MITSUBISHI HEAVY INDUSTRIES, LTD.
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TOKYO, JAPAN

April 21, 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-10113

Subject: **MHI's 1st Response to the NRC's Request for Additional Information on Topical Report MUAP-07013-P (R0) "Small Break LOCA Methodology for US-APWR" on 3/22/2010**

Reference: 1) "REQUEST FOR ADDITIONAL INFORMATION ON TOPICAL REPORT MUAP-07013-P, ' SMALL BREAK LOCA METHODOLOGY FOR US-APWR'," dated March 22, 2010.

With this letter, Mitsubishi Heavy Industries, Ltd. ("MHI") transmits to the U.S. Nuclear Regulatory Commission ("NRC") an official document entitled 'MHI's 1st Response to the NRC's Request for Additional Information on Topical Report MUAP-07013-P (R0) "Small Break LOCA Methodology for US-APWR" on 3/22/2010'. In the enclosed document, MHI provides the 5 (five) out of 7 (seven) items requested in Reference 1. The remaining response to the RAI will be transmitted to the NRC by separate correspondence, no later than May 21, 2010 (60 days after the issuance of the formal RAI), as agreed by NRC and MHI.

As indicated in the enclosed materials, this document contains 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. A non-proprietary version of the document is also being submitted in this package (Enclosure 3). Any proprietary information that is written inside a bracket in the proprietary-version is replaced by the designation "[ ]" without any text, in the non-proprietary-version.

This letter includes a copy of proprietary version (Enclosure 2), a copy of non-proprietary version (Enclosure 3), and the Affidavit of Atsushi Kumaki (Enclosure 1) which identifies the bases of MHI request that all materials 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,

Atsushi Kumaki for.

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

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NRO

Enclosures:

1. Affidavit of Atsushi Kumaki

2. MHI's 1st Response to the NRC's Request for Additional Information on Topical Report MUAP-07013-P (R0) "Small Break LOCA Methodology for US-APWR" on 3/22/2010 (proprietary)

3. MHI's 1st Response to the NRC's Request for Additional Information on Topical Report MUAP-07013-P (R0) "Small Break LOCA Methodology for US-APWR" on 3/22/2010 (non-proprietary)

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

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ENCLOSURE 1

Docket No.52-021
MHI Ref: UAP-HF-10113

MITSUBISHI HEAVY INDUSTRIES, LTD.

AFFIDAVIT

I, Atsushi Kumaki, being duly sworn according to law, depose and state as follows:

1. I am Group Manager, Licensing Promoting Group in 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 "MHI's 1st Response to the NRC's Request for Additional Information on Topical Report MUAP-07013-P (R0) 'Small Break LOCA Methodology for US-APWR' on 3/22/2010" and have determined that portions of the report 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 technical report indicates 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 in the report identified as proprietary by MHI has 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 codes and files developed by MHI for the fuel of the US-APWR and also contains information provided to MHI under license from the Japanese Government. These codes and files were developed at significant cost to MHI, since they required the performance of detailed calculations, analyses, and testing extending over several years. The referenced information is not available in public sources and could not be gathered readily from other publicly available information. MHI knows of no way the information could be lawfully acquired by organizations or individuals outside of MHI and the Japanese Government.

5. 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.

6. 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 of new fuel 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 21st day of April, 2010.

Atsushi Kumaki

Atsushi Kumaki
Group Manager-Licensing Promoting Group of APWR Promoting Department
Mitsubishi Heavy Industries, LTD.

ENCLOSURE 3

UAP-HF-10113

MHI's 1st Response to the NRC's Request for Additional Information on Topical Report MUAP-07013-P (R0) "Small Break LOCA Methodology for US-APWR" on 3/22/2010

April 2010
(Non-Proprietary)

REQUEST LS-1

Please include both of these assessments in MUAP-07013P.

RESPONSE

MHI will include the code assessment results using both of the LOFT L3-1 and Semiscale S-LH-1 test data in Revision 1 to MUAP-07013-P, which is scheduled to submit to the NRC at the end of May, 2010.

REQUEST LS-2

In the last sentence of the first paragraph of the INTRODUCTION, the ROSA/LSTF SB-CL-18 test is stated to be "sufficiently scalable" to the US-APWR SBLOCAs. Either eliminate this remark or give a definition of what the term "sufficiently scalable" means.

RESPONSE

The description intends to explain that the ROSA/LSTF SB-CL-18 test is being examined to demonstrate its scalability to US-APWR SBLOCAs in the scaling analysis report (Ref. 1). However, MHI will eliminate the description.

Reference:

1. Mitsubishi Heavy Industries, Ltd., Scaling Analysis Report for US-APWR Small Break LOCAs, UAP-HF-09568, December 25, 2009.

REQUEST LS-3

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RESPONSE

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REQUEST LS-5

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RESPONSE

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REQUEST LS-6

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RESPONSE

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