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TOKYO, JAPAN

March 5, 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-09076

Subject: MHI's Responses to US-APWR DCD RAI No. 195-2068 Revision 0

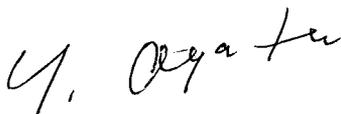
Reference: 1) "Request for Additional Information No. 195-2068 Revision 0, SRP Section: 14.03.10 – Emergency Planning - Inspections, Tests, Analyses, and Acceptance Criteria Application Section: DCD Section 2.10" dated February 09, 2009.

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. 195-2068 Revision 0."

Enclosed are the responses to Questions 14.03.10-1 through 14.03.10-2 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,



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

Enclosure:

1. Responses to Request for Additional Information No.195-2068 Revision 0

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

Contact Information

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DOB
NRC

Docket No. 52-021
MHI Ref: UAP-HF-09076

Enclosure 1

UAP-HF-09076
Docket No. 52-021

Responses to Request for Additional Information No.195-2068
Revision 0

March 2009

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

03/5/2009

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

RAI NO.: NO. 195-2068 REVISION 0
SRP SECTION: 14.03.10 – EMERGENCY PLANNING - INSPECTIONS, TESTS,
ANALYSES, AND ACCEPTANCE CRITERIA
APPLICATION SECTION: DCD SECTION 2.10
DATE OF RAI ISSUE: 02/09/2009

QUESTION NO.: 14.03.10-01

ITAAC Item 2 in Table 2.10-1

The design commitment states that 'the SC is located close to the MCR'. The acceptance criterion states that 'walking between the as-built 2 areas takes no more than 2 minutes'. The acceptance criterion is unclear about what two areas. What determines whether 2 minutes walking distance meets the accepted criteria? The criteria that must be met should be established, and the acceptance criteria should be in distance not in walking time. The time to walk a given distance is relative to what type of person is doing the walking.

ANSWER:

The two-minute walking time acceptance criterion is consistent with the NRC guidance in NUREG-0800 Table 14.3.10-1, item 8.1.2. The acceptance criterion will be revised to specify that the two areas are the Technical Support Center (TSC) and the Main Control Room (MCR).

The two-minute walking time is also part of the guidance for the location of the TSC as stated in NUREG-0696, "Functional Criteria for Emergency Response Facilities", Section 2.2, "Location":

"The walking time from the TSC to the control room shall not exceed 2 minutes. This close location will facilitate face-to-face interaction between control room personnel and the senior plant manager working in the TSC. This proximity also will provide access to information in the control room that is not available in the TSC data system."

The NRC staff, in response to question 24 as published in letter "NRC Staff Response to the Licensing Boards Questions Regarding Safety Matters," dated 01/16/2009, recognized that the speed of a person walking is not specified in the guidance.

"The two factors that drove the 2-minute walking distance – which does not specify how fast someone should walk – between the TSC and control room are the need (1) for necessary management interaction and technical information

exchange, and (2) to provide TSC access to control room information.”

Impact on DCD

See Attachment 1 for a mark-up of DCD Tier 1, Section 2.10, Revision 2, with the following changes to Table 2.10-1:

Revise ITAAC item 2 in Table 2.10-1 as follows:

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2. The TSC is located close to the MCR.	2. An inspection will be performed for the location of <u>the as-built TSC relative to the as-built MCR.</u> between as-built the MCR and as-built TSC.	2. Walking between the as-built 2-areas <u>TSC and MCR</u> takes no more than 2 minutes.

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

03/5/2009

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

RAI NO.: NO. 195-2068 REVISION 0
SRP SECTION: 14.03.10 – EMERGENCY PLANNING - INSPECTIONS, TESTS,
ANALYSES, AND ACCEPTANCE CRITERIA
APPLICATION SECTION: DCD SECTION 2.10
DATE OF RAI ISSUE: 02/09/2009

QUESTION NO.: 14.03.10-02

Explain how "See Subsection 2.7.5.4" relates to the inspection/testing and acceptance criteria for providing a habitable work space environment under accident conditions in the TSC for item 3 in Table 2.10-1.

The ITAAC for 2.7.5.4 relates to the Auxiliary Building Ventilation System Class 1E and Seismic performance of isolation dampers. The TSC is listed as being located on the top floor of the Access Building.

This is also applicable to the following ITAAC:

ITAAC Item 4 in Table 2.10-1

ANSWER:

ITAAC Item 3 in Table 2.10-1

The TSC HVAC System is described in Tier 2 Section 9.4.3 and Tier 1 section 2.7.5.4.1.4 of the US-APWR DCD. The air handling unit, filtration unit and fans for the TSC are located in the auxiliary building. ITAAC will be added to Table 2.7.5.4-2 to specifically address the TSC HVAC system.

ITAAC Item 4 in Table 2.10-1

In order to more completely describe the ITAAC for the emergency communications systems, the ITAAC Item 4 in Table 2.10-1 will be revised to reference the emergency planning ITAAC provided in other tables in Tier 1.

