

August 21, 2006

APPLICANT: MITSUBISHI HEAVY INDUSTRIES (MHI)

PROJECT: US-APWR PRESENTATION

SUBJECT: SUMMARY OF JULY 13, 2006, PUBLIC MEETING IN WHICH MHI PROVIDED INFORMATION ON THE US-APWR DESIGN

On July 13, 2006, the U.S. Nuclear Regulatory Commission (NRC) hosted a Category 1 public meeting in which representatives of Mitsubishi Heavy Industries (MHI) presented information about the US-APWR standard design. This meeting marked the first official interaction between the NRC staff and MHI regarding the US-APWR standard design. MHI personnel proposed additional meetings to discuss the US-APWR design with the NRC starting in September 2006 and they plan to submit a design certification application in March 2008. A list of meeting attendees is included as Attachment 1. Attachment 2 contains handouts provided by MHI at the meeting (ADAMS Accession Number ML062130070). A summary of the meeting is provided below.

MHI provided an overview of the company and its current activities in the nuclear arena in Japan and other countries, including the U.S. MHI personnel stated that MHI is currently constructing its twenty-fourth nuclear plant in Japan and is in the process of construction licensing review of two APWR nuclear plants that are planned to be built at the Tsuruga site in Japan.

MHI personnel stated that the US-APWR conceptual design is essentially the same as the APWR but that the US-APWR has a larger electrical generating capacity (1700 MWe for the US-APWR versus approximately 1538 MWe for the APWR). This larger capacity is a result of using larger, higher efficiency steam generators and turbine. MHI personnel further added that there are four independent trains of the high head safety injection system each having the capacity to fulfill fifty percent of the emergency core cooling requirements. The need for low head safety injection pumps is eliminated due to the uniquely designed advanced accumulators. MHI personnel stated that the design of the accumulators results in an automatic switch of the accumulator injection flow rate due to the use of a flow damper or vortex damper. MHI has half-scale test data regarding the performance of the advanced accumulator.

MHI personnel also stated that the control room design and instrumentation and controls portions of the US-APWR are essentially complete. At the conclusion of the presentation, MHI personnel proposed a schedule of meetings and topics as part of the pre-application review of the US-APWR.

The NRC staff provided feedback throughout the meeting including commenting about the challenge of having sufficient resources to sustain a review of the US-APWR given the large number of combined license applications and design certifications that the industry has already or expects to submit to the NRC over the next several years.

With respect to the technical information discussed at the meeting, the staff offered that any unique design features such as the advanced accumulators and the Mitsubishi Developed Alloy (MDA) cladding would need to be looked at very closely to ensure that all applicable U.S. regulations are met. The staff also offered that discussions of these unique design features may be useful during the pre-application review. The staff also stated that with respect to the proposed topics to be discussed during the pre-application review, it would be more beneficial to the staff if the methodologies and approaches utilized to license the US-APWR were discussed earlier in the pre-application review rather than at the end as proposed in the handouts.

Questions regarding this meeting can be directed to Larry J. Burkhart at 301-415-1311 or [ljb3@nrc.gov](mailto:ljb3@nrc.gov).

**/RA/**

Larry J. Burkhart, Project Manager  
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Attachments: As stated

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Project No. 751

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Questions regarding this meeting can be directed to Larry J. Burkhart at 301-415-1311 or [ljb3@nrc.gov](mailto:ljb3@nrc.gov).

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Project No. 751

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Attendees

Public Meeting to Discuss  
Mitsubishi Heavy Industries' (MHI's)  
US-APWR

July 13, 2006

<u>Name</u>	<u>Affiliation</u>
Kiyoshi Yamauchi	MHI
Toshisada Kato	MHI
Makoto Takashima	MHI
Makoto Toyama	MHI
Kenji Umeda	MHI
Yoshinobu Shibata	MHI
Masayuki Kambara	MHI
Takashi Naito	MHI
Akira Nagano	MHI
Takashi Kanagawa	MHI
Robert Fleishman	MHI
C. Keith Paulson	MHI
Hiroshi Yamazaki	Toshiba
Nobuyuki Ueda	IHI
Mark Beaumont	Washington Group
Jerry Phillabaum	Enercon Services
Alan Levin	AREVA
Norm Prillaman	AREVA
Jenny Weil	McGraw Hill
Andrea Jennetta	TriVis Inc
Charles Brinkman	Westinghouse
Shinichi Hayafune	Energy USA

<u>Name</u>	<u>Affiliation</u>
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Tansel Selekler	DOE
David Matthews	NRC
Stephanie Coffin	NRC
Larry Burkhart	NRC
Steven Bloom	NRC
Ralph Landry	NRC
Ed Throm	NRC
David Bessette	NRC
Malcolm Patterson	NRC
Lynn Mrowca	NRC
J. Bongarra	NRC
Tom Bergman	NRC
Brian Wagner	NRC
Kevin Robb	NRC
Jason Jennings	NRC
Steven Laur	NRC
Chris Speer	NRC
Simon Sheng	NRC
Kirk Foggie	NRC
George Dick	NRC
Matthew Mitchell	NRC
Jeff Jacobson	NRC
Jeff Ciocco	NRC
Eric Oesterle	NRC
Bruce Murico	NRC
Royce Beacom	NRC
Kiyoto Tanabe	NRC
John Cai	NRC



<u>Name</u>	<u>Affiliation</u>
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Saiwah Ng	NRC
Scott Burnell	NRC
Jared Wermiel	NRC
Richard McIntyre	NRC
Hulbert Li	NRC
Nilesh Chokshi	NRC
Sud Basu	NRC
Pat Patnaik	NRC
Ramin Assa	NRC
Mauri Lemoncelli	NRC

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**ORIGINATOR:** L. Burkhart

**SECRETARY:** C. Nagel

**DATE:** August 22, 2006

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