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MFN 08-233

Docket No. 52-010

March 13, 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. 124 Related to ESBWR Design Certification Application, Seismic Design, RAI Number 3.8-119

The purpose of this letter is to submit the GE Hitachi Nuclear Energy (GEH) response to the U.S. Nuclear Regulatory Commission (NRC) Request for Additional Information (RAI) sent by NRC letter dated January 14, 2008 (Reference 1). RAI Number 3.8-119 is addressed in Enclosure 1.

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 08-029, Letter from U.S. Nuclear Regulatory Commission to Robert E. Brown, GEH, *Request For Additional Information Letter No. 124 Related To ESBWR Design Certification Application*, dated January 14, 2008

Enclosure:

1. Partial Response to NRC RAI Letter No. 124 Related to ESBWR Design Certification Application – DCD Tier 2 Section 3.8 – Seismic Category I Structures – RAI Number 3.8-119

cc:	AE Cubbage	USNRC (with enclosure)
	GB Stramback	GEH/San Jose (with enclosure)
	RE Brown	GEH/Wilmington (with enclosure)
	DH Hinds	GEH/Wilmington (with enclosure)
	eDRF	0000-0081-5213

ENCLOSURE 1

MFN 08-233

Partial Response to NRC RAI Letter No. 124
Related to ESBWR Design Certification Application

DCD Tier 2 Section 3.8 – Seismic Category I Structures

RAI Number 3.8-119

NRC RAI 3.8-119

Appendix 3B of DCD Revision 4 has deleted significant portions of information for the containment hydrodynamic load definitions which were utilized in the structural evaluations for the containment and containment internal structures. In addition to deleting some important text information, all of the figures in the previous DCD Revision 3, Appendix 3B (Figures 3B-1 through 3B-11), have been removed. The current text in Appendix 3B now refers to Reference 3B-1, GEH Energy report "ESBWR Containment Load Definition," (NEDE-33261P and 33261) for the deleted information. The descriptive information of the hydrodynamic loadings applied to the structural models needs to be included in the DCD, just as seismic loading descriptions are included in the DCD. This description should include some pressure distribution diagrams on the containment and containment internal structures, representative pressure time histories, and sequencing of loading events comparable to the figures deleted from DCD Revision 3.

GEH Response

The information contained in the text and figures in Revision 3 of DCD Tier 2 Appendix 3B is also contained in DCD Tier 2 Reference 3B-1, which is LTR NEDE-33261P/NEDO-33261. In order to maintain consistency between DCD Tier 2 Appendix 3B and the LTR, all containment hydrodynamic load definition information is included in the LTR. The LTR was submitted to the NRC for review via MFN 07-563 dated November 8, 2007.

DCD Tier 2 Reference 3B-1 will be updated to Revision 1 of the LTR, which was submitted to the NRC for review via MFN 07-563.

DCD Impact

DCD Tier 2 Reference 3B-1 will be revised in the next update as noted in the attached markup.

- Combination with pool CH: SRSS

- Local Condensation Oscillation
  - Location: within 2 vent diameters for each of the bottom horizontal vents
  - Loading: triangular pulses as shown in Reference 3B-1
  - Phasing: in-phase of all vents
  - Combination with pool CO: absolute sum

The CO and chugging load magnitudes are proprietary information. The proprietary magnitudes used are given in Reference 3B-1.

3B.3 COL INFORMATION

None.

3B.4 REFERENCES

3B-1 ~~GE Energy~~GE Hitachi Nuclear Energy, "ESBWR Containment Load Definition," NEDE-33261P, Class III (~~proprietary~~Proprietary), Revision 1, ~~(September~~ October 2007~~)~~, and NEDO-33261, Class I (non-proprietary), Revision 1, ~~(September~~ October 2007~~)~~.