

Docket Nos. 50-317
and 50-318

OCTOBER 16 1978

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 Amendments Nos. 35 and 17 to Facility Operating Licenses Nos. DPR-53 and DPR-69 for the Calvert Cliffs Nuclear Power Plant Units Nos. 1 and 2. The amendments consist of changes to the Technical Specifications in response to your application dated June 13, 1978 and staff discussions.

The amendments change the Technical Specifications to delete the requirements for ten hydraulic snubbers on the Unit No. 1 and four hydraulic snubbers on the Unit No. 2 support systems associated with the Containment Charcoal Filter Dousing System.

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

Sincerely,

[Signature]

Robert W. Reid, Chief
Operating Reactors Branch #4
Division of Operating Reactors

Enclosures:

1. Amendment No. 35 to DPR-53
2. Amendment No. 17 to DPR-69
3. Safety Evaluation
4. Notice

cc w/enclosures:
see next page

Const 1
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|---------|----------|----------|----------|----------|----------|--|
| OFFICE | ORB#4 | ORB#4 | OELD | ORB#4 | STS | |
| SURNAME | RIngram | MConner | RReid | RReid | DHB | |
| DATE | 10/11/78 | 10/11/78 | 10/13/78 | 10/16/78 | 10/11/78 | |

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J. Strosnyder

October 12, 1978

Note to Robert Reid

We are returning this proposed amendment for the Calvert Cliffs Nuclear Power Plant operating license for further development. The evaluation in no way indicates how not requiring snubbers maintains at least the same system reliability as at present. We must detail a reasoned analysis of why we believe the snubbers are no longer necessary on the charcoal filter dousing system when it was originally believed that that system required the snubbers. Particularly indicate whether the dousing system is intended to perform during a LOCA and whether there could be seismic incidents at such time. The particular stresses calculated for the modified system and the code allowables should be set out.

*done
10/13/78
RJR*



Edwin J. Reis
Assistant Chief Hearing Counsel

Baltimore Gas and Electric Company

cc w/enclosure(s):

James A. Biddison, Jr.
General Counsel
G and E Building
Charles Center
Baltimore, Maryland 21203

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

Mr. R. C. L. Olson
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Mr. R. M. Douglass, Chief Engineer
Calvert Cliffs Nuclear Power Plant
Baltimore Gas and Electric Company
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Bechtel Power Corporation
ATTN: Mr. J. C. Judd
Chief Nuclear Engineer
15740 Shady Grove Road
Gaithersburg, Maryland 20760

Combustion Engineering, Inc.
ATTN: Mr. P. W. Kruse, Manager
Engineering Services
Post Office Box 500
Windsor, Connecticut 06095

Calvert County Library
Prince Frederick, Maryland 20678

Director, Department of State
Planning
301 West Preston Street
Baltimore, Maryland 21201

Mr. Bernard Fowler
President, Board of County
Commissioners
Prince Frederick, Maryland 20768

Chief, Energy Systems Analyses
Branch (AW-459)
Office of Radiation Programs
U. S. Environmental Protection Agency
Room 645, East Tower
401 M Street, S.W.
Washington, D. C. 20460

U. S. Environmental Protection Agency
Region III Office
ATTN: EIS COORDINATOR
Curtis Building (Sixth Floor)
Sixth and Walnut Streets
Philadelphia, Pennsylvania 19106

cc w/4 cys enclosures and 1 cy
of BG&E filings dtd: 06/13/78

Administrator, Power Plant Siting Program
Energy and Coastal Zone Administration
Department of Natural Resources
Tawes State Office Building
Annapolis, Maryland 21401



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

BALTIMORE GAS & ELECTRIC COMPANY

DOCKET NO. 50-317

CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 35
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 13, 1978, 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, 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. 35, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

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

FOR THE NUCLEAR REGULATORY COMMISSION



Robert W. Reid, Chief
Operating Reactors Branch #4
Division of Operating Reactors

Attachment:
Changes to the Technical
Specifications

Date of Issuance: October 16, 1978

ATTACHMENT TO LICENSE AMENDMENT NO. 35

FACILITY OPERATING LICENSE NO. DPR-53

DOCKET NO. 50-317

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed pages. 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.

