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Docket No. 50-317

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

Dear Mr. Lundvall:

The Commission has issued the enclosed Amendment No. 72 to Facility Operating License No. DPR-53 for Calvert Cliffs Nuclear Power Plant, Unit No. 1. The amendment consists of changes to the Appendix A Technical Specifications in response to your application dated June 30, 1982.

The amendment revises the Technical Specifications to decrease the maximum allowable response and closure times for the Main Steam Line Isolation Valves and to correct a typographical error which occurred in issuance of Amendment No. 71.

Copies of the Safety evaluation and the Notice of Issuance are also enclosed.

Sincerely,

Original signed by

David H. Jaffe, Project Manager  
 Operating Reactors Branch #3  
 Division of Licensing

Enclosures:

1. Amendment No. 72 to DPR-53
2. Safety Evaluation
3. Notice of Issuance

cc: See next page

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 P PDR

F.R. NOTICE  
 +  
 AMENDMENT

OFFICE	ORB#3:DL	ORB#3:DL	ORB#3:DL	AD-OR:DL	OELD	
SURNAME	PMKreutzer	DJaffe/pl	RAClark	TMNovak		
DATE	7/2/82	7/7/82	7/2/82	7/7/82	7/5/82	



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

DISTRIBUTION:  
Docket File  
ORB#3 Rdg  
PMKreutzer

Docket No. 50-317

Docketing and Service Section  
Office of the Secretary of the Commission

SUBJECT: BALTIMORE GAS & ELECTRIC COMPANY, Calvert Cliffs Nuclear  
Power Plant Unit No. 1

Two signed originals of the Federal Register Notice identified below are enclosed for your transmittal to the Office of the Federal Register for publication. Additional conformed copies (12 ) of the Notice are enclosed for your use.

- Notice of Receipt of Application for Construction Permit(s) and Operating License(s).
- Notice of Receipt of Partial Application for Construction Permit(s) and Facility License(s): Time for Submission of Views on Antitrust Matters.
- Notice of Availability of Applicant's Environmental Report.
- Notice of Proposed Issuance of Amendment to Facility Operating License.
- Notice of Receipt of Application for Facility License(s); Notice of Availability of Applicant's Environmental Report; and Notice of Consideration of Issuance of Facility License(s) and Notice of Opportunity for Hearing.
- Notice of Availability of NRC Draft/Final Environmental Statement.
- Notice of Limited Work Authorization.
- Notice of Availability of Safety Evaluation Report.
- Notice of Issuance of Construction Permit(s).
- Notice of Issuance of Facility Operating License(s) or Amendment(s).
- Other: Amendment No. 72.

Reference documents have been provided PDR.

Division of Licensing  
Office of Nuclear Reactor Regulation

Enclosure:  
As Stated

OFFICE	ORB#3:DI					
SURNAME	PMKreutzer/pn					
DATE	7/14/82					

Baltimore Gas and Electric Company

cc:

James A. Biddison, Jr.  
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Mr. Leon B. Russell  
Plant Superintendent  
Calvert Cliffs Nuclear Power Plant  
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Lusby, MD 20657

Bechtel Power Corporation  
Attn: Mr. J. H. Bell  
Chief Nuclear Engineer  
15740 Shady Grove Road  
Gaithersburg, MD 20760

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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301 West Preston Street  
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Baltimore, MD 21203

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 Frederick, MD 20768

U. S. Environmental Protection Agency  
Region III Office  
Attn: Regional Radiation Representative  
Curtis Building (Sixth Floor)  
Sixth and Walnut Streets  
Philadelphia, PA 19106

Mr. Ralph E. Architzel  
Resident Reactor Inspector  
NRC Inspection and Enforcement  
P. O. Box 437  
Lusby, MD 20657

Mr. Charles B. Brinkman  
Manager - Washington Nuclear Operations  
Combustion Engineering, Inc.  
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Bethesda, MD 20014

Mr. J. A. Tierman, Manager  
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Calvert Cliffs Nuclear Power Plant  
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Mr. W. J. Lippold, Supervisor  
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Calvert Cliffs Nuclear Power Plant  
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Baltimore, Maryland 21203

Mr. R. E. Denton, General Supervisor  
Training & Technical Services  
Calvert Cliffs Nuclear Power Plant  
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Lusby, MD 20657

cc w/enclosure(s) and incoming  
dated: 6/30/82

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



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

BALTIMORE GAS AND ELECTRIC COMPANY

DOCKET NO. 50-317

CALVERT CLIFFS NUCLEAR POWER PLANT UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 72  
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 June 30, 1982, 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.

