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

August 1, 1980

Docket No. 50-317
50-318

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 Nos. 44 and 27 to Facility Operating License Nos. DPR-53 and DPR-69 for Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2. These amendments consist of changes to the Technical Specifications (TS) in response to your application dated July 14, 1980.

These amendments modify Paragraph 4.5.1.b and add a new Paragraph 4.5.1.f to the TS Surveillance Requirements for the Safety Injection (SI) tanks to authorize a change in the location where samples are taken when SI tank level increases are routinely made. Some portions of your proposed Technical Specifications have been modified to meet our requirements. These modifications have been discussed with and agreed to by your staff.

A copy of the Safety Evaluation and the Notice of Issuance are also enclosed.

Sincerely,

Robert A. Clark

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

Enclosures:
1. Amendment No. 44 to DPR-53
2. Amendment No. 27 to DPR-69
3. Safety Evaluation
4. Notice of Issuance

cc w/enclosures:
See next page

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cc w/4 cys enclosures and 1 cy
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

BALTIMORE GAS AND ELECTRIC COMPANY

DOCKET NO. 50-317

CALVERT CLIFFS NUCLEAR POWER PLANT UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 44
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 14, 1980, 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 satisified.

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

Attachment:
Changes to the
Technical Specifications

Date of Issuance: August 1, 1980

ATTACHMENT TO LICENSE AMENDMENT NO. 44

FACILITY OPERATING LICENSE NO. DPR-53

DOCKET NO. 50-317

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

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3/4.5 EMERGENCY CORE COOLING SYSTEMS (ECCS)

SAFETY INJECTION TANKS

LIMITING CONDITION FOR OPERATION

3.5.1 Each reactor coolant system safety injection tank shall be OPERABLE with:

a. The isolation valve open,

b. A contained borated water volume of between 1113 and 1179 cubic feet of borated water (equivalent to tank levels of between 187 and 199 inches, respectively),

c. A boron concentration of between 1720 and 2200 ppm, and

d. A nitrogen cover-pressure of between 200 and 250 psig.

APPLICABILITY: MODES 1, 2 and 3.*

ACTION:

a. With one safety injection tank inoperable, except as a result of a closed isolation valve, restore the inoperable tank to OPERABLE status within one hour or be in HOT SHUTDOWN within the next 12 hours.

b. With one safety injection tank inoperable due to the isolation valve being closed, either immediately open the isolation valve or be in HOT STANDBY within one hour and be in HOT SHUTDOWN within the next 12 hours.

SURVEILLANCE REQUIREMENTS

4.5.1 Each safety injection tank shall be demonstrated OPERABLE:

a. At least once per 12 hours by:

1. Verifying the contained borated water volume and nitrogen cover-pressure in the tanks, and

2. Verifying that each safety injection tank isolation valve is open.

*With pressurizer pressure $\geq$ 1750 psia.

SURVEILLANCE REQUIREMENTS (Continued)

b. At least once per 31 days by verifying the boron concentration of the safety injection tank solution.

c. At least once per 31 days when the RCS pressure is above 2000 psig, by verifying that power to the isolation valve operator is removed by maintaining the feeder breaker open under administrative control.

d. Within 4 hours prior to increasing the RCS pressure above 1750 psia by verifying, via local indication at the valve, that the tank isolation valve is open.

e. At least once per 18 months by verifying that each safety injection tank isolation valve opens automatically under each of the following conditions:

1. When the RCS pressure exceeds 300 psia, and

2. Upon receipt of a safety injection test signal.

f. Within one hour prior to each increase in solution volume of $\geq$ 1% of normal tank volume by verifying the boron concentration at the operating high pressure safety injection pump discharge is between 1700 and 2200 ppm.

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. 27
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 July 14, 1980, 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 satisified.

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

Attachment:
Changes to the
Technical Specifications

Date of Issuance: August 1, 1980

ATTACHMENT TO LICENSE AMENDMENT NO. 27

FACILITY OPERATING LICENSE NO. DPR-69

DOCKET NO. 50-318

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

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3/4.5 EMERGENCY CORE COOLING SYSTEMS (ECCS)

SAFETY INJECTION TANKS

LIMITING CONDITION FOR OPERATION

3.5.1 Each reactor coolant system safety injection tank shall be OPERABLE with:

a. The isolation valve open,

b. A contained borated water volume of between 1113 and 1179 cubic feet of borated water (equivalent to tank levels of between 187 and 199 inches, respectively),

c. A boron concentration of between 1720 and 2200 ppm, and

d. A nitrogen cover-pressure of between 200 and 250 psig.

APPLICABILITY: MODES 1, 2 and 3.*

ACTION:

a. With one safety injection tank inoperable, except as a result of a closed isolation valve, restore the inoperable tank to OPERABLE status within one hour or be in HOT SHUTDOWN within the next 12 hours.

b. With one safety injection tank inoperable due to the isolation valve being closed, either immediately open the isolation valve or be in HOT STANDBY within one hour and be in HOT SHUTDOWN within the next 12 hours.

SURVEILLANCE REQUIREMENTS

4.5.1 Each safety injection tank shall be demonstrated OPERABLE:

a. At least once per 12 hours by:

1. Verifying the contained borated water volume and nitrogen cover-pressure in the tanks, and

2. Verifying that each safety injection tank isolation valve is open.

*With pressurizer pressure $\geq$ 1750 psia.

