

NOV 11 1977

Docket No. 50-318

Baltimore Gas & Electric Company
ATTN: Mr. A. E. Lundvall, Jr.
Vice President - Supply
Post Office Box 1475
Baltimore, Maryland 21203

Gentlemen:

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In response to your request dated October 31, 1977, the Commission has issued the enclosed Amendment No. 10 to Facility Operating License No. DPR-69 for Calvert Cliffs Unit No. 2. The amendment extends the interval for inspection of inaccessible hydraulic shock suppressors to 12 months \pm 25% from October 8, 1977, or until the next scheduled snubber inspection. The amendment changes the Technical Specifications to require augmented surveillance of the hydraulic fluid level in reservoirs common to the steam generator snubbers.

During our evaluation of this license amendment for Unit No. 1, we noted that your use of common hydraulic reservoirs in safety related snubbers for both Calvert Cliffs Unit Nos. 1 and 2 could provide a mechanism for reducing the reliability of these snubbers. Also we question the adequacy of your Operational Quality Assurance Program as it relates to minor construction activities. In this regard, you should provide us with the information requested in Enclosure 1 to this letter within 60 days of the date of this letter.

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

*Notified Rich Olson,
BG&E, and Don Haverkamp,
Region I of I&E, at 1030
on 11/11/77*

Sincerely,
Original signed by

Don K. Davis
Don K. Davis, Acting Chief
Operating Reactors Branch #2
Division of Operating Reactors

Enclosures:

1. Request for Additional Information
2. Amendment No. 10 to License No. DPR-69
3. Safety Evaluation
4. Notice

Const. 1

OELD
C. Woodhead
11/10/77

DOR:ORB #2
DKDavis
11/10/77

OFFICE	DOR:ORB #2	DOR:ORB #2	DOR:ORB #2	DOR:PSB/OT	DOR:PSB/OT	DOR:STSG
SURNAME	RMDiggs	MConner	RPSnaider	LShao	WButler	JMcGough
DATE	11/19/77	11/19/77	11/19/77	11/19/77	11/10/77	11/10/77



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

November 11, 1977

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Sincerely,

A handwritten signature in dark ink, appearing to read "Don K. Davis".

Don K. Davis, Acting Chief
Operating Reactors Branch #2
Division of Operating Reactors

Enclosures:

1. Request for Additional Information
2. Amendment No. 10 to License No. DPR-69
3. Safety Evaluation
4. Notice

November 11, 1977

cc w/enclosures:

James A. Biddison, Jr.
General Counsel
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Charles Center
Baltimore, Maryland 21203

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

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

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

Calvert County Library
Prince Frederick, Maryland 20678

Administrator, Power Plant Siting Program (4) - w/a copy of BG&E filing
Energy and Coastal Zone Administration dated 10/31/77.
Department of Natural Resources
Tawes State Office Building
Annapolis, Maryland 21401

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 & Walnut Streets
Philadelphia, Pennsylvania 19106

COMMON HYDRAULIC SNUBBER RESERVOIRS

CALVERT CLIFFS UNIT NOS. 1 AND 2

DOCKET NOS. 50-317 AND 50-318

REQUEST FOR ADDITIONAL INFORMATION

1. Provide a listing of all snubbers using a common reservoir. We believe this information should be available from installation drawings and need not wait for the next scheduled surveillance period as proposed by BG&E.
2. Propose a program to either eliminate common reservoirs on safety related equipment or increase the surveillance of reservoir levels as a means of increasing assurance that snubbers will be highly reliable.
3. Review the procedures used to implement the Operational Quality Assurance Program as it relates to minor construction or maintenance activities, such as that identified as the likely cause of this occurrence, in areas containing safety related equipment. Identify and correct any deficiencies in these procedures.

Since the hydraulic snubber installation on Unit No. 1 may also be susceptible to this type of failure, both Units at Calvert Cliffs will be included in this program.



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

BALTIMORE GAS & ELECTRIC COMPANY

DOCKET NO. 50-318

CALVERT CLIFFS UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 10
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 October 31, 1977, 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 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. 10, 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



Don K. Davis, Acting Chief
Operating Reactors Branch #2
Division of Operating Reactors

Attachment:
Changes to the Technical
Specifications

Date of Issuance: November 11, 1977

ATTACHMENT TO LICENSE AMENDMENT NO. 10

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 7-25

3/4 7-26

PLANT SYSTEMS

3/4.7.8 HYDRAULIC SNUBBERS

LIMITING CONDITION FOR OPERATION

3.7.8.1 All hydraulic snubbers listed in Table 3.7-4 shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With one or more hydraulic snubbers inoperable, replace or restore the inoperable snubber(s) to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.7.8.1 Hydraulic snubbers shall be demonstrated OPERABLE by performance of the following augmented inservice inspection program and the requirements of Specification 4.0.5.

- a. *Each hydraulic snubber with seal material fabricated from ethylene propylene or other materials demonstrated compatible with the operating environment and approved as such by the NRC, shall be determined OPERABLE at least once after not less than 4 months but within 6 months of initial criticality and in accordance with the inspection schedule of Table 4.7-4 thereafter, by a visual inspection of the snubber. Visual inspections of the snubbers shall include, but are not necessarily limited to, inspection of the hydraulic fluid reservoirs, fluid connections, and linkage connections to the piping and anchors. Initiation of the Table 4.7-4 inspection schedule shall be made assuming the unit was previously at the 6 month inspection interval.
- b. Each hydraulic snubber with seal material not fabricated from ethylene propylene or other materials demonstrated compatible with the operating environment shall be determined OPERABLE at least once per 31 days by a visual inspection of the snubber. Visual inspections of the snubbers shall include, but are not necessarily limited to, inspection of the hydraulic fluid reservoirs, fluid connections, and linkage connections to the piping and anchors.

