MITSUBISHI HEAVY INDUSTRIES, LTD.
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TOKYO, JAPAN

March 31, 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-09139

Subject: Transmittal of the Summary of Stress Reports for the US-APWR Piping Systems and Components

References: 1) Letter MHI Ref. UAP-HF-08123 from Y. Ogata ("MHI") to U.S. NRC, "Additional Information for Design Completion Plan of US-APWR Piping Systems and Components" dated on July 14, 2008
2) Letter MHI Ref. UAP-HF-08080 from Y. Ogata ("MHI") to U.S. NRC, "Additional Information for NRC Review Schedule for US-APWR Design Certification Application" dated on April 16, 2008

With this letter, Mitsubishi Heavy Industries, Ltd. ("MHI") transmits to the U.S. Nuclear Regulatory Commission ("NRC") its technical reports which provide summaries of the Stress Reports for the US-APWR Piping Systems and Components. Submittal of the enclosed technical reports was one of the commitments in References 1 and 2.

The seismic and accident loads for the US-APWR Piping Systems and Components were provided in the Technical Report entitled "Summary of Seismic and Accident Load Conditions for Primary Components and Piping, MUAP-09002 Revision 0" dated on January 2009. A previously provided Technical Report, MUAP-09002 Revision 0, shows the nozzle loads that were conservatively determined for estimated load. One of the technical reports included in the Enclosures, the ASME Class 1 Piping Analysis Technical Report entitled "Summary of Stress analysis Results for the US-APWR Reactor Coolant Branch Piping, MUAP-09011 Revision 0", provides the piping reaction force for the input to nozzle load values. MUAP-09002 has been revised to update the load values of the branch line nozzles on Reactor Coolant Loop consistent with MUAP-09011 Revision 0. Therefore, MHI is also submitting MUAP-09002 Revision 1 as an Enclosure. In addition, MHI will revise the enclosed Technical Report entitled "Summary of Stress Analysis Results for Reactor Coolant Loop Piping, MUAP-09010" to incorporate the stress analysis results for nozzles on Reactor Coolant Loop connected to branch piping, and submit the report at the end of May 2009.

As indicated in the enclosed materials, these documents contain information that MHI considers proprietary, and therefore the report 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. Accordingly, the technical reports are being submitted in two versions, on separate compact discs. One version (in CD 1 of Enclosure 2) contains the complete proprietary version of the technical reports. A non-proprietary version of the technical reports is enclosed on CD 2 (Enclosure 3). In

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the non-proprietary version, the proprietary information, bracketed in the proprietary version, is replaced by the designation "[ ]". In accordance with the NRC submittal procedures, this letter includes an Affidavit (Enclosure 1) that identifies the reasons why the proprietary version of the Report should 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,

Y. Ogata

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

Enclosures:

1. Affidavit of Yoshiki Ogata

2. CD 1: "Summary of Stress Reports for the US-APWR Piping Systems and Components"
   – Version containing Proprietary information

3. CD 2: "Summary of Stress Reports for the US-APWR Piping Systems and Components"
   – Version not containing Proprietary information

The file contained in each CD is listed in Attachments 1 and 2 hereto.

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

Contact Information
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ENCLOSURE 1

Docket No. 52-021
MHI Ref: UAP-HF-09139

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) 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 listed in Attachments 1, and have determined that portions of the document 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 document 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 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 stress analysis results related to the US-APWR piping systems and components, 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 and the performance of detailed hardware design and software development 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 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 unique plant design of the stress analysis. Providing public access to such information permits competitors to duplicate or mimic the methodology 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. .

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 31st day of March, 2009.

