MITSUBISHI HEAVY INDUSTRIES, LTD.
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TOKYO, JAPAN

April 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-13082

Subject: MHI's Revised Responses to US-APWR DCD RAI No. 589-4536 REVISION 2 (SRP 03.11)

Reference:
1) "Request for Additional Information No. 589-4536 Revision 2, SRP Section: 03.11 - Environmental Qualification of Mechanical and Electrical Equipment: 3.11" dated June 8, 2010 (ML101600106).
2) "MHI's Response to US-APWR DCD RAI No. 589-4536 Rev. 2", UAP-HF-10200, dated July 9, 2010 (ML101969295).
3) "MHI's Response to US-APWR DCD RAI No. 512-3893 Rev. 1", UAP-HF-12229, dated September 5, 2012 (ML12251A212).
4) "MHI's Response to US-APWR DCD RAI No. 358-2642 Rev. 1", UAP-HF-09371, dated July 10, 2009 (ML091970103).

With this letter, Mitsubishi Heavy Industries, Ltd. ("MHI") transmits to the U.S. Nuclear Regulatory Commission ("NRC") a document entitled "Revised Responses to Request for Additional Information No. 589-4536 Revision 2."

Enclosed are the revised responses to Question 03.11.-36 and 03.11-38 that are contained within Reference 1. These responses supersede the previous responses to the questions submitted in Reference 2 in its entirety. The response to Question 03.11-37 in the RAI submitted in Reference 2 is not changed by this document.

The responses are being submitted in two versions. One version includes 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 other version omits the SRI and is suitable for public disclosure. In the public version, the SRI is replaced by the designation "[Security-Related Information - Withheld under 10 CFR 2.390]."

In addition, supplemental information related to the dose calculation is submitted to support the NRC staff's confirmatory calculation. MHI considers the information 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.

This letter includes a copy of the SRI included version (CD1), the SRI excluded version (CD2), copies of electric files related to the dose calculation for EQP (CD3), and the Affidavit of Yoshiki Ogata (Enclosure 1) which identifies the reasons MHI respectfully requests that all

D081
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materials designated as "Proprietary" on CD3 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 submittals. His contact information is provided below.

Sincerely,

Y. Ogata

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

Enclosures:

1. Affidavit of Yoshiki Ogata

2. CD1: Revised Responses to Request for Additional Information No. 589-4536 REVISION 2 (SRI included version)

3. CD2: Revised Responses to Request for Additional Information No. 589-4536 REVISION 2 (SRI excluded version)

4. CD3: Dose Calculation Related Files for EQP (Proprietary)

CC: J. A. Ciocco
J. Tapia

Contact Information
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Enclosure 1

Docket No. 52-021
MHI Ref: UAP-HF-13082

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 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 CD3, "Dose Calculation Related Files for EQP" and have determined that the CD3 contain proprietary information that should be withheld from public disclosure. The label on the CD3 have been marked to indicate that the entire contents of the CD3 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 the unique design of the safety 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 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.

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 US-APWR radiation protection design. Providing public access to such information permits competitors to duplicate or mimic the radiation protection information without incurring the associated costs.

   B. Loss of competitive advantage of the US-APWR created by benefits of enhanced US-APWR radiation protection development costs associated with the radiation protection design.

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 April 2013.

Y. Ogata

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

ATTACHMENT-1

FILES CONTAINED IN CDs

CD1: Revised Responses to Request for Additional Information No. 589-4536 REVISION 2 (SRI included version)

Contents of CD1

File Name	Size	Sensitivity Level
Revised Response to RAI 589-4536_SRI.pdf	1392 kB	SRI Included

CD2: Revised Responses to Request for Additional Information No. 589-4536 REVISION 2 (SRI excluded version)

Contents of CD2

File Name	Size	Sensitivity Level
Revised Response to RAI 589-4536_Non-SRI.pdf	884 kB	SRI Excluded

CD3: Dose calculation related files for EQP (Proprietary)

