



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

July 8, 2013

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-13154

**Subject: Revised RAI Responses to Historical and Outstanding RAIs for  
US-APWR DCD Sections 3.7 and 3.8**

- Reference:**
- 1) Letter MHI Ref. UAP-HF-13034 from Y. Ogata (MHI) to U.S. NRC, "Updated Closure Plan for US-APWR Seismic and Structural Analyses-Schedule Improvement," dated February 15, 2013, ML13050A601.
  - 2) Letter MHI Ref. UAP-HF-13112 from Y. Ogata (MHI) to U.S. NRC Revised RAI Responses to Historical and Outstanding RAIs 766-5819, 909-6315, and 985-6948 for US-APWR DCD Sections 3.7 and 3.8, dated May 31, 2013.

With this letter, Mitsubishi Heavy Industries, Ltd. (MHI) transmits to the U.S. Nuclear Regulatory Commission (NRC) the document entitled "Revised RAI Responses to Historical and Outstanding RAIs for US-APWR DCD Sections 3.7 and 3.8," scheduled for submittal in accordance with Reference 1, and Reference 2. Two versions of the responses are being submitted, a proprietary (non-public) version and a non-proprietary (public) version.

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 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 CFR § 2.390 (a)(4).

Each version of the enclosed document is included on a separate compact disc (CD). 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 information identified as proprietary redacted and replaced by the designation "[ ]."

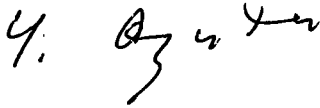
Attachment 1 provides a listing of the files contained in Enclosures 2 and 3. Attachment 2 provides a listing of those RAI responses contained in Enclosures 2 and 3. Attachment 3 provides a listing of those RAI responses, originally due in June, which are being deferred to July. The reason for the deferral is to allow the necessary time to complete design reports

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and analyses related to revised methods for determining R/B complex member design-to-capacity ratios. During the process of preparing revised responses, it was determined that two RAIs did not need a revision, and therefore were reclassified from Category "C" to Category "A". These RAIs are 632-5041 Question 03.07.04-04 and 776-5851 Question 03.07.02-82.

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 letter. Mr. Tapia's contact information is provided below.

Sincerely,



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

Enclosures:

1. Affidavit of Yoshiki Ogata
2. CD 1: Revised RAI Responses to Historical and Outstanding RAIs for US-APWR DCD Sections 3.7 and 3.8 (Proprietary version)
3. CD 2: Revised RAI Responses to Historical and Outstanding RAIs for US-APWR DCD Sections 3.7 and 3.8 (Non-Proprietary version)

CC: J. A. Ciocco  
J. Tapia

Contact Information

Joseph Tapia, General Manager of Licensing Department  
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Arlington, VA22209  
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## **Enclosure1**

### **MITSUBISHI HEAVY INDUSTRIES, LTD.**

#### **AFFIDAVIT**

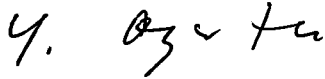
I, Yoshiki Ogata, state as follows:

1. I am Executive Vice President of Mitsubishi Nuclear Energy Systems, Inc., and have been delegated the function of reviewing MITSUBISHI HEAVY INDUSTRIES, LTD's (MHI) US-APWR documentation to determine whether it contains information that should be withheld from public disclosure pursuant to 10 CFR § 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 "Revised RAI Responses to Historical and Outstanding RAIs for US-APWR DCD Sections 3.7 and 3.8," dated July 2013, 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 as 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. 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. 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 8th day of July, 2013.



Yoshiki Ogata,  
Executive Vice president  
Mitsubishi Nuclear Energy Systems, Inc.

**ATTACHMENT – 1**

**FILES CONTAINED IN CDs**

**CD 1: Revised RAI Responses to Historical and Outstanding RAIs for US-APWR DCD Sections 3.7 and 3.8, Version Containing Proprietary Information**

**Contents of CD1**

This CD includes RAI responses containing proprietary information.

<u>File Name</u>	<u>Size</u>	<u>Sensitivity Level</u>
1. Includes proprietary information		
RAI 658-5130 Q03.08.04-48(Proprietary).pdf	9.65 MB	Proprietary
RAI 662-5131 Q03.08.03-29(Proprietary).pdf	89 KB	Proprietary
RAI 1023-7067 Q03.08.03-110(Proprietary).pdf	16.8 MB	Proprietary
2. Others (No relating proprietary information)		
RAI 223-1996 Q03.08.01-07.pdf	1.57 MB	None
RAI 342-2000 Q03.08.04-13.pdf	56 KB	None
RAI 342-2000 Q03.08.04-14.pdf	55 KB	None
RAI 342-2000 Q03.08.04-15.pdf	57 KB	None
RAI 490-3732 Q03.08.01-09.pdf	138 KB	None
RAI 490-3732 Q03.08.01-10.pdf	60KB	None
RAI 497-3734 Q03.08.04-39.pdf	4.45 MB	None
RAI 497-3734 Q03.08.04-40.pdf	56 KB	None
RAI 776-5851 Q03.07.02-83.pdf	57 KB	None
RAI 939-6334 Q03.07.01-38.pdf	83 KB	None
RAI 1024-7053 Q03.08.03-113.pdf	110 KB	None
RAI 1024-7053 Q03.08.03-114.pdf	6.17 MB	None
RAI 1025-7092 Q03.07.02-226.pdf	29.0 MB	None

**CD 2: Revised RAI Responses to Historical and Outstanding RAIs for US-APWR DCD Sections 3.7 and 3.8, Version Withholding Proprietary Information**

**Contents of CD2**

This CD includes RAI responses withholding proprietary information.

