

January 27, 2010

Mr. Jerald G. Head  
Senior Vice President, Regulatory Affairs  
GE Hitachi Nuclear Energy  
3901 Castle Hayne Road MC A-18  
Wilmington, NC 28401

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 408 RELATED TO  
ESBWR DESIGN CERTIFICATION APPLICATION

Dear Mr. Head:

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 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 301-415-6256 or [Dennis.Galvin@nrc.gov](mailto:Dennis.Galvin@nrc.gov) or you may contact Amy Cubbage at 301-415-2875 or [Amy.Cubbage@nrc.gov](mailto:Amy.Cubbage@nrc.gov).

Sincerely,

*/RA/*

Dennis Galvin, 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  
Division of New Reactor Licensing  
Office of New Reactors

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Distribution: See next page

ACCESSION NO.: ML100271077

NRO-002

<b>OFFICE</b>	PM:NGE1	PM:NGE1
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<b>DATE</b>	01/27/2010	01/27/2010

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SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 408 RELATED TO  
ESBWR DESIGN CERTIFICATION APPLICATION DATED JANUARY 27, 2010

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**Request for Additional Information (RAI)  
ESBWR Design Control Document (DCD) Revision 6**

RAI Number	Reviewer	Question Summary	Full Text
9.1-151	Kelly G.	Address gas accumulation operating experience for FAPCS.	<p>On November 3, 2009, the staff issued draft ISG-019 "Gas Accumulation Issues in Safety Related Systems" for public comment. GL 2008-01 provides additional background information.</p> <p>Gas accumulation in safety related nuclear power plant systems has been known to cause water hammer, gas binding in pumps, and inadvertent relief valve actuation that may damage pumps, valves, piping, and supports and may lead to loss of system operability.</p> <p>Address this operating experience in the DCD for the FAPCS system which is categorized as a RTNSS system.</p>

Enclosure

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(Revised 01/26/2010)

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