

February 7, 2011

APPLICANT: MITSUBISHI HEAVY INDUSTRIES, LTD.

FACILITY: US-APWR STANDARD DESIGN CERTIFICATION REVIEW

SUBJECT: SUMMARY OF THE SEPTEMBER 30, 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

On September 30, 2010, a public meeting was held between the U.S. Nuclear Regulatory Commission (NRC), Mitsubishi Heavy Industries, Ltd. (MHI), Mitsubishi Nuclear Energy Systems, 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. A list of meeting attendees is provided as Enclosure 1. The meeting presentation slides are enclosed. Enclosure 2 is the "US-APWR Key I&C Issues and Review Status" presentation, dated September 30, 2010, and it can be found in the Agencywide Documents Access and Management System (ADAMS) under accession number ML102770305. Enclosure 3 is the "Attachment to US-APWR Key I&C Issues and Review Status MHI Closure Letter Review SDOE Issues" presentation, dated September 30, 2010, and it can be found in ADAMS under accession number ML102770316. Enclosure 4 is the "PSMS and MELTAC Document Changes" presentation, dated September 30, 2010, and can be found in ADAMS under accession number ML102770321. Enclosure 5 is the "MELCO QA Audits and Corrective Actions" presentation, dated September 30, 2010, and can be found in ADAMS under accession number ML102770330.

The NRC staff began by reviewing the recent interactions with MHI, including MHI's submission of their closure plan letter (ML102430180) and the NRC response to the closure plan (ML102700183). In reference to the closure plan, the NRC staff expressed their appreciation for MHI's efforts to meet the NRC regulations and understands the complexity of the design requirements that would present design difficulties. MHI stated their understanding of the need for a comprehensive analysis of the Digital I&C design, and explained how they took a broader look at the documents and design. MHI stated the hope that the NRC staff will use the roadmap, as described in the closure plan, to expedite the review.

The NRC staff presented their commitments and expectations of MHI to resolve key issues, including providing specific feedback and clarification of Requests for Additional Information (RAIs) and RAI responses in a timely manner, with emphasis on specificity of safety and regulatory requirements without iterations of RAIs.

The NRC staff also presented the current status of each section of Chapter 7, including a status of RAI's, of the design control document (DCD), and pending RAI's. MHI requested a list of the open RAI's and general open areas. The NRC staff took this as an action item. The NRC staff also presented information on the status of the MELTAC topical report, cybersecurity and additional document review.

The NRC staff stated that it doesn't expect any major issues to arise in Sections 7.2 - 7.8. Sections 7.1 and 7.9 may be affected from this point forward. The NRC staff plans to continue issuing RAI's to resolve issues and only plans to use other methods, such as conference calls and public meetings, if the RAI's do not resolve the issues. MHI stated that they felt the RAI process has not been as successful as hoped, and stressed the value of the face-to-face public meetings. To alleviate unnecessary and unexpected revisions to documents, which the NRC staff will have to review, as a result of changes not agreed upon or discussed at the meetings, the NRC staff requested that any future revisions be presented in advance by submittal of markups, such as redline strikeouts. MHI presented their changes to the PSMS MELTAC documentation to address the key issues of Interdivision Communication and Quality. MHI first presented the original design basis and then presented the changes for discussion. For interdivisional communication, MHI provided a description of three design changes to achieve Interim Staff Guidance (ISG)-04 compliance and how the changes affected the DCD, MELTAC topical report, and technical reports. MHI also presented an overview of the complete non-safety to safety inter-division communication design to show overall compliance to ISG-04.

To address the quality issues, MHI presented information on the MELTAC Re-evaluation Program (MRP), changes to the Software Program Manuals (SPM), and MELCO Quality Assurance (QA) audits and corrective actions. For the MRP, amendments are being made to demonstrate compliance to Electric Power Research Institute (EPRI) Technical Results (TR) -107330 Table 1-1 and EPRI TR-106439 Tables 6-4a and 6-4b. For SPM's, MHI stated that both the MELTAC and PSMS SPM's have been revised to demonstrate compliance to the "should" statements in Branch Technical Position (BTP) 7-14 and the "shall" and "requires(d)" statements in referenced Institute of Electrical and Electronics Engineers (IEEE) standards. MHI stated that an appendix has been generated for each SPM to show how BTP 7-14 and referenced IEEE standards compliance is met and stated that there are no areas of non-compliance. MHI also stated the SPM's and the MRP have been revised to enhance demonstration of compliance to Regulatory Guide 1.152. MHI presented the findings of the MELCO QA audits and the status of resolving the resulting corrective actions.

The NRC staff concluded the meeting by stating that MHI's closure plan and presentations show improvement towards resolving key issues. The NRC remains cautious of the time needed to review the revised documents, send RAI's and complete the Safety Evaluation on the current schedule. The NRC will conduct a thorough review of revised documents and will let MHI know if it represents a good path forward and if there are any major issues.

The NRC also stated that the MELTAC topical report increases the uncertainty of the review timeline and questions whether it should be converted to a technical report. MHI stated they will discuss the MELTAC topical report with MELCO. The NRC staff restated that they would provide MHI with a list of the open RAI's and general open areas.

The public commented that the NRC staff guidance are not equivalent to regulations and that the NRC staff needs to be careful about how they state their interpretation of following the guidance. Particularly, when the NRC staff says they "EXPECT" the guidance to be followed, they may be going too far. There may be a schedule impact for not following the NRC staff guidance, but applicants are free to use other approaches to demonstrate compliance with NRC's regulations. Not allowing this freedom would stifle innovation and have potentially negative impacts.

If you have any questions, please direct any inquiries to William Ward at 301-415-7038, or via e-mail at William.Ward@nrc.gov.

Sincerely,

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Docket No. 52-021

Enclosures:
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