

REQUEST FOR ADDITIONAL INFORMATION 591-4722 REVISION 0

6/8/2010

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

SRP Section: 09.03.03 - Equipment and Floor Drainage System
Application Section: 9.3.3

QUESTIONS for Balance of Plant Branch 1 (AP1000/EPR Projects) (SBPA)

09.03.03-18

In order to demonstrate compliance with GDC 4, the applicant must demonstrate the capability to withstand the effects of and to be compatible with the environmental conditions (flooding) of normal operation, maintenance, testing, and postulated accidents.

Initially, RAI 299-2036, question 9.3.3-4 was submitted to request additional details on isolation signals, instrumentation and inadvertent operation of the isolation valves. Upon review of the response to question 9.3.3-4, the staff submitted a supplementary RAI 426-3167, question 9.3.3-15 stating that all references to safety-related isolation valves should be clearly distinguished from non-safety related valves in the DCD Section 9.3.3 and Figure 9.3.3-1. In the response to question 9.3.3-15 (Open Item 01), the applicant proposed to include the equipment class break on Figure 9.3.3-1 to clearly define the isolation valves for the safeguard component areas as safety-related and MHI has updated Revision 2 of the DCD accordingly. Although the isolation valves (identified as EC3) are properly classified as safety-related on Figure 9.3.3-1, the staff is unable to determine whether the piping from these safety-related valves into the safeguard component area are similarly defined as safety-related.

Therefore, the applicant is asked to provide the classification for the piping in question or define any potential failure scenarios that could impact the room as a result of failure of the non-safety piping portions and update the DCD as necessary.

References:

MHI's Response to US-APWR DCD RAI No. 299-2036; UAP-HF-09242; dated May 14, 2009; ML091380158.

MHI's Response to US-APWR DCD RAI No. 426-3167; UAP-HF-09446; dated September 14, 2009; ML092600317.

09.03.03-19

In order to demonstrate compliance with GDC 60, the applicant must show suitable control to avoid inadvertent transfer or [of] radioactive waste to non-radioactive waste portions of the system, including the environment. Upon review of the applicant's response to RAI 426-3167, question 9.3.3-15 (Open Item 01), the staff identified some additional concerns. As a result of the staffs review, the applicant is asked to address the following:

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- 1) The proposed piping routing configuration in Figure 9.3.3-1 shows the T/B sump discharging into the A/B sump in Figure 9.3.3-1 and Section 9.3.3. However, this change is not properly reflected into Figure 11.2-1, which shows the T/B sump discharging directly into the waste holdup tanks. This results in an inconsistency between the figures.
- 2) Additionally, the applicant's response proposed to revise Section 9.3.3.2.3 to clarify that the normal flow from the T/B sump discharges into the waste water system (WWS) and automatically diverts flow to the liquid waste management system (LWMS) in response to a radiation signal. However, upon review of the response to RAI 299-2036, question 9.3.3-04, the process of rerouting flow is defined as a manual process. Further review of DCD Revision 2 in Tier 1 and Section 9.3.3.2.3 indicates that this process is defined as automatic, but Section 9.3.3.2.3 of DCD rev 2 states that operator initiation is needed. Therefore, this inconsistency needs to be clarified.
- 3) A third item of concern in the response is related to the normal discharge of the T/B sump to the WWS outside the turbine building. The staff is unable to locate any details of the WWS. Therefore, the staff asks the applicant to provide additional details and components included in the WWS or justify its exclusion from the DCD. If this item is considered outside the scope of the DCD, the applicant could include a COL item to define the WWS appropriately. The applicant should address the design and configuration of the plant waste water retention basins and associated discharge piping, including, basin transfer pump size, basin size, and location of the retention basins.

References:

MHI's Response to US-APWR DCD RAI No. 299-2036; UAP-HF-09242; dated May 14, 2009; ML091380158.

MHI's Response to US-APWR DCD RAI No. 426-3167; UAP-HF-09446; dated September 14, 2009; ML092600317.