MITSUBISHI HEAVY INDUSTRIES, LTD.

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TOKYO, JAPAN

July 12, 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-13183

Subject: MHI's Revised Response to US-APWR RAI No. 929-6380 R3 (SRP 04.02)

Reference:
1) "Request for Additional Information 929-6380 (R3), SRP Section: 04.02, Applicable Section: Chapter 04.02 – Fuel System Design," dated May 14, 2012
2) "MHI's Response to US-APWR DCD RAI No. 929-6380 (R3)" (MHI Ref: UAP-HF-12156) dated July 10, 2012

With this letter, Mitsubishi Heavy Industries, Ltd. ("MHI") transmits to the U.S. Nuclear Regulatory Commission ("NRC") a document entitled "Revised Response to Request for Additional Information No. 929-6380 Question 04.02-57".

In the enclosed document, MHI provides the revised response to Question 04.02-57 contained within Reference 1. The previous response to Question 04.02-57 was provided in Reference 2.

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. The proprietary information is bracketed by the designation "[ ]".

This letter includes a copy of the proprietary version of the RAI response (Enclosure 2), a copy of the non-proprietary version of the RAI response (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 Mr. Joseph Tapia, General Manager of Licensing Department, 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,
Executive Vice President
Mitsubishi Nuclear Energy Systems, Inc.
On behalf of Mitsubishi Heavy Industries, Ltd.

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NRO

Enclosures:

1. Affidavit of Yoshiki Ogata

2. Revised Response to Request for Additional Information No. 929-6380 Question 04.02-57 (Proprietary version)

3. Revised Response to Request for Additional Information No. 929-6380 Question 04.02-57 (Non-proprietary version)

CC: J. A. Ciocco
J. Tapia

Contact Information
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ENCLOSURE1

Docket No. 52-021
MHI Ref: UAP-HF-13183

MITSUBISHI HEAVY INDUSTRIES, LTD.
AFFIDAVIT

I, Yoshiki Ogata, state as follows:

1. I am Executive Vice President of Mitsubishi Nuclear Energy System, 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 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 "Revised Response to Request for Additional Information No. 929-6380 Question 04.02-57" 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 C.F.R. § 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 information related to the fuel seismic response analysis and control rod insertion time unique to the US-APWR design.

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 design of US-APWR fuel systems and components. 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 associated with the design of US-APWR fuel systems and components.

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 12th day of July, 2013.

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

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Enclosure 3

UAP-HF-13183
Docket No. 52-021

Revised Response to Request for Additional Information No.
929-6380 Question 04.02-57

July 2013

(Non-Proprietary)

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION 929-6380 (R3)

7/12/2013

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

RAI NO.:	**929-6380 Revision 3**
SRP SECTION:	**04.02 - Fuel System Design**
APPLICATION SECTION:	**04.02**
DATE OF RAI ISSUE:	**05/14/2012**

QUESTION NO. : 04.02-57

Evaluate the impact of up to 0.1 second delay in control rod insertion on the scram worth versus position or time curve used in the Chapter 15 analyses.

ANSWER:

In the control rod insertion test, it was confirmed that the additional delay in control rod insertion time due to plastic deformation of the grid spacers was [ ] second(s); this result was explained in UAP-HF-10052 (Reference 1).

As outlined in the US-APWR fuel seismic closure plan (Reference 2), plastic deformation of the grid spacers is not expected to occur; however, if it occurs, it will be limited to only peripheral fuel assemblies. This result will be accomplished by applying the axial flow damping effect and [ ] vibration characteristics of the US-APWR fuel assemblies.

Therefore, no impacts on control rod insertability will occur in either of these cases. This is because no control rods are positioned in the potentially deformed peripheral fuel assemblies.

Grid deformation evaluation results will be updated as part of the fuel seismic evaluation and will be shown in the next revision to MUAP-08007, which is planned to be submitted in December 2013.

References:

(1) Document ML100600412, 'MHI's Responses to US-APWR DCD RAI No.519-4153 Revision 2', MHI Reference No. UAP-HF-10052, submitted February 25, 2010.

(2) Document ML13169A008, 'US-APWR Fuel Seismic Closure Plan', MHI Reference No. UAP-HF-13133, submitted June 14, 2013.

Impact on DCD

There is no impact on the DCD.

Impact on R-COLA

There is no impact on the R-COLA.

Impact on PRA

There is no impact on the PRA.

Impact on Technical/Topical Report

There is no impact on a Technical/Topical Report.

This completes MHI's response to the NRC's question.