Contents of CD3

File Category	Size	Sensitivity Level
Table of Data List.xls	37kB	Proprietary
US-APWR_Core_InventoryR3.NIF	9 kB	Proprietary
US-APWR_DBA_LOCA_Core_R1.RFT	1 kB	Proprietary
LOCA-case2-1-1r1_Spray-1.psf	18 kB	Proprietary
LOCA-case2-1-1r1_Spray-1.o0	2551 kB	Proprietary
LOCA-case2-1-1r1_Spray-2.psf	18 kB	Proprietary
LOCA-case2-1-1r1_Spray-2.o0	2554 kB	Proprietary
Radioactivity_CV.xlsx	656 kB	Proprietary
LOCA-case2-1-1r1_No-Spray_r3.psf	18 kB	Proprietary
LOCA-case2-1-1r1_No-Spray_r3.o0	2414 kB	Proprietary
Radioactivity_RW.xlsx	63 kB	Proprietary
Co-60_1Bq.xls	14 kB	Proprietary
Kr-85_1Bq.xls	14 kB	Proprietary
Kr-85m_1Bq.xls	14 kB	Proprietary
Kr-87_1Bq.xls	14 kB	Proprietary
Kr-88_1Bq.xls	15 kB	Proprietary

Rb-86_1Bq.xls	14 kB	Proprietary
Sr-89_1Bq.xls	14 kB	Proprietary
Sr-91_1Bq.xls	14 kB	Proprietary
Sr-92_1Bq.xls	14 kB	Proprietary
Y-90_1Bq.xls	14 kB	Proprietary
Y-91_1Bq.xls	14 kB	Proprietary
Y-92_1Bq.xls	14 kB	Proprietary
Y-93_1Bq.xls	14 kB	Proprietary
Zr-95_1Bq.xls	14 kB	Proprietary
Zr-97_1Bq.xls	14 kB	Proprietary
Nb-95_1Bq.xls	14 kB	Proprietary
Mo-99_1Bq.xls	14 kB	Proprietary
Tc-99m_1Bq.xls	14 kB	Proprietary
Ru-103_1Bq.xls	14 kB	Proprietary
Ru-105_1Bq.xls	14 kB	Proprietary
Rh-105_1Bq.xls	14 kB	Proprietary
Sb-127_1Bq.xls	14 kB	Proprietary
Sb-129_1Bq.xls	14 kB	Proprietary
Te-127_1Bq.xls	14 kB	Proprietary
Te-127m_1Bq.xls	14 kB	Proprietary
Te-129_1Bq.xls	14 kB	Proprietary
Te-129m_1Bq.xls	14 kB	Proprietary
Te-131m_1Bq.xls	15 kB	Proprietary
Te-132_1Bq.xls	14 kB	Proprietary
I-131_1Bq.xls	14 kB	Proprietary
I-132_1Bq.xls	14 kB	Proprietary
I-133_1Bq.xls	14 kB	Proprietary
I-134_1Bq.xls	14 kB	Proprietary
I-135_1Bq.xls	14 kB	Proprietary
Xe-133_1Bq.xls	14 kB	Proprietary
Xe-135_1Bq.xls	14 kB	Proprietary
Cs-134_1Bq.xls	14 kB	Proprietary
Cs-136_1Bq.xls	14 kB	Proprietary
Ba-139_1Bq.xls	14 kB	Proprietary
Ba-140_1Bq.xls	14 kB	Proprietary
La-140_1Bq.xls	15 kB	Proprietary
La-141_1Bq.xls	14 kB	Proprietary
La-142_1Bq.xls	15 kB	Proprietary
Ce-141_1Bq.xls	14 kB	Proprietary
Ce-143_1Bq.xls	14 kB	Proprietary
Ce-144_1Bq.xls	14 kB	Proprietary
Pr-143_1Bq.xls	14 kB	Proprietary
Nd-147_1Bq.xls	14 kB	Proprietary
Np-239_1Bq.xls	14 kB	Proprietary
Pu-238_1Bq.xls	14 kB	Proprietary
Pu-239_1Bq.xls	15 kB	Proprietary
Pu-240_1Bq.xls	14 kB	Proprietary
Pu-241_1Bq.xls	14 kB	Proprietary
Am-241_1Bq.xls	15 kB	Proprietary
Cm-242_1Bq.xls	14 kB	Proprietary
Cm-244_1Bq.xls	14 kB	Proprietary
gamma-vapor.ms7	16 kB	Proprietary
gamma-vapor.html	50 kB	Proprietary

gamma-vapor.html.bmp	105 kB	Proprietary
Gamma_CV.xlsx	561 kB	Proprietary
gamma-liquid_130207.ms7	15 kB	Proprietary
gamma-liquid.html	46 kB	Proprietary
gamma-liquid.html.bmp	105 kB	Proprietary
Gamma_RW.xlsx	333 kB	Proprietary
beta-dose_a.xls	4562 kB	Proprietary
beta-dose_b.xls	4287 kB	Proprietary
beta-dose_total.xls	182 kB	Proprietary