

August 14, 2013

APPLICANT: MITSUBISHI HEAVY INDUSTRIES, LTD.

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

SUBJECT: SUMMARY OF THE JULY 17, 2013, PUBLIC MEETING WITH MITSUBISHI HEAVY INDUSTRIES, LTD., TO DISCUSS UNITED STATES - ADVANCED PRESSURIZED WATER REACTOR SEISMIC AND STRUCTURAL ANALYSIS ISSUES

On July 17, 2013, a public meeting was held between the U.S. Nuclear Regulatory Commission (NRC) and Mitsubishi Heavy Industries, Ltd. (MHI) at the NRC Headquarters in Rockville, Maryland. The meeting notice was issued on July 3, 2013, and was documented in the Agencywide Documents Access and Management System (ADAMS) under accession number ML13183A247. The notice included the meeting agenda. No members of the public attended the meeting. During the meeting, MHI made presentations to the NRC concerning United States - Advanced Pressurized Water Reactor (US-APWR) seismic issues on two topics:

- US-APWR Tier 2\* DCD Markups
- Status of Containment Internal Structure (CIS) Design

The MHI's public presentation is available in ADAMS under accession number ML13170A038.

The staff made several observations and had feedback from the meeting. The staff noted that it does not conduct reviews at meetings and does not make regulatory decisions at meetings, as these are done on submitted materials.

- US-APWR Tier 2\* DCD Markups
  - The staff indicated that an important use of the Tier 2\* designation in the seismic and structural analysis is to maintain regulatory control and preserve the finality of design during construction.
  - The staff noted that, in general, a value with an associated tolerance is preferable to identifying a minimum or maximum value.
  - The staff also noted that significant assumptions and parameters used in seismic analysis and structural design are typically designated as Tier 2\*.
  - The staff noted that Tier 2\* information should include critical sections descriptions, results and design description tables, and detailing figures.
  - The staff noted that seismic analysis models are important and should be considered for Tier 2\* designation. MHI clarified that the presentation was focused on information in Section 3.8 and that it would apply the same criteria to Section 3.7 at a later time.

- The staff recommended that MHI should submit its revision to the DCD with T2\* marking for the staff review once it has considered the feedback provided at the meeting.
- Status of CIS Design
  - MHI indicated they are considering 12 critical sections involving the CIS.
  - MHI indicated that its proposed refinements for CIS accident thermal demand may impact MUAP-11019, “Design Criteria for SC Walls (For In-Plane and Out-of-Plane Behavior).”

The NRC staff also noted the importance of MHI providing DCD submittals in a timely manner as these are necessary to complete the staff’s Phase 2 safety evaluation with open items.

No decisions related to the acceptability of the US-APWR Design Certification application were made in the meeting by the NRC staff. Discussions or feedback provided during the meeting or in this meeting summary should not be viewed as acceptance or rejection of the application or parts thereof.

Please direct any inquiries to me at 301-415-6256, or via e-mail to [Dennis.Galvin@nrc.gov](mailto:Dennis.Galvin@nrc.gov).

*/RA/*

Dennis Galvin, Project Manager  
Licensing Branch 2  
Division of New Reactor Licensing  
Office of New Reactors

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*/RA/*

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**ADAMS Accession Nos.:**

**ML13210A333 -Pkg**

**ML13200A315**

**via email\***

**NRC-001**

<b>OFFICE</b>	DNRL/LB2: PM	DNRL/LB2: LA*	DNRL/LB2: PM	DNRL/LB2: PM (signed)
<b>NAME</b>	DGalvin	CMurphy (MBrown for)	PKallan (Acting)	DGalvin
<b>DATE</b>	08/13/2013	07/30/2013	08/14/2013	08/14/2013

**OFFICIAL RECORD COPY**

List of Attendees

Public Meeting with Mitsubishi Heavy Industries, Ltd to Discuss US-APWR Seismic and  
Structural Analysis Issues Held on July 17, 2013

<u>NAME</u>	<u>AGENCY/AFFILIATION</u>
Hiroyuki Fuyama	MHI
Kentaro Mori*	MHI
Joseph Tapia	MNES
Mike Tschiltz	MNES
Ryan Sprengel	MNES
William McConaghy	MNES
Masanori Onozuka	MNES
Erin Wisler	MNES
Takanori Ogata	MNES
Kazuya Sasahara	MNES
Jim Raleigh	MNES
Bruce Knobloch	MNES/Marathon Consulting Group
Don Woodlan	Luminant
Robert Bird	Luminant
Sam Hobbs	Luminant / Enercon
Curt Angstadt *	Luminant / Enercon
Nathan Kyle	URS
Gary Stark	URS
Matt Van Liew	URS
Mike McKenna *	URS
Derek Winkler *	URS
Amit Varma *	URS
Mohammed Shams	Nuclear Regulatory Commission
Brett Tegeler	Nuclear Regulatory Commission
Vaughn Thomas	Nuclear Regulatory Commission
Pravin Patel	Nuclear Regulatory Commission
John Ma	Nuclear Regulatory Commission
Milton Valentin	Nuclear Regulatory Commission
Robert Roche	Nuclear Regulatory Commission
Alissa Neuhausen	Nuclear Regulatory Commission

Enclosure

<b><u>NAME</u></b>	<b><u>AGENCY/AFFILIATION</u></b>
Jeff Ciocco	Nuclear Regulatory Commission
Dennis Galvin	Nuclear Regulatory Commission
Joe Braverman *	Brookhaven National Laboratory
Xing Wei *	Brookhaven National Laboratory

\* Participated by phone

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(Revised 07/25/2013)

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