DESIGNATED ORIGINAL

Certified By

*Patricia J. Noonan*

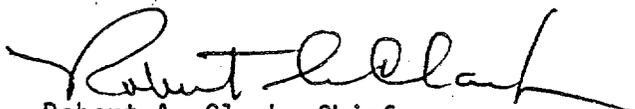
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-53, is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 72, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. The license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



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

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: July 13, 1982

ATTACHMENT TO LICENSE AMENDMENT NO. 72

FACILITY OPERATING LICENSE NO. DPR-53

DOCKET NO. 50-317

Replace the following pages of the Appendix A Technical Specifications with the enclosed pages as indicated. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change. The corresponding overleaf pages are also provided to maintain document completeness.

Remove

3/4 2-14  
3/4 2-15  
3/4 3-21  
3/4 7-9

Insert

3/4 2-14  
-  
3/4 3-21  
3/4 7-9

## POWER DISTRIBUTION LIMITS

### DNB PARAMETERS

#### LIMITING CONDITION FOR OPERATION

---

3.2.5 The following DNB related parameters shall be maintained within the limits shown on Table 3.2-1:

- a. Cold Leg Temperature
- b. Pressurizer Pressure
- c. Reactor Coolant System Total Flow Rate
- d. AXIAL SHAPE INDEX, core power

APPLICABILITY: MODE 1.

#### ACTION:

With any of the above parameters exceeding its limit, restore the parameter to within its limit within 2 hours or reduce THERMAL POWER to less than 5% of RATED THERMAL POWER within the next 4 hours.

#### SURVEILLANCE REQUIREMENTS

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4.2.5.1 Each of the parameters of Table 3.2-1 shall be verified to be within their limits at least once per 12 hours.

4.2.5.2 The Reactor Coolant System total flow rate shall be determined to be within its limit by measurement at least once per 18 months.

TABLE 3.2-1  
DNB PARAMETERS

Parameter	<u>LIMITS</u>			
	<u>Four Reactor Coolant Pumps Operating</u>	<u>Three Reactor Coolant Pumps Operating</u>	<u>Two Reactor Coolant Pumps Operating-Same Loop</u>	<u>Two Reactor Coolant Pumps Operating-Opposite Loop</u>
Cold Leg Temperature	$\leq 548^{\circ}\text{F}$	**	**	**
Pressurizer Pressure	$\geq 2225 \text{ psia}^*$	**	**	**
Reactor Coolant System Total Flow Rate	$\geq 370,000 \text{ gpm}$	**	**	**
AXIAL SHAPE INDEX	***	**	**	**

\*Limit not applicable during either a THERMAL POWER ramp increase in excess of 5% of RATED THERMAL POWER per minute or a THERMAL POWER step increase of greater than 10% of RATED THERMAL POWER.

\*\*These values left blank pending NRC approval of ECCS analyses for operation with less than four reactor coolant pumps operating.

\*\*\*The AXIAL SHAPE INDEX, Core Power shall be maintained within the limits established by the Better Axial Shape Selection System (BASSS) for CEA insertions of the lead bank of  $< 55\%$  when BASSS is OPERABLE, or within the limits of FIGURE 3.2-4 for CEA insertions specified by FIGURE 3.1-2.