*See page 3/4 7-26.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- c. At least once per 18 months during shutdown, a representative sample of at least 10 hydraulic snubbers or at least 10% of all snubbers listed in Table 3.7-4, whichever is less, shall be selected and functionally tested to verify correct piston movement, lock up and bleed. Snubbers greater than 50,000 lb. capacity may be excluded from functional testing requirements. Snubbers selected for functional testing shall be selected on a rotating basis. Snubbers identified as either "Especially Difficult to Remove" or in "High Radiation Zones" may be exempted from functional testing provided these snubbers were demonstrated OPERABLE during previous functional tests. Snubbers found inoperable during functional testing shall be restored to OPERABLE status prior to resuming operation. For each snubber found inoperable during these functional tests, an additional minimum of 10% of all snubbers or 10 snubbers, whichever is less, shall also be functionally tested until no more failures are found or all snubbers have been functionally tested.

*Snubber designated "Inaccessible" in Table 3.7-4 may remain on the 12 months + 25% inspection interval of Table 4.7-4 until the next visual inspection of these snubbers, which shall be performed on October 8, 1978, + 92 days, provided the hydraulic reservoir levels of all steam generator hydraulic snubbers are verified acceptable at least once per 31 days.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 10 TO LICENSE NO. DPR-69

BALTIMORE GAS AND ELECTRIC COMPANY

CALVERT CLIFFS NUCLEAR POWER PLANT UNIT NO. 2

DOCKET NO. 50-318

INTRODUCTION

By letter dated October 31, 1977, Baltimore Gas & Electric Company (BG&E) requested that Technical Specification 4.7.8.1.a be modified to extend the surveillance interval for all inaccessible hydraulic snubbers to 12 months \pm 25%.

BACKGROUND

Snubbers are designed to prevent unrestrained motion of piping systems under dynamic loads as might occur during an earthquake or severe transient while allowing normal thermal expansion and contraction during startup and shutdown. The consequence of an inoperable snubber is to increase the probability of structural damage to piping systems resulting from seismic or other severe dynamic loads.

Specification 4.7.8.1.a of the Standard Technical Specifications (STS) describes a variable surveillance interval for snubbers which is a function of the number of inoperable snubbers found during the most recent inspection. The greater the number of snubbers found inoperable, the shorter the time interval until the next inspection. For example, the specification requires an inspection interval of 31 days \pm 25% if eight or more snubbers are found inoperable during an inspection. Specification 4.7.8.1.a also divides snubbers into two categories: "accessible" and "inaccessible". A snubber is considered inaccessible if it is not accessible for inspection during reactor operation.

In the October 31, 1977 submittal, BG&E indicates that eight Steam Generator No. 22 snubbers were found with insufficient hydraulic fluid during a routine surveillance inspection on October 8, 1977. The requested action would not impose the 31-day inspection schedule on all inaccessible hydraulic snubbers as required by STS Table 4.7-4 when eight or more snubbers are found inoperable.

DISCUSSION AND EVALUATION

The BG&E submittal and subsequent discussions with BG&E indicate that one steam generator (SG) snubber was found with essentially no hydraulic fluid as the result of a cracked fitting in the line between the block and cylinder of snubber 2-63-19. Seven other snubbers on SG No. 22 were found partially drained of hydraulic fluid. All eight of these snubbers (half the snubbers on one steam generator) are supplied with hydraulic fluid from a common reservoir. BG&E maintains that this is not a repetitive type occurrence because the damaged hydraulic fluid line most probably occurred during the installation of platforms for access to the steam generator manways. These platforms had been erected in the vicinity of the damaged snubber fluid line since the last snubber surveillance inspection performed on May 6, 1977.

After our review of this occurrence, we do not believe that requiring surveillance inspections at 31, 62 and 124 day intervals of all inaccessible snubbers is necessary. The intent of the STS is to require surveillance at increased frequency when multiple failures occur. In this instance, since the loss of fluid in the eight snubbers was due to one identified failure, one cracked fitting connecting the eight snubbers to a common reservoir, the intent of the surveillance requirement can be met by the augmented surveillance plan BG&E proposed. This augmented surveillance includes all four steam generator snubber reservoirs and continues for the 12 months from the date of the occurrence or until the next snubber surveillance inspection. It requires monthly surveillance of the common snubber hydraulic reservoir levels.

The use of common reservoirs to supply hydraulic fluid to several snubbers does, however, identify a mechanism for the potential reduction in reliability of several snubbers from one common cause. In this regard, we are requesting BG&E to respond to the concerns described in Enclosure 1 of the letter accompanying this amendment.

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 the 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 the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Date: November 11, 1977

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50- 318

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. 10 to Facility Operating License No. DPR-69 to Baltimore Gas & Electric Company (the licensee), which revised the license and the appended Technical Specifications for operation of the Calvert Cliffs Nuclear Power Plant Unit No. 2 (the facility) located in Calvert Cliffs, Maryland. The amendment is effective as of its date of issuance.

The amendment permitted a temporary exemption to surveillance requirements for inaccessible hydraulic shock suppressors (snubbers) and required augmented surveillance of steam generator snubber reservoirs.

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 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 this amendment.

For further details with respect to this action, see (1) the application for amendment dated October 31, 1977, (2) Amendment No. 10 to License No. 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 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 11th day of November, 1977.

FOR THE NUCLEAR REGULATORY COMMISSION



Don K. Davis, Acting Chief
Operating Reactors Branch #2
Division of Operating Reactors