

DDR



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

MAR 16 1984

Mr. Joseph Sheppard, Chairman
Westinghouse Owners' Group
Carolina Power & Light Company
336 Fayetteville Street
Raleigh, NC 27602

Dear Mr. Sheppard:

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 conditions. As one of the leading industry representatives, 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.
C. J. Heltemes, Jr., Director
Office for Analysis and Evaluation
of Operational Data

8404130084 840316
PDR ADOCK 05000251
S PDR

Enclosure:
As stated

cc: See page 2



1978

Mr. Joseph Sheppard

- 2 -

MAR 16 1984

cc: w/o enclosure

Mr. Richard Wells, Chairman
Northeast Utilities Service Company

Dr. David Rossin, Director
Nuclear Safety Analysis Center

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

Dr. Paul L. McGill, President
Combustion Engineering Inc.

Mr. E. P. Rahe, Manager
Westinghouse Electric Corporation

DISTRIBUTION:

~~DES PDR~~
AEOD CF
ROAB CF
ROAB RF
WLanning
KVseyfrit
TAIppolito
CJHeltemes

MAR 16 1984

Mr. Joseph Sheppard, Chairman
Westinghouse Owners' Group
Carolina Power & Light Company
336 Fayetteville Street
Raleigh, NC 27602

Dear Mr. Sheppard:

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 conditions. As one of the leading industry representatives, 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.

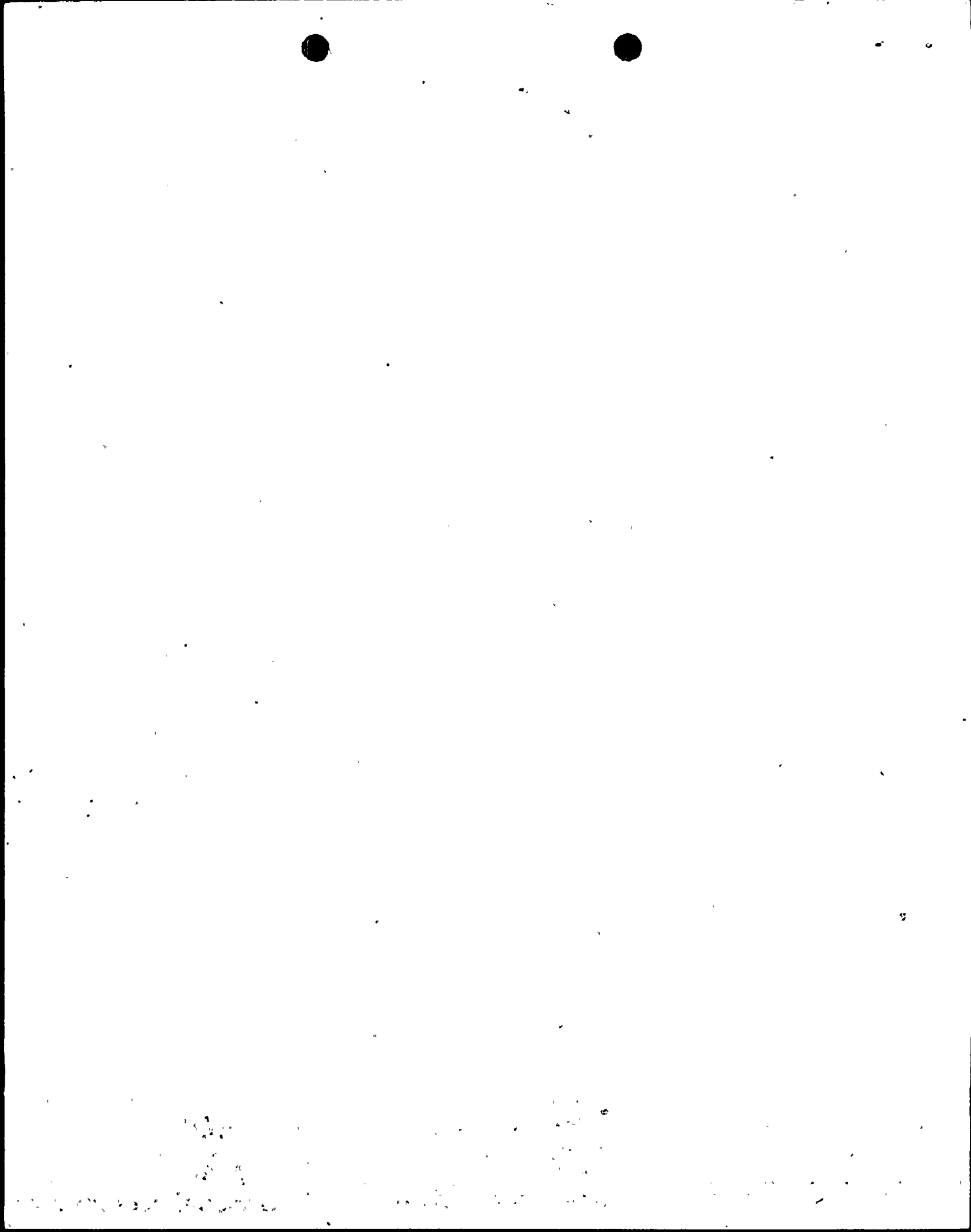
If you have any questions regarding this report, please contact Wayne D. Lanning of my staff. Mr. Lanning can be reached at (301) 492-4433.

Sincerely,

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

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

OFFICE	Enclosure	ROAB	RAOB: C	AEOD: DD	AEOD: D
SURNAME	As stated	WLanning/cj	KVseyfrit	TAIppolito	CJHeltemes
DATE	cc: See page 2	2/13/84	2/13/84	2/13/84	3/16/84



Mr. Joseph Sheppard

- 2 -

MAR 16 1984

cc: w/o enclosure

Mr. Richard Wells, Chairman
Northeast Utilities Service Company

Dr. David Rossin, Director
Nuclear Safety Analysis Center

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

Dr. Paul L. McGill, President
Combustion Engineering Inc.

Mr. E. P. Rahe, Manager
Westinghouse Electric Corporation