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April 22, 2010

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-10115

Subject: MHI's 1st Response to US-APWR DCD RAI No.558-4227 Revision 2

References: 1) "Request for Additional Information No.558-4227 Revision 2, SRP Section: 06.05.01 – ESF Atmosphere Cleanup Systems, Application Section: DCD 9.4.6" dated March 23, 2010.

With this letter, Mitsubishi Heavy Industries, Ltd. ("MHI") transmits to the U.S. Nuclear Regulatory Commission ("NRC") a document entitled "Response to Request for Additional Information No.558-4227 Revision 2".

Enclosed are the responses to RAI No.558-4227 Revision 2, Question No. 06.05.01-10 through 15 and 18 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,

Atsushi Kumabe for.

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

Enclosure:

1. First Response to Request for Additional Information No. 558-4227, Revision 2

CC: J. A. Ciocco
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NRO

Docket No. 52-021
MHI Ref: UAP-HF-10115

Enclosure 1

UAP-HF-10115
Docket Number 52-021

First Response to Request for Additional Information
No. 558-4227, Revision 2

April, 2010

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

04/22/2010

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

RAI NO.:	**NO.558-4227 REVISION 2**
SRP SECTION:	**06.05.01 – ESF Atmosphere Cleanup Systems**
APPLICATION SECTION:	**DCD Tier 2 Section 9.4.6**
DATE OF RAI ISSUE:	**03/23/2010**

QUESTION NO. : 06.05.01-10

This is a follow-up RAI to "Request for Additional Information No.300-2288 Revision 1, SRP Section: 06.05.01 - ESF Atmosphere Cleanup Systems, Application Section: Tier 2, CD 9.4.6" dated April 1, 2009." QUESTION NO. : 06.05.01-3

The third to last paragraph of the applicant's ANSWER reads:

> DCD Figure 9.4.6-1 "Containment Ventilation System Flow Diagram (2 of 2)" will be revised to show the following radiation monitors RMS-RE-22, 23 21A, 21B, 80A and 80B. This revision will clarify the relative position of the radiation monitors with respect to the ventilation system.

The first IMPACT ON DCD reads:

> Revise DCD Figure 9.4.6-1 "Containment Ventilation System Flow Diagram (2 of 2)" per the attached mark-up drawing. The attached marked up drawing to RAI No.300-2288 adequately resolved the staff concerns of RAI No.300-2288 Question No. 06.05.01-3. However the RAI drawing was not correctly added to Figure 9.4.6-1 of Revision 2 of the DCD. More specifically Figure 9.4.6-1 was not revised to show RMS-RE- 21A, 21B, 80A and 80B. In fact, the Vent Stack representation was removed from Figure 9.4.6-1 in its entirety. The staff could not locate another figure in the DCD that displays what the committed to drawing change RAI No.300-2288 Question No. 06.05.01-3 displays.

The staff requests that the applicant amend the DCD to reflect all the information contained on the associated Figure of the applicant's response to RAI No.300- 2288 Question No. 06.05.01-3.

ANSWER:

The vent stack representation was relocated from Figure 9.4.6-1 (Sheet 2 of 2) to Figure 9.4.5-1. This relocation required that radiation monitors RMS-RE 21A,21B, 80A and 80B also relocated to Figure 9.4.5-1 in Revision 2 of the DCD. Figures 9.4.5-1 and 9.4.6-1 (Sheet 2 of 2) now adequately address RAI 300, Question No. 06.05.01-3.

Impact on DCD

There is no impact on the DCD.

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

04/22/2010

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

RAI NO.:	**NO.558-4227 REVISION 2**
SRP SECTION:	**06.05.01 – ESF Atmosphere Cleanup Systems**
APPLICATION SECTION:	**DCD Tier 2 Section 9.4.6**
DATE OF RAI ISSUE:	**03/23/2010**

QUESTION NO. : 06.05.01-11

This is a follow-up RAI to "Request for Additional Information No.73-943 Revision 0, SRP Section: 06.05.01 - ESF Atmosphere Cleanup Systems, Application Section: FSAR Sections 6.4, 9.4.5 and 9.4.6" dated September 24, 2008." Question No. 06.05.01-1, RAI 6.5.1-6

The second paragraph of third part of the applicants ANSWER to Question No. 06.05.01-1, RAI 6.5.1-6 reads:

> "Subsections 9.4.6.1, 9.4.6.3.1, 9.4.6.3.2, 9.4.6.3.3, and 9.4.6.3.4 will be modified to include the correct seismic category of the components as defined in Subsection 3.2.1.1 as well as a discussion of how the guidance of Regulatory Guide 1.29 is followed in compliance with GDC 2 of Appendix A to 10CFR Part 50. Regulatory Guide 1.29 and Appendix A to 10CFR Part 50 will also be added to the list of References at the end of Section 9.4."

