

January 15, 2008

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

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 141 RELATED TO  
ESBWR DESIGN CERTIFICATION APPLICATION

Dear Mr. Brown:

By letter dated August 24, 2005, GE-Hitachi Nuclear Energy Americas, LLC (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.

To support the review schedule, you are requested to provide the requested additional information within 45 days of the date of this letter.

If you have any questions or comments concerning this matter, you may contact me at 301-415-6256 or [djg3@nrc.gov](mailto:djg3@nrc.gov) or you may contact Amy Cabbage at 301-415-2875 or [aec@nrc.gov](mailto:aec@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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Sincerely,

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Dennis Galvin, Project Manager  
ESBWR/ABWR Projects Branch 1  
Division of New Reactor Licensing  
Office of New Reactors

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Enclosure: Request for Additional Information

cc: See next page

Distribution: See next page

ACCESSION NO.:

NRO-002

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<b>DATE</b>	01/15/2008	01/15/2008	01/15/2008

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SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 141 RELATED TO  
ESBWR DESIGN CERTIFICATION APPLICATION

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

RAI Number	Reviewer	Question Summary	Full Text
7.1-75	Hardin R	Template aspect of SMP and SQAP.	<p>This RAI refers to GEH-submitted Licensing Topical Reports (LTRs) NEDE-33226P, Rev 2 (ESBWR Software Management Plan (SMP)) and NEDE-33245P, Rev 2 (Software Quality Assurance Plan (SQAP)).</p> <p>Staff understands that GEH intends the submitted SMP and SQAP to be umbrella or template type documents. The submitted LTRs provide high level planning information (i.e., roadmap) and describe the process that GEH will use to develop/approve the various software systems and applications needed for the ESBWR. It is the staff's understanding that these are not "implementation plans."</p> <p>Please confirm staff's understanding of the documents' purpose, and provide additional clarification of the purpose in the LTRs. In addition, the names of these two LTRs correspond to names specified in Branch Technical Position 7-14 (BTP 7-14) - both the current revision and the previous revision. However, the LTRs have a different purpose from that intended by the BTP. The BTP 7-14 documents are part of a set of documents, while the LTR documents actually include these other BTP 7-14 referenced documents as their constituent parts. Please rename these LTRs to more precisely reflect their use as templates or process descriptions, in order to reduce the potential for confusion or misunderstanding.</p> <p>Also, please confirm that the implementation plans, when developed, will follow the same document flow (i.e., SMP and SQAP encompassing all the BTP 7-14 referenced documents for specific implementations.)</p>

RAI Number	Reviewer	Question Summary	Full Text
7.1-76	Hardin R	The use of EOPs and other internal, non-docketed, GEH materials as part of these documents.	<p>This RAI refers to GEH-submitted Licensing Topical Reports (LTRs) NEDE-33226P, Rev 2 (ESBWR Software Management Plan (SMP)) and NEDE-33245P, Rev 2 (Software Quality Assurance Plan (SQAP)).</p> <p>There are Engineering Operating Procedures (EOPs) and other internal, non-docketed GEH materials that are used as a part of these documents. While staff understands that these items are beneficial to GEH in the implementation phase and provide valuable guidance, their use complicates the review process and introduces a level of uncertainty into the effort. As these internal materials are to be revised to remain current with internal GEH procedures, without modification to the SMP or SQAP, the impact of any such change could be unknown and unrecognized. The staff requests that GEH remove these references or otherwise abstract them so as to eliminate the uncertainty introduced by their use. Alternately, they could be submitted for review along with the LTRs. Please provide justification as to why these internal procedures are vital to these documents, a method for abstraction/elimination to reduce the uncertainty, or a schedule for providing these items.</p>
7.1-77	Hardin R	Clarify software development lifecycle process being used for the ESBWR.	<p>This RAI refers to GEH-submitted Licensing Topical Reports (LTRs) NEDE-33226P, Rev 2 (ESBWR Software Management Plan (SMP)) and NEDE-33245P, Rev 2 (Software Quality Assurance Plan (SQAP)).</p> <p>No lifecycle was explicitly defined in the documentation. The phases and general description seem consistent with the waterfall method. The requirement for an iterative process was also mentioned in meetings between staff and GEH. The staff requests that GEH explicitly define a lifecycle in this documentation. Alternately, GEH could clarify that no lifecycle has been chosen and provide an associated justification.</p>

RAI Number	Reviewer	Question Summary	Full Text
7.1-78	Hardin R	Clarify adherence to IEEE 603-1991, with 1995 Letter.	<p>This RAI refer to GEH-submitted Licensing Topical Reports (LTRs) NEDE-33226P, Rev 2 (ESBWR Software Management Plan (SMP)) and NEDE-33245P, Rev 2 (Software Quality Assurance Plan (SQAP)).</p> <p>Current NRC regulations (50.55a(h)) only specifically require adherence to one IEEE standard. This is IEEE 603-1991 and the correction sheet dated January 30, 1995. The submitted documentation refers to IEEE 603-1998 as a supplemental document. While it is reasonable to assume a more recent version of a standard will meet previous version requirements as well, it is not sufficient to simply reference the new standard. Please directly reference IEEE 603-1991, and the correction sheet dated January 30, 1995, and provide justifications for non-compliance (if needed.) Please note that this is not to be taken as a request to remove references to the more recent standard.</p>
7.1-79	Hardin R	Incorporation of SRP BTP 7-14 Revision 5 into the SMP and SQAP	<p>This RAI refer to GEH submitted Licensing Topical Reports (LTRs) NEDE-33226P, Rev 2 (ESBWR Software Management Plan (SMP)) and NEDE-33245P, Rev 2 (Software Quality Assurance Plan (SQAP)).</p> <p>What are the plans, if any, on incorporation of the most recent Standard Review Plan (SRP), BTP 7-14 Rev 5, into the SMP and SQAP?</p>

DC GE - ESBWR Mailing List

(Revised 1/3/08)

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