

May 1, 2008

APPLICANT: Mitsubishi Heavy Industries, Ltd. (MHI)

PROJECT: US-APWR Design Certification

SUBJECT: SUMMARY OF APRIL 15, 2008 MEETING WITH
MHI, ON DESIGN CERTIFICATION REVIEW SCHEDULE

On April 15, 2008, a Category 1 public meeting was held between the U.S. Nuclear Regulatory Commission (NRC) and representatives of MHI at the Mitsubishi Nuclear Energy Systems Offices, 2300 Wilson Boulevard, Arlington, Virginia. The purpose of the meeting was for MHI to present updated design certification scheduling information in response to the NRC's March 25th public meeting to review the draft design certification review schedule for the US-APWR application. The meeting also allowed MHI to introduce the newly appointed General Manager of the US-APWR Promoting Department, Mr. Yoshiki Ogata, and to update the staff on the contents of future design submissions and the planned revisions to the Design Control Document (DCD). A list of attendees is provided as Enclosure 1.

A public meeting notice was issued on April 3, 2008 (Agencywide Documents Access and Management System (ADAMS) accession number (ML080930137) and included the meeting agenda, which was provided as a handout at the meeting.

Sump Strainer

Following the introductory remarks (ML080107147), MHI presented updated information on the enhanced schedule and plan for the US-APWR sump strainer design (ML081070222). At the March 25th meeting, the NRC laid out a review schedule that did not include the timeline for completion of the sump strainer design submitted to the NRC on March 20th. MHI presented a more up-to-date plan for the strainer submittals, which will be provided by the end of 2008, and improvement of six months from their March 20th letter. Also presented was a discussion of challenging technical issues related to the sump, including debris generation and transport, head loss testing, chemical effects, and downstream effects. Due to the updated design plan, MHI stated that a shortening of the review schedule for Chapter 6 and 15 is warranted.

The NRC staff responded by first stating that before committing to change any milestone dates in the draft schedule as present March 25th, the impacted branches would need to be consulted, but the improvement in the schedule on MHI's part was appreciated. The staff also commented on the acceptability of approach used for chemical effects, and stated that there are many questions regarding the approach to downstream effect but that future submittals could address these additional questions. Finally, there were a handful of questions from the staff to MHI regarding some of the technical issues that were discussed in the presentation. MHI responded to a question on eliminating fibrous insulation, and thereby debris, completely by stating that it is not practical to assume no fibrous debris in containment. The staff inquired as to the use of existing data for the bounding head loss calculation; MHI stated that they have spoken with their contractor, and a bounding test data set is available. With regards to the refueling water storage pit (RWSP), the staff asked if it was lined and MHI responded that it is steel-lined. The staff then asked if the steel was treated to prevent rust and MHI clarified that the RWSP is lined with stainless steel. The staff also asked for clarification on the assumption that 66% of debris head loss would be on one train; MHI responded that the assumption is based on debris evenly distributed among the drains. Finally, the staff stated that the concept of multiple sumps is a

new idea and that justifying the assumption of uniform debris distribution may need to be considered. MHI stated that future submittals should have all relevant details.

Stress Analysis

The sump strainer presentation was followed by a presentation by MHI on the updated schedule for stress analysis (ML081070166). MHI improved their original submittal dates for a technical report and audit from June and September of 2009, respectively, to March of 2009 for both. Outlines of the technical reports to be submitted were presented, as was the inclusion of an additional technical report related to stress analyses Seismic accident load conditions for primary components and piping designs, to be submitted in January 2009. MHI stated that due to the updated design plan, with submittals up to six months earlier than anticipated, the review schedule for Chapters 3 and 4 should be shortened by six months.

The staff thanked MHI for the improved schedule and again stated that these changes would be considered by all affected staff before a final schedule would be issued. The staff inquired as to why a six month shortening was expected if the technical report is only coming in three months earlier than originally expected. MHI responded that they assumed the extension of the draft schedule was due to the late audit and not the technical report. The staff also asked when the design reports would be available. MHI stated that the design reports will be available with the technical reports. Finally, the staff stated that additional discussion may be required to more accurately define what will be considered a complete design.

Contents of Technical Reports

To further assist the staff in the development of the review schedule, MHI presented information on the contents of technical reports to be submitted in the future (ML081070160). The information presented included table of contents, a summary outline and the related DCD sections for seven of the technical reports MHI plans to submit through June of 2009. The contents of technical reports related to the Sump Strainer or Stress Analysis were not included as they were discussed in greater detail in earlier presentations. MHI stated that the information was being provided as a reference for future RAIs developed during the review but prior to the submittal of the reports. They further stated that the only changes being made to the technical reports are to the sump strainer and stress analysis reports.