In Revision 2 of the DCD, the applicant satisfied all of their commitments to revise the DCD contained in this RAI's ANSWER with the exception of the last sentence of the above paragraph.

The staff requests that the applicant amend DCD subsection 9.4.8 "References" to include as references Regulatory Guide 1.29 and Appendix A to 10CFR Part 50.

ANSWER:

DCD Subsection 9.4.8 will be revised to include as references Regulatory Guide 1.29 and Appendix A to 10CFR Part 50.

Impact on DCD

Add the following references to DCD Subsection 9.4.8.

" **9.4.8-27 General Design Criteria for Nuclear Power Plants, NRC Regulations Title 10, Code of Federal Regulations, 10 CFR Part 50, Appendix A.**

9.4.8-28 Seismic Design Classification, Regulatory Guide 1.29 Revision 4, March 2007."

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

04/22/2010

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

RAI NO.:	**NO.558-4227 REVISION 2**
SRP SECTION:	**06.05.01 – ESF Atmosphere Cleanup Systems**
APPLICATION SECTION:	**DCD Tier 2 Section 9.4.6**
DATE OF RAI ISSUE:	**03/23/2010**

QUESTION NO. : 06.05.01-12

This is a follow-up RAI to "Request for Additional Information No.73-943 Revision 0, SRP Section: 06.05.01 - ESF Atmosphere Cleanup Systems, Application Section: FSAR Sections 6.4, 9.4.5 and 9.4.6" dated September 24, 2008." Question No. 06.05.01-1, RAI 6.5.1-1

The applicant responded, in the ANSWER and/or IMPACT ON DCD sections of the RAI, to Question No. 06.05.01-1, RAI 6.5.1-1 with the following commitments to revise the DCD:

ANSWER

4) In response to: "By this statement, it appears that containment isolation valves will close. Are containment ventilation fans shut down through this interlock? If so, which ones? The staff requests more information about this interlock." A fan trip interlock coincident with the Containment isolation valve closure will be made to Section 9.4.6.2.1 to include a trip interlock on the Containment Low Volume Purge AHU and exhaust fans coincident with the Containment isolation valve closure.

IMPACT ON DCD

2) The last paragraph of Subsection 9.4.6.3.4, Containment Purge System:

"The containment isolation valves for the containment purge system will close within five seconds upon initiation of the containment purge isolation signal (Chapter 7, Section 7.3)."

Will be modified to read as follows:

"The containment isolation valves for the containment purge system will close within five seconds upon initiation of the containment purge isolation signal (Chapter 7, Section 7.3). The containment low volume purge air handling unit and exhaust fan, and containment high volume purge air handling unit and exhaust fan will trip coincident with the isolation valve closure."

3) The third paragraph of Subsection 9.4.6.4, Inspection and Testing Requirements:

"Preoperational testing of the system is performed as described in Chapter 14, Verification Programs, to verify that system is installed in accordance with applicable programs and specifications. All HVAC system airflows are balanced in conformance with the design flow, path flow capacity, and proper air mixing throughout the containment."

Will be modified to read as follows:

"Preoperational testing of the system is performed as described in Chapter 14, Verification Programs, to verify that the system is installed and operates in accordance with applicable programs and specifications. All HVAC system airflows are balanced in conformance with the design flow, path flow capacity, and proper air mixing throughout the containment. The containment low volume purge air handling unit and exhaust fan interlock with the Containment isolation valve closure will be verified as part of the preoperational testing."

The staff found that Revision 2 to the DCD does not contain these DCD changes. The staff requests that the applicant revise the DCD to incorporate these changes of the DCD as previously committed to by the applicant.