Y. Ogata

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

ATTACHMENT 1

FILE CONTAINED IN CD 1

CD 1: "Summary of Stress Reports for the US-APWR Piping Systems and Components"
– Version Containing Proprietary Information

Contents of CD

Document No.	Title	File Name	File Size
MUAP-09004-P(R0)	Summary of Stress Analysis Results for Core Support Structures	MUAP-09004-P.pdf	5.0MB
MUAP-09005-P(R0)	Summary of Stress Analysis Results for Reactor Vessel	MUAP-09005-P.pdf	3.9MB
MUAP-09006-P(R0)	Summary of Stress Analysis Results for Steam Generator	MUAP-09006-P.pdf	13.0MB
MUAP-09007-P(R0)	Summary of Stress Analysis Results for Pressurizer	MUAP-09007-P.pdf	1.3MB
MUAP-09008-P(R0)	Summary of Stress Analysis Results for Reactor Coolant Pump	MUAP-09008-P.pdf	8.7MB
MUAP-09009-P(R0)	Summary of Stress Analysis Results for Control Rod Drive Mechanizm	MUAP-09009-P.pdf	1.5MB
MUAP-09010-P(R0)	Summary of Stress Analysis Results for Reactor Coolant Loop Piping	MUAP-09010-P.pdf	0.4MB
MUAP-09011-P(R0)	Summary of Stress Analysis Results for Reactor Coolant Loop Branch Piping	MUAP-09011-P.pdf	9.3MB
MUAP-09012-P(R0)	Summary of Stress Analysis Results for Accumulator	MUAP-09012-P.pdf	0.4MB
MUAP-09013-P(R0)	Summary of Stress Analysis Results for Main Steam Piping inside Containment Vessel	MUAP-09013-P.pdf	0.8MB
MUAP-08007-P(R0)	Evaluation Results of Structural Response Analysis of US-APWR Fuel System under Seismic and LOCA	MUAP-08007-P.pdf	30.0MB
MUAP-09002-P(R1)	Summary of Seismic and Accident Load Conditions for Primary Components and Piping	MUAP-09002-P._R1pdf	2.4MB

ATTACHMENT 2

FILE CONTAINED IN CD 2

CD 2: "Summary of Stress Reports for the US-APWR Piping Systems and Components"
– Version Not Containing Proprietary Information

Contents of CD

Document No.	Title	File Name	File Size
MUAP-09004-NP(R0)	Summary of Stress Analysis Results for Core Support Structures	MUAP-09004-NP.pdf	0.4MB
MUAP-09005-NP(R0)	Summary of Stress Analysis Results for Reactor Vessel	MUAP-09005-NP.pdf	3.7MB
MUAP-09006-NP(R0)	Summary of Stress Analysis Results for Steam Generator	MUAP-09006-NP.pdf	0.7MB
MUAP-09007-NP(R0)	Summary of Stress Analysis Results for Pressurizer	MUAP-09007-NP.pdf	1.1MB
MUAP-09008-NP(R0)	Summary of Stress Analysis Results for Reactor Coolant Pump	MUAP-09008-NP.pdf	2.6MB
MUAP-09009-NP(R0)	Summary of Stress Analysis Results for Control Rod Drive Mechanizm	MUAP-09009-NP.pdf	1.3MB
MUAP-09010-NP(R0)	Summary of Stress Analysis Results for Reactor Coolant Loop Piping	MUAP-09010-NP.pdf	0.2MB
MUAP-09011-NP(R0)	Summary of Stress Analysis Results for Reactor Coolant Loop Branch Piping	MUAP-09011-NP.pdf	2.0MB
MUAP-09012-NP(R0)	Summary of Stress Analysis Results for Accumulator	MUAP-09012-NP.pdf	0.1MB
MUAP-09013-NP(R0)	Summary of Stress Analysis Results for Main Steam Piping inside Containment Vessel	MUAP-09013-NP.pdf	0.5MB
MUAP-08007-NP(R0)	Evaluation Results of Structural Response Analysis of US-APWR Fuel System under Seismic and LOCA	MUAP-08007-NP.pdf	2.2MB
MUAP-09002-NP(R1)	Summary of Seismic and Accident Load Conditions for Primary Components and Piping	MUAP-09002-NP_R0.pdf	1.9MB