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Docket No. 50-317

**OCT 8 1976**

Baltimore Gas & Electric Company  
ATTN: Mr. A. E. Lundvall, Jr.  
Vice President - Supply  
Gas and Electric Building  
Charles Center  
Baltimore, Maryland 21203

Gentlemen:

The Commission has issued the enclosed Amendment No. 17 to Facility Operating License No. DPR-53 for the Calvert Cliffs Nuclear Power Plant Unit No. 1. The amendment consists of a change in the Technical Specifications in accordance with your application dated July 15, 1976.

This amendment modifies the Technical Specifications to incorporate a revised Figure 3-6 "Augmentation Factors for the Calvert Cliffs Reactor". This results in an effective gain of approximately 0.7 kW/ft in the operating margin to the maximum allowable peak linear heat generation rate.

Copies of the Safety Evaluation and the Notice of Issuance are enclosed.

Sincerely,

Original signed by  
Dennis L. Ziemann

Dennis L. Ziemann, Chief  
Operating Reactors Branch #2  
Division of Operating Reactors

Enclosures:

- 1. Amendment No. 17 to License No. DPR-53
- 2. Safety Evaluation
- 3. Notice

cc w/enclosures:  
See next page

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OFFICE >	DOR:ORB #2	DOR:ORB #2	OELD	DOR:ORB #2		
SURNAME >	<i>RMDiggs</i>	<i>EAReeves</i>	<i>WDPeters</i>	DLZiemann		
DATE >	<i>10/4/76</i>	<i>10/5/76</i>	<i>10/6/76</i>	<i>10/8/76</i>		

October 8, 1976

cc w/enclosures:

James A. Biddison, Jr.  
General Counsel  
Gas and Electric Building  
Charles Center  
Baltimore, Maryland 21203

James C. Cavood, Jr., Esquire  
Vice President  
Chesapeake Environmental  
Protection Association  
4700 Auth Place  
Camp Springs, Maryland 20023

George F. Trowbridge, Esquire  
Shaw, Pittman, Potts and  
Trowbridge  
1800 M Street, N. W.  
Washington, D. C. 20036

Bechtel Power Corporation  
ATTN: Mr. R. L. Ashley  
Chief Nuclear Engineer  
P. O. Box 607  
Gaithersburg, Maryland 20760

Combustion Engineering, Inc.  
ATTN: Mr. J. A. Honey  
Project Manager  
P. O. Box 500  
Windsor, Connecticut 06095

Mr. R. C. L. Olson  
Baltimore Gas and Electric Company  
Room 922 Gas and Electric Building  
Charles Center  
Baltimore, Maryland 21203

Mr. R. M. Douglass, Chief Engineer  
Calvert Cliffs Nuclear Power Plant  
Baltimore Gas and Electric Company  
Lusby, Maryland 20657

Calvert County Library  
Prince Frederick, Maryland 20678

Mr. Bernard Fowler  
President, Board of County  
Commissioners  
Prince Frederick, Maryland 20678

cc w/4 cys. of enclosures and  
1 cy. of 7/15/76 BG&E filing:  
Mr. Warren Hodges, Director  
Department of State Planning  
301 West Preston Street  
Baltimore, Maryland 21201



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

BALTIMORE GAS & ELECTRIC COMPANY

DOCKET NO. 50-317

CALVERT CLIFFS UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 17  
License No. DPR-53

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Baltimore Gas & Electric Company (the licensee) dated July 15, 1976, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment.
3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

*Dennis L. Ziemann*

Dennis L. Ziemann, Chief  
Operating Reactors Branch #2  
Division of Operating Reactors

