MITSUBISHI HEAVY INDUSTRIES, LTD.
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TOKYO, JAPAN

September 14, 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-09444

Subject: MHI's Responses to US-APWR DCD RAI No. 447-3303 Revision 1

Reference: 1) "Request for Additional Information No. 447-3303 Revision 1, SRP Section: 14.03 Inspections, Tests, Analyses, and Acceptance Criteria Application" dated September 1st, 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 No. 447-3303 Revision 1."

Enclosed are the responses to Questions 14.03-01 and 14.03-02 that are 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,

Y. Ogata

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

Enclosure:

1. Responses to Request for Additional Information No. 447-3303 Revision 1

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

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Enclosure 1

UAP-HF-09444
Docket No. 52-021

Responses to Request for Additional Information No. 447-3303
Revision 1

September 2009

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

09/14/2009

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

RAI NO.: **NO. 447-3303 REVISION 1**

SRP SECTION: **14.03 - Inspections, Tests, Analyses, and Acceptance Criteria**

APPLICATION SECTION: **DCD SECTIONS 14.3.6, 14.3.7, 14.3.11, AND 14.3.12**

DATE OF RAI ISSUE: **09/01/2009**

QUESTION NO.: 14.03-01

ITAAC Item 2 in Table 2.8-1

The original RAI question 14.03.07-15 (RAI 1935, Q7651) stated the following:

The reference for this ITAAC seems confusing. If everything is covered in Section 2.7.6.13, what is the need for this ITAAC?

The applicant in its response stated the following: The description of the area radiation monitoring and airborne radioactivity monitoring systems is part of the radiation protection program. ITAAC Item 2 in Table 2.8-1 is provided as a cross-reference to the ITAAC and Design Description for the radiation monitoring systems because they support the radiation protection program.

The radiation program consists of shielding provided by permanent structures or additional shielding in some areas. That shielding reduces the maximum radiation levels in areas requiring occupancy or operator actions so that radiation doses are within the ALARA program. That shielding is permanent, so its impact on the radiation levels in any plant area is constant. The Area Radiation and Airborne Radioactivity Monitoring System contains the area radiation and airborne radioactivity monitors. ITAAC Item 2 as written can not be performed because an inspector would not have a way of determining when the ITA was performed or the AC met. A mere reference to a section in the DCD does not provide the means to know when either of those actions occurred. Typically, a reference ITAAC makes a reference to another ITAAC, so that when the ITAAC being referred to is completed, the ITAAC making a reference to it can be considered complete also. If this ITAAC is necessary, then it should refer to ITAAC in Table 2.7.6.13-3. The regulatory basis for these comments is 10 CFR 50.70 and 10 CFR 50, Appendix B, Criterion III, Design Control.

ANSWER:

ITAAC item 2 in Table 2.8-1 is used a cross-reference for completeness. MHI agrees and will revise ITAAC Item 2 in Table 2.8-1. ITAAC item 2 will refer to all ITAAC in Table 2.7.6.13-3 since all are applicable to the radiation monitors.

Impact on DCD

ITAAC Item 2 in Table 2.8-1 will be revised as follows;

2. Area radiation and airborne radioactivity monitoring systems are provided to monitor radioactivity concentrations.	2. Refer to **Table** ~~Subsection~~ 2.7.6.13-**3**.	2. Refer to **Table** ~~Subsection~~ 2.7.6.13-**3**.

Impact on COLA

There is no impact on the COLA.

Impact on PRA

There is no impact on the PRA.

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

09/14/2009

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

RAI NO.:	**NO. 447-3303 REVISION 1**
SRP SECTION:	**14.03 - Inspections, Tests, Analyses, and Acceptance Criteria**
APPLICATION SECTION:	**DCD SECTIONS 14.3.6, 14.3.7, 14.3.11, AND 14.3.12**
DATE OF RAI ISSUE:	**09/01/2009**

APPLICATION SECTION:	**DCD SECTIONS 14.3.6, 14.3.7, 14.3.11, AND 14.3.12**
DATE OF RAI ISSUE:	**09/01/2009**

QUESTION NO.: 14.03-02

ITAAC Item 4 in Table 2.7.6.4-2

The original RAI question 14.03.07-33 (RAI 1912, Q7576) stated the following:

What is the rated capacity of the suspension hoist? That should be stated in the AC. The applicant in its response stated the following: ITAAC Item 4 in Table 2.7.6.4-2 verifies the suspension hoist load limit interlock prevents the hoist from lifting a load greater than its rated capacity. MHI believes the ITAAC as written provides adequate assurance that the ITAAC will verify acceptable performance of the interlock. The rated capacity of the suspension hoist is given in Tier 2 Table 9.1.5-1 Specification of the Spent Fuel Cask Handling Crane, and is the subject of RAI 200-1983, RAI SRP 9.1.4- 12. The remainder of the applicant's response dealt with ITAAC Item 3 in Table 2.7.6.5- 1 which is not pertinent of ITAAC Item 4 in Table 2.7.6.4-2.

For ITAAC Item 4 in Table 2.7.6.4-2, the staff wants to know why the rated capacity of the suspension hoist of 2 metric tons is not added after the word "capacity" in the AC of this ITAAC? The measureable value being referred to should be included in the AC of this ITAAC. The regulatory basis for these comments is 10 CFR 50.70 and 10 CFR 50, Appendix B, Criterion III, Design Control.

ANSWER:

DCD Tier 2 Section 9.1.4.2.1.3 states that the suspension hoist has limit interlocks which precludes the hoist from lifting loads greater than its rated capacity. The rated capacity of the suspension hoist is identified in Table 9.1.5-1 as 2 metric tons. ITAAC Item 4 in Table 2.7.6.4-2 will be revised to add the specific capacity of 2 metric tons to the Acceptance Criteria.

Impact on DCD

ITAAC Item 4 in Table 2.7.6.4-2 will be revised as follows:

4. The suspension hoist is precluded from lifting a load greater than its rated capacity by a load limit interlock.	4. Test of the as-built suspension hoist's load limit interlock will be performed.	4. The as-built suspension hoist is precluded from lifting a load greater than its rated capacity **of 2 metric tons**.

Impact on COLA

There is no impact on the COLA.

Impact on PRA

There is no impact on the PRA.