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MFN 08-014

Docket No. 52-010

January 22, 2008

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555-0001

Subject: Response to Portion of NRC Request for Additional Information Letter No. 96 Related to ESBWR Design Certification Application - Emergency Core Cooling Systems - RAI Number 6.3-80

Enclosure 1 contains the GE Hitachi Nuclear Energy (GEH) response to the subject NRC RAI transmitted via the Reference 1 letter.

If you have any questions or require additional information, please contact me.

Sincerely,

James C. Kinsey

James C. Kinsey
Vice President, ESBWR Licensing

D068
NRO

Reference:

1. MFN 07-231, Letter from U.S. Nuclear Regulatory Commission to Robert E. Brown, *Request for Additional Information Letter No. 96 Related to ESBWR Design Certification Application*, April 12, 2007

Enclosure:

1. MFN 08-014 - Response to Portion of NRC Request for Additional Information Letter No. 96 Related to ESBWR Design Certification Application - Emergency Core Cooling Systems - RAI Number 6.3-80

cc:	AE Cubbage	USNRC (with enclosures)
	GB Stramback	GEH/San Jose (with enclosures)
	RE Brown	GEH/Wilmington (with enclosures)
	eDRF	0000-0077-3422

Enclosure 1

MFN 08-014

Response to Portion of NRC Request for Additional Information Letter No. 96 Related to ESBWR Design Certification Application

Emergency Core Cooling Systems

RAI Number 6.3-80

NRC RAI 6.3-80:

In DCD Tier 2, Revision 3, Chapter 6.3, the decay heat curve presented in Figure 6.3-39 changed from that presented in Revision 2 of the DCD. GE indicated that the reason for this is that "GE updated the ANS decay heat standard." Please address the following:

A. Explain why the ECCS performance analyses presented in Figures 6.3-7a to 6.3-38b and summarized in Table 6.3-5 and Figure 6.3-6 are unchanged.

B. The staff reviewed your decay heat model in detail during an audit of TRACG as applied to ESBWR LOCA in December 2006. Provide a detailed explanation of the differences between the method used to generate the decay heat curve used for the ECCS performance analyses in Revision 3 of the DCD Tier 2 and the method which the staff audited in December 2006.

GEH Response:

A. The decay heat curve as shown in DCD Tier 2, Figure 6.3-39 in both Revision 2 and Revision 3 were based on the ANSI/ANS 5.1-1994 standard. As stated in the response to RAI 6.3-62, Item F (MFN 07-439 dated August 17, 2007), the previous reference in DCD Tier 2, Revision 2 to the 1979 ANS standard was a typographical error. Thus, the decay heat curves in DCD Tier 2, Revision 2 and Revision 3 have the same basis, and the only change in the presented curves was one of format involving a slight change in the scaling, addition of grid lines, and the inclusion of both the nominal and 2 sigma decay heat curves. Based on this, there was no change in inputs to the Emergency Core Cooling Systems (ECCS) performance analysis that resulted from the decay heat curve used, and thus no changes to ECCS performance results.

B. As stated in Item A above, the decay heat method used for both DCD Tier 2, Revision 2 and Revision 3, was unchanged, and was the same methodology reviewed during the staff audit of TRACG in December 2006. Therefore, there are no differences between the method reviewed in the TRACG audit and the decay heat curve used for ECCS performance analysis in DCD Tier 2, Revision 3.

DCD Impact:

No DCD changes will be made in response to this RAI.