

October 20, 2008

Mr. Yoshiki Ogata, General Manager
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16-5, Konan 2-Chome, Minato-Ku
Tokyo, 108-8215 JAPAN

SUBJECT: MITSUBISHI NUCLEAR ENERGY SYSTEMS, INC. - REQUEST FOR
ADDITIONAL INFORMATION (RAI) ON US-APWR TOPICAL REPORT
MUAP-07010-P, "NON-LOCA METHODOLOGY"

Dear Mr. Ogata:

On September 11, 2008, Mitsubishi Heavy Industries, LTD (MHI) participated in a conference call with the U.S. Nuclear Regulatory Commission (NRC) staff regarding Topical Report MUAP-07010-P, "Non-LOCA Methodology." The NRC staff reviewing this topical report had determined that additional information was required in order to continue their review. Following this conference call, requests for additional information (RAIs) were submitted electronically to MHI in draft form. A follow-up conference call was held on September 25, 2008, to help clarify the draft RAIs and as a result, we are providing you with the final RAIs as an enclosure to this letter. Please submit your RAI responses to the NRC Document Control Desk within 30 days from receipt of this letter. If you have any questions or comments concerning this matter, you may contact me at 301-415-7871, or via email at Michael.Takacs@nrc.gov.

Sincerely,
/RA/

Mike Takacs, Project Manager
US-APWR Projects Branch
Division of New Reactor Licensing
Office of New Reactors

Docket No. 52-021

Enclosure:
As stated

cc: See next page

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Requests for Additional Information (RAIs)
US-APWR Topical Report: Non-LOCA Methodology, MUAP-07010-P

RAI #	Reviewers*	Full Text
SECTION 2.1: MARVEL-M Code		
2.1-21	ASB, JSS	As shown in the figure on page 2-3 of MUAP-07010-P, MHI did not begin development of MARVEL-M starting with the approved version of MARVEL, but rather an earlier version. Detail the differences between MARVEL-M and the approved version of MARVEL.
2.1-22	ASB, JSS	In accounting for the differences between MARVEL-M and the NRC approved version of MARVEL, are there any limitations beyond those already described in MUAP-07010 which are applicable to the use of MARVEL-M for the US-APWR design?
2.1-23	ASB, JSS	In the NRC evaluation of Westinghouse topical reports WCAP-7909-P and WCAP-8843-P, MARVEL was approved for use to analyze the following four events: steamline rupture, feedwater line rupture, startup of an inactive reactor coolant loop, and excessive heat removal due to a feedwater system malfunction. However, MHI is utilizing MARVEL-M to analyze many events in DCD Chapter 15 beyond these four. Explain why MHI believes this is acceptable.
SECTION 2.2: TWINKLE-M Code		
2.2-2	ASB, JSS	Elaborate further on the development history of TWINKLE-M. Are there any differences between the TWINKLE version used to develop TWINKLE-M and the NRC approved version described in WCAP-7979-P-A? Include, if possible, a figure describing the development of TWINKLE-M analogous to the figure describing the development of MARVEL-M found on page 2-3 of MUAP-07010-P.
* Reviewers: Andrew Bielen (ASB), Jeffrey Schmidt (JSS)		

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