The staff inquired as to the change in submittal date for the security assessment report and whether this should be the topic of a future Design-centered Working Group meeting. Clarification was also sought regarding which sections of the sump strainer design should be reviewed in light of the changes expected. The staff also asked MHI to clarify their expectations for the review of topical reports versus technical reports. MHI stated that they do not expect an SER for technical reports, only topical reports. They further clarified that the evaluation of the technical reports is expected to be included in the SER written for the DCD. Finally, the staff asked about the inclusion of technical report changes in future FSAR changes, and what would be included in the FSAR and therefore become the part of the licensing basis. MHI responded that items the staff asks be included in the FSAR will be added.

US-APWR DCD Revision

MHI updated the staff on the expected changes that will be made in the revised DCD to be submitted August 2008 (ML081070176). The scope of the revision was presented, including the affected sections of the DCD and reasons for the change. There were four stated reasons for the changes; Plant Arrangement Change, NRC comments, Incorporating Technical Report, and Customer's Preference. These changes include the incorporation of Risk-Informed Technical Specifications (RITS) Initiative 4b/5b. The revised DCD will be the used for the reference COLA

to be submitted in September 2008. MHI concluded by stating that due to the minor nature of these revisions, they should not impact the anticipated improvements in the review schedule.

The staff stated that the probabilistic risk assessment (PRA) supporting RITS initiative 4b/5b would require extensive review, especially considering that 5b has not been approved in a generic sense. The review of 5b would likely need to be in concert with the Technical Specifications task force, which may have an impact on the schedule. The staff also stated that the PRA quality should be able to pass review for any application and should therefore be included in its entirety in the DCD. MHI responded that the analysis in support of this revision should be available for staff review. The staff inquired as to what would be incorporated by reference or summarized given that some information will not be submitted until September 2008, after the revision. MHI responded that revision bars will be included in their revision. The staff expressed concern that the revision may impact the review schedule due to the new plant layout. The staff explained that the new layout may require staff reassessment of some sections already under review. MHI suggested that meeting to discuss the specific revisions to the DCD may benefit the staff in their current review. The staff agreed with this suggestion and stated the managing the changes would be beneficial.

Concluding Remarks

In closing, MHI stated that they hoped to communicate critical path updates to the staff and requested that the staff continue to interact with them to help improve upon and finalize the review schedule (ML081070231). The staff thanked MHI for the detailed feedback on the draft schedule. The staff communicated to MHI that they will take this new information into consideration as they reassess the draft schedule in preparation for the final schedule publication. MHI closed by stating that time is of the essence for their project and they will provide all the presented information to the NRC in a formal letter following the meeting.

Members of the public were in attendance. Public Meeting Feedback forms were distributed, but none were returned.

Please direct any inquiries to me at 301-415-2849, or jenise.thompson@nrc.gov.

/RA/

Jenise Thompson, Project Manager
USAPWR Projects Branch
Division of New Reactor Licensing
Office of New Reactors

Docket No. 52-021

Enclosure:

1. List of Attendees

cc w/encl: See next page

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Office of New Reactors

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cc w/encl: See next page

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Meeting with Mitsubishi Heavy Industries Regarding US-APWR Design Certification Review
 Schedule – April 15, 2008

Attendance Sheet

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Don Woodlan	Luminant
Yoshiki Ogata	MHI
Atsushi Kumaki	MHI
Chikara Kurimura	MHI
Nobuo Ishihara	MHI
Futoshi Tanaka	MHI
Hiroshi Hamamoto	MHI
Tomoyuki Kitani	MHI
Shinji Otani	MHI
Tetsuya Teramae	MHI
Hironori Noguchi	MHI
Etsuro Saji	MHI
Kaname Shibato	MHI
Shinji Kawanago	MNES
C.K. Paulson	MNES
Don Algama	MNES
Masanori Onozuka	MNES
Mutsumi Ishida	MNES
Takahiro Imamura	MNES
David Lange	MNES
Masayuki Kambara	MNES
Diane Yeager	MNES/Enercon
Jenise Thompson	NRC
Jin Ching	NRC
Andy Du Bouchet	NRC
Chris Jackson	NRC
Stephen Monarque	NRC
Pete Hearn	NRC
David Terao	NRC
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