ANSWER:

A trip interlock on the Containment Low Volume Purge Air Handling Units and associated exhaust fans coincident with the containment isolation valve closure does not occur as stated in the previous response to RAI Question No. 06.05.01-1, RAI 6.5.1-1. The correct sequence of events is as follows. Upon receipt of a Containment Low Volume Purge System low airflow alarm following closure of the containment isolation valves, the Containment Low Volume Purge Air Handling Units and associated exhaust fans are manually shut down.

The following is MHI's amended response to RAI 73, Question No. 06.05.01-1, RAI 6.5.1-1. This amendment is consistent with the response to RAI 300, Question No. 06.05.01-3.

2) The 2nd paragraph of response to "It follows that Tier 2 FSAR Section 14.2.12.1.69 "Containment Fan Cooler System Preoperational Test" will not test this interlock given the as written acceptance criteria of the preoperational test (i.e. "The containment fan cooler system operates as described in Subsection 9.4.6.")."

"Upon receipt of a Containment Low Volume Purge System Low airflow alarm following closure of the containment isolation valves, the Containment Low Volume Purge Air Handling Units and associated exhaust fans will be manually shut down."

4) In response to "By this statement, it appears that containment isolation valves will close. Are containment ventilation fans shut down through this interlock? If so, which ones? The staff requests more information about this interlock."

"There is no interlock coincident with containment isolation valve closure. The Containment Low Volume Purge Air Handling Units and associated exhaust fans will be manually shut down upon receipt of a Containment Low Volume Purge System low airflow alarm following closure of the containment isolation valves."

IMPACT ON DCD

2) The last paragraph of Subsection 9.4.6.3.4, Containment Purge System:

"The containment isolation valves for the containment purge system will close within five seconds upon initiation of the containment purge isolation signal (Chapter 7, Section 7.3)."

Will be modified to read as follows:

"The containment isolation valves for the containment purge system will close within five seconds upon initiation of the containment purge isolation signal (Chapter 7, Section 7.3). **Upon receipt of a containment low volume purge system low airflow alarm following closure of the containment isolation valves, the containment low volume purge air handling units and associated exhaust fans will be manually shut down.** ~~The containment low volume purge air handling unit and exhaust fan, and containment high volume purge air handling unit and exhaust fan will trip coincident with the isolation valve closure."~~

~~3) The third paragraph of Subsection 9.4.6.4, Inspection and Testing Requirements:~~

~~"Preoperational testing of the system is performed as described in Chapter 14, Verification Programs, to verify that system is installed in accordance with applicable programs and specifications. All HVAC system airflows are balanced in conformance with the design flow, path flow capacity, and proper air mixing throughout the containment."~~

~~Will be modified to read as follows:~~

~~"Preoperational testing of the system is performed as described in Chapter 14, Verification Programs, to verify that the system is installed and operates in accordance with applicable programs and specifications. All HVAC system airflows are balanced in conformance with the design flow, path flow capacity, and proper air mixing throughout the containment. The containment low volume purge air handling unit and exhaust fan interlock with the Containment isolation valve closure will be verified as part of the preoperational testing."~~

Impact on DCD

The last paragraph of DCD Subsection 9.4.6.3.4 will be revised as follows:

"The containment isolation valves for the containment purge system will close within five seconds upon initiation of the containment purge isolation signal (Chapter 7, Section 7.3). **Upon receipt of a containment low volume purge system low airflow alarm following closure of the containment isolation valves, the containment low volume purge air handling units and associated exhaust fans will be manually shut down."**

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

04/22/2010

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

RAI NO.:	**NO.558-4227 REVISION 2**
SRP SECTION:	**06.05.01 – ESF Atmosphere Cleanup Systems**
APPLICATION SECTION:	**DCD Tier 2 Section 9.4.6**
DATE OF RAI ISSUE:	**03/23/2010**

QUESTION NO. : 06.05.01-13

This is a follow-up RAI to "Request for Additional Information No.73-943 Revision 0, SRP Section: 06.05.01 - ESF Atmosphere Cleanup Systems, Application Section: FSAR Sections 6.4, 9.4.5 and 9.4.6" dated September 24, 2008." Question No. 06.05.01-1, RAI 6.5.1-13.

The "Impact on DCD" section of the applicant's response to Question No. 06.05.01-1, RAI 6.5.1-13 reads:

> "Subsection 9.4.6 of DCD revision 2 will be modified to include a failure modes and effects analysis for the safety-related portions of Containment Ventilation System."

