GE Hitachi Nuclear Energy

Richard E. Kingston
Vice President, ESBWR Licensing

PO Box 780 M/C A-55
Wilmington, NC 28402-0780
USA

T 910 819 6192
F 910 362 6192
rick.kingstion@ge.com

MFN 08-666

Docket No. 52-010

November 18, 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. 244 Related to ESBWR Design Certification Application – Electrical Power - RAI Number 8.3-59**

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 (RAIs) sent by NRC letter No. 244, dated August 27, 2008 (Reference 1).

The GEH response to RAI 8.3-59 is provided in Enclosure 1.

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

Sincerely,

Richard E. Kingston

Richard E. Kingston
Vice President, ESBWR Licensing

D068
NRO

References:

1. MFN 08-664 - Letter from U.S. Nuclear Regulatory Commission to Robert E. Brown, GEH, *Request For Additional Information Letter No. 244 Related To ESBWR Design Certification Application*, dated August 27, 2008

2. MFN 08-844 - Response to Portion of NRC Request for Additional Information Letter No. 256 Related to ESBWR Design Certification Application – Electrical Power - RAI Number 8.2-14 S01

Enclosure:

1. MFN 08-666 -Response to Portion of NRC Request for Additional Information Letter No. 244 Related to ESBWR Design Certification Application – Electrical Power - RAI Number 8.3-59

cc: AE Cubbage USNRC (with enclosure)
RE Brown GEH/Wilmington (with enclosure)
DH Hinds GEH/Wilmington (with enclosure)
eDRF 0000-0093-3280

Enclosure 1

MFN 08-666

Response to Portion of NRC Request for Additional Information Letter No. 244 Related to ESBWR Design Certification Application

Electrical Power

RAI Number

8.3-59

NRC RAI 8.3-59

Ancillary diesel generator provides post accident power to loads connected to 480V Ancillary Diesel bus and the safety-related UPS loads through regulating transformer and isolation devices by manually closing the feeder breakers. The staff requests that GEH provide (1) protective relaying schemes on the 480V Ancillary Diesel bus to protect (isolate) the safety-related UPS system from faults on nonsafety-related 480V Ancillary Diesel bus; and (2) alarm and indication of the ancillary diesel generator.

GEH Response

The two items in the RAI are addressed as follows:

(1) The configuration for the Ancillary Diesel Generator(s) powering the safety-related UPS loads through the regulating transformers, which bypasses the UPS units has been revised. The regulating transformers are being deleted (see response to RAI 8.2-14 S01, MFN 08-844, dated 11/17/2008) and the Ancillary Diesel Generator(s) will supply power directly to the UPS units by connection through circuit breakers on the Isolation Power Centers. This configuration allows for protection of the safety-related UPS and battery charger from voltage transients on the Ancillary Diesel bus that is addressed in the response to RAI 8.2-14 S01. Additionally, DCD Tier 1, Section 2.13.1, Table 2.13.1-2, ITAAC # 5 addresses voltage and frequency protection of the Isolation Power Center loads.

(2) The alarms and indications for the Ancillary Diesel Generator system is already addressed by DCD Tier 1 Section 2.13.4, Table 2.13.4-2, ITAAC # 6.

DCD Impact

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