

Docket No. 50-318

DEC 30 1976

Baltimore Gas and Electric Company
ATTN: Mr. John W. Gore, Jr.
Vice President
Gas and Electric Building
Charles Center
Baltimore, Maryland 21203

Gentlemen:

**ISSUANCE OF AMENDMENT NO. 4 TO FACILITY OPERATING LICENSE NO. DPR-69
FOR CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT 2**

The Commission has issued the enclosed Amendment No. 4 to Facility Operating License No. DPR-69 for Calvert Cliffs Nuclear Power Plant, Unit 2. This amendment adds to the license a restriction inadvertently omitted from Amendment No. 2. The correction was discussed with your staff on December 17, 1976.

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

Sincerely,

Original signed by
K. Kniel

Karl Kniel, Chief
Light Water Reactors Branch No. 2
Division of Project Management

Enclosures:

- 1. Amendment No. 4 to License No. DPR-69
- 2. Safety Evaluation
- 3. Notice

cc w/enclosures:
See next page

*R
Conrad*

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|-----------|-------------------------------|---------------------|----------------------|--|--|
| OFFICE > | DPM: LWR <i>Karl Kniel</i> | ELD <i>For</i> | DPM: LWR <i>2</i> | | |
| SURNAME > | HRood: ab | KIEFER <i>me</i> | KKniel | | |
| DATE > | 12/21/76 | 12/22/76 | 12/30/76 | | |

BALTIMORE GAS AND ELECTRIC COMPANY

DOCKET NO. 50-318

CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 4
License No. DPR-69

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - B. 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;
 - C. 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
 - D. 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 replacing page 6 with the page attached to this license amendment.
3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Original signed by
K. Kniel

Karl Kniel, Chief
Light Water Reactors Branch No. 2
Division of Project Management

Attachment:
Revised Page 6 of DPR-69

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|------------------|----------------------|----------|----------------------|--|--|
| Date of Issuance | DEC 30 1976 | | | | |
| OFFICE | DPM: LWB K. Kniel | ELD | DPM: LWB K. Kniel | | |
| SURNAME | HRood: ab | Kir. fer | KKniel | | |
| DATE | 12/21/76 | 12/22/76 | 12/30/76 | | |

- c. The following items shall be completed to the satisfaction of the Commission prior to startup following the first regularly scheduled refueling outage:
 - (1) Installation of a permanent means of protection against reactor coolant system overpressurization during plant startup and shutdown.
 - (2) Installation of a permanent neutron streaming shield.

6. Additional Reactivity and Power Distribution Surveillance

Prior to the first regularly scheduled refueling outage, during operation at or above 50 percent of rated thermal power, the following surveillance shall be performed, in addition to that required by the Appendix A Technical Specifications and the results included in the Monthly Operating Report:

- a. An overall core reactivity balance shall be compared to predicted values at least once every seven (7) Effective Full Power Days (EFPD).
- b. Measured data from at least several fixed in-core detectors shall be gathered at least once a day. In the event of in-core detection and/or data reduction system inoperability, the time interval between measured data collections may be extended to at least once every two (2) days. Measured data will be analyzed at least weekly in order to determine axial power shape and magnitude. The axial power shape and magnitude shall be compared with the expected shape and magnitude in order to identify any axial power distribution anomaly.

7. Less Than Four Pump Operation

The licensee shall not operate the reactor at power levels in excess of five (5) percent of rated thermal power with less than four (4) reactor coolant pumps in operation. This condition shall remain in effect until the licensee has submitted safety analyses for less than four pump operation, and approval for such operation has been granted by the Commission by amendment of this license.