Pages

3/4 7-48

3/4 7-49

TABLE 3.7-4

SAFETY RELATED HYDRAULIC SNUBBERS*

| <u>SNUBBER NO.</u> | <u>SYSTEM SNUBBER INSTALLED ON, LOCATION AND ELEVATION</u> | <u>ACCESSIBLE OR INACCESSIBLE (A or I)</u> | <u>HIGH RADIATION ZONE** (Yes or No)</u> | <u>ESPECIALLY DIFFICULT TO REMOVE (Yes or No)</u> |
|------------------------|--|--|--|---|
| 1-60-8 | SERVICE WATER FROM CONTAINMENT COOLER #13 66' | I | Yes | No |
| 1-60-8A | SERVICE WATER FROM CONTAINMENT COOLER #13 66' | I | Yes | No |
| 1-60-9 | SERVICE WATER TO CONTAINMENT COOLER #11 44' | I | Yes | No |
| 1-60-9A | SERVICE WATER TO CONTAINMENT COOLER #11 44' | I | Yes | No |
| 1-60-10 | SERVICE WATER TO CONTAINMENT COOLER #11 44' | I | Yes | No |
| 1-60-10A | SERVICE WATER TO CONTAINMENT COOLER #11 43' | I | Yes | No |
| 1-60-11 | SERVICE WATER FROM CONTAINMENT COOLER #11 43' | I | Yes | No |
| 1-60-11A | SERVICE WATER FROM CONTAINMENT COOLER #11 43' | I | Yes | No |
| 1-60-12 | SERVICE WATER FROM CONTAINMENT COOLER #11 43' | I | Yes | No |
| 1-60-12A | SERVICE WATER FROM CONTAINMENT COOLER #11 43' | I | Yes | No |

TABLE 3.7-4
SAFETY RELATED HYDRAULIC SNUBBERS*

| <u>SNUBBER NO.</u> | <u>SYSTEM SNUBBER INSTALLED ON, LOCATION AND ELEVATION</u> | <u>ACCESSIBLE OR INACCESSIBLE (A or I)</u> | <u>HIGH RADIATION ZONE** (Yes or No)</u> | <u>ESPECIALLY DIFFICULT TO REMOVE (Yes or No)</u> |
|------------------------|--|--|--|---|
| 1-60-18 | SPRAY TO CONTAINMENT CHARCOAL FILTER #11 60' | I | Yes | No |
| 1-60-20 | SPRAY TO CONTAINMENT CHARCOAL FILTER #11 60' | I | Yes | No |

TABLE 3.7-4
SAFETY RELATED HYDRAULIC SNUBBERS*

| <u>SNUBBER NO.</u> | <u>SYSTEM SNUBBER INSTALLED ON, LOCATION AND ELEVATION</u> | <u>ACCESSIBLE OR INACCESSIBLE (A or I)</u> | <u>HIGH RADIATION ZONE** (Yes or No)</u> | <u>ESPECIALLY DIFFICULT TO REMOVE (Yes or No)</u> |
|------------------------|--|--|--|---|
| 1-60-25 | SPRAY TO CONTAINMENT CHARCOAL FILTER #11 63' | I | Yes | No |
| 1-60-26 | SPRAY TO CONTAINMENT CHARCOAL FILTER #11 66' | I | Yes | No |
| 1-60-27 | SPRAY TO CONTAINMENT CHARCOAL FILTER #11 66' | I | Yes | No |
| 1-60-28 | SPRAY TO CONTAINMENT CHARCOAL FILTER #11 66' | I | Yes | No |
| 1 61-1 | CONTAINMENT SPRAY PUMP #12 DISCHARGE -15' | A | No | No |

TABLE 3.7-4SAFETY RELATED HYDRAULIC SNUBBERS*

| <u>SNUBBER NO.</u> | <u>SYSTEM SNUBBER INSTALLED ON, LOCATION AND ELEVATION</u> | <u>ACCESSIBLE OR INACCESSIBLE (A or I)</u> | <u>HIGH RADIATION ZONE** (Yes or No)</u> | <u>ESPECIALLY DIFFICULT TO REMOVE (Yes or No)</u> |
|------------------------|--|--|--|---|
| 1-61-14 | CONTAINMENT SPRAY D/STRM S/D H/X 5' | A | No | No |



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

BALTIMORE GAS & ELECTRIC COMPANY

DOCKET NO. 50-318

CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 17
License No. DPR-69

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Baltimore Gas & Electric Company (the licensee) dated June 13, 1978, 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.

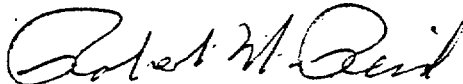
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-69 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 17, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

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

FOR THE NUCLEAR REGULATORY COMMISSION



Robert W. Reid, Chief
Operating Reactors Branch #4
Division of Operating Reactors

Attachment:
Changes to the Technical
Specifications

Date of Issuance: October 16, 1978

ATTACHMENT TO LICENSE AMENDMENT NO. 17

FACILITY OPERATING LICENSE NO. DPR-69

DOCKET NO. 50-318

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed pages. 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.

