



**HITACHI**

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Subject      Submittal of Preliminary ESBWR Design Control Document, Revision 6,  
Chapter 3, Design of Structures, Components, Equipment and Systems,  
Sections 3.1 through 3.8

GE Hitachi Nuclear Energy (GEH) submitted a design certification application for the ESBWR to the U.S. Nuclear Regulatory Commission (NRC) in a letter dated August 24, 2005 (reference 1), which included Revision 0 of the Design Control Document (DCD). The NRC accepted this application in a letter dated December 1, 2005 (reference 2). As part of the ongoing NRC review, GEH has responded to NRC requests for additional information (RAIs) and has submitted revisions to the DCD through Revision 5, which was submitted June 1, 2008. GEH is currently preparing Revision 6 of the DCD, which will incorporate RAI responses intended to address remaining NRC open items and establish the basis for the NRC Final Safety Evaluation for the design certification. The NRC issued a review schedule in a letter dated February 18, 2009 (reference 3).

In recent interactions between GEH and the NRC regarding incorporation of RAI responses into the DCD, GEH and the NRC discussed submittal of completed preliminary DCD chapters and associated change lists in advance of Revision 6 to facilitate NRC staff actions in preparing the advanced Final Safety Evaluation Report for review by the Advisory Committee for Reactor Safeguards (ACRS).

In this regard, GEH has determined the chapter contained in Enclosure 1 is complete with the exception that responses to the following RAIs, with potential impact to the chapter, have yet to be submitted to the NRC, or incorporated in the chapter as applicable:

DOB8  
NRW

RAI 3.7-73  
RAI 3.7-75  
RAI 3.7-76  
RAI 3.8-96 S04  
RAI 3.8-125 S01  
RAI 3.8-126  
RAI 3.8-127

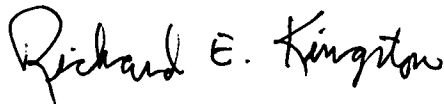
GEH is currently evaluating and answering these RAIs. The response to be provided for each may, or may not, impact the chapter. In addition, RAI responses submitted by GEH, but currently unresolved by the NRC, may lead to additional questions from the NRC. Otherwise, the chapter content to date, as contained in Enclosure 1, has been verified by the ESBWR technical team.

Other than potential impacts as discussed above, the chapter is not expected to undergo significant changes before issuance of Revision 6; however, GEH plans to perform an integrated quality review of the entire DCD prior to final submittal. The integrated quality review may result in changes such as any needed for (1) correction of administrative information, formatting, or conversion issues; (2) ensuring consistency; (3) ensuring internal references remain appropriate; and (4) improving quality of the document. To reflect the status of the enclosed chapter and ensure the NRC technical reviewers will be able to differentiate between the preliminary version and the final version (Revision 6), GEH has marked the chapter as "Preliminary."

Any issues that would change the technical content in the DCD will be discussed with the NRC in advance of submitting Revision 6.

If you have any questions, please contact me.

Sincerely,



Richard E. Kingston  
Vice President, ESBWR Licensing

References:

1. MFN 05-084, General Electric Company Application for Final Design Approval and Design Certification of ESBWR Standard Plant Design, dated August 24, 2005
2. Letter from U.S. Nuclear Regulatory Commission to Steven A. Hucik, *Acceptance of the General Electric Company Application for Final Design*

*Approval and Standard Design Certification for the Economic Simplified Boiling Water Reactor (ESBWR) Design*, dated December 1, 2005

3. MFN 09-144, Letter from U.S. Nuclear Regulatory Commission to Robert E. Brown, *Economic Simplified Water Reactor (ESBWR) Design Certification Schedule Update*, dated February 18, 2009

Enclosure:

1. CD - Enclosure 1 - Preliminary ESBWR Design Control Document, Revision 6, Chapter 3, Design of Structures, Components, Equipment and Systems, Sections 3.1 through 3.8

cc: AE Cubbage      USNRC (with enclosure)  
JG Head            GEH/Wilmington (w/o enclosure)  
DH Hinds           GEH/Wilmington (w/o enclosure)  
eDRF Section      0000- 0099-6853

**CD Enclosure 1**

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**Preliminary ESBWR Design Control Document, Revision 6**

**Chapter 3, Design of Structures, Components, Equipment  
and Systems, Sections 3.1 through 3.8**