

  
**MITSUBISHI HEAVY INDUSTRIES, LTD.**  
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TOKYO, JAPAN

June 27, 2011

Document Control Desk  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Attention: Mr. Jeffery A. Ciocco

Docket No. 52-021  
MHI Ref: UAP-HF-11190

**Subject:** MHI's Responses to US-APWR DCD RAI No. 765-5824 (SRP 09.02.02)

**Reference:** 1) "Request for Additional Information No. 765-5824 Revision 0, SRP Section: 09.02.02 - Reactor Auxiliary Cooling Water Systems, Application Section: 9.2.2" dated 6/6/2011.

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. 765-5824, Revision 0."

Enclosed are the responses to one RAI contained within Reference 1. This transmittal completes the response to this RAI.

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

Sincerely,



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

Enclosure:

1. Response to Request for Additional Information No. 765-5824, Revision 0

DOB  
NRO

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

Contact Information

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Docket No. 52-021  
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Enclosure 1

UAP-HF-11190  
Docket No. 52-021

Response to Request for Additional Information No. 765-5824,  
Revision 0

June, 2011

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**RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION**

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6/27/2011

**US-APWR Design Certification**

**Mitsubishi Heavy Industries**

**Docket No.52-021**

**RAI NO.:** NO. 765-5824 REVISION 0  
**SRP SECTION:** 09.02.02 – Reactor Auxiliary Cooling Water Systems  
**APPLICATION SECTION:** 9.2.2  
**DATE OF RAI ISSUE:** 6/6/2011

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**09.02.02-83**

Based on a review of the US-APWR DCD between Revision 2 and Revision 3, the following minor drawing discrepancies were noted on Figure 9.2.2-1, "Component Cooling Water System Piping and Instrumentation Diagram." These discrepancies should be fixed in the next DCD revision.

Figure 9.2.2-1 Sheet 1

- Valves bypass around the nitrogen supply VLV-PCV-012 is missing (VLV-043A, VLV-044A and VLV-045A). This information was shown in Revision 2.
- Pressure indication (PI) is missing from the 'A' side of the surge tank (should be similar to the 'C' side of the surge tank on Sheet 2). Note: The C/D surge tank has two PIs and the A/B surge tank only have 1 for R/2.

Figure 9.2.2-1 Sheet 2

- Valve VLV-004B (local sample connection) is shown on the header to the 'D' pump, Revision 2 had it previously shown on the header to the 'C' pump.

Figure 9.2.2-1 Sheet 8

- Valve VLV-570 (to vacuum vent equipment) to the letdown heat exchanger was removed on Revision 3, but was previously shown in Revision 2.
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**ANSWER:**

**1) Figure 9.2.2-1 Sheet 1**

The bypass line and pressure indication are only installed on the B-CCW surge tank for the purpose of supplying CCW to the Chilled Water System at a higher pressure than its normal supply pressure in a severe accident condition. The A-CCW surge tank is not used for the severe accident purpose. Therefore, only the B-CCW surge tank has the bypass line and

pressure indication. The bypass line around VLV-PCV-012 was intentionally deleted in DCD Revision 3. The bypass line for the A-CCW surge tank is not needed.

**2) Figure 9.2.2-1 Sheet 2**

This local sample connection has been moved due to layout design progress. The purpose of the sample line is to take samples from the CCW surge tank. Whether the sample line is on "C" header or "D" header, it is functionally the same.

**3) Figure 9.2.2-1 Sheet 8**

The connection shown in Revision 2 is the connection to future equipment, which is used only during outages. The equipment is not within the scope of the standard design and is not described in the DCD. Therefore the connection was omitted in Revision 3 for P&ID simplification.

**Impact on DCD**

There is no impact on the DCD.

**Impact on R-COLA**

There is no impact on the R-COLA.

**Impact on S-COLA**

There is no impact on the S-COLA.

**Impact on PRA**

There is no impact on the PRA.