


MITSUBISHI HEAVY INDUSTRIES, LTD.
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TOKYO, JAPAN

May 12, 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-09233

Subject: MHI's Responses to US-APWR DCD RAI No. 349-2586 Revision 0

Reference: [1] "Request for Additional Information No. 349-2586 Revision 0, SRP Section: 06.02.02 – Containment Heat Removal System - Design Certification and New License Applicants, Application Section: 6.2.2," dated April 28, 2009.

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. 349-2586 Revision 0".

Enclosure 1 is the responses to 1 question that is 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,

Y. Ogata

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

DO81
NRO

Enclosures:

1. Responses to Request for Additional Information No. 349-2586 Revision 0

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

Contact Information

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Enclosure 1

UAP-HF-09233
Docket No. 52-021

Responses to Request for Additional Information
No. 349-2586 Revision 0

May 2009

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

5/12/2009

**US-APWR Design Certification
Mitsubishi Heavy Industries, Ltd.
Docket No. 52-021**

RAI NO.: NO. 349-2586 REVISION 0
SRP SECTION: 06.02.02 – Containment Heat Removal System
APPLICATION SECTION: 6.2.2
DATE OF RAI ISSUE: 4/28/2009

QUESTION NO.: 06.02.02-18

It appears that the strainer test evaluation provided does not demonstrate applicability to regulatory requirements and guidance. APWR elected to use operating plant head loss testing to serve as the APWR design basis. The analysis which documented this approach is referred to as a comparative evaluation. In this comparative evaluation, APWR concluded that the APWR strainer design is bounded by an operating plant test on the basis of "debris" per unit area of strainer screen (see MUAP 08001-NP (R2) page 7 of 24). The following items present some concerns with this comparative evaluation:

- Test facility not scaled to APWR design
- Reduction in APWR strainer hole size
- Changes in APWR strainer module configuration, geometry, and orientation
- Significant differences in debris types and quantities (sufficient fiber remains available to achieve a thin-bed)
- Operating Experience that brings into question the more "debris" per unit area bounding assertion
- APWR Design Bases assumes 70% debris load on the strainer as the worst case
- Prototypicality issues with operating plant test used for comparative evaluation

Therefore, the NRC staff requests APWR provide strainer test data that demonstrates applicability to regulatory requirements and guidance.

ANSWER:

As the response to this question, MHI refers following commitment letter which has already submitted to the NRC:

MHI reference No.: UAP-HF-09204 dated April 24, 2009.
Subject: Additional Information for Sump Strainer Performance

In the captioned letter, MHI committed to complete the following actions to resolve the above NRC's concerns:

1) MHI will perform plant specific head loss for the US-APWR. A summary for the test plan was provided in Enclosure of the referenced letter. The test information and results will become an attachment to the report, MUAP-08001.

2) MHI will revise the report MUAP-08001 to provide further additional information to justify the comparative evaluation using existing knowledge, experience at an operating plant, and/or using the above head loss test results.

Impact on DCD

The technical report MUAP-08001 (R2), and/or associated DCD description if necessary, will be revised as per the results of the above actions.

Impact on COLA

There is no impact on the COLA

Impact on PRA

There is no impact on the PRA.