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MFN 07-289

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Subject: Enclosure 1 MFN 07-289 Response to Portion of NRC Request for Additional Information Letter No. 73 Related to ESBWR Design Certification Application ESBWR Probabilistic Risk Assessment RAI Number 15.0-24.

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

If you have any questions about the information provided here, please contact me.

Sincerely,

Kathy Sedney for

James C. Kinsey
Project Manager, ESBWR Licensing

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Reference:

1. MFN 06-385, Letter from U.S. Nuclear Regulatory Commission to David Hinds,*Request for Additional Information Letter No. 73 Related to ESBWR Design Certification Application*, October 8, 2006

Enclosures:

1. Enclosure 1 MFN 07-289 Response to Portion of NRC Request for Additional Information Letter No. 73 Related to ESBWR Design Certification Application ESBWR Probabilistic Risk Assessment RAI Number 15.0-24.

cc:	AE Cubbage	USNRC (with enclosures)
	George Stramback	GE/San Jose (with enclosures)
	RE Brown	GE/Wilmington (with enclosures)

EDRF Section 0067-9823

Enclosure 1
MFN 07-289
Response to Portion of NRC Request for

Additional Information

Related to ESBWR Design Certification Application

Probabilistic Risk Assessment

RAI Number 15.0-24

NRC RAI 15.0-24

Question Summary: Confirm that responses to RAIs 19.1-21 and 22 will address questions related to PRA modeling of the I&C system,including CCFs, which will clarify the analysis in Section 15A.3.9.

Full Text: The analysis performed to estimate the frequency of event "Inadvertent Opening of a Depressurization Valve" relies heavily on PRA modeling of the I&C systems. This includes assumptions about hardware and software CCFs. The staff is waiting for the applicant's response to Chapter 19.1 (PRA) RAIs (#19.1-21 and #19.1-22) to continue the review of DCD Tier 2, Revision1, Section 15A.3.9. A brief discussion in Subsection DCD Tier 2, Revision1, 15A.3.9.2.2.7, on the frequency contribution of CCFs, does not provide the information the staff needs to understand how I&C hardware and software CCFs were modeled. Please confirm that the responses to RAIs 19.1-21 and 19.1-22 will address questions related to PRA modeling of the I&C system, including CCFs, which also will clarify the analysis in DCD Tier 2, Revision1, Section 15A.3.9. If not, please provide additional information in DCD Tier 2, Appendix 15A to address this concern.

GE Response

GE response to RAIs 19.1-21 (MFN 07-213) and 22 (MFN 06-373) have been provided previously.

Section 15A.3.9 in DCD Tier 2, has been updated by Revision 3. Details about the CCF analysis have been added to help address the stated concern. A fault tree diagram (Figure 15A-2) and a system schematic (Figure 15A-1) have also been added to provide additional information.

Additionally, the common cause modeling associated with Revision 2 of the ESBWR PRA (NEDO 33201)has been extensively updated from Revision 1. Details can be found in NEDO-33201 Revision 2, Chapter 5 (Section 5.3 specifically addresses common cause).

DCD/NEDO-033201 Impact

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

NEDO-33201 Rev 2 Section 5 has been revised as described above.