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MFN 07-621

Docket No. 52-010

November 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. 110 – Related to ESBWR Design Certification
Application – RAI Numbers 4.2-14 Supp 1 and 4.9-12**

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 the Reference 1 NRC letter. GEH response to RAI Numbers 4.2-14 Supp 1 and 4.9-12 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

*DO68
NRC*

Reference:

1. MFN 07-510, Letter from U.S. Nuclear Regulatory Commission to David Hinds, *Request for Additional Information Letter No. 110 Related to the ESBWR Design Certification Application*, September 19, 2007.

Enclosure:

1. MFN 07-621 – Response to Portion of NRC Request for Additional Information Letter No. 110 – Related to ESBWR Design Certification Application – RAI Numbers 4.2-14 Supp 1 and 4.9-12

cc: AE Cubbage USNRC (with enclosure)
GB Stramback GEH/San Jose (with enclosure)
RE Brown GEH/Wilmington (with enclosure)
eDRF 0000-0077-6734

Enclosure 1

MFN 07-621

Response to Portion of NRC Request for

Additional Information Letter No. 110

Related to ESBWR Design Certification Application

RAI Numbers 4.2-14 S01 and 4.9-12

NRC RAI 4.2-14 S01

Control rod design Tier 2 requirements*

As discussed during the July 2007 GEH Control Blade and Fuel Assembly Design Audit, please revise the control rod design Tier 2 requirements, Appendix 4C, to make consistent with Tier 1 requirements.*

GEH Response

The control rod design criteria were deleted from the Tier 1 DCD for revision 4. The corresponding Tier 2* design criteria were previously updated in response to NRC RAIs 4.2-10 and 4.2-14, and now appear only in the Tier 2 DCD, thereby removing any inconsistency.

DCD Impact

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

NRC RAI 4.9-12

Audit of the ESBWR Marathon Control Rod Blade differed from that which was presented in NEDE-33243-P and NEDE-33244-P.

During the July 2007 GEH Control Blade and Fuel Assembly Design Audit, the staff identified that the mechanical design of the ESBWR Marathon Control Rod Blade differed from that which was presented in NEDE-33243-P and NEDE-33244-P. GEH should issue a Revision 1 on these reports documenting the revised design of the ESBWR Marathon and also capturing any RAI responses from the staff's review of the Marathon-5S control blade design for use in operating reactors that are applicable (See ML071760570, RAIs 19, 20a, and 23).

GEH Response

Licensing Topical Reports NEDE-33243P Rev. 1 and NEDE-33244P Rev. 1 have been submitted. LTR NEDE-33244P Rev. 1 contains a list and description of differences between the previously approved BWR/2-6 Marathon control rod (NEDE-31758P-A) and the ESBWR design. Responses to applicable Marathon-5S RAIs have been integrated into both Licensing Topical Reports.

DCD Impact

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

Licensing Topical Reports NEDE-33243P Rev. 1 and NEDE-33244P Rev. 1 have been submitted.