



GE Energy

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 07-072

Docket No. 52-010

March 19, 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. 83 – Generic Issues – RAI Numbers 20.0-1 through 20.0-4**

Enclosure 1 contains GE's response to the subject NRC RAIs transmitted via the Reference 1 letter.

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

Sincerely,

A handwritten signature in cursive script that reads "James C. Kinsey for".

James C. Kinsey
Project Manager, ESBWR Licensing

Reference:

1. MFN 06-516, Letter from U.S. Nuclear Regulatory Commission to David Hinds, *Request for Additional Information Letter No. 83 Related to the ESBWR Design Certification Application*, December 7, 2006

Enclosures:

1. MFN 07-072– Response to Portion of NRC Request for Additional Information Letter No. 83 – Generic Issues – RAI Numbers 20.0-1 through 20.0-4

cc: AE Cubbage USNRC (with enclosures)
GB Stramback GE/San Jose (with enclosures)
BE Brown GE/Wilmington (without enclosures)
eDRF 0064-3518

Enclosure 1

MFN 07-072

**Response to Portion of NRC Request for
Additional Information Letter No. 83
Related to ESBWR Design Certification Application**

Generic Issues

RAI Numbers 20.0-1 through 20.0-4

NRC RAI 20.0-1:

DCD, Tier 2, Revision 1, Table 1C-1 states that GL 89-13, Supplement 1, is not applicable because the ESBWR has no safety-related service water. However, this GL supplement states: "The generic letter is not designed to focus on fire protection systems, which are not safety-related, but to incidentally include them if they use untreated water that could be subject to the service water system problems described in the generic letter." The staff believes that COL Applicant/Holder" should be indicated in Table 1C-1 rather than the current wording, "not applicable..." Since the fire water source will be determined by the COL applicant, explain why the "Evaluation Result" for this item in Table 1C-1 does not indicate "COL Applicant/Holder" or provide a justification for current wording.

GE Response:

GE agrees. The Evaluation Result for this item has been changed to read:

"ESBWR has no safety-related service water. COL Applicant/Holder to address actions in Section II.D of Enclosure 1 for selected fire protection system makeup water source."

DCD Impact:

DCD Tier 2, Appendix 1C, Table 1C-1, has been updated in DCD Tier 2, Revision 3, to include the above statement in the Evaluation Result column for GL 89-13, Supplement 1.

NRC RAI 20.0-2:

DCD, Tier 2, Revision 1, Table 1C-1 states that GL 92-008 is not applicable because the ESBWR provides strict physical separation between the redundant safety-related divisions without the need for Thermo-Lag 330. This suggests that the ESBWR design, including plant specific electrical designs, does not require any local raceway fire barriers to ensure post-fire safe shutdown. Please confirm.

GE Response:

GE confirms that this statement is correct. The ESBWR design meets Reg. Guide 1.75 requirements for separation criteria. Therefore, the ESBWR design does not require the use of Thermo-lag or any fire-retardant wraps.

DCD Impact:

DCD Tier 2, Appendix 1C, Table 1C-1, has been updated to refer to RG 1.75 in the entry for GL 92-08.

NRC RAI 20.0-3:

GL 86-10, Supplement 1, and GL 2006-03 are not addressed in Table 1C-1, yet these GLs address electrical raceway fire barrier systems similar to those addressed by GL 92-008, which is included in Table 1C-1. The staff believes that GL 86-10, Supplement 1, and GL 2006-03 should also be addressed in Table 1C-1. Please include these GLs in the table or provide justification for not including them.

GE Response:

GL 86-10, Supplement 1, and GL 2006-03 has been added to Table 1C-1 with a reference to Subsection 9.5.1 and Appendices 9A and 9B. GL 2006-03 was not included originally because it did not exist at the time the DCD was originally prepared.

DCD Impact:

DCD Tier 2, Appendix 1C, Table 1C-1, has been updated to include GL 86-10, Supplement 1, and GL 2006-03.

NRC RAI 20.0-4:

Provide a consolidated response to New Generic Issue 156.6.1, "Pipe Break Effects on Systems and Components." DCD, Tier 2, Revision 1, Table 1.11-1 only states that this issue is address in Sections 3.5, 3.6, 3.8, and 3.9.

GE Response:

GE agrees. The Technical Resolution column for Issue 156.6.1 has been revised to read as follows:

(4) The ESBWR design considers the potential effects of pipe breaks on systems and components. See Sections 3.5, 3.6, 3.8, and 3.9 for details. Section 3.5 addresses the protection of ESBWR components against the effects of missiles. Section 3.6 addresses the protection of ESBWR components against dynamic effects such as pipe whip and jet impingement that is associated with postulated piping ruptures. Section 3.8 addresses the seismic design requirements for structures that contain safety-related components. Section 3.9 addresses the analysis methods used to evaluate Seismic Category I components and supports.

DCD Impact:

DCD Tier 2, Section 1.11, Revision 3 has been updated for Issue 156.6.1.