TABLE 3.3-5 (Continued)

ENGINEERED SAFETY FEATURES RESPONSE TIMES

<u>INITIATING SIGNAL AND FUNCTION</u>	<u>RESPONSE TIME IN SECONDS</u>
6. <u>Steam Generator Pressure-Low</u>	
a. Main Steam Isolation	≤ 6.9
b. Feedwater Isolation	≤ 80
7. <u>Refueling Water Tank-Low</u>	
a. Containment Sump Recirculation	≤ 80
8. <u>Reactor Trip</u>	
a. Feedwater Flow Reduction to 5%	≤ 20
9. <u>Loss of Power</u>	
a. 4.16 kv Emergency Bus Undervoltage (Loss of Voltage)	≤ 2.2 <sup>***</sup>
b. 4.16 kv Emergency Bus Undervoltage (Degraded Voltage)	≤ 8.4 <sup>***</sup>
10. <u>Steam Generator Level - Low</u>	
a. Auxiliary Feedwater System	≤ 360*/360** (2)

TABLE NOTATION

\* Diesel generator starting and sequence loading delays included.

\*\* Diesel generator starting and sequence loading delays not included. Offsite power available.

\*\*\* Response time measured from the incidence of the undervoltage condition to the diesel generator start signal.

(1) Header fill time not included.

(2) Includes time delay of 3 to 5 minutes.

TABLE 4.3-2

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
1. SAFETY INJECTION (SIAS)				
a. Manual (Trip Buttons)	N.A.	N.A.	R	N.A.
b. Containment Pressure - High	S	R	M	1, 2, 3
c. Pressurizer Pressure - Low	S	R	M	1, 2, 3
d. Automatic Actuation Logic	N.A.	N.A.	M(1)(3)	1, 2, 3
2. CONTAINMENT SPRAY (CSAS)				
a. Manual (Trip Buttons)	N.A.	N.A.	R	N.A.
b. Containment Pressure -- High	S	R	M	1, 2, 3
c. Automatic Actuation Logic	N.A.	N.A.	M(1)	1, 2, 3
3. CONTAINMENT ISOLATION (CIS) #				
a. Manual CIS (Trip Buttons)	N.A.	N.A.	R	N.A.
b. Containment Pressure - High	S	R	M	1, 2, 3
c. Automatic Actuation Logic	N.A.	N.A.	M(1)(4)	1, 2, 3
4. MAIN STEAM LINE ISOLATION (SGIS)				
a. Manual SGIS (MSIV Hand Switches and Feed Head Isolation Hand Switches)	N.A.	N.A.	R	N.A.
b. Steam Generator Pressure - Low	S	R	M	1, 2, 3
c. Automatic Actuation Logic	N.A.	N.A.	M(1)(5)	1, 2, 3

# Containment isolation of non-essential penetrations is also initiated by SIAS (functional units 1.a and 1.c).

CALVERT CLIFFS - UNIT 1  
CALVERT CLIFFS - UNIT 2

3/4 3-22

Amendment No. 53  
Amendment No. 36

PLANT SYSTEMS

MAIN STEAM LINE ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

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3.7.1.5 Each main steam line isolation valve shall be OPERABLE.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

- MODE 1 - With one main steam line isolation valve inoperable, POWER OPERATION may continue provided the inoperable valve is either restored to OPERABLE status or closed within 4 hours; otherwise, be in HOT SHUTDOWN within the next 12 hours.
- MODES 2 and 3 - With one main steam line isolation valve inoperable, subsequent operation in MODES 1, 2 or 3 may proceed provided:
- a. The isolation valve is maintained closed.
  - b. The provisions of Specification 3.0.4 are not applicable.
- Otherwise, be in HOT SHUTDOWN within the next 12 hours.

SURVEILLANCE REQUIREMENTS

---

4.7.1.5 Each main steam line isolation valve shall be demonstrated OPERABLE by verifying full closure within 3.6 seconds when tested pursuant to Specification 4.0.5.

Deleted



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 72 TO

FACILITY OPERATING LICENSE NO. DPR-53

CALVERT CLIFFS NUCLEAR POWER PLANT UNIT NO. 1

DOCKET NO. 50-317

Introduction

By application for license amendment dated June 30, 1982, Baltimore Gas and Electric Company (BG&E) requested changes to the Technical Specifications (TS) for Calvert Cliffs Unit 1. The proposed changes would decrease the maximum allowable response and closure times for the Main Steam Isolation Valves (MSIVs). In addition, this license amendment corrects a typographical error which occurred in issuance of License Amendment 71 for Calvert Cliffs Unit 1.

