

May 23, 2006

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

SUBJECT: SAFETY EVALUATION REGARDING THE APPLICATION OF
GENERAL ELECTRIC'S LICENSING TOPICAL REPORT "TRACG APPLICATION
FOR ESBWR STABILITY ANALYSIS," NEDE-33083P, SUPPLEMENT 1
(TAC MC3288)

Dear Mr. Hinds:

By letter dated April 18, 2002, General Electric (GE) requested a pre-application review of the economic simplified boiling water reactor (ESBWR) advanced passive reactor design. At GE's request, the pre-application review was focused on the TRACG thermal-hydraulic analysis computer code and its assessment. On December 22, 2004, GE submitted licensing topical report (TR) "TRACG Application for ESBWR Stability Analysis," NEDE-33083P, Supplement 1, for staff review as part of the pre-application review. Subsequently, on August 24, 2005, GE submitted the ESBWR design certification application. The staff has now completed its review of NEDE-33083P, Supplement 1.

The enclosed safety evaluation (SE) is limited to the application of TRACG to ESBWR stability analysis. The staff concludes that TRACG, including the application methodology, is an acceptable evaluation model for ESBWR stability analysis. The staff finds "TRACG Application for ESBWR Stability Analysis," NEDE-33083P, Supplement 1, acceptable for referencing during the ESBWR design certification review to the extent specified and under the limitations delineated in the licensing TR and in the associated NRC SE. The SE, which is enclosed, defines the basis for acceptance of the licensing TR.

The staff requests that GE publish the revised version of the TR listed above within 3 months of receipt of this letter. The accepted version of NEDE-33083P, Supplement 1, shall incorporate this letter and the enclosed SE and all requests for additional information and their responses between the title page and the abstract, and add an "-A" (designating accepted) following the report identification number (i.e., NEDE-33083P-A, Supplement 1).

If NRC's criteria or regulations change, so that its conclusion that the TR is acceptable is invalidated, GE and/or the applicant referencing the TR will be expected to revise and resubmit its respective documentation, or submit justification for the continued applicability of the TR without revision of the respective documentation.

Pursuant to 10 CFR 2.390, we have determined that the enclosed SE may contain proprietary information. We will delay placing this document in the public document room for a period of 10 working days from the date of this letter to provide you with the opportunity to comment on

D. H. Hinds

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the proprietary aspects only. If you believe that any information in the enclosure is proprietary, please identify such information line by line and define the basis pursuant to the criteria of 10 CFR 2.390.

The subject TR and supporting documentation have been reviewed by the Advisory Committee on Reactor Safeguards, which has agreed with the staff recommendation for approval by their letter of April 21, 2006.

If you have any further questions regarding this review, please contact Amy E. Cubbage (301-415-2875).

Sincerely,

/RA W. Beckner for:/

David B. Matthews, Director
Division of New Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 52-010

Enclosure: Safety Evaluation

cc: See next page (w/o enclosure)

D. H. Hinds

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Enclosure: Safety Evaluation

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ESBWR

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