Impact on DCD

See Attachment 2 for a mark-up of DCD Tier 1, Section 2.7, Revision 2, with the following changes to Table 2.7.5.4-2:

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
<p>5. <u>The TSC HVAC system provides a habitable workspace environment for the TSC under all plant operating conditions, including normal plant operations, abnormal and accident conditions.</u></p>	<p>5.a <u>Tests of the as-built TSC HVAC system will be performed.</u></p>	<p>5.a <u>The as-built TSC HVAC system is capable of providing conditioned air to maintain the proper design temperature for the TSC during all plant operating conditions, including normal plant operations, abnormal and accident conditions.</u></p>
	<p>5.b <u>Tests and inspections of the as-built TSC HVAC system will be performed.</u></p>	<p>5.b <u>Controls and displays are provided in the as-built MCR to operate and monitor the status of the TSC HVAC system.</u></p>

See Attachment 1 for a mark-up of DCD Tier 1, Table 2.10-1, changes to be incorporated with the following revision:

Revise the following ITAAC in Tier 1, Table 2.10-1 of the US-APWR DCD Revision 1.

<p>3. The TSC provides a habitable workspace environment.</p>	<p>3. See Subsection 2.7.5.4 <u>Table 2.7.5.4-2 ITAAC Item 5.</u></p>	<p>3. See Subsection 2.7.5.4 <u>Table 2.7.5.4-2 ITAAC Item 5.</u></p>
<p>4. <u>Adequate emergency communications systems are in place.</u> The means exists for communications from the control room, TSC, and EOF to the NRC headquarters and regional office emergency operations centers (including establishment of the emergency response data system (i.e. ERDS) between the onsite computer system and the NRC Operations Center.)</p>	<p>4. See Subsection 2.7.6.10 <u>Table 2.7.6.10-1 and Table 2.9-1, ITAAC Items 7.k and 7.l.</u></p>	<p>4. See Subsection 2.7.6.10 <u>Table 2.7.6.10-1 and Table 2.9-1, ITAAC Items 7.k and 7.l.</u></p>

Impact on COLA

There is no impact on the COLA.

Impact on PRA

There is no impact on the PRA.

Attachment 1

US-APWR DCD Tier 1 Mark-up

RESPONSES TO RAI No. 195-2068 Revision 0

RAI No.195
14.03.10-01
14.03.10-02

2.10.2 Inspections, Tests, Analyses, and Acceptance Criteria

Table 2.10-1 describes ITAAC for emergency planning.

Table 2.10-1 Emergency Planning Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
1. The TSC floor space is at least 1875 ft ² (75 ft ² for each of at least 25 persons).	1. An inspection of the as-built TSC floor area will be performed.	1. The as-built TSC has at least 1875 ft ² of floor space.
2. The TSC is located close to the MCR.	2. An inspection will be performed for the location of the as-built TSC relative to the as-built MCR between as-built the MCR and as-built TSC.	2. Walking between the as-built TSC and MCR takes no more than 2 minutes.
3. The TSC provides a habitable workspace environment.	3. See Subsection 2.7.5.4 Table 2.7.5.4-2 ITAAC Item 5.	3. See Subsection 2.7.5.4 Table 2.7.5.4-2 ITAAC Item 5.
4. Adequate emergency communications systems are in place. The means exists for communications from the control room, TSC, and EOF to the NRC headquarters and regional office emergency operations centers (including establishment of the emergency response data system (i.e. ERDS) between the onsite computer system and the NRC Operations Center.)	4. See Subsection 2.7.6.10 Table 2.7.6.10-1 and Table 2.9-1, ITAAC Items 7.k and 7.l.	4. See Subsection 2.7.6.10. Table 2.7.6.10-1 and Table 2.9-1, ITAAC Items 7.k and 7.l.

Attachment 2

US-APWR DCD Tier 1 Mark-up

RESPONSES TO RAI No. 195-2068 Revision 0

Table 2.7.5.4-2 Auxiliary Building Ventilation System Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 2 of 2)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
4.a The isolation dampers identified in Table 2.7.5.4-1 perform an safety-related function to change closed position.	4.a Tests of the as-built isolation dampers identified in Table 2.7.5.4-1 will be performed.	4.a Each as-built isolation dampers identified in Table 2.7.5.4-1 perform the function to change closed position after receiving a signal.
4.b After loss of motive power, the isolation dampers identified in Table 2.7.5.4-1, assume the closed position.	4.b Tests of the as-built isolation dampers will be performed under the conditions of loss of motive power.	4.b Upon loss of motive power, each as-built isolation damper identified in Table 2.7.5.4-1 assumes the closed position.
<u>5. The TSC HVAC System provides a habitable workspace environment for the TSC under all plant operating conditions, including normal plant operations, abnormal and accident conditions.</u>	<u>5.a Tests of the as-built TSC HVAC system will be performed.</u>	<u>5.a. The as-built TSC HVAC system is capable of providing conditioned air to maintain the proper design temperature for the TSC during all plant operating conditions, including normal plant operations, abnormal and accident conditions.</u>
	<u>5.b Tests and inspections of the as-built TSC HVAC system will be performed.</u>	<u>5.b Controls and displays are provided in the as-built MCR to operate and monitor the status of the TSC HVAC system.</u>