

September 7, 2006

Mr. David H. Hinds, Manager, ESBWR  
General Electric Company  
P.O. Box 780, M/C L60  
Wilmington, NC 28402-0780

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 57 RELATED TO  
ESBWR DESIGN CERTIFICATION APPLICATION

Dear Mr. Hinds:

By letter dated August 24, 2005, General Electric Company (GE) 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 enclosures to this letter. Enclosure 1 includes proprietary information which is indicated in brackets and underlines. We have prepared a non-proprietary version of the RAI (Enclosure 2) that does not contain proprietary information.

The RAI question is related to NEDE-33083P, Supplement 2, "TRACG Application for ESBWR Anticipated Transient Without Scram Analysis." The RAI question was sent to you in draft form via electronic email on April 4, 2006, and June 26, 2006, and was discussed with your staff during a telecon on August 30, 2006. You agreed to respond to the RAI on September 15, 2006.

If you have any questions or comments concerning this matter, you may contact me at (301) 415-4115 or [mcb@nrc.gov](mailto:mcb@nrc.gov) or you may contact Amy Cubbage at (301) 415-2875 or [aec@nrc.gov](mailto:aec@nrc.gov).

Sincerely,

/RA/

Martha Barillas, Project Manager  
ESBWR/ABWR Projects Branch  
Division of New Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 52-010

Enclosures: 1. Request for Additional Information (Proprietary)  
2. Request for Additional Information (Non-Proprietary)

cc: See next page (w/o enclosure 1)

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ADAMS ACCESSION NO. ML062480225

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DATE	09/05/2006	09/07/2006

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Distribution for DCD RAI Letter No. 57 dated September 7, 2006

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**Request for Additional Information (RAI)**  
**ESBWR Design Control Document (DCD) Chapter 21**  
**Related to NEDE-33083P, Supplement 2,**  
**“TRACG Application for ESBWR Anticipated Transient Without Scram Analysis”**

RAI Number	Reviewer	Summary	Full Text
21.6-36	Landry R Klein V	Provide additional information on your uncertainty analysis.	<p>Provide additional information regarding the uncertainty analysis described in NEDE-33083P Supplement 2 by addressing the following questions:</p> <p>(a) In Section 8.3, you show figures of how each of the highly ranked phenomena effect the safety parameters on a +/-1 <math>\sigma</math> level. Provide additional information explaining how you determined the response in the safety parameters (peak power, peak vessel pressure, peak clad temperature, etc.).</p> <p>(b) Clarify the statement in Section 7.3 that states: <i>“Section 7.6 of Reference 12 provides a statistical analysis of selected AOO events. Since there is no ATWS transient event to compare to, these events provide the best possible evaluation of TRACG’s accuracy. They provide a general confirmation that the code uncertainty determined by varying PIRT parameters is consistent with the event measurements.”</i> How are the uncertainties from the AOO events used in the ATWS uncertainty evaluation?</p>

RAI Number	Reviewer	Summary	Full Text
21.6-36 Cont'd			<p>(c) In Section 7.2 you state: [[</p> <p style="text-align: right;">]] Clarify this process. GE may consider outlining this process using a table or a diagram and referencing the portions of the topical which explain each step in the process.</p> <p>(d) Describe the methodology for selecting which conservatisms were selected to be included into the application methodology. In regard to the information provided on pages 8-28 to 8-33 in Sections 8.2.1 and 8.2.2, was there a threshold in change in the safety parameters that warranted inclusion of the specific phenomena as a conservatism into the application methodology?</p>