Pages

3/4 7-41

3/4 7-43

TABLE 3.7-4

SAFETY RELATED HYDRAULIC SNUBBERS*

| <u>SNUBBER NO.</u> | <u>SYSTEM SNUBBER INSTALLED ON, LOCATION AND ELEVATION</u> | <u>ACCESSIBLE OR INACCESSIBLE (A or I)</u> | <u>HIGH RADIATION ZONE** (Yes or No)</u> | <u>ESPECIALLY DIFFICULT TO REMOVE (Yes or No)</u> |
|------------------------|--|--|--|---|
| 2-60-7 | SERVICE WATER OUTLET CONT. COOLER #23 65' | I | Yes | No |
| 2-60-8 | SERVICE WATER INLET CONT. COOLER #21 43' | I | Yes | No |
| 2-60-9 | SPRAY TO CONT. CHARCOAL FILTER #23 66' | I | Yes | No |
| 2-60-10 | SPRAY TO CONT. CHARCOAL FILTER #23 66' | I | Yes | No |
| 2-60-12 | SPRAY TO CONT. CHARCOAL FILTER #23 72' | I | Yes | No |
| 2-60-14 | SPRAY TO CONT. CHARCOAL FILTER #23 66' | I | Yes | No |
| 2-60-15 | SPRAY TO CONT. CHARCOAL FILTER #23 66' | I | Yes | No |
| 2-60-18 | SPRAY TO CONT. CHARCOAL FILTER #23 68' | I | Yes | No |

CALVERT CLIFFS-UNIT 2

3/4 7-42

TABLE 3.7-4
SAFETY RELATED HYDRAULIC SNUBBERS*

| <u>SNUBBER NO.</u> | <u>SYSTEM SNUBBER INSTALLED ON, LOCATION AND ELEVATION</u> | <u>ACCESSIBLE OR INACCESSIBLE (A or I)</u> | <u>HIGH RADIATION ZONE** (Yes or No)</u> | <u>ESPECIALLY DIFFICULT TO REMOVE (Yes or No)</u> |
|------------------------|--|--|--|---|
| 2-60-18A | SPRAY TO CONT. CHARCOAL FILTER #23 66' | I | Yes | No |
| 2-60-20 | SPRAY HDR TO CONT. CHARCOAL FILTERS 3' | I | Yes | No |
| 2-60-21 | SERVICE WATER OUTLET CONT. COOLER #23 67' | I | Yes | No |
| 2-60-22 | SERVICE WATER OUTLET CONT. COOLER #21 43' | I | Yes | No |
| 2-60-22A | SERVICE WATER OUTLET CONT. COOLER #21 43' | I | Yes | No |
| 2-60-24 | SERVICE WATER OUTLET CONT. COOLER #21 44' | I | Yes | No |
| 2-60-24A | SERVICE WATER OUTLET CONT. COOLER #21 44' | I | Yes | No |
| 2-60-26 | SERVICE WATER INLET CONT. COOLER #21 44' | I | Yes | No |
| 2-60-26A | SERVICE WATER INLET CONT. COOLER #21 44' | I | Yes | No |

CALVERT CLIFFS-UNIT 2

3/4 7-43

Amendment No. 8, 17

TABLE 3.7-4

SAFETY RELATED HYDRAULIC SNUBBERS*

| <u>SNUBBER NO.</u> | <u>SYSTEM SNUBBER INSTALLED ON, LOCATION AND ELEVATION</u> | <u>ACCESSIBLE OR INACCESSIBLE (A or I)</u> | <u>HIGH RADIATION ZONE** (Yes or No)</u> | <u>ESPECIALLY DIFFICULT TO REMOVE (Yes or No)</u> |
|------------------------|--|--|--|---|
| 2-60-28 | SPRAY TO CONT. CHARCOAL FILTER #22 77' | I | Yes | No |
| 2-61-1 | HPSI PUMP #23 SUCT. FROM S/D COOLING H.X. #22 9'9" | A | No | No |
| 2-61-2 | HPSI PUMP #23 SUCT. FROM S/D COOLING H.X. #22 9'9" | A | No | No |
| 2-61-3 | CONT. SPRAY PUMP #22 DISCH 3'6" | A | No | No |
| 2-61-4 | CONT. SPRAY HDR PENETRATION PIPING 10'0" | A | No | No |
| 2-61-5 | CONT. SPRAY HDR DOWNSTREAM S/D COOL H.X. #22 17'5" | A | No | No |
| 2-61-5A | CONT. SPRAY HDR DOWNSTREAM S/D COOL H.X. #22 17'5" | A | No | No |

