

December 4, 2008

Mr. Robert E. Brown
Senior Vice President, Regulatory Affairs
GE Hitachi Nuclear Energy
3901 Castle Hayne Road MC A-50
Wilmington, NC 28401

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 282 RELATED TO
ESBWR DESIGN CERTIFICATION APPLICATION

Dear Mr. Brown:

By letter dated August 24, 2005, GE Hitachi Nuclear Energy submitted an application for final design approval and standard design certification of the economic simplified boiling water reactor (ESBWR) standard plant design pursuant to 10 CFR Part 52. The U.S. Nuclear Regulatory Commission (NRC) staff is performing a detailed review of this application to enable the staff to reach a conclusion on the safety of the proposed design.

The NRC staff has identified that additional information is needed to continue portions of the review. The staff's request for additional information (RAI) is contained in the enclosure to this letter.

If you have any questions or comments concerning this matter, you may contact me at 301-415-3179 or ilka.berrios@nrc.gov, or you may contact Amy Cubbage at 301-415-2875 or amy.cubbage@nrc.gov.

Sincerely,

/RA/

Ilka T. Berrios, Project Manager
ESBWR/ABWR Projects Branch 1
Division of New Reactor Licensing
Office of New Reactors

Docket No. 52-010

Enclosure:
Request for Additional Information

cc: See next page

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ESBWR/ABWR Projects Branch 1
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Request for Additional Information
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Distribution: See next page

ADAMS ACCESSION NO. ML08

NRO-002

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SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 282 RELATED TO
ESBWR DESIGN CERTIFICATION APPLICATION DATED
DECEMBER 04, 2008

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**Requests for Additional Information (RAIs)
ESBWR Design Control Document (DCD), Revision 5**

RAI Number	Reviewer	Question Summary	Full Text
RAI 11.0-1 S01	Dehmel J	The intended purpose of proposed Footnote 9 to Table 11.5-5 of DCD Tier 2, is inconsistent with DCD Section 9.2.6 regarding the design features of the condensate storage tank and retention basin in the event of a CST rupture or overflow.	The staff has reviewed GEH's response to RAI 11.0-1, item (d) (MFN 08-889). The intended purpose of Footnote 9 in Table 11.5-5 of DCD Tier 2 is acceptable, but its defined objective is wrongly stated. The purpose of the RAI was to ensure that sampling of contaminated condensate water in the retention basin would be accomplished following a tank rupture or overflow. DCD Tier 2, Section 9.2.6 clearly acknowledges the possibility of such an event and states that sampling would be performed to assess is condensate water retained in the retention basin could be released to the storm drain or pumped back to the LWMS depending on radioactivity levels. However, the proposed Footnote 9 refers to sampling following a "rain event." Given the design features of the condensate storage and transfer system and purpose of the retention basin, reference to a "rain event" is inconsistent with the system's design bases and underlying radiological concerns. The applicant is requested to remove "rain event" from Footnote 9 as the rationale for sampling and instead indicate that manual sampling will be performed following the observation of water in the retention basin. Also, Footnote 9 should be consistent in its terminology, "CST Containment Dike," while DCD Section 9.2.6 refers to a "retention area" and retention basin." Accordingly, the applicant is requested to revise proposed Footnote 9 to Table 11.5-5 for consistency with the system description and design basis of DCD Section 9.2.6.

Enclosure

RAI Number	Reviewer	Question Summary	Full Text
RAI 11.3-13 S01	Dvir A	Steam supply temperature is not included in the table design parameters in DCD Tier 2, Rev. 5, Table 11.3-1.	GEH's Response to RAI 11.3-13, item (a) (MFN 08-889), discuss Turbine Auxiliary Steam System (TASS) design temperature and operating temperature. However, a review of DCD Tier 2, Rev. 5, Table 11.3-1, Offgas System Design Parameters, shows that steam supply temperature is not given in the design parameters in that table. Therefore, GEH is requested to include the TASS temperature design value in Table 11.3-1.
RAI 11.3-14	Dvir A	The description of OGS system components under process facilities is incomplete in DCD Tier 2, Rev. 5, Section 11.3.2.3.	The description of OGS components in DCD Tier 2, Rev. 5, Section 11.3.2.3 under process facilities is incomplete as it does not include all equipment described in DCD Section 11.3.2.2. Specifically, the text of DCD Section 11.3.2.3, beyond the first paragraph, repeats some of the information already presented in DCD Section 11.3.2.1 and does not include a discussion of process equipment and their locations in process facilities. For example, DCD Section 11.3.2.3 does not address the OGS preheaters, recombiners, dryers, and monitoring instrumentation and controls. Accordingly, GEH is requested to revise the discussions in DCD Section 11.3.2.3 to include all equipment described in DCD Section 11.3.2.2.

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(Revised 11/12/2008)

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