MITSUBISHI HEAVY INDUSTRIES, LTD.
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TOKYO, JAPAN

March 31, 2014

Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Attention: Mr. Perry Buckberg

Docket No. 52-021
MHI Ref: UAP-HF-14031

Subject: MHI's Responses to US-APWR DCD Section 3.7 and 3.8 RAIs

References:
1) REQUEST FOR ADDITIONAL INFORMATION 1062-7296, NRC letter, "Non-PROP US-APWR Design Certification Application RAI 1062-7296 (Section 3.8.3)," dated December 2nd, 2013, ML13329A537.
2) REQUEST FOR ADDITIONAL INFORMATION 1066-7306, NRC letter, "US-APWR Design Certification Application RAI 1066-7306 (Section: 03.08.01 – Concrete Containment)," dated December 12th, 2013, ML 13346A548
3) REQUEST FOR ADDITIONAL INFORMATION 1067-7307, NRC letter, "US-APWR Design Certification Application RAI 1067-7307 (03.08.04 - Other Seismic Category I Structures)," dated December 12th, 2013, ML 13346A560
4) NRC Audit Report, "REPORT OF THE SEPTEMBER 23 - 27, 2013, AUDIT REGARDING THE UNITED STATES – ADVANCED PRESSURIZED WATER REACTOR DESIGN CERTIFICATION DOCUMENT SECTION 3.7," dated December 18th, 2013, ML13322B238

With this letter, Mitsubishi Heavy Industries, Ltd. (MHI) transmits to the U.S. Nuclear Regulatory Commission (NRC) the document entitled "MHI's Response to US-APWR DCD Section 3.7 and 3.8 RAIs." The enclosed document responds to those questions posed in References 1 through 3. Also, this letter contains revised responses to 3.7 RAIs, as the NRC requested in Reference 4.

This letter includes a copy of the proprietary (non-public) version of RAI responses (Enclosure 2), a copy of the non-proprietary (public) version of the RAI responses (Enclosure 3), and the Affidavit of Katsuhisa Takaura (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 CFR § 2.390 (a)(4).

As indicated in the enclosed materials, this document contains information that MHI considers proprietary, and therefore should be withheld from public disclosure pursuant to the 10 CFR § 2.390 (a)(4) as trade secrets and commercial or financial information which is privileged or confidential. The non-proprietary version of the document is also being submitted with the

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

Attachment 1 provides a listing of files contained on compact disks (CDs) one and two (Enclosures 2 and 3) and a description of information sensitivity contained within responses. Attachment 2 provides a listing of those RAI responses contained in Enclosures 2 and 3.

Please contact Mr. Joseph Tapia, General Manager of Licensing Department, Mitsubishi Nuclear Energy Systems, Inc. if the NRC has questions concerning any aspect of this submittal. Mr. Tapia's contact information is provided below.

Sincerely,

for
K. Takaura

Yoshiki Ogata,
Executive Vice President
Mitsubishi Nuclear Energy Systems, Inc.
On behalf of Mitsubishi Heavy Industries, Ltd.

Enclosures:

1. Affidavit of Katsuhisa Takaura

2. CD1: MHI's Response to US-APWR DCD Section 3.7 and 3.8 RAIs– Proprietary version

3. CD 2: MHI's Response to US-APWR DCD Section 3.7 and 3.8 RAIs– Non-Proprietary version

CC: P. Buckberg
J. Tapia

Contact Information
Joseph Tapia, General Manager of Licensing Department
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ATTACHMENT – 1

FILES CONTAINED IN CDs

CD 1: MHI's Response to US-APWR DCD Section 3.7 and 3.8 RAIs – Proprietary version

Contents of CD1

File Name	Size	Sensitivity Level
1. Includes proprietary information		
RAI 858-6126 Q03.08.03-47-P.pdf	6.79 MB	Proprietary
RAI 960-6709 Q03.07.02-212-P.pdf	270 KB	Proprietary
RAI 960-6709 Q03.07.02-216-P.pdf	1.25 MB	Proprietary
RAI 960-6709 Q03.07.02-217-P.pdf	1.57 MB	Proprietary
RAI 1050-7218 Q03.07.02-229_230-P.pdf	2.57 MB	Proprietary
RAI 1062-7296 Q03.08.03-116-P.pdf	14.8 MB	Proprietary
2. Others (No proprietary information)		
RAI 960-6709 Q03.07.02-219.pdf	83.9 KB	None
RAI 1025-7092 Q03.07.02-226.pdf	5.01 MB	None
RAI 1050-7218 Q03.07.02-228.pdf	402 KB	None
RAI 1066-7306 Q03.08.01-24.pdf	86.4 KB	None
RAI 1067-7307 Q03.08.04-59_60.pdf	616 KB	None

CD 2: MHI's Response to US-APWR DCD Section 3.7 and 3.8 RAIs – Non-proprietary version

Contents of CD2

File Name	Size	Sensitivity Level
1. Includes proprietary information		
RAI 858-6126 Q03.08.03-47-NP.pdf	139 KB	Non-proprietary
RAI 960-6709 Q03.07.02-212-NP.pdf	112 KB	Non-proprietary
RAI 960-6709 Q03.07.02-216-NP.pdf	1.20 MB	Non-proprietary
RAI 960-6709 Q03.07.02-217-NP.pdf	757 KB	Non-proprietary
RAI 1050-7218 Q03.07.02-229_230-NP.pdf	2.58 MB	Non-proprietary
RAI 1062-7296 Q03.08.03-116-NP.pdf	4.85 MB	Non-proprietary
2. Others (No proprietary information)		
RAI 960-6709 Q03.07.02-219.pdf	83.9 KB	None
RAI 1025-7092 Q03.07.02-226.pdf	5.01 MB	None
RAI 1050-7218 Q03.07.02-228.pdf	402 KB	None
RAI 1066-7306 Q03.08.01-24.pdf	86.4 KB	None
RAI 1067-7307 Q03.08.04-59_60.pdf	616 KB	None

ATTACHMENT – 2

LIST OF RAI RESPONSES

RAI Letter No.	eRAI No.	Question No.	Question No. (Sub-number)
960	6709	03.07.02-212	
960	6709	03.07.02-216	
960	6709	03.07.02-217	
960	6709	03.07.02-219	
1025	7092	03.07.02-226	
1050	7218	03.07.02-228	
1050	7218	03.07.02-229	
1050	7218	03.07.02-230	
858	6126	03.08.03-47	
1062	7296	03.08.03-116	
1066	7306	03.08.01-24	
1067	7307	03.08.04-59	
1067	7307	03.08.04-60	

Enclosure1

MITSUBISHI HEAVY INDUSTRIES, LTD.

AFFIDAVIT

I, Katsuhisa Takaura, state as follows:

1. I am Manager, APWR Project of Global Nuclear Project 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 document entitled "MHI's Response to US-APWR DCD Section 3.7 and 3.8 RAIs" dated March 2014, 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 CFR § 2.390 (a)(4).

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 basis for holding the referenced information confidential is that it describes the unique design information and analysis, 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 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 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 31th day of March, 2014.

K. Takaura

Katsuhisa Takaura,
Manager- APWR Project
Of Global Nuclear Project Department
Mitsubishi Heavy Industries, Ltd.