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ARTHUR E. LUNDVALL, JR.  
VICE PRESIDENT  
SUPPLY

April 4, 1984

U.S. Nuclear Regulatory Commission  
Office of Nuclear Reactor Regulation  
Washington, D. C. 20555

ATTENTION: Mr. James R. Miller, Chief  
Operating Reactors Branch #3

SUBJECT: Calvert Cliffs Nuclear Power Plant  
Unit No. 1; Docket No. 50-317  
Request for Amendment

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REFERENCE: (a) Telephone conversation between D. H. Jaffe, NRC, and  
L. E. Salyards, BG&E on April 4, 1984.

Gentlemen:

The Baltimore Gas and Electric Company hereby requests an Amendment to its Operating License No. DPR-53 for Calvert Cliffs Unit 1 with the submittal of the enclosed emergency change to the Technical Specifications.

PROPOSED CHANGE (BG&E FCR 84-44) (Unit 1 Only)

Remove existing page 3/4 3-38 of the Unit 1 Technical Specifications and replace with the attached, marked-up page Attachment (1).

DISCUSSION

This proposed change involves a temporary change to the requirements of the Remote Shutdown Monitoring Instrumentation, which is required to be **OPERABLE** by Unit 1 Technical Specification 3.3.3.5, with the associated instrumentation listed in Table 3.3-9. During the Unit 1 refueling outage in late 1983, we modified the Wide Range Nuclear Instrumentation by providing an extended range from .1 cps to 200% power in lieu of the original range, .1 cps to 150% power. The instrument location was also changed from the Auxiliary Feed Pump Room Instrumentation Panel to the Alternate Shutdown Panel 1C43 in the 45' Elevation Switchgear Room. The Extended Range Nuclear Instrument was installed to meet Appendix R, Alternate Safe Shutdown, requirements.

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On March 19, 1984, the newly installed nuclear instruments began showing evidence of possible impending failure. These indications included the following:

- (1) initially indicated low (i.e., ~50% when power was 100%)
- (2) then indicated high (i.e., between 100% and 200%)

During the period between March 19-April 3, 1984, with vendor assistance we conducted extensive troubleshooting of those instrumentation components external to the containment structure, but could not locate or repair the problem. The **ACTION** requirements of Technical Specification 3.3.3.5 were imposed on March 19, 1984, and specify that Calvert Cliffs Unit 1 must restore the inoperable instrument to **OPERABLE** status within 30 days or be in at least **HOT SHUTDOWN** within the next 12 hours. Troubleshooting has localized the problem to components on the 10' elevation of the containment. Further troubleshooting of these instruments is difficult during power operation, due to the high radiation field which must be encountered to access the instruments.

During full power operation, the radiation levels in the area of these instruments are approximately 5 R/HR (10' Elevation NE corner of Containment) and significant neutron streaming is present. By decreasing power the radiation levels may be reduced to 1 to 1.5 R/hr, however, a shutdown would be required before they would be low enough to permit necessary troubleshooting without excessive radiation exposure to plant personnel. Although the nuclear instrument channels installed in the Auxiliary Feedwater Pump Room are not certified to the specifications of Appendix R Section III.G and the associated criteria for environmental qualification, they have demonstrated high reliability throughout the operating life of the plant and will satisfy General Design Criterion 19 of 10 CFR 50.

This proposed change would permit us to utilize the instrumentation at the Auxiliary Feedwater Pump Room instrumentation panel to meet the requirements of Technical Specification 3.3.3.5 and Table 3.3-9 until the next outage of sufficient duration to allow repair/replacement of the detectors defective component(s). During this period, the nuclear instrumentation on the panel in the Unit 1 Auxiliary Feedwater Pump Room will be subjected to the surveillance requirements in Table 4.3-6.

Because further troubleshooting would require shutdown of the affected unit, we have determined that this change constitutes an emergency Technical Specification change. Further, we state that because of insufficient operating experience with the new instruments, we could not have predicted the need for the Technical Specification change earlier.

#### DETERMINATION OF SIGNIFICANT HAZARDS CONSIDERATIONS

This proposed change has been determined to involve no significant hazards considerations, operation of the facility in accordance with the proposed license amendment would not:

- (i) involve a significant increase in the probability or consequences of an accident previously evaluated; or
- (ii) create the possibility of a new or different kind of accident from any accident previously evaluated; or
- (iii) involve a significant reduction in the margin of safety.

The remote shutdown monitoring instruments allow the operator to monitor key safety parameters outside the Control Room. No automatic safety features are actuated from remote shutdown monitoring instrumentation. The purpose of the instrumentation is to provide required information to assure safe shutdown of the plant. Utilizing the instruments located in the Auxiliary Feedwater Pump Room still provides substantial assurance that the operator will be able to monitor neutron flux throughout the required range for remote shutdown of the plant, .1 cps to 150% power. In addition, this change is applicable only until the next outage of sufficient duration to allow repair or replacement of the defective component(s).

In the unlikely event of a fire which might require evacuation of the Control Room, and a restart occurs, the Operator has several methods available to initiate reactivity control and ensure the reactor is maintained safely shutdown. To address the restart concern, when a fire in the Control Room requires Control Room evacuation, and the nuclear instrument indication in the Auxiliary Feedwater Pump Room is lost, procedural controls will be established to require initiation of emergency boration while this Technical Specification change is in effect. Other means are available to monitor the shutdown condition of the plant from the Auxiliary Shutdown Panel, 1C43 (e.g., Pressurizer Pressure, Reactor Coolant Temperatures, etc.).

#### SAFETY COMMITTEE REVIEW


This proposed emergency change to the Technical Specifications and our determination of significant hazards have been reviewed by our Plant Operations and Off-Site Safety Review Committees, and they have concluded that implementation of this change will not result in an undue risk to the health and safety of the public.

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**FEE DETERMINATION**

We have determined, pursuant to 10 CFR 170.22, that this Amendment Request consists of a Class III Amendment. For Fee determination purposes only, we request you consider this change as a supplement to our request dated March 26, 1984.

Very truly yours,



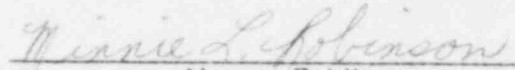
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Attachments

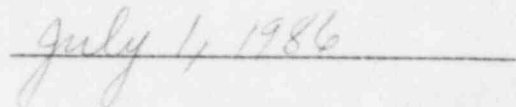
STATE OF MARYLAND :  
                              :     TO WIT:  
CITY OF BALTIMORE :

Arthur E. Lundvall, Jr., being duly sworn 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:



cc: D. A. Brune, Esquire  
G. F. Trowbridge, Esquire  
D. H. Jaffe, NRC  
T. Foley, NRC  
T. Magette, DNR