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MFN 07-269 Supplement 1

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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. 85 - Containment Systems - RAI Number 6.2-151 S01**

Enclosure 1 contains the GE Hitachi Nuclear Energy (GEH) response to the subject NRC RAI originally transmitted via the Reference 1 letter and supplemented by an NRC request for clarification in Reference 2.

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

Sincerely,

Kathy Sedney for

James C. Kinsey
Vice President, ESBWR Licensing

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NRO

References:

1. MFN 07-054, Letter from U.S. Nuclear Regulatory Commission to David Hinds, *Request for Additional Information Letter No. 85 Related to ESBWR Design Certification Application*, January 19, 2007
2. E-Mail from Shawn Williams, U.S. Nuclear Regulatory Commission, to George Wadkins, GE Hitachi Nuclear Energy, dated May 22, 2007 (ADAMS Accession Number ML071430342)

Enclosure:

1. MFN 07-269 Supplement 1 - Response to Portion of NRC Request for Additional Information Letter No. 85 - Related to ESBWR Design Certification Application - Containment Systems - RAI Number 6.2-151 S01

cc:

AE Cubbage	USNRC (with enclosures)
GB Stramback	GEH/San Jose (with enclosures)
RE Brown	GEH/Wilmington (with enclosures)
eDRF	0000-0076-5769

Enclosure 1

MFN 07-269 Supplement 1

Response to Portion of NRC Request for

Additional Information Letter No. 85

Related to ESBWR Design Certification Application

Containment Systems

RAI Number 6.2-151 S01

NRC RAI 6.2-151 S01:

The information provided in this response is necessary to support the basis for a reasonable assurance finding. Thus, please update DCD Tier 2 Section 6.2.1.3 to include information provided in response to RAI 6.2-151.

GEH Response:

DCD Tier 2, Revision 4, Section 6.2.1.3, "Mass and Energy Release Analyses for Postulated Loss-of-Coolant Accidents," 2nd bullet item, "Source of Energy," will be revised to include the information as provided in response to RAI 6.2-73 as follows:

- Calculations of the energy available for release from the above sources are done in general accordance with the requirements of 10 CFR 50, Appendix K, paragraph I.A. To maximize the energy release to the containment during the blowdown and reflood phases of a LOCA, the following conservative assumptions are used in the analyses.

  1) All non-wall heat structures inside the drywell and wetwell are conservatively ignored in the analyses.

  2) The drywell basemat and the top drywell top slab (horizontal heat slabs) are expected to see some steam condensation during the early part of the LOCA. These horizontal heat slabs are conservatively ignored in the analyses.

  3) The suppression pool basemat and the GDCS pool basemat are covered with water. The heat sink effect of these horizontal heat slabs is conservatively ignored in the analyses.

DCD Impact:

DCD Tier 2, Revision 4, Section 6.2.1.3, will be revised as described in the above response to this RAI.