

October 4, 2010

APPLICANT: MITSUBISHI HEAVY INDUSTRIES, LTD.

APPLICATION: UNITED STATES - ADVANCED PRESSURIZED WATER REACTOR
STANDARD DESIGN CERTIFICATION REVIEW

SUBJECT: SUMMARY OF JULY 27, 2010, PUBLIC MEETING WITH MITSUBISHI
HEAVY INDUSTRIES LTD., TO DISCUSS KEY ISSUES ASSOCIATED
WITH THE UNITED STATES - ADVANCED PRESSURIZED WATER
REACTOR DIGITAL INSTRUMENTATION AND CONTROLS

Below is the summary of the July 27, 2010, public meeting between the U.S. Nuclear Regulatory Commission (NRC), Mitsubishi Heavy Industries, Ltd. (MHI), Mitsubishi Nuclear Energy Systems (MNES), and members of the public. This summary includes the discussion of unresolved design issues that have significant licensing schedule uncertainties and planning for an upcoming public meeting to further discuss the key issues.

The NRC began by stating that the purpose of this meeting was to present key issues that remain open after the NRC staff has reviewed the information submitted so far. A summary of the key technical issues is provided below. Additional details of the key technical issues and examples are in Enclosure 2.

Key Technical Issue 1:

Compliance with the NRC regulatory requirements in General Design Criterion 24 and Title 10 of the *Code of Federal Regulations* (10 CFR), Part 50.55a(h) (i.e., Section 5.6 of Institute of Electrical and Electronics Engineers 603-1991 since safety functions could be adversely affected by nonsafety systems).

Key Technical Issue 2:

Compliance with the NRC regulatory requirements regarding quality assurance (QA) and quality standards. The current set of information does not conform to the NRC regulatory guidance on QA and quality standards nor does it provide an acceptable alternative with sufficient evidence and justification to meet the NRC's regulations. Specific areas of the NRC staff concerns include:

- a) Demonstration of the compliance with Appendix B of 10 CFR Part 50 and 10 CFR 21 for the development of the Mitsubishi Electric Total Advanced Controller platform.
- b) Demonstration of the quality of the software and its development process used in safety systems - software program manuals.
- c) Demonstration of the quality of programmable logic technologies, such as Field Programmable Gate Arrays, used in safety systems.
- d) Demonstration of a secure development and operational environment for the software development process as described in Regulatory Guide 1.152.

There are other areas and issues under the NRC staff review. The NRC staff plans to interact with MHI in a timely manner as the NRC staff review is completed. The impact on the review schedule for the design certification application will be established after discussion with MHI regarding its plans to address the NRC's determination. The NRC staff stated they intend to develop a letter to MHI documenting the NRC staff positions after future interactions with MHI.

After the key issue discussion, MHI requested clarification that these issues have previously been addressed through Requests for Additional Information, Audits and Public Meetings and that these are not new issues. The NRC confirmed that all the issues have been presented before and that MHI's previous responses have not been successful in addressing the issues. MHI also stated that it was important that both the NRC and MHI have a mutual understanding of the issues. MHI requested additional clarification of the issues and categorization of the open items into areas where additional details are required or, where MHI is not on a success path towards a resolution. The NRC staff stated that they needed a clear direction from MHI on how they are going to resolve these issues. Specifically, the NRC is looking for a clear licensing basis in order to make a reasonable assurance finding and develop a mutually agreeable success path. The NRC and MHI discussed the need for a future public meeting to allow MHI the opportunity to present their proposed resolutions. A public meeting was proposed on August 18 and 19, 2010. The NRC and MHI will work together to refine the meeting scope and agenda prior to noticing the meeting.

During the public comment portion of the meeting, a question was asked if the public meeting would only cover the key messages discussed in this meeting or would it cover other areas. The NRC stated that the public meeting would primarily address the issues discussed in this meeting, but may branch off into other related areas if they directly support the resolution of issues.

Please direct any inquiries to Michael S. Magee at 301-415-6988, or via e-mail at Michael.Magee@nrc.gov.

Sincerely,

/RA By Jeffrey Ciocco, Acting For/

Michael S. Magee, Project Manager
US-APWR Projects Branch
Division of New Reactor Licensing
Office of New Reactors

Docket No. 52-021

Enclosures:

1. List of Attendees
2. Key Technical Issues

cc w/encls: See next page

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/Jeffrey Ciocco for/

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