

September 5, 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. 250 RELATED TO  
ESBWR DESIGN CERTIFICATION APPLICATION

Dear Mr. Brown:

By letter dated August 24, 2005, GE Hitachi Nuclear Energy (GEH) 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 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) 415-2890 [Andrea.Johnson@nrc.gov](mailto:Andrea.Johnson@nrc.gov) or Thomas Kevern at (301) 415-0224 or [Thomas.Kevern@nrc.gov](mailto:Thomas.Kevern@nrc.gov).

Sincerely,

***/RA B. Baval for:/***

Andrea Johnson, 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 w/encl: See next page

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ESBWR DESIGN CERTIFICATION APPLICATION DATED SEPTEMBER 5, 2008

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**Supplemental Requests for Additional Information (RAI)  
ESBWR Design Control Document (DCD)**

<b>RAI Number</b>	<b>Reviewer</b>	<b>Question Summary</b>	<b>Full Text</b>
RAI 2.3-4 S04	Harvey B Chakrabarti S	Identify the normal and extreme liquid and frozen precipitation events used in the design of the roofs of safety related structures	Specify and identify the normal and extreme liquid and frozen precipitation events used in the design of the roofs of safety related structures in accordance with the Proposed Interim Staff Guidance (ISG) DC/COL-ISG-07, "Interim Staff Guidance on Assessment of Normal and Extreme Winter Precipitation Loads on the Roofs of Seismic Category I Structures." These events should be identified as site parameters in DCD Tier 1 Table 5.1-1 and Tier 2 Table 2.0-1. Provide a basis for the chosen site parameter values, including ensuring the postulated site parameter values are representative of a reasonable number of sites that have been or may be considered for a COL application. Also describe the design and analysis method used to accommodate the resulting loads.
RAI 15.4-1 S02	JLee	Provide administrative controls to mitigate radiological consequences of a fuel handling accident	<p>Section 5.3 of Appendix B to Regulatory Guide 1.183 states that if the containment (e.g., ESBWR reactor building or fuel building) is open during fuel handling operations, the technical specifications allowing such operations should include administrative controls to close the open penetrations within 30 minutes. Such administrative controls will generally require that a dedicated individual be present, with necessary equipment available, to restore containment closure should a fuel handling accident occur.</p> <p>In response to the above guidelines, the following administrative controls should be included in the appropriate section of the DCD:</p> <ul style="list-style-type: none"> <li>• Fuel Handling Accident Consequence Mitigation</li> </ul> <p>“The station procedure shall contain requirements to take appropriate actions necessary to isolate the areas, to reduce or redirect the released radioactivity, and to stop degradation of conditions and mitigate their consequences following a fuel handling accident. Any cable or hoses crossing the open doors should have quick-disconnects to ensure that the doors are capable of being closed in a timely manner and a designated individual is available outside each open door to close the door in the event of an accident.”</p>

DC GE - ESBWR Mailing List

(Revised 08/25/2008)

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