Subsection 9.4.6 of DCD Revision 2, does not contain the "committed to" failure modes and effects analysis (FMEA).

The staff requests that the applicant amend the DCD to include an FMEA for the safety related components of the Containment Ventilation System (e.g. VCS-AOV-304, -305, -306, -307, -354, -355, -356 and -357).

ANSWER:

MHI will add the following text in the last sentence of 1st paragraph in DCD Subsection 9.4.6.3.4 Revision 2 instead of FMEA for containment isolation valves of containment purge system.

"The containment isolation function of containment purge system is evaluated in Subsection 6.2.4"

MHI considers that the section 6.2.4 contains information to confirm that the containment isolation valves of containment purge system are capable of functioning in spite of the failure of any active component, in the event of an earthquake, during loss of offsite power, or a concurrent single active failure.

However, MHI will add the FMEA for containment isolation valves of containment purge system in accordance with the response to RAI #73, Question No. 06.05.01-1, RAI 6.5.1-13.

Impact on DCD

Table 9.4.6-2, "Containment Ventilation System Failure Modes and Effects Analysis" will be added. See Attachment 1.

Impact on COLA

There is no impact on the COLA.

Impact on PRA

There is no impact on the PRA.

Attachment 1

Table 9.4.6-2 Containment Ventilation System Failure Modes and Effects Analysis (Sheet 1 of 2)

Item	Component	Safety Function	Failure Mode	Effect on System Operation	Failure Detection Method
1	Containment isolation valve VCS-AOV-304	Close to provide containment pressure boundary	Failure to close on demand	None: Redundant isolation valve VCS-AOV-305 closes to isolate containment penetration.	Valve position indication and alarm in MCR if valve position not consistent with control signal.
2	Containment isolation valve VCS-AOV-305	Close to provide containment pressure boundary	Failure to close on demand	None: Redundant isolation valve VCS-AOV-304 closes to isolate containment penetration.	Valve position indication and alarm in MCR if valve position not consistent with control signal.
3	Containment isolation valve VCS-AOV-306	Close to provide containment pressure boundary	Failure to close on demand	None: Redundant isolation valve VCS-AOV-307 closes to isolate containment penetration.	Valve position indication and alarm in MCR if valve position not consistent with control signal.
4	Containment isolation valve VCS-AOV-307	Close to provide containment pressure boundary	Failure to close on demand	None: Redundant isolation valve VCS-AOV-306 closes to isolate containment penetration.	Valve position indication and alarm in MCR if valve position not consistent with control signal.
5	Containment isolation valve VCS-AOV-354	Close to provide containment pressure boundary	Failure to close on demand	None: Redundant isolation valve VCS-AOV-355 closes to isolate containment penetration.	Valve position indication and alarm in MCR if valve position not consistent with control signal.

Table 9.4.6-2 Containment Ventilation System Failure Modes and Effects Analysis (Sheet 2 of 2)

Item	Component	Safety Function	Plant Condition	Effect on System Operation	Failure Detection Method
6	Containment isolation valve VCS-AOV-355	Close to provide containment pressure boundary	Failure to close on demand	None: Redundant isolation valve VCS-AOV-354 closes to isolate containment penetration.	Valve position indication and alarm in MCR if valve position not consistent with control signal.
7	Containment isolation valve VCS-AOV-356	Close to provide containment pressure boundary	Failure to close on demand	None: Redundant isolation valve VCS-AOV-357 closes to isolate containment penetration.	Valve position indication and alarm in MCR if valve position not consistent with control signal.
8	Containment isolation valve VCS-AOV-357	Close to provide containment pressure boundary	Failure to close on demand	None: Redundant isolation valve VCS-AOV-356 closes to isolate containment penetration.	Valve position indication and alarm in MCR if valve position not consistent with control signal.

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

04/22/2010

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

RAI NO.:	**NO.558-4227 REVISION 2**
SRP SECTION:	**06.05.01 – ESF Atmosphere Cleanup Systems**
APPLICATION SECTION:	**DCD Tier 2 Section 9.4.6**
DATE OF RAI ISSUE:	**03/23/2010**

QUESTION NO. : 06.05.01-14

This is a follow-up RAI to "Request for Additional Information No.73-943 Revision 0, SRP Section: 06.05.01 - ESF Atmosphere Cleanup Systems, Application Section: FSAR Sections 6.4, 9.4.5 and 9.4.6" dated September 24, 2008." Question No. 06.05.01-1, RAI 6.5.1-18.