Discussion

On June 24, 1982, the NRC issued License Amendment 71 for Calvert Cliffs Unit 1 which authorized Cycle 6 operation at 2700 Mwt. As part of Amendment 71, TS 4.7.1.5, "Main Steam Isolation Valves" was changed to permit an increase in the maximum allowable MSIV closure time from 3.6 to 4.0 seconds. In addition, a change was made in TS Table 3.3-5, "Engineering Safety Features Response Times" to increase the MSIV response time\* from 6.9 to 12.9 seconds.

A subsequent evaluation by BG&E indicated that implementation of the revised MSIV closure and response times might lead to decreased plant availability resulting from an increased frequency of reactor trips due to low steam generator level. Accordingly, by application dated June 30, 1982, BG&E requested that the previous values of MSIV closure and response times, 3.6 and 6.9 seconds, respectively, be reinstated in the TS.

Evaluation

Of the two design basis events which result in automatic MSIV closure, the main steam line break is the most limiting in that it produces the lowest minimum DNBR.

\*The MSIV response time includes the MSIV closure time plus instrument and other delay time.

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Certified By

*Patricia J. Noonan*

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P PDR

An MSIV response time of 6.9 seconds is more conservative than 12.9 seconds because the mass/energy blowdown from the unaffected steam generator is greater in the 12.9 second case. This increases the rate and extent of reactor coolant system cooldown and results in a more limiting, transient, minimum DNBR.

In addition, for the same preaccident steam generator water/steam mass, an MSIV response time of 6.9 seconds would produce a lower maximum containment pressure than an MSIV response time of 12.9 seconds. Accordingly, the consequences of the main steam line break are less severe for an MSIV response time of 6.9 seconds (with a corresponding MSIV closure time of 3.6 seconds) than for an MSIV response time of 12.9 seconds (with a corresponding MSIV closure time of 4.0 seconds). No new accidents have been introduced, or any safety margins reduced, as a result of the decrease in maximum allowable MSIV closure and response times.

An additional change to the TS is being made to correct a typographical error which occurred in our issuance of License Amendment 71 for Calvert Cliffs Unit 1. TS Table 3.2-1, "DNB Parameters", footnote (\*\*\*) contains the phrase, "...when BASSS is inoperable..." This phrase should actually have been, "...when BASS is operable..." This change is consistent with BG&E's application for License Amendment 71, dated February 17, 1982. Furthermore, the change has no safety significance and is administrative in nature.

#### 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 §51.5(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 an accident previously evaluated, does not create the possibility of an accident of a type different from any evaluated previously, and does not involve a significant reduction in a margin of safety, 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: July 13, 1982

UNITED STATES NUCLEAR REGULATORY COMMISSIONDOCKET NO. 50-317BALTIMORE GAS AND ELECTRIC COMPANYNOTICE OF ISSUANCE OF AMENDMENT TO FACILITY  
OPERATING LICENSE

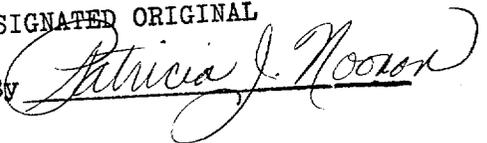
The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 72 to Facility Operating License No. DPR-53, issued to Baltimore Gas and Electric Company, which revised Technical Specifications for operation of the Calvert Cliffs Nuclear Power Plant, Unit No. 1 located in Calvert County, Maryland. The amendment is effective as of the date of issuance.

The amendment revises the Technical Specifications to decrease the maximum allowable response and closure times for the Main Steam Line Isolation Valves and to correct a typographical error which occurred in the issuance of Amendment No. 71.

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.

DESIGNATED ORIGINAL

Certified By



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- 2 -

The Commission has determined that the issuance of the 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 the amendment.

For further details with respect to this action, see (1) the application for amendment dated June 30, 1982, (2) Amendment No. 72 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. 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 Licensing.

Dated at Bethesda, Maryland, this 13th day of July, 1982.

FOR THE NUCLEAR REGULATORY COMMISSION

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