



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

TERA

8005140054

APRIL 25 1980

Docket Nos. 50-325  
and 50-324

Mr. J. A. Jones  
Executive Vice President  
Carolina Power & Light Company  
336 Fayetteville Street  
Raleigh, North Carolina 27602

Dear Mr. Jones:

SUBJECT: EFFECT OF A DC POWER SUPPLY FAILURE ON ECCS PERFORMANCE

It has generally been recognized that the loss of a direct current (DC) power supply could disable several emergency core cooling system components and thereby could result in a limiting single failure condition for some breaks. The enclosed letter report was submitted to the NRC staff by the General Electric Company to provide a definitive, generic, reference analysis of the effects of DC power supply failures on ECCS conformance calculations. The NRC staff is reviewing the analysis which compares the peak cladding temperatures associated with various postulated DC power supply failure (ECCS equipment availability) cases to the peak cladding temperatures for a HPCI (small break) failure and LPCI injection valve (large break) failure cases. Since the study was based on plant design information which may have been incomplete or out-of-date, some uncertainty exists whether the worse ECCS system availability combinations have been identified for your operating BWRs. Accordingly, in order that we may have an adequate level of assurance that the systems combinations assumed in the generic analysis are conservative for Brunswick Steam Electric Plant Units 1 and 2, we request that you confirm the conclusion of the reference study regarding the minimum ECCS equipment availability with a DC power supply failure. Include in your response a list of the ECCS equipment that would be available for large and small (1) recirculation loop discharge breaks, and (2) recirculation loop suction breaks. The listing of equipment available should take into account not only DC power supply failure, but also loss of equipment due to water spillage.

Please provide a schedule for your response within 30 days of the receipt of this letter.

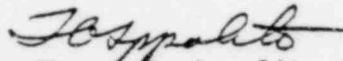
Mr. J. A. Jones

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This request for generic information was approved by GAO under clearance number B-180225(579018); this clearance expires October 31, 1980.

Sincerely,



Thomas A. Ippolito, Chief  
Operating Reactors Branch #3  
Division of Operating Reactors

Enclosure:

General Electric Company letter  
(R. E. Engel) to USNRC (P. S.  
Check), "DC Power Source Failure  
for BWR/3 and 4," dated November 1,  
1978.

cc w/enclosure:  
See next page

Mr. J. A. Jones

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cc:

Richard E. Jones, Esquire  
Carolina Power & Light Company  
336 Fayetteville Street  
Raleigh, North Carolina 27602

George F. Trowbridge, Esquire  
Shaw, Pittman, Potts & Trowbridge  
1800 M Street, N. W.  
Washington, D. C. 20036

John J. Burney, Jr., Esquire  
Burney, Burney, Sperry & Barefoot  
110 North Fifth Avenue  
Wilmington, North Carolina 28401

Resident Inspector  
U. S. Nuclear Regulatory Commission  
P. O. Box 1057  
Southport, North Carolina 28461

Southport - Brunswick County Library  
109 W. Moore Street  
Southport, North Carolina 28461

Mr. Fred Tollison  
Plant Manager  
P. O. Box 458  
Southport, North Carolina 28461