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MFN 07-302, Supplement 1

Docket No. 52-010

December 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. 90 Related to ESBWR Design Certification Application
– Safety Analyses – RAI Number 15.4-25S01**

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 (RAI) sent by NRC letter dated October 11, 2006. GEH response to RAI Number 15.4-25S01 is addressed in Enclosure 1.

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

Sincerely,

James C. Kinsey
Vice President, ESBWR Licensing

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NR0

Reference:

1. MFN 07-084, Letter from U.S. Nuclear Regulatory Commission to David H. Hinds, GEH, *Request For Additional Information Letter No. 90 Related To ESBWR Design Certification Application*, dated January 29, 2007.

Enclosure:

1. Response to Portion of NRC Request for Additional Information Letter No. 90 Related to ESBWR Design Certification Application - Safety Analyses – RAI Number 15.4-25S01

cc: AE Cubbage USNRC (with enclosure)
GB Stramback GEH/San Jose (with enclosure)
RE Brown GEH/Wilmington (with enclosure)
eDRF 0000-0076-9508

Enclosure 1

MFN 07-302, Supplement 1

**Response to Portion of NRC Request for
Additional Information Letter No. 90
Related to ESBWR Design Certification Application**

Safety Analyses

RAI Numbers 15.4-25 S01

NRC RAI 15.4-25 S01:

Revise response to account for changes in Scenarios 1 and 2 dose assumptions and results. Include changes in LTR NEDE-33279P currently scheduled for submittal to NRC on 08/31/07 and English/SI units in DCD Tables and subsections.

GEH Response:

Changes in scenarios 1 and 2 dose assumptions have not impacted the modeling of the PCCS leakage in Revision 1 of LTR NEDE-33279P. GEH recognizes that liquid leakage from the PCC condensers will contain volatile fission products. Modeling of the liquid release in the manner outlined in RG 1.183 Appendix A, Position 5.5, would entail the development of a flash fraction that is multiplied by fission product inventory in the liquid release resulting in less than 100% of the volatile fission products being released to the environment. For conservatism, 100% of the volatile fission products were assumed to be released to the environment by modeling of the PCCS leakage as an airborne release in which all of the volatile fission products are transported to the environment with no reductions credited.

DCD Impact:

Both English and SI units will be included in the appropriate DCD Chapter 15 tables and subsection markups for Tier 2, Revision 5 as provided in GEH letter MFN 07-523 submitted on November 30, 2007.