- D. The licensee shall maintain in effect and fully implement all provisions of the Nuclear Regulatory Commission staff approved physical security plan, including amendments and changes made pursuant to the authority of 10 CFR Part 50.54(p). The approved security plan consists of proprietary documents (pursuant to 10

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|-----------|---|--|--|--|--|
| OFFICE > | CFR 2.790), collectively titled "Security Plan - Calvert Cliffs Nuclear Power Plant - Baltimore Gas and Electric Company" as follows: | | | | |
| SURNAME > | | | | | |
| DATE > | | | | | |

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
SUPPORTING AMENDMENT NO. 4 TO FACILITY OPERATING LICENSE NO. DPR-69

BALTIMORE GAS AND ELECTRIC COMPANY

CALVERT CLIFFS NUCLEAR POWER PLANT UNIT 2

DOCKET NO. 50-318

SAFETY EVALUATION

On November 30, 1976, Amendment No. 2 to Facility Operating License No. DPR-69 for Calvert Cliffs Nuclear Power Plant, Unit 2 was issued. The amendment authorized the facility to operate at full power (2560 megawatts thermal). Accompanying Amendment No. 2 was Supplement No. 7 to the Safety Evaluation Report. Section 4.0 of Supplement No. 7 described our review of the emergency core cooling system (ECCS) for Calvert Cliffs Unit 2. We concluded that the Calvert Cliffs Unit 2 ECCS meets the requirements of 10 CFR 50.46(b) and Appendix K to 10 CFR Part 50 and is acceptable. Since the ECCS analysis submitted by the licensee was based on facility operation with four reactor coolant pumps in operation, our above conclusion applies only to four pump operation. Consequently, license condition 2.C.7, which was inadvertently omitted from Amendment No. 2, requires that four reactor coolant pumps be in operation when the facility is at power levels greater than five percent of full power. This amendment to DPR-69 adds this condition to the license. This condition was discussed with representatives of Baltimore Gas and Electric Company on December 17, 1976, and they agreed that the condition was appropriate.

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.

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| OFFICE ➤ | | | | | | |
| SURNAME ➤ | | | | | | |
| DATE ➤ | | | | | | |

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: DEC 30 1976

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| OFFICE ➤ | DPM:LWR #2 <i>Handwritten initials</i> | OELD <i>Handwritten initials</i> | DPM:LWR #2 <i>Handwritten initials</i> | | | |
| SURNAME ➤ | <i>FOR</i> Hrood:mt | <i>Handwritten initials</i> | KKniel <i>Handwritten initials</i> | | | |
| DATE ➤ | 12/21/76 | 12/22/76 | 12/30/76 | | | |

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-318

BALTIMORE GAS AND ELECTRIC COMPANY

NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY
OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 4 to Facility Operating License No. DPR-69, issued to Baltimore Gas and Electric Company (the licensee), which revised the operating license for Calvert Cliffs Nuclear Power Plant, Unit 2 (the facility) located in Calvert County, Maryland. The amendment is effective as of its date of issuance.

The amendment incorporated a condition restricting facility operation with less than four reactor coolant pumps. This condition was inadvertently omitted from Amendment No. 2.

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) Amendment

~~No. 2 to License No. DPR 69 issued November 30, 1976 and Supplement No. 7~~

OFFICE →

SURNAME →

DATE →

to the Safety Evaluation Report, issued on the same date, and (2) Amendment No. 4 to License No. DPR-69 and 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 single copy of items (1) and (2) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Project Management.

Dated at Bethesda, Maryland, this 30th day of December, 1976.

FOR THE NUCLEAR REGULATORY COMMISSION

Original signed by]
K. Kniel

Karl Kniel, Chief
Light Water Reactors
Branch No. 2
Division of Project Management

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|-----------|---|--|---|--|--|--|
| OFFICE > | DPM:LWR #2 <i>Handwritten initials</i> | OELD <i>Handwritten initials</i> | DPM:LWR #2 <i>Handwritten initials</i> | | | |
| SURNAME > | Rood:mt <i>Handwritten initials</i> | Krieger <i>Handwritten initials</i> | KKniel <i>Handwritten initials</i> | | | |
| DATE > | 12/21/76 | 12/22/76 | 12/30/76 | | | |



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

BALTIMORE GAS AND ELECTRIC COMPANY

DOCKET NO. 50-318

CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 4
License No. DPR-69

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - B. 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;
 - C. 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
 - D. 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 replacing page 6 with the page attached to this license amendment.
3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

A handwritten signature in cursive script, appearing to read "Karl Kniel".

