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GEORGE C. CREEL
VICE PRESIDENT
NUCLEAR ENERGY
13011 860-4455

December 20, 1990

U. S. Nuclear Regulatory Commission
Washington, DC 20555

ATTENTION: Document Control Desk

SUBJECT: Calvert Cliffs Nuclear Power Plant
Unit Nos. 1 & 2; Docket Nos. 50-317 & 50-318
Response to Generic Letter 90-06, Resolution of Generic Issue 70,
"Power-Operated Relief Valve and Block Valve Reliability," and Generic
Issue 94, "Additional Low-Temperature Overpressure Protection for
Light-Water Reactors," Pursuant to 10 CFR 50.54(f) (TACs 77337 and
77338)

- REFERENCES:
- (a) Letter from Mr. J. G. Partlow (NRC) to all Pressurized Water Reactor Licensees, dated June 25, 1990, same subject
 - (b) NUREG-1316, "Technical Findings and Regulatory Analysis Related to Generic Issue 70," December 1989
 - (c) NUREG-1326, "Regulatory Analysis for the Resolution of Generic Issue 94, Additional Low-Temperature Overpressure Protection for Light-Water Reactors," December 1989
 - (d) Letter from Mr. J. A. Tiernan (BG&E) to Mr. A. C. Thadani (NRC), dated April 21, 1986, "Reactor Coolant System Vents Supplemental Information"
 - (e) Letter from Mr. D. G. McDonald, Jr. (NRC) to Mr. G. C. Creel (BG&E), dated September 18, 1990, "Issuance of Amendment for Calvert Cliffs Nuclear Power Plant Unit 1, TAC No. 77292"
 - (f) Letter from Mr. G. C. Creel (BG&E) to NRC Document Control Desk, dated October 22, 1990, "Technical Specification Change - Low Temperature Overpressure Protection TAC No. 76130"

Gentlemen:

Generic Letter 90-06, Reference (a), advises pressurized water reactor licensees of NRC staff requests for safety enhancements to power-operated relief (PORV) and PORV block valve reliability. It also requests safety enhancements for low-temperature overpressure protection (LTOP) for light-water reactors. References (b) and (c)

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summarize the work performed to resolve Generic Issues (GI) 70 and 94, respectively. The generic letter notes that the staff's requests are based on the performance of current PORV and block valve designs. Future use of more reliable valves should result in less frequent corrective maintenance and longer inservice testing intervals.

Generic Letter 90-06, the Atomic Energy Act and 10 CFR 50.54(f) require Baltimore Gas and Electric (BG&E) Company to advise the NRC of our current plans to follow NRC staff positions and propose an implementation schedule for the following:

- PORVs and block valves
- the LTOP system

REQUESTED ACTION

- A. A statement of whether BG&E will commit to incorporate improvements 1, 2 and 3 contained in Section 3.1, Enclosure A of the generic letter.
- B. A statement of whether BG&E will submit a license amendment request to modify our technical specifications and commit to use the modified technical specification for the LTOP system in Enclosure B to the generic letter.

DETAILED REQUESTED ACTION AND BG&E RESPONSE

- A. Section 3.1 Enclosure A Improvements
 1. Include PORVs and block valves within the scope of an operational quality assurance (QA) Part 50, Appendix B. The QA program should:
 - a. Add PORVs and block valves to the plant operational Quality (Q) List

Response

BG&E commits to maintain PORVs and block valves in the Q-List as safety-related category pressure boundary items. Reference (b), Section 5.1 concludes that the most cost-effective means to achieve an acceptable level of safety is to implement the improvements for non-safety-grade PORVs and block valves. We note that "associated control systems" are not included in the scope of the chosen alternative for operating plants. Therefore, BG&E understands that associated control systems for PORVs and block valves are not requested to be included in the Q-List.

- b. Implement a maintenance/refurbishment program for PORVs and block valves based on manufacturer's recommendations or guidelines and implemented by trained plant maintenance personnel.

Response

BG&E commits to maintain improvement.

- c. Procure replacement parts and spares, as well as complete components, for existing non-safety-grade PORVs, block valve and associated control systems in accordance with original construction codes and standards.

Response

For reasons not related to this generic letter, we are evaluating procurement programs for items that are not designated as safety-related but which have procurement requirements in addition to those for non-safety-related items. Such a program, if ultimately adopted, would respond to this item. BG&E is not presently prepared to respond to this item. We will keep you informed of the progress of this evaluation.

Additionally, we note that even though the generic letter bases its requested improvements "on the analysis and findings for GI-70" (i.e., Reference b), Improvement A.1.c is not addressed in Reference (b) and also is the only improvement that includes "associated control circuits."

2. Include PORVs, valves in PORV control air systems, and block valves within the scope of a program covered by Subsection IWV, "Inservice Testing of Valves in Nuclear Power Plants," of Section XI of the ASME Boiler and Pressure Vessel Code. Stroke testing of PORVs should only be performed during **MODE 3 (HOT STANDBY)** or **MODE 4 (HOT SHUTDOWN)** and in all cases prior to establishing conditions where the PORVs are used for low-temperature overpressure protection. Stroke testing of the PORVs should not be performed during power operation. Additionally, the PORV block valves should be included in the licensees' expanded MOV test program discussed in NRC Generic Letter 89-10, "Safety-Related Motor Operated Valve Testing and Surveillance," dated June 28, 1989.

Response

BG&E commits to include PORVs and block valves in our inservice testing program. Calvert Cliffs Nuclear Power Plant does not have a PORV control air system. Testing and stroke timing prior to LTOP conditions will be resolved as part of resolving the anomalies of the Second Ten-Year Interval Inservice Testing Program Safety Evaluation Report of September 20, 1990. BG&E commits to include the PORV block valves within the scope of our motor-operated valve (MOV) test program.