Part "2)" of the applicant's response contains the applicant's commitment "...Tier 2 Subsections 9.4.6.5.2 and 9.4.6.5.3 will be revised to add the vibration alarm/monitoring on fan / motor."

This is a follow-up RAI to "Request for Additional Information No.73 Revision 0, SRP Section: 06.05.01 - ESF Atmosphere Cleanup Systems, Application Section: FSAR Sections 6.4, 9.4.5 and 9.4.6" dated September 24, 2008." Question No. 06.05.01-1, RAI 6.5.1-18.

Part "2)" of the applicant's response contains the applicant's commitment "...Tier 2 Subsections 9.4.6.5.2 and 9.4.6.5.3 will be revised to add the vibration alarm/monitoring on fan / motor."

The staff found that subsection 9.5.6.5.3 was not revised in Revision 2 of the DCD to reflect a vibration alarm for the Reactor Cavity Cooling System. In addition, Subsection 9.5.6.5.3 still reflects the existence of an Alarm on low air flow.

In contrast, the "Test Method" Revision 2 DCD subsection 14.2.12.1.66 "Reactor Cavity Cooling System Preoperational Test" contains "Simulate high vibration signals and verify alarm annunciation." This subsection does not make mention of testing the alarm on low air flow.

In Question No. 06.05.01-1, RAI 6.5.1-18, the staff requested of the applicant that:

> "In the light of the above finding, the staff further requests that the DC applicant review in detail Preoperational Tests 14.2.12.1.66, 14.2.12.1.67, 14.2.12.1.68, 14.2.12.69 and 14.2.12.1.79 to (1) ensure that all required information to complete the preoperational test is contained either in Section 9.4.6, table 9.4-1 and / or Table 9.4.6-1 (2) remove any conflicting information that would impair preoperational test completion."

The applicant has not accomplished this requirement. In this follow-up RAI, the staff has not provided the applicant with a line by line listing of errors that need correction to satisfy the staff's request above.

The staff requests that the applicant redress its response in its entirety to satisfy the staff's original concerns of NO.73-943 Revision 0, Question No. 06.05.01-1, RAI 6.5.1-18.

ANSWER:

DCD Subsection 9.4.6.5.3 will be revised to add the information of high vibration alarm.

DCD Subsection 14.2.12.1.66 will be revised to remove any conflicting information.

Impact on DCD

Following bullet will be added in DCD Subsection 9.4.6.5.3.

- **Sensor on cooling fan corresponding alarm for high vibrations.**

DCD Subsection 14.2.12.1.66, C.2 will be revised as following.

"2. Simulate **low airflow and** high vibration signals and verify alarm annunciation."

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

04/22/2010

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

RAI NO.:	**NO.558-4227 REVISION 2**
SRP SECTION:	**06.05.01 – ESF Atmosphere Cleanup Systems**
APPLICATION SECTION:	**DCD Tier 2 Section 9.4.6**
DATE OF RAI ISSUE:	**03/23/2010**

QUESTION NO. : 06.05.01-15

In RAI No. 73-943, Revision 0 Question No. 06.05.01-1, RAI 6.5.1-17 the applicant responded:

> "Containment fan cooler system, Control rod drive mechanism (CRDM) cooling system and Reactor cavity cooling system are classified as a nonsafety related, non-seismic category I. These systems do not penetrate any fire barrier that constitutes as a fire area boundary within the containment. Therefore, there are no fire dampers installed as a part of these systems inside the containment. Containment purge system is also classified as a non-safety related, non-seismic category I, with the exception of containment isolation valves. The ductwork for the containment purge system is in the Reactor Building and the Auxiliary Building, its ductwork will be penetrating fire barriers. Therefore, fire dampers will be installed in this system. The containment penetration and the containment isolation valves are constructed of stainless steel material and act as a fire barrier and are equivalent to any fire rated damper. They will prevent the spread of a fire from one fire area to another fire area. The installation of the fire dampers to a specific barrier penetration depends on the duct route, which have not been determined at this time. However, fire dampers will be installed where a fire rated barrier has been penetrated by ductwork. This type of fire damper will be released by a fixed temperature fusible link. It should be noted that there are no gaseous fire suppression systems inside containment and therefore, there will be no automatic closing of fire dampers from a fire detection system."

