

January 18, 2012

APPLICANT: MITSUBISHI HEAVY INDUSTRIES, LTD.

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

SUBJECT: SUMMARY OF THE DECEMBER 6, 2011, UNITED STATES -
ADVANCED PRESSURIZED WATER REACTOR DESIGN CENTER
WORKING GROUP PUBLIC MEETING WITH MITSUBISHI HEAVY
INDUSTRIES, LTD., LUMINANT, AND DOMINION TO DISCUSS THE
PROGRAM STATUS

On December 6, 2011, a public meeting was held between the U.S. Nuclear Regulatory Commission (NRC), Mitsubishi Heavy Industries, Ltd. (MHI), Luminant, and Dominion, at the NRC offices in Rockville, Maryland. The meeting notice was issued on November 16, 2011, and was documented in the Agencywide Documents Access and Management System (ADAMS) under accession number ML113201991. The notice included the meeting agenda. The purpose of the meeting was to discuss a programmatic review of the United States - Advanced Pressurized Water Reactor (US-APWR) design center. The meeting presentation is publicly available in ADAMS under accession number ML113530171.

NRC staff, MHI, Luminant, and Dominion presented a high-level Design Certification Working Group (DCWG) summary of the program status. The following are the main issues discussed:

- NRC General Topics – The design certification, the Reference-Combined License Application (R-COLA), and Subsequent-Combined License Application (S-COLA) are a high priority for NRC staff in fiscal years 2012 and 2013. The Office of New Reactors reorganization should not have any impact on the US-APWR design center.
- Financial Qualification of Applicants – The NRC staff is determining if the applicant has to identify the funding sources for construction prior to issuance of the combined license or whether the staff can use a license condition.
- Design Certification and Topical Report Review Status – The project status was discussed, including the status of requests for additional information (RAI). All issues must be tracked to closure. Project schedules were also discussed and that attention should be given to the timing of the Advisory Committee on Reactor Safeguards (ACRS) meetings.

- Seismic Technical Issues - The NRC indicated that the new approach using a common basemat and returning to the Northridge data is seen as a positive step to closure of the seismic evaluation. Using a different soil profile is seen by the NRC as a commercial decision to be made by MHI. MHI indicated that they will provide the "plan for the new seismic submittal plan" within 2 weeks and submit the plan in March 2012. Technical Reports required for plan implementation will be submitted by June 2012. The NRC indicated that their review of steel concrete modules was continuing since the new approach should not affect this review, but requested MHI to quickly identify those areas where the NRC review should stop because changes will occur. NRC stated MHI should get resolution on seismic issues before the end of fiscal year 2012 because Fukushima NRC seismic activities for operating plants could become very high on their priority list in fiscal year 2013.
- Sump Strainer Technical Issue – NRC staff appreciated MHI's participation at the ACRS information briefing. NRC staff will decide within 3 weeks whether they will ask any RAIs resulting from the ACRS briefing. MHI will review the transcript from the ACRS meeting and discuss the questions with the NRC to determine the most appropriate way to respond to ACRS member questions that were not answered during the briefing. Mitsubishi will provide the sump strainer/GSI-191 closure plan on December 12, 2011. NRC said that they would like to see the closure plan be as comprehensive as possible, making sure it will address "lingering issues" in addition to debris transport and delay time. The closure plan should include Tier 2* information, Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC), containment cleanliness program, etc. NRC staff suggested to MHI to consider providing ACRS another information briefing after there has been more progress on implementing the closure plan. With respect to containment overpressure credit, NRC staff said that MHI should review the Commission Staff Requirements Memorandum on this matter.
- Fukushima – NRC staff provided the following Fukushima Follow-Up Actions for New Reactors. "Given that final action on the Design Certification applications under review will go to the Commission in advance of completion of many of the Fukushima lessons learned recommendations, new reactors applicants are strongly encouraged to review proposed designs in order to identify and implement changes to address the recommendations. This is consistent with Commission policy to encourage enhanced safety and increased safety margins for new reactor designs. Early dialog on these issues is also consistent with the Commission's desire to have safety issues addressed at the design stage rather than through operational programs. Finally, addressing design issues early will promote standardization. The AP1000 and ESBWR design certifications have been able to proceed, in part, because the Task Force concluded that those designs provide features and attributes that address many of their recommendations. Consistent with the message provided in the 45-day Commission paper (SECY-11-0137), we are beginning to engage new reactor stakeholders to allow sufficient opportunity for design certification applicants and design certification renewal applicants to address the recommended design-related safety enhancements prior to completion of the staff's review." MHI proposed the third week of January 2012 to have a meeting with NRC to propose the US-APWR plan for addressing Fukushima actions.
- Fuel Design – NRC staff recommended that MHI follow closely the 50.46 Emergency Core Cooling System (ECCS) rulemaking activities with respect to peak cladding temperature and hydrogen generation.

