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

July 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-10208

Subject: Submittal of Technical reports for Environmental Fatigue Analysis and Pipe Break Hazard Analysis on the US-APWR Piping Systems and Components

References: 1) Letter MHI Ref: UAP-HF-10207 from Y. Ogata (MHI) to U.S. NRC, "Updated Design Completion Plan for US-APWR Piping Systems and Components" dated on July 21, 2010

With this letter, Mitsubishi Heavy Industries, Ltd. ("MHI") transmits to the U.S. Nuclear Regulatory Commission ("NRC") the enclosed technical reports for environmental fatigue analysis and pipe break hazard analysis on the US-APWR piping systems and components. The reports are being submitted electronically in compact discs (CDs).

Environmental Fatigue Analysis Reports for Class 1 components, reactor coolant loop piping and pressurizer surge line piping, which are based on the DCD Revision 2 inputs and the NRC's comments on the seismic evaluation, will be available for the April 2011 audit as described in Reference 1. However, to facilitate the NRC's review and maintain the current US-APWR DC review schedule, MHI submits the enclosed environmental fatigue analysis reports based on DCD Revision 1. MHI will be the first vendor to supply the analysis according to RG 1.207 "GUIDELINES FOR EVALUATING FATIGUE ANALYSES INCORPORATING THE LIFE REDUCTION OF METAL COMPONENTS DUE TO THE EFFECTS OF THE LIGHT-WATER REACTOR ENVIRONMENT FOR NEW REACTORS."

The results of Pipe Break Hazard Analysis will be provided during the procurement phase as described in Reference 1. However, for the reasons similar to the above, MHI submits the enclosed pipe break hazard analysis reports.

MHI proposes a public meeting in August 2010 to explain the methodology of Environmental Fatigue Analysis and Pipe Break Hazard Analysis. MHI expects the NRC to review and evaluate the methodology of these analyses.

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 with the information identified as proprietary redacted and replaced by the designation "[ ]".

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Enclosed are copy of the proprietary version (Enclosure 2), copy of the non-proprietary version (Enclosure 3), and the Affidavit of Yoshiki Ogata (Enclosure 1) which identifies the reasons MHI respectfully requests 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 letter. His contact information is provided below.

Sincerely,

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

Enclosures:

1. Affidavit of Yoshiki Ogata

2. CD 1: "US-APWR Environmental Fatigue Analysis Reports and Pipe Break Hazard Analysis Reports" – Version containing Proprietary information

3. CD 2: "US-APWR Environmental Fatigue Analysis Reports and Pipe Break Hazard Analysis Reports" – 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
C. Keith Paulson, Senior Technical Manager
Mitsubishi Nuclear Energy Systems, Inc.
300 Oxford Drive, Suite 301
Monroeville, PA 15146
E-mail: ckpaulson@mnes-us.com
Telephone: (412) 373-6466

ENCLOSURE 1

Docket No. 52-021
MHI Ref: UAP-HF-10208

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 Attachment 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 environmental fatigue analysis and pipe break hazard analysis 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 structural 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 21st day of July, 2010.

Y. Ogata

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

ATTACHMENT 1

FILE CONTAINED IN CD 1

CD 1: "US-APWR Environmental Fatigue Analysis Reports and Pipe Break Hazard Analysis Reports" – Version Containing Proprietary Information

Contents of CD1

File Name	Report Title	File Size	Sensitivity Level
MUAP-09011-P-R1.pdf	Summary of Stress Analysis Results for the US-APWR Reactor Coolant Loop Branch Piping	9.3MB	Proprietary
MUAP-10015-P-R0.pdf	Summary of Environmental Fatigue Analysis Results for the US-APWR Class 1 Components	1.8MB	Proprietary
MUAP-10016-P-R0.pdf	Summary of Environmental Fatigue Analysis Results for the US-APWR Reactor Coolant Loop Branch Piping	2.7MB	Proprietary
MUAP-10017-P-R0.pdf	US-APWR Methodology of Pipe Break Hazard Analysis	2.3MB	Proprietary

ATTACHMENT 2

FILE CONTAINED IN CD 2

CD 2: "US-APWR Environmental Fatigue Analysis Reports and Pipe Break Hazard Analysis Reports" – Version Not Containing Proprietary Information

Contents of CD2

File Name	Report Title	File Size	Sensitivity Level
MUAP-09011-NP-R1.pdf	Summary of Stress Analysis Results for the US-APWR Reactor Coolant Loop Branch Piping	2.5MB	Non-proprietary
MUAP-10015-NP-R0.pdf	Summary of Environmental Fatigue Analysis Results for the US-APWR Class 1 Components	0.5MB	Non-proprietary
MUAP-10016-NP-R0.pdf	Summary of Environmental Fatigue Analysis Results for the US-APWR Reactor Coolant Loop Branch Piping	0.7MB	Non-proprietary
MUAP-10017-NP-R0.pdf	US-APWR Methodology of Pipe Break Hazard Analysis	1.6MB	Non-proprietary