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Calvert Cliffs Nuclear Power Plant
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June 2, 1995

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
License Amendment Request; Pressurizer Safety Valves Lift Tolerance

Pursuant to 10 CFR 50.90, the Baltimore Gas and Electric Company hereby requests an Amendment to Operating License Nos. DPR-53 and DPR-69 by incorporating the changes described below into the Technical Specifications for Calvert Cliffs Unit Nos. 1 and 2.

DESCRIPTION

The proposed amendment would revise the pressurizer safety valve setpoint tolerance "as-found" acceptance criterion to $+2\%/-1\%$ for the valve with the lower setpoint (RC-200) and $\pm 2\%$ for the valve with the upper setpoint (RC-201). The "as-left" setpoint tolerance will remain $\pm 1\%$ for both valves.

BACKGROUND

The Calvert Cliffs Nuclear Power Plant overpressure design incorporates two spring-loaded safety valves connected to the top of the pressurizer. The two pressurizer safety valves automatically open at set pressures of 2500 psia and 2565 psia, respectively, to prevent exceeding the Reactor Coolant System (RCS) pressure safety limit of 2750 psia (110% of the design pressure of 2500 psia).

Currently, the Technical Specification Surveillance Requirements for the pressurizer safety valves require that testing be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable addenda, as required by 10 CFR 50.55a(f). The Surveillance Requirements indicate that the pressurizer safety valves should be tested to verify that their lift pressure and seat leakages are acceptable pursuant to the Calvert Cliffs Inservice Testing program that complies with the ASME Section XI 1983 edition through summer 1983 addendum. This document does not indicate the tolerance to be applied to the

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safety valve lift pressure verification. Calvert Cliffs uses the $\pm 1\%$ indicated in the Limiting Condition for Operation (LCO) as the acceptance criteria for the pressurizer safety valves during the ASME Section XI testing. Under the current testing requirements, when a pressurizer safety valve has a tested lift pressure outside the $\pm 1\%$ tolerance specified in the LCO, it must be repaired or replaced per IWB-3510 and additional valves in the system be tested.

In contrast, the 1989 edition of the ASME Code, Section XI, now requires that the pressurizer safety valves be tested pursuant to the ASME/ANSI OM-1987, Part 1, "Requirements for Inservice Performance Testing of Nuclear Power Plant Pressure Relief Devices." This allows the tested lift pressure to exceed the stamped set pressure by up to 3% before repair or replacement would be required. It also includes guidelines for testing additional valves when a valve exceeds the valve setpoint. Calvert Cliffs does not intend to adopt the ASME/ANSI OM-1987, Part 1 standard at this time, but is using this standard as guidance to determine the "as-found" setpoint tolerance acceptance criterion. Calvert Cliffs will use $+2\% / -1\%$ for valve RC-200 and $\pm 2\%$ for valve RC-201 for the "as-found" acceptance criteria for additional valve testing required by ASME Section XI. The proposed Technical Specification will still require that the pressurizer safety valve setpoints be restored to within $\pm 1\%$ of their nominal setpoints following testing.

The "as-found" condition of the pressurizer safety valves have been close to or in excess of the $\pm 1\%$ limit currently permitted by the Technical Specifications. Increasing the tolerance band on the pressurizer safety valves will provide the operational flexibility needed to accommodate the "as-found" setpoint drift experienced historically. This proposed change is similar to the license amendment request made by Haddam Neck Plant, dated May 18, 1993, and approved by the NRC staff on September 2, 1993.

REQUESTED CHANGE

Change Specification 3/4.4.2 of the Unit 1 and Unit 2 Technical Specifications as shown on the marked-up pages attached to this transmittal. The final Technical Specifications pages will be renumbered to accommodate added and/or deleted pages.

SAFETY ANALYSIS

The Calvert Cliffs pressurizer safety valves are used to prevent exceeding the RCS pressure safety limit of 2750 psia (110% of design pressure of 2500 psia). The reactor vessel and pressurizer design is licensed in accordance with ASME Section III, 1965 edition, through winter 1967 addendum. For a vessel with multiple safety valves, the Code requires that:

1. The nominal pressure setting of at-least one safety valve shall not be greater than the design pressure of the vessel (at design temperature) which it protects. Additional relief valves required may have higher nominal settings, but in no case shall these settings exceed 105% of the design pressure (N-910.4).

2. The rated capacity of the pressure relief devices, including any limitation imposed by the systems connected to the discharge side, shall be sufficient to prevent a rise in pressure within the vessels they protect of more than 10% of the design pressure at the design temperature (N-910.3).