This system interface with the fire protection system is fundamental to plant operations in its response to instances of smoke or fire within the areas served by the containment purge system. 10 CFR 50.48, Fire Protection and associated NRC Regulatory Guide 1.189, Revision 1 address preventing smoke from migrating from one fire area to another so that safe shutdown capability is not adversely affected.

The staff notes that Tier 1 Table 2.7.5.1-3 "Main Control Room ITAAC", HVAC System Table 2.7.5.2-3 "Engineered Safety Features Ventilation System ITAAC" and Table 2.7.5.4-3 "Auxiliary Building Ventilation System ITAAC" all appropriately provide ITAAC for the ductwork fire dampers of the respective system. The staff requests that the applicant add a similar line item to Tier 1 Table 2.7.5.3-1 "Containment Ventilation System ITAAC" for fire dampers of the containment purge system.

ANSWER:

Tier 1 Table 2.7.5-1 will be revised to add the new ITAAC for fire dampers of the containment purge system. Also Tier 1 DCD Subsection 2.7.5.3.1.1, "Containment Purge System – Design Description" under "Key Design Features" is revised to add the new sentence with respect to the containment purge system fire dampers.

Impact on DCD

Following line item is added in Teir 1 Table 2.7.5-1.

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
3 The fire dampers in ductwork of the containment purge system that penetrates fire barriers that are required to protect safe-shutdown capability close fully when called upon to do so.	3 Tests of the as-built fire dampers will be performed.	3 Each as-built fire damper in ductwork of containment purge system that penetrates fire barrier that are required to protect safe-shutdown capability close under design air flow conditions.

Revise Tire 1 DCD Subsection 2.7.5.3.1.1, "Containment Purge System – Design Description" under "Key Design Features" to add the following new sentence.

"The containment purge system has fire dampers to limit the spread of fire and combustion products. The fire dampers are capable of closing against full airflow."

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

04/22/2010

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

RAI NO.:	**NO.558-4227 REVISION 2**
SRP SECTION:	**06.05.01 – ESF Atmosphere Cleanup Systems**
APPLICATION SECTION:	**DCD Tier 2 Section 9.4.6**
DATE OF RAI ISSUE:	**03/23/2010**

QUESTION NO. : 06.05.01-18

This is a follow-up response to RAI No. 449-3495, Revision 1, Question No. 06.05.01-8. The staff notes that the acceptance criteria 14.2.12.2.4.11 "Ventilation Capability Test" reads:

> "Temperature conditions are maintained in the containment and ESF areas in accordance with Subsections 9.4.5, 9.4.6, and Table 9.4-1. It has been demonstrated through testing and analyses that the temperatures for these areas are being maintained at or around the design temperatures based on outside air ambient design conditions."

The staff finds this acceptance criteria as too ambiguous. In particular, the words "at or around" and "on outside air ambient design conditions". In Question No. 06.05.01-8 the staff posited that this demonstration would need to be accomplished during normal power operations (i.e. full power) and during near design basis limiting ambient summertime conditions (e.g. temperature, solar heat gain, wind velocities, etc., see DCD Table 9.4-1). The historical meteorological data for the COL applicant's site will provide the bases for these worst case ambient conditions. The COL applicant must demonstrate through analyses (i.e. calculations and analysis based on test data) that these HVAC systems are capable of performing its intended functions.

The staff requests that the applicant provide more clarity and precise definition to these acceptance criteria in the DCD.

ANSWER:

MHI will revise the acceptance criteria in DCD Subsection 14.2.12.4.11 D.1 "Ventilation Capability Test" to clarify.

Impact on DCD

Revise the DCD Subsection 14.2.12.4.11 D.1 "Ventilation Capability Test" as follows:

"Temperature conditions are maintained in the containment and ESF areas in accordance with Subsections 9.4.5, 9.4.6, and Table 9.4-1. It has been demonstrated through testing and analyses that

the temperatures for these areas are being maintained ~~at or around~~ **within** the design temperatures based on **recorded** ~~outside air ambient design~~ **environmental** conditions."

Impact on COLA

There is no impact on the COLA.

Impact on PRA

There is no impact on the PRA.