Karl Kniel, Chief
Light Water Reactors Branch No. 2
Division of Project Management

Attachment:
Revised Page 6 of DPR-69

Date of Issuance: December 30, 1976

- c. The following items shall be completed to the satisfaction of the Commission prior to startup following the first regularly scheduled refueling outage:
- (1) Installation of a permanent means of protection against reactor coolant system overpressurization during plant startup and shutdown.
 - (2) Installation of a permanent neutron streaming shield.

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- b. Measured data from at least several fixed in-core detectors shall be gathered at least once a day. In the event of in-core detection and/or data reduction system inoperability, the time interval between measured data collections may be extended to at least once every two (2) days. Measured data will be analyzed at least weekly in order to determine axial power shape and magnitude. The axial power shape and magnitude shall be compared with the expected shape and magnitude in order to identify any axial power distribution anomaly.

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- D. The licensee shall maintain in effect and fully implement all provisions of the Nuclear Regulatory Commission staff approved physical security plan, including amendments and changes made pursuant to the authority of 10 CFR Part 50.54(p). The approved security plan consists of proprietary documents (pursuant to 10 CFR 2.790), collectively titled "Security Plan - Calvert Cliffs Nuclear Power Plant - Baltimore Gas and Electric Company" as follows:



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
SUPPORTING AMENDMENT NO. 4 TO FACILITY OPERATING LICENSE NO. DPR-69
BALTIMORE GAS AND ELECTRIC COMPANY
CALVERT CLIFFS NUCLEAR POWER PLANT UNIT 2
DOCKET NO. 50-318

SAFETY EVALUATION

On November 30, 1976, Amendment No. 2 to Facility Operating License No. DPR-69 for Calvert Cliffs Nuclear Power Plant, Unit 2 was issued. The amendment authorized the facility to operate at full power (2560 megawatts thermal). Accompanying Amendment No. 2 was Supplement No. 7 to the Safety Evaluation Report. Section 4.0 of Supplement No. 7 described our review of the emergency core cooling system (ECCS) for Calvert Cliffs Unit 2. We concluded that the Calvert Cliffs Unit 2 ECCS meets the requirements of 10 CFR 50.46(b) and Appendix K to 10 CFR Part 50 and is acceptable. Since the ECCS analysis submitted by the licensee was based on facility operation with four reactor coolant pumps in operation, our above conclusion applies only to four pump operation. Consequently, license condition 2.C.7, which was inadvertently omitted from Amendment No. 2, requires that four reactor coolant pumps be in operation when the facility is at power levels greater than five percent of full power. This amendment to DPR-69 adds this condition to the license. This condition was discussed with representatives of Baltimore Gas and Electric Company on December 17, 1976, and they agreed that the condition was appropriate.

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 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: December 30, 1976

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-318

BALTIMORE GAS AND ELECTRIC COMPANY

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OPERATING LICENSE

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The amendment incorporated a condition restricting facility operation with less than four reactor coolant pumps. This condition was inadvertently omitted from Amendment No. 2.

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) Amendment No. 2 to License No. DPR-69 issued November 30, 1976 and Supplement No. 7

to the Safety Evaluation Report, issued on the same date, and (2) Amendment No. 4 to License No. DPR-69 and 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 single copy of items (1) and (2) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Project Management.

Dated at Bethesda, Maryland, this 30th day of December, 1976.

FOR THE NUCLEAR REGULATORY COMMISSION



Karl Kniel, Chief
Light Water Reactors
Branch No. 2
Division of Project Management

DISTRIBUTION FOR AMENDMENT NO. 4 TO FACILITY OPERATING LICENSE NO. DPR-69
DATED DEC 30 1976

Docket File
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Local PDR
LWR #2 File
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J. Lee
F. J. Williams
H. Smith
B. Scott, PM
IE (5)
N. Dube, MIPC
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W. Miller, ADM
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