The above Code requirements are met at Calvert Cliffs by:

1. One safety valve has to be nominally set at or below the system design pressure of 2500 psia. The lowest setpoint for the Calvert Cliffs pressurizer safety valves is 2500 psia. Therefore, this first requirement is met.
2. The highest relief valve nominal set pressure cannot exceed 2625 psia (105% of design pressure). The highest setpoint is 2565 psia, which is within the above limit of 2625 psia, and therefore, this Code requirement is met.
3. Safety analysis accounting for the new setpoint tolerance has been performed to show that the RCS pressure remains below 2750 psia (110% of design pressure) for the most challenging overpressurization event. The pressurizer safety valves are used to mitigate the consequences of a feedline break event, loss of load event, and loss of feedwater flow event. These events were re-analyzed assuming +2% setpoint drift. The results of the re-analysis of these three events show that the RCS pressure safety limit of 2750 psia is not exceeded and the secondary system pressure limit of 1100 psia is also not exceeded. The remaining overpressure events in the safety analysis were evaluated and it was determined that these events did not reach pressures high enough to cause the pressurizer safety valves to lift. The opening setpoint of valve RC-200 with the maximum allowable -1% drift will remain higher than the high pressurizer pressure trip setpoint.

The proposed change would allow relaxation of the pressurizer safety valve setpoint tolerance from $\pm 1\%$ to $+2\%/-1\%$ for valve RC-200 and $\pm 2\%$ for valve RC-201. The use of the proposed tolerances would be for the "as-found" acceptance criteria for valve testing required by ASME Section XI 1983 edition, through summer 1983 addendum, Article IWB-3510. The proposed change will not change the "as-left" tolerance requirements of $\pm 1\%$ of the nominal setpoints.

DETERMINATION OF SIGNIFICANT HAZARDS

The proposed change has been evaluated against the standards in 10 CFR 50.92 and has been determined to not involve a significant hazards consideration, in that operation of the facility in accordance with the proposed amendments:

1. *Would not involve a significant increase in the probability or consequences of an accident previously evaluated.*

The pressurizer safety valves are used to prevent exceeding the Reactor Coolant System (RCS) pressure safety limit. The proposed change to increase the pressurizer safety valve setpoint tolerance for the "as-found" acceptance criteria from $\pm 1\%$ to $+2\%/-1\%$ for the valve with the lower

pressure setpoint, and $\pm 2\%$ for the valve with the upper pressure setpoint, does not affect any initiating event. The proposed change does not affect the consequences of the previously evaluated design basis accidents as the new safety valve setpoint tolerances are bounded by the assumptions in the safety analysis. Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. *Would not create the possibility of a new or different type of accident from any accident previously evaluated.*

The proposed change to increase the "as-found" setpoint tolerances does not involve any changes in equipment or the function of these safety valves. The proposed change does not represent a change in the configuration or operation of the plant. The test method for the pressurizer safety valves will remain the same. The increase in the setpoint tolerances does not create any new accident initiator. Therefore, the proposed change does not create the possibility of a new or different type of accident from any accident previously evaluated.

3. *Would not involve a significant reduction in a margin of safety.*

The pressure safety limit for the RCS protects the structural integrity of the system from failure due to overpressurization. The pressurizer safety valves are used to prevent the RCS pressure from exceeding the safety limit. The proposed change to the pressurizer safety valve setpoint tolerances will continue to prevent the RCS pressure from exceeding the design safety limit during any design basis event. Therefore, the proposed change does not involve a significant reduction in a margin of safety.

ENVIRONMENTAL ASSESSMENT

The proposed amendment would change requirements with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 or changes to an inspection or surveillance requirement. We have determined that the proposed amendment involves no significant hazards consideration, and that operation with the proposed amendment would result in no significant change in the types or significant increases in the amounts of any effluents that may be released offsite, and in no significant increase in individual or cumulative occupational radiation exposure. Therefore, the proposed amendment is eligible for categorical exclusion as set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment is needed in connection with the approval of the proposed amendment.

SCHEDULE

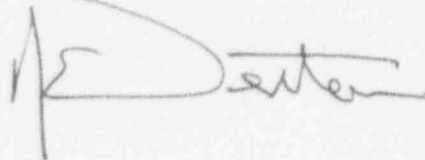
This change is requested to be approved and issued by December 1, 1995. However, issuance of this amendment is not currently identified as impacting outage completion or continued plant operation.

SAFETY COMMITTEE REVIEW

These proposed changes to the Technical Specifications and our determination of significant hazards have been reviewed by our Plant Operations and Safety Review Committee and Offsite Safety Review Committee. They have concluded that implementing these changes will not result in an undue risk to the health and safety of the public.

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

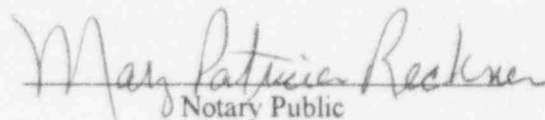
Very truly yours,



STATE OF MARYLAND :
: TO WIT :
COUNTY OF CALVERT :

I hereby certify that on the 2nd day of June, 1995, before me, the subscriber, a Notary Public of the State of Maryland in and for CALVERT COUNTY, personally appeared Robert E. Denton, 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:


Notary Public

My Commission Expires:

2/1/98
Date

RED/DJM/dlm

Attachments

cc: D. A. Brune, Esquire
J. E. Silberg, Esquire
L. B. Marsh, NRC
D. G. McDonald, Jr., NRC

T. T. Martin, NRC
P. R. Wilson, NRC
R. I. McLean, DNR
J. H. Walter, PSC

ATTACHMENT (1)

UNIT 1
TECHNICAL SPECIFICATION
REVISED PAGE
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