SURVEILLANCE REQUIREMENTS (Continued)

b. At least once per 31 days by verifying the boron concentration of the safety injection tank solution.

c. At least once per 31 days when the RCS pressure is above 2000 psig, by verifying that power to the isolation valve operator is removed by maintaining the feeder breaker open under administrative control.

d. Within 4 hours prior to increasing the RCS pressure above 1750 psia by verifying, via local indication at the valve, that the tank isolation valve is open.

e. At least once per 18 months by verifying that each safety injection tank isolation valve opens automatically under each of the following conditions:

1. When the RCS pressure exceeds 300 psia, and

2. Upon receipt of a safety injection test signal.

f. Within one hour prior to each increase in solution volume of $\geq$ 1% of normal tank volume by verifying the boron concentration at the operating high pressure safety injection pump discharge is between 1700 and 2200 ppm.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NOS. 44 AND 27 TO

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

BALTIMORE GAS AND ELECTRIC COMPANY

CALVERT CLIFFS NUCLEAR POWER PLANT UNIT NOS. 1 & 2

DOCKET NOS. 50-317 AND 50-318

Introduction

By application dated July 14, 1980, Baltimore Gas and Electric Company (BG&E or the licensee) requested amendments to Facility Operating Licenses Nos. DPR-53 and DPR-69 for the Calvert Cliffs Nuclear Power Plant (CCNPP), Unit Nos. 1 and 2.

This application would modify Paragraph 4.5.1.b and add a new Paragraph 4.5.1.f to the TS Surveillance Requirements for the Safety Injection (SI) tanks to authorize a change in the location where samples are taken when SI tank level increases are routinely made.

Discussion and Evaluation

The present boron concentration surveillance requirement for the SI tanks (TS 4.5.1.b) requires sampling of any SI tank within 6 hours after each solution volume increase of $\geq$ 1% of the tank volume. This sampling requires a significant containment entry and an expenditure of personnel radiation exposure.

The Baltmore Gas and Electric (BG&E) staff has discussed with us the problem of continual volume decrease, due to valve seat leakage, in one SI tank per unit. The leakage is contained inside the system piping, is collected in the reactor coolant drain tank, and later processed by the liquid radioactive waste system. This condition requires the refilling of the Unit 2 SI tank every day and the Unit 1 tank every 3 or 4 days in order to meet the level requirements of TS 3.5.1.b. Thus, containment entries with corresponding use of personnel radiation exposure are presently being made to satisfy TS 4.5.1.b at the rate of about 9 per week for both units.

The BG&E proposed change (July 14, 1980 letter) is to take a sample of the borated water to be added to the low volume SI tanks at the discharge of the High Pressure Safety Injection (HPSI) pumps used to add the solution. This sample would be taken outside the

containment within one hour of the time when the refilling is made. The HPSI pumps take suction from the Refueling Water Storage Tanks (RWTs) during normal reactor operation and for the refilling of any SI tank. The boron concentration TS limit on the RWT is the same as that of the SI tanks, 1700 to 2200 parts per million (ppm). TS 4.5.4.a requires that the RWT boron concentration be verified at least once per seven days.

The alternatives to this proposed TS change are:

1. To continue taking the required samples in the containment about 9 times per week at a personnel exposure of 350 to 500 man-mrem per week, or

2. Shut down each unit to locate and repair the leaking SI tank valves. This alternative would require about a five day outage per unit.

The BG&E staff has committed to locate and repair the valves that are leaking through during the next scheduled refueling outage for each unit. These outages are currently scheduled for late 1980 and early 1981 for Unit 1 and Unit 2, respectively. In addition, the BG&E staff has agreed to keep the SI tank leakage at a minimum by maintaining the equipment in good repair if this change is authorized on a permanent basis.

The proposed method of sampling would include a 10 minute, 90 gallon per minute flush of the fill line from the RWT into the reactor coolant drain tank, and then taking a sample at the running HPSI pump discharge within one hour before the low volume SI tank is refilled. The BG&E staff has agreed to modify their operating procedures to clearly specify the appropriate steps in this operation. Our Office of Inspection and Enforcement resident inspector will review this revised procedure for conformance with the above conditions. No change was proposed or is authorized to the sampling location, at the SI tank, for the monthly sample required by TS 4.5.1.b.

We have concluded that the proposed method of sampling, while not as direct as drawing a sample from the SI tank inside containment, provides an acceptable measurement of the concentration of boron in the makeup solution added to the tank. This coupled with the monthly sample taken inside containment will ensure that an adequate boron concentration is maintained in the solution stored in SI tanks.

Based on the above review, we find the proposed change acceptable for the long term operation of the Calvert Cliffs units.

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 §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 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.

Date of issuance: August 1, 1980

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NOS. 50-317 AND 318

BALTIMORE GAS AND ELECTRIC COMPANY

NOTICE OF ISSUANCE OF AMENDMENTS TO FACILITY

OPERATING LICENSES

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment Nos. 44 and 27 to Facility Operating Licenses Nos. DPR-53 and DPR-69, issued to Baltimore Gas and Electric Company, which revised Technical Specifications for operation of the Calvert Cliffs Nuclear Power Plant, Units Nos. 1 and 2. The amendments are effective as of the date of issuance.

The amendments modify paragraph 4.5.1.b and add a new paragraph 4.5.1.f to the TS Surveillance Requirements for the Safety Injection (SI) tanks to authorize a change in the location where samples are taken when SI tank level increases are routinely made.

The application for the amendments 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 amendments. Prior public notice of the amendments was not required since the amendments do not involve a significant hazards consideration.

The Commission has determined that the issuance of these amendments 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 amendments.

For further details with respect to this action, see (1) the application for amendment dated July 14, 1980, (2) Amendment Nos. 44 and 27 to License 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 Regualtory Commission, Washington, D.C. 20555, Attention: Director, Division of Licensing.

Dated at Bethesda, Maryland, this 1st day of August 1980.

FOR THE NUCLEAR REGULATORY COMMISSION

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