

# GENERAL ELECTRIC

NUCLEAR ENERGY  
PROJECTS DIVISION

GENERAL ELECTRIC COMPANY, 175 CURTNER AVE., SAN JOSE, CALIFORNIA 95125  
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U. S. Nuclear Regulatory Commission  
Division of Operating Reactors  
Washington, D.C. 20555

Attention: P. S. Check, Chief  
Reactor Safety Branch  
Operational Technology

Dear Mr. Check:

SUBJECT: DC Power Source Failure For BWR/3 and 4

A recent concern expressed by members of your staff is the effect of a direct current (DC) power source failure on the currently approved 10CFR50.46 conformance calculations for operating BWR/3's and 4's. The General Electric Company has conducted a study of this concern and has documented the results in Attachment 1 to this letter. An additional concern expressed was the lack of a peak cladding temperature (PCT) versus break area curve in the small break region which could be applied to operating BWR/3's and 4's. This concern is also covered in Attachment 1.

The study was performed with the 1977 approved model and input changes using bounding assumptions to provide a generic result applicable to all operating BWR/3's and 4's. The results of the study show that there is an increase in PCT for small breaks; however, the PCT remains less than 1950°F. For large breaks, the PCT was not affected. Also, the maximum average planar linear heat generation rate (MAPLHGR) is not affected for any plant.

If you have any questions or comments, please contact R. T. Hill of my staff on (408) 925-3255.

Sincerely,  
*R. E. Engel*  
R. E. Engel, Manager  
Operating Licenses I  
Safety and Licensing Operation

Attachment

cc: F. D. Coffman  
R. H. W. Woods

bcc: J. D. Duncan  
R. T. Hill  
ORL Route  
S&LO Staff

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