<u>File Name</u>	<u>Size</u>	<u>Sensitivity Level</u>
1. Included proprietary information		
RAI 658-5130 Q03.08.04-48(Non-Proprietary).pdf	81 KB	Non-Proprietary
RAI 662-5131 Q03.08.03-29(Non-Proprietary).pdf	85 KB	Non-Proprietary
RAI 1023-7067 Q03.08.03-110(Non-Proprietary).pdf	5.27 MB	Non-Proprietary
2. Others (No relating proprietary information)		
RAI 223-1996 Q03.08.01-07.pdf	1.57 MB	None
RAI 342-2000 Q03.08.04-13.pdf	56 KB	None
RAI 342-2000 Q03.08.04-14.pdf	55 KB	None
RAI 342-2000 Q03.08.04-15.pdf	57 KB	None
RAI 490-3732 Q03.08.01-09.pdf	138 KB	None
RAI 490-3732 Q03.08.01-10.pdf	60KB	None
RAI 497-3734 Q03.08.04-39.pdf	4.45 MB	None
RAI 497-3734 Q03.08.04-40.pdf	56 KB	None

<u>File Name</u>	<u>Size</u>	<u>Sensitivity Level</u>
RAI 776-5851 Q03.07.02-83.pdf	57 KB	None
RAI 939-6334 Q03.07.01-38.pdf	83 KB	None
RAI 1024-7053 Q03.08.03-113.pdf	110 KB	None
RAI 1024-7053 Q03.08.03-114.pdf	6.17 MB	None
RAI 1025-7092 Q03.07.02-226.pdf	29.0 MB	None

**ATTACHMENT – 2**  
**LIST OF RAI RESPONSES**

<b>RAI Letter No.</b>	<b>eRAI No.</b>	<b>Question No.</b>	<b>Question No. (Sub-number)</b>
223	1996	03.08.01-01	03.08.01-07
342	2000	03.08.04-13	
342	2000	03.08.04-14	
342	2000	03.08.04-15	
490	3732	03.08.01-09	
490	3732	03.08.01-10	
497	3734	03.08.04-39	
497	3734	03.08.04-40	
658	5130	03.08.04-48	
662	5131	03.08.03-29	
776	5851	03.07.02-83	
939	6334	03.07.01-38	
1023	7067	03.08.03-110	
1024	7053	03.08.03-113	
1024	7053	03.08.03-114	
1025	7092	03.07.02-226	

**ATTACHMENT - 3**  
**LIST OF DEFERRED RAI RESPONSES**

<b>RAI Letter No.</b>	<b>eRAI No.</b>	<b>Question No.</b>	<b>Question No. (Sub-number)</b>	<b>Submittal Date <sup>1)</sup></b>
223	1996	03.08.01-01	03.08.01-11	July 2013 <sup>2)</sup>
342	2000	03.08.04-12		July 2013 <sup>2)</sup>
490	3732	03.08.01-02		July 2013 <sup>2)</sup>
852	6003	03.07.02-136		September 2013 <sup>3)</sup>
852	6003	03.07.02-137		September 2013 <sup>3)</sup>
858	6126	03.08.03-48		September 2013 <sup>3)</sup>
894	6270	03.08.03-63		September 2013 <sup>3)</sup>
950	6575	03.07.03-12		July 2013 <sup>2)</sup>
958	6608	03.08.03-94		September 2013 <sup>3)</sup>
958	6608	03.08.03-96		July 2013 <sup>3)</sup>
977	6899	03.08.03-97		September 2013 <sup>4)</sup>
977	6899	03.08.03-98		September 2013 <sup>3)</sup>
977	6899	03.08.03-99		September 2013 <sup>3)</sup>
1024	7053	03.08.03-111		September 2013
1024	7053	03.08.03-112		September 2013
1025	7092	03.07.02-225		July 2013

Note

- 1) RAI responses will be submitted individually or in groups as they are completed.
- 2) These RAI responses were scheduled for submittal in June 2013 in accordance with the Seismic Closure Plan (UAP-HF-13034, February 15, 2013).
- 3) These RAI responses were scheduled for submittal in June 2013 in accordance with the MHI Transmittal Letter UAP-HF-13064, dated March 29, 2013.
- 4) This RAI response was scheduled for submittal in June 2013 in accordance with the MHI Transmittal Letter UAP-HF-13096, dated April 29, 2013.