Attachment:  
Changes to the Technical  
Specifications

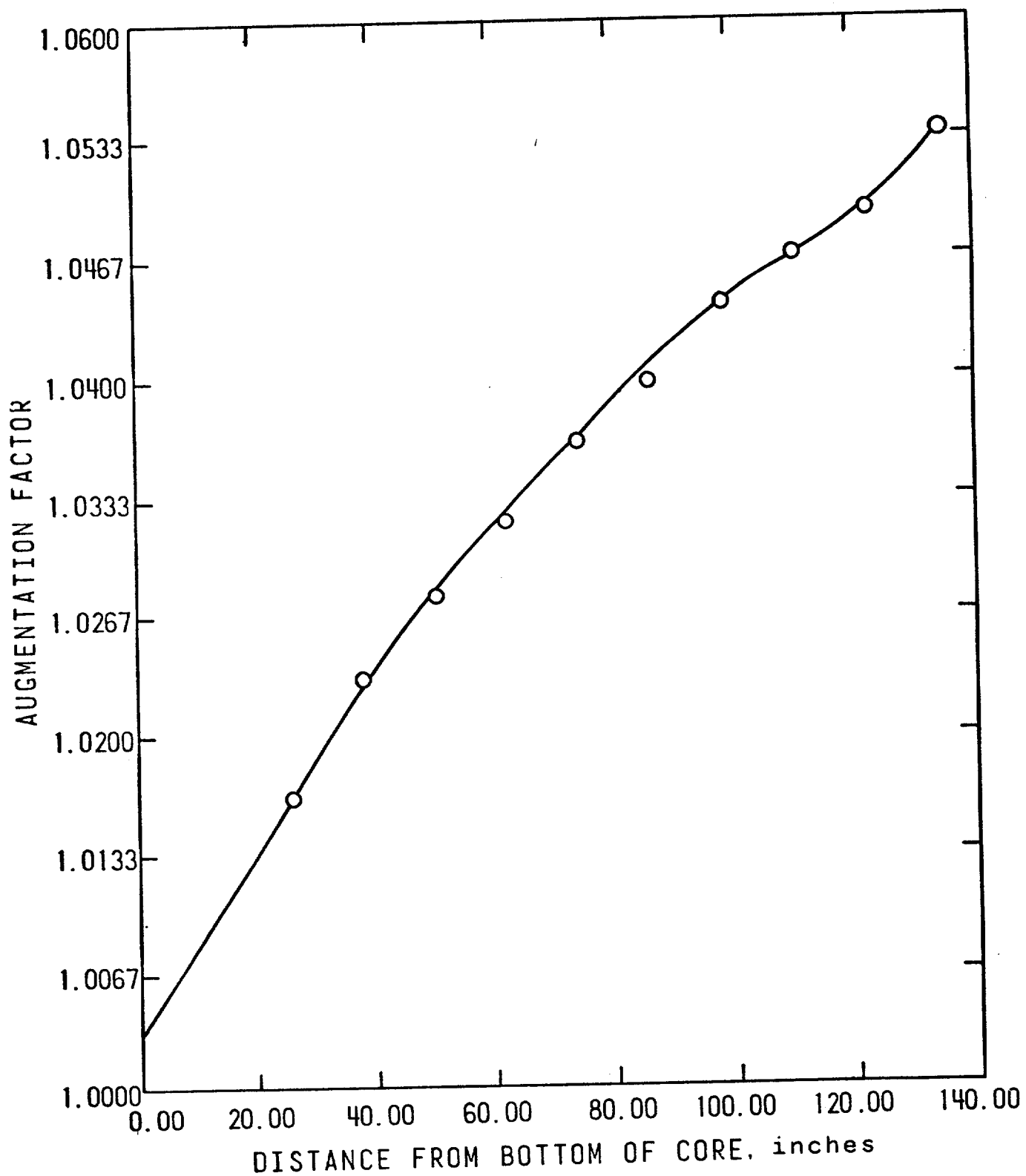
Date of Issuance: October 8, 1976

ATTACHMENT TO LICENSE AMENDMENT NO. 17

FACILITY OPERATING LICENSE NO. DFR-53

DOCKET NO. 50-317

Replace page 3.10-20 (Figure 3-6) of the Appendix A portion of the Technical Specifications with the enclosed revised page 3.10-20.



