MITSUBISHI HEAVY INDUSTRIES, LTD.
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TOKYO, JAPAN

April 24, 2013

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-13091

Subject: MHI's Responses to US-APWR DCD RAI No. 1016-7062 (SRP 02.03.04)

Reference: 1) "Request for Additional Information No. 1016-7062, SRP Section: 02.03.04 – Short Term Atmospheric Dispersion Estimates for Accident Releases, Application Section: 2.3.4" dated March 28, 2013.

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. 1016-7062."

Enclosed is the response to the RAI contained within Reference 1.

Please contact Mr. Joseph Tapia, General Manager of Licensing Department, Mitsubishi Nuclear Energy Systems, Inc. if the NRC has questions concerning any aspect of this submittals. His contact information is provided below.

Sincerely,

Y. Ogata

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

Enclosures:

1. Responses to Request for Additional Information No. 1016-7062

D081
NRD

CC: J. A. Ciocco
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Enclosure 1

UAP-HF- 13091
Docket No. 52-021

Responses to Request for Additional Information No. 1016-7062

April 2013

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

4/24/2013

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

RAI NO.:	**NO. 1016-7062 REVISION 0**
SRP SECTION:	**02.03.04 – SHORT TERM ATMOSPHERIC DISPERSION ESTIMATES FOR ACCIDENT RELEASES**
APPLICATION SECTION:	**DCD TIER 2, SECTION 2.3.4**
DATE OF RAI ISSUE:	**03/28/2013**

QUESTION NO.: 02.03.04-14

This question is related to the applicant's revised response to RAI 02.03.04-3 dated June 4, 2009 (ML091590200) and DCD markups associated with the updated seismic closure plan submitted on January 31, 2013 via Letter MHI Ref: UAP-HF-13020 (ML13044A586). The revised response to RAI 02.03.04-3(a) states the MCR HVAC in-leakage location is selected among the following such that that the direct distance from a release point will be shortest:

- the reactor building (R/B) door (communicating with the pathway in front of MCR)
- class 1 E electrical room HVAC intake (external air drawn in by the class 1 E electrical room HVAC may leak through negative pressure sections of the MCR HVAC equipment)
- auxiliary building (A/B) HVAC intake (external air drawn in by the A/B HVAC is fed to the pathway in front of MCR)

However, it appears that the DCD markups associated with the updated seismic closure plan consider the auxiliary building door to be a MCR HVAC in-leakage location instead of the reactor building door. Please explain and justify this apparent change in MCR HVAC in-leakage location.

ANSWER:

At the time of the revised response to RAI 02.03.04-3, the layout showed an existing gap between the reactor building (R/B) and auxiliary building (A/B) where external air could leak into the R/B from the R/B door. However, as a result of the seismic reinforcement of the R/B and A/B where the buildings were unified, the gap between the R/B and A/B disappeared. As a result of the change, the door of the reactor building is not exposed to the environment, and will not be a source of in-leakage.

However, the A/B door is still in contact with external air. Therefore, the A/B door is set as the in-leakage location corresponding to the R/B door. Therefore, the A/B door is given as the in-

leakage location resulting from the seismic reinforcement change, and is currently reflected in the DCD markup provided in Mitsubishi letter UAP-HF-13020 dated January 31, 2013.

The distance between sources and the A/B door in the new layout is longer than the distance between sources and R/B door in original layout. The atmospheric dispersion factors provided in DCD chapter 15 are bounding for the longer distance between the sources and receptor since the dispersion factors were based upon shorter distances between the sources and receptors. Therefore, the atmospheric dispersion factors used in DCD chapter 15 do not need to be changed.

Impact on DCD

There is no impact on the DCD due to this RAI.

Impact on R-COLA

There is no impact on the R-COLA due to this RAI.

Impact on S-COLA

There is no impact on the S-COLA due to this RAI.

Impact on PRA

There is no impact on the PRA.

Impact on Technical / Topical Reports

There is no impact on the Technical / Topical Reports.