

# GE-Hitachi Nuclear Energy Americas LLC

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MFN 07-052  
Supplement 1

Docket No. 52-010

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U.S. Nuclear Regulatory Commission  
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Subject: **Response to Portion of NRC Request for Additional Information  
Letter No. 65 Related to ESBWR Design Certification Application –  
Classification of Structures, Systems and Components – RAI Number  
3.2-63 S01**

Enclosure 1 contains GEH's response to the subject NRC RAI transmitted via e-mail from the NRC on May 24, 2007. The original RAI response was provided in the Reference 1 letter.

If you have any questions or require additional information regarding the information provided here, please contact me.

Sincerely,



James C. Kinsey  
Project Manager, ESBWR Licensing

D068

MRO

Reference:

1. MFN 07-052, Letter from James C. Kinsey to U.S. Nuclear Regulatory Commission, *Response to Portion of NRC Request for Additional Information Letter No. 65 Related to ESBWR Design Certification Application – Classification of Structures, Systems and Components – RAI Numbers 3.2-63 and 3.2-64*, March 22, 2007

Enclosure:

1. MFN 07-052, Supplement 1 – Response to Portion of NRC Request for Additional Information Letter No. 65 Related to ESBWR Design Certification Application – Classification of Structures, Systems and Components – RAI Number 3.2-63 S01

cc: AE Cubbage USNRC  
DH Hinds GEH (with enclosures)  
RE Brown GEH (w/o enclosures)  
eDRF 0000-0070-1095/1

**Enclosure 1**

**MFN 07-052, Supplement 1**

**Response to Portion of NRC Request for**

**Additional Information Letter No. 65**

**Related to ESBWR Design Certification Application**

**Classification of Structures, Systems and Components**

**RAI Number 3.2-63 S01**

**The Original Response to RAI 3.2-63 that was previously submitted under MFN 07-052 is included to provide historical continuity during review.**

**NRC RAI 3.2-63**

*Classification of non-safety SSCs required to support safety-related components - components required following discharge of batteries.*

*Table 3.2-1, Classification Summary, indicates that the Medium Voltage Distribution System, R11, the Low Voltage Distribution System, R12, and the Standby alternating current (ac) Power Supply, R21, are non safety-related and non-seismic. Describe how the batteries will be recharged following their design basis discharge if the non safety-related systems R11, R12 and R21 have been destroyed in a seismic event. All paths and components required to maintain the plant shutdown and provide residual core cooling following the discharge of the batteries should be seismic category I.*

**GE Response**

The equipment needed to recharge the safety-related batteries following their discharge is located in the Electrical Building. The Electrical Building and the components within it that are needed to recharge the safety-related batteries will be designed to withstand seismic effects using methods permitted by the International Building Code (IBC), without formally classifying these components as Seismic Category I. Section 1616.2.3 of the IBC addresses post-earthquake recovery and is therefore directly applicable to the design of RTNSS equipment. See the attached DCD markup for additional details.

GE believes this is the appropriate method for addressing the seismic design of nonsafety-related components that support the long-term operability of safety-related components. For additional information on battery recharging, see the GE response to RAI 9.5-31 that is being transmitted to NRC in GE Letter MFN 07-068.

**DCD Impact**

Markups of the DCD were provided in MFN 07-052.

**NRC RAI 3.2-63 S01**

*In response to NRC RAI 3.2-63 regarding medium voltage distribution system and low voltage distribution system (needed for recharging batteries) being classified as non-safety and non-seismic, GE indicated that these equipments are located in the electrical building and that the electrical building and the components within it that are needed to recharge the safety-related batteries will be designed to withstand seismic effects using methods permitted by the International Building Code (IBC), without formally classifying these components as Seismic Category I. However, the NRC staff notes that the method of seismic analysis referenced in Section 16.2.3 of the IBC is only applicable to building structures and not the electrical equipment. In view of the above, please identify the Standards or Codes that will be used to qualify the electrical equipment (switchgear) that will be used to recharge the safety-related batteries (after 72 hours) in the event of a seismic event to ensure their availability when required.*

**GEH Response**

The codes and standards used to qualify the Electrical Building electrical equipment (switchgear) in the event of a seismic event are defined in International Building Code (IBC) Chapter 16 (Structural Design), Section 1621 (Architectural, Mechanical and Electrical Component Seismic Design Requirements). This IBC section applies Section 9.6 of ASCE 7 with exceptions as noted in the IBC section.

**DCD Impact**

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