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TOKYO, JAPAN

September 10, 2013

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

Attention: Mr. Perry Buckberg

Docket No. 52-021
MHI Ref: UAP-HF-13212

Subject: Submittal of US-APWR Design Control Document Revision 4 in Support of Mitsubishi Heavy Industries, Ltd.'s Application for Design Certification of the US-APWR Standard Plant Design

- References:**
- 1) Letter MHI Ref: UAP-HF-07171 from M. Kaneda (MHI) to U.S. NRC, "Submittal of US-APWR Design Control Document in Support of Mitsubishi Heavy Industries, Ltd.'s Application for Design Certification of the US-APWR Standard Plant Design," dated December 31, 2007.
 - 2) Letter MHI Ref: UAP-HF-13175 from Y. Ogata (MNES) to U.S. NRC "Submittal of the US-APWR DCD Revision 3 Tracking Report Revision 5." dated July 16, 2013.
 - 3) Letter MHI Ref: UAP-HF-13170 from Y. Ogata (MNES) to U.S. NRC, "US-APWR Safety Analysis Cleanup," dated July 1, 2013.
 - 4) Letter MHI Ref: UAP-HF-13133 from Y. Ogata (MNES) to U.S. NRC, "US-APWR Fuel Seismic Closure Plan," dated June 14, 2013.
 - 5) Letter MHI Ref: UAP-HF-13101 from Y. Ogata (MNES) to U.S. NRC, "Closure Plan for US-APWR Probabilistic Risk Assessment," dated April 26, 2013.
 - 6) 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.
 - 7) Letter MHI Ref: UAP-HF-13196 from Y. Ogata (MNES) to U.S. NRC, "US-APWR Update to the Seismic Closure Plan and Submittals related to DCD Chapter 3," dated August 2, 2013.
 - 8) Letter MHI Ref: UAP-HF-13211 from Y. Ogata (MNES) to U.S. NRC, "Transmittal of Technical Report, "US-APWR Containment Performance for Pressure Loads" (MUAP-10018, Revision 1)," dated August 23, 2013.
 - 9) Letter MHI Ref: UAP-HF-13081 from Y. Ogata (MNES) to U.S. NRC, "Human Factors Engineering Closure Plan for US-APWR," dated March 29, 2013.

Mitsubishi Heavy Industries, Ltd. ("MHI") is pleased to submit to the U.S. Nuclear Regulatory Commission ("NRC") Revision 4 of the US-APWR Design Control Document ("DCD"). As stated in Reference 1, the DCD constitutes the Final Safety Analysis Report ("FSAR") for the US-APWR standard plant design required by 10 C.F.R. § 52.47(a), which is an integral part of MHI's application for NRC certification of MHI's US-APWR standard plant design.

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Changes in Revision 4 of the DCD fall into the following categories:

- a) RAI responses and additional commitments to the NRC
- b) Editorial corrections
- c) Engineering progress:
 - 1) Regenerative heat exchanger type change.
 - 2) 3-Way Valve type change of HVAC system
- d) Corrections of inconsistency between DCD and design documents (CAR 12-082)

Two versions of the DCD Rev. 4 are being submitted on separate compact discs. One version (on CD 1 in Enclosure 1) includes certain information designated pursuant to Commission guidance as sensitive unclassified non-safeguards information and referred to as security-related information ("SRI") to be withheld from public disclosure under 10 C.F.R. § 2.390. This SRI information is identified by brackets. Another version (on CD 2 in Enclosure 2) omits the SRI and is suitable for public disclosure. In the public version on CD 2 (which contains only the public version of the DCD), the SRI is replaced by the designation "[Security-Related Information - Withheld under 10 CFR 2.390]." Each disc contains a packing slip explaining the contents.

A DCD Change List is also provided for both versions of the DCD. Both versions identify the locations in the DCD where changes have been made and provide a brief description of those changes. Revision bars are also provided in the relevant places in the DCD Rev. 4 to identify where changes have been made.

Enclosure 3 lists the NRC's Requests for Additional Information ("RAIs") to which MHI has already responded. Each entry identified in this list provides information identifying the impact of MHI's response in the DCD and the extent to which the changes have been incorporated into this revision.

DCD Revision 5 will be submitted in the future with revisions to the several areas previously communicated to the NRC Staff. Also included will be commitments made in RAI responses after July 8, 2013 and not included in DCD Revision 3 Tracking Report Revision 5 (Reference 2). Revisions of all Technical or Topical Reports incorporated by reference will be included in DCD Revision 5. Selected areas to be updated in DCD Revision 5 include:

- a) Safety Analysis Cleanup as communicated in Reference 3, including revised RADTRAD analysis - Chapters 1, 3, 4, 6, 7, 9, 11, 12, 15
- b) Fuel Seismic as communicated in Reference 4 – Chapters 1, 4
- c) Probabilistic Risk Assessment as communicated in Reference 5 - Chapters 1, 3, 6, 7, 17, 19
- d) Structural Seismic, Design of Category I Structures and associated topics as communicated in Reference 6 and supplemented or superseded by Reference 7 - Chapters 1, 3, 6, 8, 9
- e) The pressure capacity under hydrogen burning condition will be revised to incorporate the value in the latest MUAP-10018 submitted in Reference 8 – Chapters 1, 3
- f) Human Factors Engineering as communicated in Reference 9 – Chapters 1, 18

Please contact to 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,



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

Enclosures:

1. DCD Rev.4 (SRI included version, August 2013) (CD 1)
2. DCD Rev.4 (SRI excluded version, August 2013) (CD 2)
3. RAI Response Incorporation List for US-APWR Design Control Document Revision 4

The files contained in each CD are listed in Attachments 1 and 2 hereto.

CC: P. Buckberg
J. Tapia

Contact Information

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