



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

MAR 16 1984

Mr. E. P. Rahe, Manager  
Nuclear Safety Department  
Nuclear Technology Division  
Westinghouse Electric Corporation  
Box 355  
Pittsburgh, PA 15230

Dear Mr. Rahe:

Subject: Case Study Report - Low Temperature Overpressure Events  
at Turkey Point Unit 4

Following resolution of peer review comments, we have completed the enclosed study of low temperature overpressure events. This study concentrates on two overpressure events that occurred at Turkey Point, Unit 4, but also considers related events at other pressurized water reactors occurring after 1979 when the staff resolved the generic issue entitled, "Reactor Vessel Pressure Protection (Overpressure Protection)."


The report provides: (1) an analysis and evaluation of the Turkey Point events; (2) a review of operating events that have challenged the low temperature overpressure protection (LTOP) systems; (3) evaluation of the LTOP technical specifications; (4) an evaluation of water solid operation during the low temperature regime; and (5) recommendations that, if implemented, could reduce challenges to the overpressure protection system and strengthen its mitigatory capability to minimize the potential severity of overpressure events.

You will note that there is an activity identified for the nuclear industry to further evaluate the necessity for water solid operation and consider developing a recommended operating practice for filling and venting which excludes water solid operation. As a vendor for a PWR design that operates water solid, I encourage you to pursue this activity in the interest of improving reactor safety.

The recommendations contained in this report are under review within the Nuclear Regulatory Commission. The report is being forwarded for your information and use as you deem appropriate.

If you have any questions regarding this report, please contact Wayne D. Lanning of my staff. Mr. Lanning can be reached at (301) 492-4433.

Sincerely,

  
C. J. Heltemes, Jr., Director  
Office for Analysis and Evaluation  
of Operational Data

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PDR ADDCK 05000251  
S PDR

Enclosure:  
As stated

cc: See page 2

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Mr. E. P. Rahe

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cc: w/o enclosure

Mr. Joseph Sheppard, Chairman  
Carolina Power & Light Company

Mr. Eugene P. Wilkinson, President  
Institute of Nuclear Power Operations

Dr. David Rossin, Director  
Nuclear Safety Analysis Center

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MAR 16 1984

Dr. Paul L. McGill, Vice President  
 Commercial Department  
 Combustion Engineering Inc.  
 1000 Prospect Hill Road  
 Windsor, Connecticut 06095

Dear Dr. McGill:

Subject: Case Study Report - Low Temperature Overpressure Events  
 at Turkey Point Unit 4

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Sincerely,

Original signed by:  
 C. J. Heltemes, Jr.

C. J. Heltemes, Jr., Director  
 Office for Analysis and Evaluation  
 of Operational Data

OFFICE	Enclosure	ROAB:CF	ROAB:CF	AEOD:DD	AEOD:DD
SURNAME	As stated	WLanning/cj	KVseyfrit	TAippolito	CJHeltemes
DATE	cc: See page 2	1/21/84	1/31/84	2/13/84	3/16/84



Dr. Paul L. McGill

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MAR 16 1984

cc: w/o enclosure

Mr. Richard Wells, Chairman  
Northeast Utilities Service Company

Mr. Eugene P. Wilkinson, President  
Institute of Nuclear Power Operations

Dr. David Rossin, Director  
Nuclear Safety Analysis Center