3. Modify the limiting conditions of operation of PORVs and block valves in the technical specifications for **MODES 1, 2, and 3** to incorporate the position adopted by the staff in recent licensing actions. Plant Operation in **MODES 1, 2** and with PORVs and block valves inoperable, for reasons other than seat leakage, is not permitted for a period of more than 72 hours.

Response

Reference (b), Sections 2.1, 2.2 and 2.3 describes how the role of PORVs has evolved at many nuclear power plants such that PORVs are now relied on to perform design basis safety-related functions. We have not changed the function of PORVs from their original design. For the steam generator tube rupture event, we use the auxiliary pressurizer spray system, not PORVs, to depressurize the primary system. The auxiliary pressurizer spray system is a safety-related system. For normal plant cooldown, we use the auxiliary pressurizer spray valve, not the PORVs.

Reference (b) describes three beyond design basis events - reactor coolant system (RCS) venting, feed and bleed cooling and anticipated transient without scram (ATWS) mitigation - that "are not strictly in the scope of GI-70." For venting RCS non-condensable gases that may inhibit natural circulation, we use the PORVs as a backup to the RCS high point vent paths (Reference d). For feed and bleed cooling, we use the PORVs to establish once through core cooling as described in our emergency operating procedure for total loss of all feedwater. For ATWS mitigation, we monitor pressurizer pressure to ensure that it stabilizes to an appropriate range or that the PORVs cycle open and shut at appropriate setpoints as described in our emergency operating procedure for post reactor trip immediate actions.

In summary, the role of PORVs at Calvert Cliffs Nuclear Power Plant has not changed for either design basis events or beyond design basis events. Since we do not use PORVs for other than LTOP mitigation, there is no benefit to public health and safety from modifying Technical Specifications for Modes 1, 2 and 3.

However, BG&E commits to evaluate the guidance provided by the generic letter. A draft technical specification request is currently under BG&E staff review. We may submit a technical specification amendment request that incorporates appropriate NRC staff positions. Such a request would justify our conclusions as required by 10 CFR Part 50. Since our evaluation is not complete, we cannot commit to use the modified limiting conditions of operation for PORVs and block valves in Attachment A-1 of the generic letter.

Currently, our proposed alternative will essentially follow the NRC staff guidance. We are considering one or more of the following proposed alternatives:

- a. clarify "excessive seat leakage"
- b. clarify allowable continued operation period
- c. revise applicability to prevent overlap with Technical Specification 3.4.9.3 "Over-pressure Protection Systems"
- d. clarify "manual control"
- e. clarify BASES

B. Section 3 Enclosure B Improvements

The NRC staff concluded that unavailability of the LTOP system was the dominant contributor to low-temperature overpressure transients. They further concluded that improved availability could be achieved by improved administrative controls on the LTOP system. State whether BG&E will submit a license amendment request for technical specifications as contained in Enclosure B to the generic letter. State whether BG&E will commit to use the modified technical specifications.

Response

BG&E has extensively reviewed numerous issues involving the LTOP system, Reference (e) and (f). We have not completed an evaluation of how the NRC staff proposed modifications affect recently approved license amendments for the LTOP system. We will commit to submit and use the NRC staff proposed modifications when we have completed our evaluation.

SCHEDULE FOR UNIT 1 AND 2

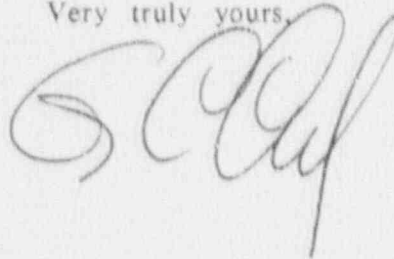
<u>IMPROVEMENT</u>	<u>ECD</u>
A.1.a. Add PORVs and block valves to Q-List	Complete
b. Implement maintenance program	Complete
c. Procure parts under original codes	To Be Determined
A.2.a. Include PORVs and block valves in inservice inspection program	July 1991
b. Include block valves in MOV test program	Complete
A.3.a. Evaluation of Technical Specification for Mode 1, 2 and 3	July 1991
b. Submit, if necessary, modified Technical Specification for Mode 1, 2 and 3	End of U-1 Cycle 10 Refueling Outage (Currently Spring 1992)

SCHEDULE FOR UNIT 1 AND 2 (continued)

	<u>IMPROVEMENT</u>	<u>ECD</u>
B.1	Evaluation of Technical Specification for Mode 4, 5 and 6	July 1991
2.	Submit, if necessary, modified Technical Specification for Mode 4, 5 and 6	End of U-1 Cycle 10 Refueling Outage (Currently Spring 1992)

Should you have any further questions regarding this matter, we will be pleased to discuss them with you.

Very truly yours,



STATE OF MARYLAND

TO WIT:

I hereby certify that on the 20th day of December, 1990, before me, the subscriber, a Notary Public of the State of Maryland in and for Calvert County, personally appeared George C. Creel, being duly sworn, and states that he is Vice President of the Baltimore Gas and Electric Company, a corporation of the State of Maryland; that he provides the foregoing response for the purposes therein set forth; that the statements made are true and correct to the best of his knowledge, information, and belief; and that he was authorized to provide the response on behalf of said Corporation.

WITNESS my Hand and Notarial Seal:

Michelle D. Hall
Notary Public

My Commission Expires:

February 2, 1994
Date

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cc: D. A. Brune, Esquire
J. E. Silberg, Esquire
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