TABLE 3.7-4

SAFETY RELATED HYDRAULIC SNUBBERS*

| <u>SNUBBER NO.</u> | <u>SYSTEM SNUBBER INSTALLED ON, LOCATION AND ELEVATION</u> | <u>ACCESSIBLE OR INACCESSIBLE (A or I)</u> | <u>HIGH RADIATION ZONE** (Yes or No)</u> | <u>ESPECIALLY DIFFICULT TO REMOVE (Yes or No)</u> |
|------------------------|--|--|--|---|
| 2-61-16 | CONT. SPRAY HDR FOR SPRAY RING #22 70' | I | Yes | No |
| 2-61-17 | CONT. SPRAY HDR FOR SPRAY RING #22 46' | I | Yes | Yes |
| 2-61-18 | CONT. SPRAY HDR FOR SPRAY RING #22 39' | I | Yes | Yes |



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENTS NOS. 35 AND 17 TO

FACILITY OPERATING LICENSES NOS. DPR-53 AND DPR-69

BALTIMORE GAS AND ELECTRIC COMPANY

CALVERT CLIFFS NUCLEAR POWER PLANT, UNITS NOS. 1 AND 2

DOCKETS NOS. 50-317 AND 50-318

Introduction

By application for license amendment dated June 13, 1978, Baltimore Gas & Electric Company (BG&E, or the licensee), requested changes to the Technical Specifications (TS) for Calvert Cliffs Nuclear Power Plant (CCNPP) Units Nos. 1 and 2. The proposed changes to the TS consist of revising Table 3.7-4 to permit deletion of certain hydraulic shock suppressors (snubbers) listed in that table as part of a redesign of the support systems of the Containment Charcoal Filter Dousing System for each unit.

Background

BG&E is in the process of systematically reviewing all snubber installations at CCNPP. The intention of this review is to eliminate as many snubbers as possible. The reliability of the piping system is improved by minimizing the number of hydraulic snubbers. Hydraulic snubbers have a potential for leakage and miscalibration. This potential makes them inherently less reliable than other types of rigid and mechanical supports. Also a snubber without hydraulic fluid provides essentially no piping support.

BG&E has proposed a change to Table 3.7-4 of the CCNPP Units Nos. 1 and 2 TS to delete the requirements for ten snubbers on the Unit No. 1 and four snubbers on the Unit No. 2 charcoal filter dousing systems. Four of the snubbers removed from the Unit No. 1 system will be replaced with rigid restraints. The remaining support system will employ six and nine snubbers for the Unit 1 and Unit 2 charcoal filter dousing system, respectively.

The containment charcoal filter dousing piping was modified under the provisions of 10 CFR 50.59 by the addition of a manual isolation valve. This valve facilitates the testing of the system by isolating the spray header and preventing the inadvertent wetting of the charcoal.

Evaluation

A reanalysis of the piping system was performed by Bechtel Power Corporation using their ME 632 computer code. The code utilizes a linear elastic modeling technique and performs thermal, dead weight, and seismic analyses. While not specifically stated in the Final Safety Analysis Report (FSAR), the dousing system piping was originally designed in accordance with ANSI B31.7 Class II. This reanalysis was performed in accordance with the original design criteria. The calculated stresses for the modified system with the snubbers removed are well below the code allowables for all design conditions. We find that this reanalysis, using a standard calculational method, provides assurance that the containment charcoal filter dousing system continues to meet the original design criteria.

The redesign of this support system reduces the surveillance burden, improves the overall system reliability and thus reduces the potential of a safety system piping failure due to a malfunction of the support system. Thus, the reliability of the containment charcoal filter dousing system and the facility as a whole will be increased by reducing the number of hydraulic snubbers necessary to satisfy the design criteria.

Environmental Consideration

We have determined that the amendments do 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 amendments involve an action which is insignificant from the standpoint of environmental impact and pursuant to 10 CFR Section 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 these amendments.

Conclusion

We have concluded, based on the considerations discussed above, that: (1) because the amendments do not involve a significant increase in the probability or consequences of accidents previously considered and do not involve a significant decrease in a safety margin, the amendments do 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 the amendments will not be inimical

to the common defense and security or to the health and safety of the public.

Dated: October 16, 1978

- 2 -

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

For further details with respect to this action, see (1) the application for amendment dated June 13, 1978, (2) Amendments Nos. 35 and 17 to Licenses Nos. DPR-53 and DPR-69, 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 Operating Reactors.

Dated at Bethesda, Maryland, this 16th day of October 1978.

FOR THE NUCLEAR REGULATORY COMMISSION



Robert W. Reid, Chief
Operating Reactors Branch #4
Division of Operating Reactors