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MFN 08-891

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

Subject: **Submittal of Portion of Response to NRC Request for Additional Information (RAI) Letter 241 - Related to ESBWR Design Certification Application - Chapter 14.3 - RAI Number 14.3-409**

The purpose of this letter is to submit the response to Nuclear Regulatory Commission (NRC) Request for Additional Information (RAI) number 14.3-409.

This response to RAI 14.3-409 is provided based on the request in NRC Letter 241 (Reference 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

Reference:

1. MFN 08-650 – Letter from Nuclear Regulatory Commission to Robert E. Brown (GEH) "*Request for Additional Information Letter No. 241 Related to ESBWR Design Certification Application*", dated August 15, 2008

Enclosure:

1. MFN 08-891 – Response to Portion of NRC Request for Additional Information Letter No. 241 Related to ESBWR Design Certification Application - DCD Tier 1 - RAI Numbers 14.3-409

cc: AE Cubbage USNRC (with enclosure)
RE Brown GEH/Wilmington (with enclosure)
DH Hinds GEH/Wilmington (with enclosure)
RM Wachowiak GEH/Wilmington (with enclosure)
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Enclosure 1

MFN 08-891

Response to Portion of NRC Request for Additional Information Letter No. 241 Related to ESBWR Design Certification Application DCD Tier 1

RAI Number 14.3-409

NRC RAI 14.3-409

Figure 2.13.1-1 is incomplete

In DCD, Tier 1, Figure 2.13.1-1 Sh. 2 is not complete. Correct figure as stated below:

a) The figure is missing ancillary diesel bus,

b) 480 V buses do not include all loads [e.g., UPS rectifiers, regulating transformers, etc.],

c) PIP bus A feeds to Isolation Power Center Bus A alternate feed is incorrect,

d) PIP bus B feeds Isolation Power Center Bus D alternate feed is incorrect

GEH Response

GEH has reviewed Revision 5 of Figure 2.13.1-1, "Onsite AC Power System Functional Arrangement," and verified that the items listed in the RAI question were previously corrected in Revision 5. As discussed with the Staff on October 7, 2008, the regulating transformers were the only items requested in the RAI that were not properly shown in Revision 5, and those regulating transformers have now been eliminated from the ESBWR design. Therefore, no updates to DCD Tier 1, Figure 2.13.1-1 Sh. 2 will be made in response to this RAI.

The following details how each item questioned in the RAI was addressed in Revision 5:

a) The figure shows both Ancillary Diesel Bus A and Ancillary Diesel Bus B.

b) Each 480 V bus (Isolation Power Centers shown as Bus A31, Bus B31, Bus C31, and Bus D31) shows loads including two UPS rectifiers, two normal battery chargers, and one standby battery charger. The only Isolation Power Center load previously not shown on Figure 2.13.1-1 was the regulating transformer, as it served no safety-related function and therefore it was not thought it needed to be shown in Tier 1. However, as described in the GEH Response to RAI 8.2-14 S01 (MFN 08-844, dated 11/17/2008), the regulating transformers are now being removed from the design of the safety-related UPS. Therefore, they will not be shown as Isolation Power Center loads.

c) and d) Revision 5 of DCD Tier 1, Figure 2.13.1-1 Sh 2 correctly showed both the normal and alternate feeds to each Isolation Power Center. PIP Bus A shows normal feeds to IPC Bus A and IPC Bus C and alternate feeds to IPC Bus B and IPC Bus D. PIP Bus B shows normal feeds to IPC Bus B and IPC Bus D and alternate feeds to IPC Bus A and IPC Bus C.

DCD Impact

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