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TOKYO, JAPAN

August 26, 2009

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-09430

Subject: MHI's Responses to US-APWR DCD RAI 437-3268 Revision 1

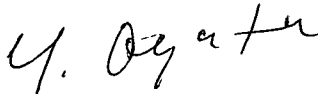
Reference: 1) "REQUEST FOR ADDITIONAL INFORMATION 437-3268 REVISION 1, SRP
Section: 10.04.03 – Turbine Gland Sealing System, Application Section:
10.4.3, dated July 30, 2009.

With this letter, Mitsubishi Heavy Industries, Ltd. ("MHI") transmits to the U.S. Nuclear Regulatory Commission ("NRC") a document entitled "Responses to Request for Additional Information 437-3268 Revision 1."

Enclosed are the responses to a RAI contained within Reference 1.

Please contact Dr. C. Keith Paulson, Senior Technical Manager, Mitsubishi Nuclear Energy Systems, Inc. if the NRC has questions concerning any aspect of the submittals. His contact information is below.

Sincerely,



Yoshiaki Ogata,
General Manager- APWR Promoting Department
Mitsubishi Heavy Industries, LTD.

Enclosure:

1. Responses to Request for Additional Information 437-3268 Revision 1

CC: J. A. Ciocco
C. K. Paulson

Contact Information

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DOB
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Docket No. 52-021
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Enclosure 1

UAP-HF-09430
Docket No. 52-021

Responses to Request for Additional Information No. 437-3268
Revision 1

August 2009

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

8/26/2009

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

RAI NO.: NO. 437-3268 REVISION 1
SRP SECTION: 10.04.03 TURBINE GLAND SEALING SYSTEM
APPLICATION SECTION: 10.4.3
DATE OF RAI ISSUE: 7/30/2009

QUESTION NO.: 10.04.03-2

Supplemental - Request for Additional Information

US-APWR - Supplemental RAI 10.4.3-1

To conform to GDC 60 criteria, as related to control releases of radioactive materials in the effluents to the environment, in US-APWR RAI 10.4.3-1 (NO. 236-2140), dated February 26, 2009, the staff requested the applicant to provide additional information regarding the key elements of the plant operating procedures. The staff also requested the applicant to provide details on how the effluents are discharged to the environment via the total dissolved solids system. Also, the staff requested the applicant to provide additional information regarding unacceptable levels of radiation and provision of alarms and corresponding set points to preclude significant releases of radiation in the effluents discharged to the environment.

In its response, the applicant described that the key elements (of the plant procedure that the staff requested) and the unacceptable levels of radiation and provisions of alarms and corresponding set-points to preclude significant release of radiation are described in DCD Section 11.5.2.4.3, "GSS (gland steam system) Exhaust Fan Discharge Line Radiation Monitors..." Further, the routing of the GSS effluents is shown in Figures 11.5-1j, "Typical Gland Steam Radiation Monitor Schematic," and Figure 11.5-2g, "Location of Radiation Monitors at Plant (Power Block at Elevation 50'-2)." The staff reviewed the DCD Section 11.5.2.4.3 and the above cited figures, and finds the applicant response acceptable as it addresses the GDC 60 and 64 requirements and SRP guidance for the design of the GSS. However, in its response, the applicant did not indicate the revision to DCD Section 10.4.3 to direct the reader to refer to the DCD Section 11.5.2.4.3 and its associated figures. Therefore, the staff requests the applicant to revise Section 10.4.1 to reflect the details of Section 11.5.4.2.3 and associated figures as described in its response.

ANSWER:

In the US-APWR RAI response 10.4.3-1 dated March 24, 2009, MHI indicated that MHI add the following sentence to the end of the 5th paragraph of Subsection 10.4.3.2.2:

"A discussion of the radiological aspects of primary-to-secondary leakage, including anticipated release from the system, is addressed in Chapter 11."

In addition, MHI add the following to the end of above sentence:

“The statement regarding the key elements and system is addressed in 2nd paragraph of Subsection 11.5.2.4.3. Furthermore, the statement regarding unacceptable levels of radiation and provision of alarms and corresponding set points to preclude significant release of radiation is addressed in 1st paragraph of Subsection 11.5.2.4.3. Furthermore, the detail on how the effluents are discharged to the environment is shown on Figure 11.5-1j and Figure 11.5-2g.”

Impact on DCD

The fifth paragraph in Subsection 10.4.3.2.2 will be revised as follows:

10.4.3.2.2 System Operation

The mixture of non-condensable gases discharged from the gland steam condenser exhaust fan is not normally radioactive; however, in the event of significant primary-to-secondary system leakage due to a steam generator tube leak, it is possible to discharge radioactively contaminated gases. The GSS effluents are monitored by a radiation monitor installed on the gland steam condenser exhaust fan discharge line. Upon detection of unacceptable levels of radiation, operating procedures are implemented. A discussion of the radiological aspects of primary-to-secondary leakage, including anticipated release from the system, is addressed in Chapter 11. The statement regarding the key elements and system is addressed in 2nd paragraph of Subsection 11.5.2.4.3. Furthermore, the statement regarding unacceptable levels of radiation and provision of alarms and corresponding set points to preclude significant release of radiation is addressed in 1st paragraph of Subsection 11.5.2.4.3. Furthermore, the detail on how the effluents are discharged to the environment is shown on Figure 11.5-1j and Figure 11.5-2g.

Impact on COLA

There is no impact on the COLA.

Impact on PRA

There is no impact on the PRA.