

May 23, 2013

APPLICANT: MITSUBISHI HEAVY INDUSTRIES, LTD.

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

SUBJECT: SUMMARY OF THE MAY 15, 2013, PUBLIC AND CLOSED MEETING
WITH MITSUBISHI HEAVY INDUSTRIES, LTD. TO DISCUSS ITS
APPROACH TO CRITICAL SECTIONS OF STRUCTURES FOR THE
UNITED STATES - ADVANCED PRESSURIZED WATER REACTOR

On May 15, 2013, a public and closed meeting was held between the U.S. Nuclear Regulatory Commission (NRC) and Mitsubishi Heavy Industries, Ltd. (MHI) at the NRC offices in Rockville, Maryland. The meeting notice was issued on May 1, 2013, and was documented in the Agencywide Documents Access and Management System (ADAMS) under accession number ML13120A179. The meeting notice was revised on May 10, 2013 to indicate that a portion of the meeting would be closed to discuss proprietary information. The revised meeting notice is in ADAMS under accession number ML13130A271. The notice included the meeting agenda.

During the meeting, MHI presented to the NRC staff, its approach for defining and selecting critical sections of structures for the United States - Advanced Pressurized Water Reactor. MHI also discussed critical section selections, design status, and design certification (DC) contents. MHI's public presentation is available in ADAMS under accession number ML13137A274.

The staff had the following observations and feedback from the meeting:

- MHI plans to submit information regarding critical sections, including a design certification document (DCD) Tier 2, Chapter 3 appendix, by the end of June 2013. MHI plans on including this DCD change in DCD Revision 4, to be submitted by the end of August 2013.
- The staff noted that the MHI selection criteria for critical sections, was reasonable.
- The staff recommended that MHI clearly define and appropriately use design drawing terms such as "typical" and "representative" when referring to critical sections.
- The staff recommended that MHI consider including and adequately detail critical sections for representative concrete connections and composite sections, and unique structures such as, the primary shield wall, the reactor vessel supports and the pre-stressed concrete containment vessel (PCCV) fuel transfer tube penetration. Other unique areas may also need to be included.

- The staff recommended that a consistent approach and comparable level-of-detail should be provided for all critical sections. The staff noted that the MHI presentation of containment internal structures (CIS) critical sections did not contain as much information as what was presented for the reactor building and PCCV. The staff indicated that MHI should provide sufficient details to describe the composite steel-concrete design of the CIS modules.
- The staff noted that the MHI presentation focused on methodology and some drawings of critical sections, but no information on DCD text descriptions was provided. The staff noted that it is preferable to consolidate critical section information in one location for clarity and consistency of Tier 2* markings. Possible options include a DCD appendix or in a technical report incorporated into the DCD.
- Consistent with the regulatory requirement to provide an essentially complete design in a DC application, the staff requested MHI to provide its proposed Tier 2* designation for the critical sections information in the upcoming revision of the DCD, Revision 4. Such designation is necessary to provide appropriate regulatory control over potential modifications of this information after the certification.

Please direct any inquiries to me at 301-415-6256, or via e-mail to Dennis.Galvin@nrc.gov.

/RA/

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

Docket No.: 52-021

Enclosure:
Meeting Agenda

cc w/ encl: See next page

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/RA/

Dennis Galvin, Project Manager
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Division of New Reactor Licensing
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Meeting Agenda

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ADAMS Accession No.: ML13140A379

NRC-001

OFFICE	DNRL/LB2: PM	DNRL/LB2: LA	DNRL/LB2: PM	DNRL/LB2: PM (signed)
NAME	DGalvin	CMurphy	JCiocco	DGalvin
DATE	05/22/2013	05/22/2013	05/23/2013	05/23/2013

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List of Attendees

Public and Closed Meeting with MHI to Discuss its Approach to Critical Sections of Structures
for the US-APWR held on May 15, 2013

<u>NAME</u>	<u>AGENCY/AFFILIATION</u>
Tomoyuki Kitani	Mitsubishi Heavy Industries, Ltd.
Mike Tschiltz	Mitsubishi Nuclear Energy System
William McConaghy	Mitsubishi Nuclear Energy System
Masanori Onozuka	Mitsubishi Nuclear Energy System
Erin Wisler	Mitsubishi Nuclear Energy System
Takanori Ogata	Mitsubishi Nuclear Energy System
Kazuya Sasahara	Mitsubishi Nuclear Energy System
Jim Raleigh *	Mitsubishi Nuclear Energy System
Sean Ton *	Mitsubishi Nuclear Energy System
Bruce Knobloch	MNES/Marathon Consulting Group
Don Woodlan *	Luminant Generation Company LLC.
Sam Hobbs *	Luminant Generation Company LLC./ Enercon
Curt Angstadt	Luminant Generation Company LLC./ Enercon
Gary Stark	URS
Mike McKenna	URS
Matt Brethauer	URS
Nathan Kyle	URS
Alan Levin	Areva
Mohammed Shams	Nuclear Regulatory Commission
Bhagwat Jain	Nuclear Regulatory Commission
Dennis Galvin	Nuclear Regulatory Commission
Vaughn Thomas	Nuclear Regulatory Commission
Pravin Patel	Nuclear Regulatory Commission
Jeff Ciocco	Nuclear Regulatory Commission
John Ma	Nuclear Regulatory Commission
Brett Tegeler	Nuclear Regulatory Commission
Milton Valentin	Nuclear Regulatory Commission
Robert Roche	Nuclear Regulatory Commission
Samuel Lee	Nuclear Regulatory Commission

* Participated via telephone

Enclosure

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cc:

(Revised 02/06/2013)

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