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MFN 08-775

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

Subject: Response to Portion of NRC RAI Letter No. 220 Related to ESBWR
Design Certification Application - DCD Tier 2 Section 3.9 – Mechanical
Systems and Components; RAI Number 3.9-246

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) letter number 220 sent by NRC letter dated July 29, 2008 (Reference 1). RAI Number 3.9-246 is addressed in Enclosure 1.

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

Sincerely,

Richard E. Kingston
Vice President, ESBWR Licensing

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NRD

Reference:

1. MFN 08-609 Letter from U.S. Nuclear Regulatory Commission to Robert E. Brown, GEH, *Request For Additional Information Letter No. 220 Related to NEDE-33312P, "ESBWR Steam Dryer Acoustic Load Definition," NEDE-33313P, "Steam Dryer Structural Evaluation," NEDC-33408P, "ESBWR Steam Dryer-Plant Based Load Evaluation Methodology," NEDE-33259P, "Reactor Internals Flow Induced Vibration Program," and ESBWR Design Control Document, Revision 5, dated July 29, 2008*

Enclosure:

1. Response to Portion of NRC RAI Letter No. 220 Related to ESBWR Design Certification Application - DCD Tier 2 Section 3.9 – Mechanical Systems and Components; RAI Number 3.9-246

cc: AE Cabbage
RE Brown
DH Hinds
eDRF

USNRC (with enclosures)
GEH/Wilmington (with enclosures)
GEH/Wilmington (with enclosures)
0000-0091-6352 (RAI 3.9-246)

Enclosure 1

MFN 08-775

**Response to Portion of NRC Request for
Additional Information Letter No. 220
Related to ESBWR Design Certification Application
Mechanical Systems and Components
RAI Numbers 3.9-246**

NRC RAI 3.9-246

Summary: Provide references in the DCD for the GEH Topical Reports that provide the bases for load definition and structural evaluation of the ESBWR steam dryer.

The GEH Topical Reports which provide the design bases for the ESBWR steam dryer, including acoustic and flow-induced load definition and structural evaluation, are neither discussed nor referenced in DCD Section 3.9.5. The DCD should be revised to include reference, in the appropriate sections of DCD section 3.9.5, to the following GE-H Topical Reports:

- NEDC-33408P, "ESBWR Steam Dryer - Plant Based Load Evaluation Methodology," Feb. 2008
- NEDE-33312P, "ESBWR Steam Dryer Acoustic Load Definition," Nov. 2007
- NEDE-33313P, "ESBWR Structural Evaluation," Nov. 2007

Additionally, these Topical Reports should be listed in DCD Section 3.9.10, References.

GEH Response

Appendix 3L of the DCD references the GEH Topical Reports that provide the bases for load definition and structural evaluation of the ESBWR steam dryer. Specifically, Section 3L.4 discusses the steam dryer evaluation program, including the steam dryer design and performance, materials and fabrication, load combinations, fluid loads, structural evaluations and instrumentation and startup testing. Section 3L.6 (References) lists documents NEDC-33408P (Reference 3L-8), NEDE-33312P (Reference 3L-5) and NEDE-33313P (Reference 3L-6).

DCD Impact

No change will be made to the DCD.