-07006-NP(R2) Defense-in-Depth and Diversity"  
– Version not containing Proprietary information

The files contained in each CD are listed in Attachments 1 and 2 hereto.

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

Contact Information

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## MITSUBISHI HEAVY INDUSTRIES, LTD.

## AFFIDAVIT

I, Yoshiki Ogata, 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 public disclosure pursuant to 10 C.F.R. § 2.390 (a)(4) and 10 C.F.R. § 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 enclosed documents entitled "Technical Report MUAP-07014-P(R1) Defense-in-Depth and Diversity Coping Analysis" and "Topical Report MUAP-07006-P(R2) Defense-in-Depth and Diversity" dated June 2008, and have determined that portions of the documents contain proprietary information that should be withheld from public disclosure. Those pages containing proprietary information are 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 documents indicate 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 have 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 of the Defense-in-Depth and Diversity ("D3") system and the unique post-accident response of the US-APWR crediting design features of the D3 system, developed by MHI and 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, detailed design for its software and hardware extending over several years.
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 and testing 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 development of the D3 system and the post-accident plant response of the US-APWR to the design features of the D3 system. Providing public access to such information permits competitors to duplicate or mimic the D3 system design without incurring the associated costs.
- B. Loss of competitive advantage of the US-APWR created by benefits of enhanced plant safety, and reduced operation and maintenance costs associated with the D3 system.

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 20th day of June, 2008.



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

**ATTACHMENT 1**

**FILES CONTAINED IN CD 1**

**CD 1: "Technical Report MUAP-07014-P(R1) Defense-in-Depth and Diversity Coping Analysis" and "Topical Report MUAP-07006-P(R2) Defense-in-Depth and Diversity"  
– Version containing proprietary information**

**Contents of CD**

<u>File Name</u>	<u>Size</u>	<u>Sensitivity Level</u>
001_D3 Coping Analysis_R1(Proprietary).pdf	0.5MB	Proprietary
002_D3_R2(Proprietary).pdf	1.1MB	Proprietary

**ATTACHMENT 2**

**FILES CONTAINED IN CD 2**

**CD 2: "Technical Report MUAP-07014-NP(R1) Defense-in-Depth and Diversity Coping Analysis" and "Topical Report MUAP-07006-NP(R2) Defense-in-Depth and Diversity"  
– Version not containing proprietary information**

**Contents of CD**

<u>File Name</u>	<u>Size</u>	<u>Sensitivity Level</u>
001_D3 Coping Analysis_R1(Non-proprietary).pdf	0.5MB	Non-Proprietary
002_D3_R2(Non-proprietary).pdf	1.1MB	Non-Proprietary