



MITSUBISHI HEAVY INDUSTRIES, LTD.
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TOKYO, JAPAN

October 31, 2011

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-11369

Subject: Transmittal of Technical Reports for Seismic and Structural Analyses

Reference: 1) Letter MHI Ref. UAP-HF-11319 from Y. Ogata ("MHI") to U.S. NRC, "Updated Completion Plan for US-APWR Seismic and Structure Analyses", dated on September 22, 2011

With this letter, Mitsubishi Heavy Industries, Ltd. ("MHI") transmits to the U.S. Nuclear Regulatory Commission ("NRC") four (4) technical reports scheduled for submittal in accordance with Reference 1:

The following 3 documents are being submitted in two versions, non-public and public.

- MUAP-10001 Revision 4, "Seismic Design Bases of the US-APWR Standard Plant",
- MUAP-10006 Revision 2, "Soil-Structure Interaction Analyses and Results for the US-APWR Standard Plant",
- MUAP-11007 Revision 1, "Embedment and Ground Water Effect on SSI".

The following document is being submitted in public version only.

- MUAP-11002 Revision 1, "Turbine Building Model Properties, SSI Analyses, and Structural Integrity Evaluation"

The each version of all enclosed documents is included on a separate compact disc. As indicated in the enclosed materials, the non-public report versions contain information that MHI considers proprietary, and therefore should be withheld from public disclosure pursuant to the 10 C.F.R. § 2.390 (a)(4) as trade secrets and commercial or financial information which is privileged or confidential. Non-proprietary versions of the documents are also being submitted as the public versions with the information identified as proprietary redacted and replaced by the designation "[]".

In addition, the non-public report versions include certain information, designated pursuant to the Commission guidance as sensitive unclassified non-safeguards information, referred to as security-related information ("SRI"), that is to be withheld from public disclosure under 10 C.F.R. § 2.390. The information that is SRI is identified by brackets "{ }". The public versions of reports omit the SRI and are suitable for public disclosure. In the public version of the reports, the SRI is replaced by designation "Security Related Information – Withheld Under 10 C.F.R. 2.390".

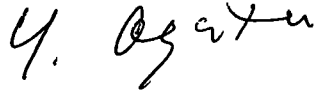
This letter includes a copy of the proprietary and SRI-included (non-public) version (Enclosure 2, 4, 6), a copy of the non-proprietary and SRI-excluded (public) version (Enclosure 3, 5, 7, 8), and the Affidavit of Yoshiki Ogata (Enclosure 1) which identifies the reasons MHI respectfully requests that all materials designated as "Proprietary" in Enclosure 2, 4 and 6 be withheld from public disclosure

DOB
NRD

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

Enclosures :

1. Affidavit of Yoshiki Ogata
2. CD 1: "Seismic Design Bases of the US-APWR Standard Plant"
– Proprietary information and SRI-included version
3. CD 2: "Seismic Design Bases of the US-APWR Standard Plant"
– Non-Proprietary information and SRI-excluded version
4. CD 3: "Soil-Structure Interaction Analyses and Results for the US-APWR Standard Plant"
– Proprietary information and SRI-included version
5. CD 4: "Soil-Structure Interaction Analyses and Results for the US-APWR Standard Plant"
– Non-Proprietary information and SRI-excluded version
6. CD 5: "Embedment and Ground Water Effect on SSI"
– Proprietary information and SRI-included version
7. CD 6: "Embedment and Ground Water Effect on SSI"
– Non-Proprietary information and SRI-excluded version
8. CD 7: "Turbine Building Model Properties, SSI Analyses, and Structural Integrity Evaluation"
– Non-Proprietary information

The file contained in each CD is listed in Attachment 1 hereto.

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

Contact Information

C. Keith Paulson, Senior Technical Manager
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ENCLOSURE – 1

Docket No. 52-021
MHI Ref: UAP-HF-11369

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 below, 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 document indicates that all information identified as "Proprietary" should be withheld from public disclosure pursuant to 10 C.F.R. § 2.390 (a)(4).