BALTIMORE  
GAS & ELECTRIC CO.  
Calvert Cliffs  
Nuclear Power Plant

AUGMENTATION FACTORS FOR  
THE CALVERT CLIFFS REACTOR

Figure  
3-6



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
SUPPORTING AMENDMENT NO. 17 TO FACILITY OPERATING LICENSE NO. DPR-53

BALTIMORE GAS AND ELECTRIC COMPANY  
CALVERT CLIFFS NUCLEAR POWER PLANT UNIT 1

DOCKET NO. 50-317

INTRODUCTION

By letter dated July 15, 1976, the Baltimore Gas & Electric Company (BG&E) requested an amendment to Facility Operating License No. DPR-53 for the Calvert Cliffs Nuclear Power Plant Unit No. 1. The request involves a revision to the Technical Specifications to incorporate a revised Figure 3-6 "Augmentation Factors for the Calvert Cliffs Reactor".

DISCUSSION

The augmentation factor accounts for power peaking due to fuel densification effects and influences the maximum allowable peak linear heat generation rate (PLHGR). As a result of errors found in the Combustion Engineering Loss-of-Coolant-Accident (LOCA) heatup code, STRIKIN-II, the PLHGR for Calvert Cliffs Unit No. 1 was reduced to 13.9 kW/ft and reaffirmed by Confirmatory Order dated June 17, 1976. The PLHGR limit includes an interim penalty of 1 kW/ft until additional calculations are approved by the NRC. The licensee has stated that the proposed Figure 3-6, which is a reduction in augmentation factor, will result in an effective gain of approximately 0.7 kW/ft in the operating margin to the maximum allowable PLHGR.

EVALUATION

We have reviewed the proposed curve of Figure 3-6. The proposed curve relating augmentation factor versus distance from the bottom of the core was generated using the methods described in the Combustion Engineering Topical Report, CENPD-139, for densification. The proposed curve is the same as the curve recently reviewed and approved by the staff for use in the Technical Specifications for Calvert Cliffs Unit No. 2. Augmentation factors were determined for various values of fuel burnup for the full life of the fuel in both Calvert Cliffs Unit Nos. 1 and 2.

The final proposed augmentation factor curve was defined as shown on Figure 3-6 by combining the most conservative values taken from both sets of calculations. We conclude that the change in augmentation factor as shown in Figure 3-6 has been determined using accepted and conservative methods and, therefore, is acceptable.

#### ENVIRONMENTAL CONSIDERATION

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR §1.5(d)(4), that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

#### CONCLUSION

We have concluded, based on the considerations discussed above, that: (1) because the amendment does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant decrease in a safety margin, the amendment does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Date: October 8, 1976



UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-317

BALTIMORE GAS & ELECTRIC COMPANY

NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY  
OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 17 to Facility Operating License No. DPR-53, issued to Baltimore Gas & Electric Company (the licensee), which revised the Technical Specifications for operation of the Calvert Cliffs Nuclear Power Plant Unit No. 1 (the facility) located in Calvert County, Maryland. The amendment is effective as of its date of issuance.

The amendment modified the augmentation factor curve of Figure 3-6 of the Technical Specifications for the facility. This results in an effective gain of approximately 0.7 kW/ft in the operating margin to the maximum allowable peak linear heat generation rate.

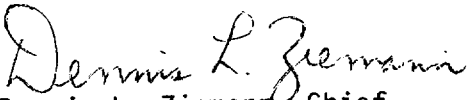
The application for the amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendment. Prior public notice of this amendment was not required since the amendment does not involve a significant hazards consideration.

The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant to 10 CFR 51.5(d)(4) an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with issuance of this amendment.

For further details with respect to this action, see (1) the application for amendment dated July 15, 1976, (2) Amendment No. 17 to License No. DPR-53, and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N. W., Washington, D. C. and at the Calvert County Library, Prince Frederick, Maryland 20678. A copy of items (2) and (3) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Operating Reactors.

Dated at Bethesda, Maryland, this eighth day of October, 1976.

FOR THE NUCLEAR REGULATORY COMMISSION

  
Dennis L. Ziemann, Chief  
Operating Reactors Branch #2  
Division of Operating Reactors