- Since the Safety Evaluation Report for Chapter 4 is not complete, NRC may issue questions regarding the new proposed rule and associated guidance documents requesting MHI confirmation that fuel design meets these new criteria.
- Hydrology – Luminant discussed their perception that NRC's hydrology analysis expectations are above that which is required for the Comanche Peak site, which Luminant stated is straightforward geology and hydrology. A public meeting is planned for December 20, 2012.
- "Freeze Point" for the Design Certification Document (DCD) – MHI informed NRC staff that although the Interim Staff Guidance (ISG)-11 freeze point was set and passed, some DCD changes will be made voluntarily (errata and consistency) that will help reduce departures for the R-COLA and S-COLA. NRC staff discouraged freezing the licensing basis too soon. The NRC staff requires design finality before issuing the final SER and therefore, a balance must be struck. MHI stated procedures were in place to provide this. NRC staff noted a revision to ISG-11 is under development.
- Administrative Topics - The DCWG members proposed that the meetings be held on a periodic basis, approximately bimonthly, and that the next meeting should be in February 2012. NRC staff noted that the meetings would likely need to be more frequent as the NRC review progressed and that the Office Director may be interested in attending these DCWG meetings about semiannually.

MHI and NRC staff agreed on the following follow-up actions:

- MHI – Update specific items not requiring NRC review on December 12, 2011 NRC seismic call, describe plan of the plan by December 21, 2012, and submit plan by March 20, 2012.
- MHI – Identify RAIs that need clarification/NRC staff to provide reconciliation
- MHI – Provide integrated timeline for the next DCWG meeting.
- MHI – Evaluate and address NRC comment on level of detail requested for the GSI-191 closure plan and provide the closure plan by December 21, 2011.
- MHI – Attend EPR Fukushima meeting and provide feedback. Coordinate meeting date with NRC, considering Mr. Holahan's availability.
- MHI – Identify proposed dates for the next meeting with Luminant and Dominion and finalize schedule with Jeff Ciocco.
- NRC – Decide within 3 weeks whether staff will ask any RAIs resulting from the ACRS briefing.
- NRC – Determine for the next DCWG meeting if the COL applicants are meeting the financial qualifications of the Standard Review Plan.

- NRC – Determine any issues slowing the completion of the Topical Report reviews for the next DCWG meeting.
- A list of attendees is provided as Enclosure 1

Please direct any inquiries to me at 301-415-6391, or via e-mail to Jeff.Ciocco@nrc.gov.

/RA/

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Enclosure:
As stated

- NRC – Determine for the next DCWG meeting if the COL applicants are meeting the financial qualifications of the Standard Review Plan.
- NRC – Determine any issues slowing the completion of the Topical Report reviews for the next DCWG meeting.
- A list of attendees is provided as Enclosure 1

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List of Attendees

Design Center Working Group Meeting with NRC staff, Mitsubishi Heavy Industries, Ltd. (MHI), Luminant, and Dominion to discuss program status on December 6, 2011

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Mark Giles	Dominion
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Joseph Tapia	Mitsubishi Nuclear Energy Systems
Don Woodlan	Luminant
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Jeff Ciocco	Nuclear Regulatory Commission
Steve Monarque	Nuclear Regulatory Commission
Francis Akstulewicz	Nuclear Regulatory Commission
Chandu Patel	Nuclear Regulatory Commission
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(Revised 11/16/2011)

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