



January 31, 1992
LD-92-011

Docket No. 52-002

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

Subject: Response to NRC Requests for Additional Information

Reference: (A) Letter, Risk Assessment Branch RAIs, T. V. Wambach (NRC) to
E. H. Kennedy (C-E), dated October 30, 1991
(B) Letter LD-92-004, E. H. Kennedy (C-E) to T. V. Wambach (NRC),
dated January 23, 1992

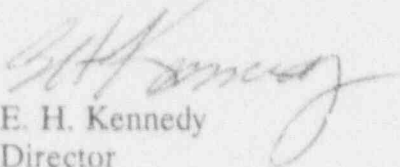
Dear Sirs:

Reference (A) requested additional information for the NRC staff review of the Combustion Engineering Standard Safety Analysis Report - Design Certification (CESSAR-DC). Reference (B) provided responses to a number of those questions. Enclosure I to this letter provides additional responses to questions of Reference (A). Responses to the remaining questions will be provided by separate correspondence.

Should you have any questions on the enclosed material, please contact me or Mr. Stan Ritterbusch of my staff at (203) 285-5206.

Very truly yours,

COMBUSTION ENGINEERING, INC.


E. H. Kennedy
Director
Nuclear Systems Licensing

gdh/lw

Enclosure: As Stated

cc: J. Trotter (EPRI)

T. Wambach (NRC)

ABB Combustion Engineering Nuclear Power

D032
111

9202110334 920131
PDR ADOCK 05200002
A PDR

Combustion Engineering, Inc.

1000 Prospect Hill Road
Post Office Box 500
Windsor, Connecticut 06095-0500

Telephone (203) 678-1911
Fax (203) 285-9512
Telex 99297 COMBEN WSOR

RESPONSE TO NRC REQUESTS FOR ADDITIONAL INFORMATION
RISK ASSESSMENT BRANCH

Question 720.2

Please explain why injection by passive safety injection tanks (SITs) is not needed for mitigating a Medium LOCA.

Response 720.2

C-E ran a best estimate LOCA analysis for System 80+ using the best-estimate small break LOCA computer program, CEFLASH-4AS. This analysis, as reported in TIS-8328, "LOCA Aspects of the Combustion Engineering Advanced Light Water Reactor - System 80+", by S. Rosen, et. al. demonstrated that the core remained fully covered for the duration of the transient for all break sizes analyzed up to and including a 0.55 ft² break. (A copy of this paper is attached.) A MAAP analysis of an 0.5 ft² break LOCA was run in which only one injection pump and no SITs delivered flow to the RCS. This analysis showed that the core did not uncover and, therefore, sustained no damage. These results reflect System 80+ design improvements, including an increased number of high-pressure safety injection pumps (four vs. two) and the use of dedicated direct vessel injection lines.