Enclosed Document

- "Seismic Design Bases of the US-APWR Standard Plant" (MUAP-10001 Revision 4)
 - "Soil-Structure Interaction Analyses and Results for the US-APWR Standard Plant" (MUAP-10006 Revision 2)
 - "Embedment and Ground Water Effect on SSI" (MUAP-11007 Revision 1)
3. The information identified as proprietary in the enclosed document 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 bases for holding the referenced information confidential are as follows;
 - A. They include the output of analyses used by mathematical models developed at significant cost to MHI, since it required the performance of detailed design calculations, supporting analyses and testing extending. The information out of the analyses is not available in public sources and could not be gathered readily from other publicly available information.

- B. They include the information that is provided to MHI pursuant to licensing agreements with third parties (the "Licensors") for MHI's use and under the obligation to maintain their confidentiality. Furthermore, MHI has an ownership interest in the referenced information by having paid significant sums of money to the Licensors for the rights to the intellectual property therein such that public disclosure of the materials would adversely affect MHI's competitive position.
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. 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 methodology of modeling and analysis for building structure design. Providing public access to such information permits competitors to duplicate or mimic the methodology without incurring the associated 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 October, 2011.



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

ATTACHMENT – 1

FILES CONTAINED IN CDs

**CD 1: Technical Reports,
MUAP-10001-P Revision 4, “Seismic Design Bases of the US-APWR Standard Plant
(Proprietary Version)”,
– Versions Containing Proprietary Information and Safety Related Information**

Contents of CD1

<u>File Name</u>	<u>Size</u>	<u>Sensitivity Level</u>
MUAP-10001-P_R4.pdf	16.1MB	SRI included, Proprietary

**CD 2: Technical Report,
MUAP-10001-NP Revision 4, “Seismic Design Bases of the US-APWR Standard Plant
(Non-proprietary Version)”,
– Versions Not Containing Proprietary Information and Safety Related Information**

Contents of CD2

<u>File Name</u>	<u>Size</u>	<u>Sensitivity Level</u>
MUAP-10001-NP_R4.pdf	3.1MB	Non-SRI, Non-Proprietary

**CD 3: Technical Reports,
MUAP-10006-P Revision 2, “Soil-Structure Interaction Analyses and Results for the
US-APWR Standard Plant (Proprietary Version)”,
– Versions Containing Proprietary Information and Safety Related Information**

Contents of CD3

<u>File Name</u>	<u>Size</u>	<u>Sensitivity Level</u>
MUAP-10006-P_R2.pdf	15.3MB	SRI included, Proprietary

**CD 4: Technical Report,
MUAP-10006-NP Revision 2, "Soil-Structure Interaction Analyses and Results for the
US-APWR Standard Plant (Non-proprietary Version)",
– Versions Not Containing Proprietary Information and Safety Related Information**

Contents of CD4

<u>File Name</u>	<u>Size</u>	<u>Sensitivity Level</u>
MUAP-10006-NP_R2.pdf	7.4MB	Non-SRI, Non-Proprietary

**CD 5: Technical Reports,
MUAP-11007-P Revision 1, "Embedment and Ground Water Effect on SSI"
(Proprietary Version)"
– Versions Containing Proprietary Information and Safety Related Information**

Contents of CD5

<u>File Name</u>	<u>Size</u>	<u>Sensitivity Level</u>
MUAP-11007-P_R1.pdf	9.9MB	SRI included, Proprietary

**CD 6: Technical Report,
MUAP-11007-NP Revision 1, "Embedment and Ground Water Effect on
SSI"(Non-proprietary Version)"
– Versions Not Containing Proprietary Information and Safety Related Information**

Contents of CD6

<u>File Name</u>	<u>Size</u>	<u>Sensitivity Level</u>
MUAP-11007-NP_R1.pdf	6.2MB	Non-SRI, Non-Proprietary

**CD 7: Technical Reports,
MUAP-11002-NP Revision 1, "Turbine Building Model Properties, SSI Analyses, and
Structural Integrity Evaluation"
– Versions Not Containing Proprietary Information and Safety Related Information**

Contents of CD7

<u>File Name</u>	<u>Size</u>	<u>Sensitivity Level</u>
MUAP-11002_R1.pdf	40.4 MB	Non-SRI, Non-Proprietary