

October 27, 2011

Mr. Yoshiki Ogata, General Manager
APWR Promoting Department
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SUBJECT: SCHEDULE CHANGE FOR THE UNITED STATES - ADVANCED
PRESSURIZED WATER REACTOR DESIGN CERTIFICATION

Dear Mr. Ogata:

The purpose of this letter is to inform you of a schedule change for the United States - Advanced Pressurized Water Reactor Design Certification (DC) review. The schedule change is due to an increased scope of work associated with additional information provided or to be provided in support of the DC application.

The major areas contributing to the need for this revision of the review schedule are seismic and structural analysis, and resolution of Generic Safety Issue (GSI)-191, "Assessment of Debris Accumulation on PWR Sump Performance."

On March 31, 2011, Mitsubishi Heavy Industries, Ltd. (MHI) informed the U.S. Nuclear Regulatory Commission (NRC) staff that it will change the reactor building seismic analysis model from a simplified, lumped-mass-stick model to a detailed, three-dimensional finite element model, to facilitate MHI's responses to technical issues raised by the NRC staff. This change requires MHI to re-perform the seismic analysis, including the soil-structure-interaction analysis of the nuclear island; resubmit revised technical reports; and submit additional technical reports and supporting calculations. In various letters and public meetings since May 2011, MHI outlined its current plan for submitting the necessary technical information to enable the NRC staff to complete its Phase 2 of the safety review. The plan outlines MHI's commitment to submit 16 new and revised technical reports between June 2011, and October 2011, and to make available for audit 51 supporting calculations and design reports by February 2012. MHI has also committed to submit interim and final updates to Revision 3 of the Design Control Document (DCD) for Section 3.7 and Section 3.8 and associated appendices that will reflect all changes resulting from the technical reports and Request for Additional Information responses. In addition to the seismic re-analysis, the new technical information submitted by MHI provides the technical basis for MHI's approach for the design of the containment internal structures, including steel-concrete modules for which there are currently no available codes or standards in the United States. The NRC staff is currently reviewing the technical reports submitted to date and plans to complete its Phase 2 review of Section 3.7 and Section 3.8 of the DC application and the associated technical reports identified to date by MHI by January 2013. This review schedule includes audits of pertinent calculations and design reports. This review schedule does not include three technical reports (MUAP-07033, MUAP-08012, and MUAP-08007) impacted by the seismic re-analysis, which is scheduled for submittal in March and April 2012. The safety review of these three technical reports will be completed by Phase 4. During a public meeting on September 22, 2011, MHI explained the scope and description of potential testing of anchorage and connections for the steel-concrete modules. In addition, MHI informed

the staff of their proposed changes to the design and analyses parameters. The potential impact of these tests and proposed changes to the design and analyses parameters are not reflected in this review schedule.

By letter dated May 24, 2011, MHI submitted a comprehensive closure plan for GSI-191 related issues. The closure plan includes three significant licensing documents, which have been submitted, and a last submittal to the NRC staff is scheduled for October 2011. The core inlet blockage test report is also due in October 2011. At a public meeting held on September 21, 2011, MHI described additional testing and analyses that are being considered to support the assumptions of fuel assembly head-loss testing. At this point, it is not clear to the staff what MHI intends to submit for further review, and the schedule is not currently clear. Although progress has been made by MHI since May 2011, the staff believes that it is now appropriate for MHI to revise its closure plan for this topic area to clarify what additional testing and/or analyses will be submitted and the schedule for remaining submittals. Upon receipt of the revised closure plan, the staff will reassess the schedule to determine if it can complete its Phase 2 review of Chapter 6 of the DCD and the associated technical reports by April 2012.

For Chapter 7, "Instrumentation and Controls," MHI has taken significant steps to address several challenging issues such as software program manuals, communication independence, and quality standards and assurance. MHI's improved responsiveness to these issues and frequent and effective communication with the NRC staff have resulted in the timely review of Chapter 7. As a result, the Phase 2 review of Chapter 7 is expected to be completed by January 2012, which is consistent with the date stated in the previous NRC Schedule letter, dated February 24, 2011 (ML110240150).

Given the circumstances described above, the NRC has developed the revised milestones for the remaining review phases of the DC that are shown in the Enclosure entitled "US-APWR Design Certification Application Review Milestones." The schedule also includes a milestone for the DC rulemaking activities. The rulemaking milestone assumes that the rulemaking task will start at the end of Phase 4 and last 12½ months, as described in SECY-09-0018, "Streamlining Design Certification Rulemakings," dated January 30, 2009.

Y. Ogata

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If you have any questions regarding this matter, please contact Mr. Jeffrey Ciocco, Lead Project Manager for the US-APWR DC application at (301) 415-6391, or via e-mail at Jeff.Ciocco@nrc.gov.

Sincerely,

/RA/

David B. Matthews, Director
Division of New Reactor Licensing
Office of New Reactors

Docket No. 52-021

Enclosure:
As stated

cc w/encl: See next page

Y. Ogata

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(Revised 08/25/2011)

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US-APWR Design Certification Application Review Milestones

Task Description	Completion Date
Phase 1 - Preliminary Safety Evaluation Report (SER) and Request for Additional Information	Completed
Phase 2 - SER with Open Items	January 2013
Phase 3 - Advisory Committee on Reactor Safeguards (ACRS) Review of SER with Open Items	May 2013
Phase 4 - Advanced SER with No Open Items	October 2013
Phase 5 - ACRS Review of Advanced SER with No Open Items	December 2013
Phase 6 - Final SER	May 2014
Final Design Certification Rule	October 2014

Enclosure