

May 21, 2008

Mr. Robert E. Brown  
Senior Vice President, Regulatory Affairs  
GE Hitachi Nuclear Energy  
3901 Castle Hayne Road MC A-45  
Wilmington, NC 28401

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 205  
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 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 301-415-3104 or [Michael.Eudy@nrc.gov](mailto:Michael.Eudy@nrc.gov) or you may contact Amy Cubbage at (301) 415-2875 or [Amy.Cubbage@nrc.gov](mailto:Amy.Cubbage@nrc.gov).

Sincerely,  
*/RA/*

Michael A. Eudy, 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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Michael A. Eudy, Project Manager  
ESBWR/ABWR Projects Branch 1  
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Request for Additional Information

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Distribution: See next page

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NRO-002

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|--------|--------------|--------------|
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| DATE   | 05/21/2008   | 05/21/2008   |

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RELATED TO ESBWR DESIGN CERTIFICATION APPLICATION  
DATED MAY 21, 2008

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**Requests for Additional Information (RAIs)  
ESBWR Design Control Document (DCD), Revision 4**

| RAI Number | Reviewer | Question Summary             | Full Text  |
|------------|----------|------------------------------|--|
| 8.2-14     | Pal A    | Load rejection voltage spike | From DCD, Revision.4, Section 8.2.1.2, it appears that the ESBWR design has the capability to sustain a full load rejection from 100 percent power with the turbine generator continuing stable operation while supplying the plant house loads. However, the staff notes that in such instances, the voltage spike from the main generator during islanding could go as high as 130 percent. In this regard provide the following: (a) Describe the provisions provided in the ESBWR design that will ensure that the onsite auxiliary power equipment including safety-related battery chargers and uninterruptible power supplies can withstand such a voltage spike from the generator for the duration of its susceptibility without tripping or causing any damage to the equipment. (b) Describe the circumstances when this design feature will be used in the plant design. |

Enclosure

DC GE - ESBWR Mailing List  
cc:

(Revised 04/28/2008)

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