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Mr. A. E. Lundvall, Jr. Vice President - Supply Baltimore Gas & Electric Company P. O. Box 1475 Baltimore, Maryland 21203

Dear Mr. Lundvall:

During our meeting of March 3, 1982 with the Combustion Engineering Group and the three CE NSS Owners, who received our August 21, 1981 letter concerning pressurized thermal shock (PTS), it was requested that we provide a formal request for any additional information which would be desired regarding the PTS issue. The enclosure identifies the requested additional information. We request the information be submitted by April 30, 1982.

The reporting and/or recordkeeping requirements of this letter affect fewer than ten respondents; therefore, OMB clearance is not required under P. L. 96-511.

Sincerely,

Original signed by

Robert A. Clark, Chief Operating Reactors Branch #3 Division of Licensing

Enclosure: Request for Additional Information

cc w/enclosure: See next page



Baltimore Gas and Electric Company

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cc: James A. Biddison, Jr. General Counsel Baltimore Gas and Electric Company P. O. Box 1475 Baltimore, MD 21203

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Combustion Engineering, Inc. Attn: Mr. P. W. Kruse, Manager Engineering Services P. O. Box 500 Windsor, CT 06095

Public Document Room Calvert County Library Prince Frederick, MD 20678

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Mr. T. L. Syndor, General Supervisor Operations Quality Assurance Calvert Cliffs Nuclear Power Plant Maryland Routes 2 & 4 Lusby, MD 20657 Ms. Mary Harrison, President Calvert County Board of County Commissioners Prince Fredcrick, MD 20768

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Administrator, Power Plant Siting Program Energy and Coastal Zone Administration Department of Natural Resources Tawes State Office Building Annapolis, MD 21204

Regional Administrator Nuclear Regulatory Commission, Region I Office of Executive Director for Operations 631 Park Avenue King of Prussia, Pennsylvania 19406

# Enclosure

## REQUEST FOR ADDITIONAL INFORMATION

#### CONCERNING

## PRESSURIZED THERMAL SHOCK

## AND

# REGARDING THE "150 DAY" RESPONSE TO NRC LETTER DATED AUGUST 21, 1981

## FOR

# CALVERT CLIFFS 1 DOCKET NO. 50-317

#### concerning Operator Actions

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- 1. In CEN-189, only two cases are considered for a SBLOCA with concurrent loss of teedwater. In one case, PORVs are opened by the operator at 10 minutes to prevent core uncovery. In the other case, feedwater is restored to the steam generator in 30 minutes to prevent core uncovery. For both cases, the report stated that 15-30 minutes would provide ample time to initiate feedwater prior to dryout. Provide the analysis or basis to justify that 15 to 30 minutes is ample time for correct operator action.
- In CEN-189, provide an evaluation of the sensitivity of the transient to the time assumes for operator action (i.e., if the operator opens the PORVs at 15 minutes, or 30 minutes, or restores feedwater alone at 15 minutes, or 20 minutes, or 45 minutes, what are the resulting pressure/temperature transients?).
- 3. In the Calvert Cliffs 1 steam line break analyses, it is assumed that the operator trips reactor coolant pumps in 30 seconds, and reduces high pressure injection and charging flow to control plant pressure. Provide an evaluation of the sensitivity of the transient to the time assumed for operator action.
- 4. In your evaluation, the actions described do not provide the operator with clear direction for dealing with conflicting concerns that need to be evaluated when considering the operation of HPI and the charging flow as it relates to vessel integrity and maintaining core cooling. Provide an evaluation of the need and effectiveness of procedure modifications to clearly identify the concerns in the emergency operating procedures themselves. This should be done in contrast of depending upon upgrading operator training alone.
- 5. You have indicated that you are participating in a Combustion Engineering Owners' Group program which includes the review of plant operating procedures for the proper integration of specific guidance on pressurized thermal shock. The resulting procedural modifications should clearly identify the conflicting concerns. We request that you provide a more specific schedule for upgrading procedures.

Calvert Cliffs 1

# Concerning Probabilistic Risk Assessment (PRA) of Overcooling Transients

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 Provide existing documentation or references of such documentation related to PRAs which would provide insight into the probabilities of overcooling events at your plant.

# Concerning Overcooling Transients at Your Plant

Review the operating history at your plant and identify all overcooling events as well as those events which could have become overcooling events if not mitigated by plant controls in operator actions. Provide a summary of each identified event.