

GE-Hitachi Nuclear Energy Americas LLC

**James C. Kinsey**  
Project Manager, ESBWR Licensing

PO Box 780 M/C J-70  
Wilmington, NC 28402-0780  
USA

T 910 675 5057  
F 910 362 5057  
jim.kinsey@ge.com

MFN 07-342

Docket No. 52-010

June 18, 2007

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. 65 Related to ESBWR Design Certification Application –  
Electrical Power - RAI Number 8.5-14**

Enclosure 1 contains GHNEA's response to the subject NRC RAI 8.5-14 transmitted via the Reference 1 letter.

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

Sincerely,



James C. Kinsey  
Project Manager, ESBWR Licensing

Doc 8

NR0

MFN 07-342

Page 2 of 2

Reference:

1. MFN 06-353, Letter from U.S. Nuclear Regulatory Commission to David Hinds, *Request for Additional Information Letter No. 65 Related to ESBWR Design Certification Application*, September 26, 2006

Enclosure:

1. MFN 07-342, Response to Portion of NRC Request for Additional Information Letter No. 65 Related to ESBWR Design Certification Application – Electrical Power - RAI Numbers 8.5-14

cc: AE Cabbage USNRC (with enclosures)  
RE Brown GHNEA/Wilmington (with enclosures)  
GB Stramback GHNEA/San Jose (with enclosures)  
eDRF 0000-0069-3817

**Enclosure 1**

**MFN 07-342**

**Response to Portion of NRC Request for  
Additional Information Letter No. 65  
Related to ESBWR Design Certification Application**

**RAI Number 8.5-14**

**NRC RAI 8.5-14**

*Provide a discussion on the effect of temperature on the operability of equipment required during an SBO event. Discussion should include all the areas including containment, auxiliary building, control room, battery rooms, etc., containing equipment required during an SBO event.*

**GHNEA Response**

The effect of temperature on the operability of safety-related equipment, during an SBO event, is addressed in Chapter 3.11 Environmental Qualification of Mechanical and Electrical Equipment, DCD/Tier 2, 26A6642AN Revision 03. The accident conditions in Appendix 3.H.3.2 identify that the effects of SBO have been assumed coincident with and included in both LOCA and HELB temperature analyses.

“In general, the most severe conditions result from a postulated reactor coolant line break inside the containment, LOCA (bounding case) plus SBO, see Chapter 6 for detailed information. However, conditions were also considered for ruptures occurring in the steam tunnel and breaks in the RWCU/SDC System outside the containment, HELB plus SBO, see Chapter 6 for detailed information.”

Tables 3H-8, 3H-9, and 3H-10 show the temperatures for Containment Vessel, Reactor Building with battery rooms, and Control Room Zone, respectively for accident conditions with SBO.

**DCD Changes**

There are no changes to the DCD do to this RAI.