



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

May 18, 1989

Docket Nos. 50-317
and 50-318

Mr. G. C. Creel
Vice President - Nuclear Energy
Baltimore Gas and Electric Company
Calvert Cliffs Nuclear Power Plant
MD Rtes. 2 & 4
P. O. Box 1535
Lusby, Maryland 20657

Dear Mr. Creel:

SUBJECT: ISSUANCE OF AMENDMENTS (TACS NOS. 61710, 61711, 69242 AND 69243)

The Commission has issued the enclosed Amendment No. 137 to Facility Operating License No. DPR-53 and Amendment No. 120 to Facility Operating License No. DPR-69 for the Calvert Cliffs Power Plant, Unit Nos. 1 and 2, respectively. The amendments consist of changes to the Technical Specifications (TS) in response to your application transmitted by letter dated April 14, 1986, as supplemented on April 28, 1987.

These amendments modify TS 3/4.8.2.3, "Electrical Power System: D.C. Distribution-Operating," by deleting the dummy load profile for the 18-month station battery service test from TS Surveillance Requirement 4.8.2.3.2.d.2 and instead specify that the load profile is documented in Chapter 8 of the Calvert Cliffs Nuclear Power Plant Units 1 and 2 Updated Final Safety Analysis Report (UFSAR) and updated in accordance with 10 CFR 50.71(e). Modifications of the UFSAR load profile should be made in accordance with the process described in 10 CFR 50.59.

Change No. 2 of your June 16, 1988 application, independent from your previous application, requested modification of the loads provided in your TS station battery dummy load profile. The issuance of these amendments, deleting the dummy load profile from the TS, renders this June 16, 1988 request moot. Consequently, Change No. 2 of your June 16, 1988 request is being withdrawn. Your staff has verbally concurred with this action.

Finally, your letter of April 13, 1989 requested the withdrawal of all station battery modifications, other than the deletion of the dummy load profile, that were requested in Change No. 5 of your April 14, 1986 application. The NRC staff concurs with this request and shall withdraw these proposed TS modifications from future consideration. Consequently, this letter completes all NRC staff activities associated with your April 14, 1986 application.

These amendments will not become effective until 14 days after your issuance of a notarized letter to the Commission providing official certification of the completion, approval and implementation, in accordance with the provisions of 10 CFR 50.59, of a new design load study reflecting current plant conditions at Calvert Cliffs.

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[Signature]
DFO1

Mr. G. C. Cree1

- 2 -

May 18, 1989

A copy of the related Safety Evaluation is enclosed. A Notice of Issuance will be included in the Commission's next regular bi-weekly Federal Register notice.

Sincerely,

Scott Alexander McNeil

Scott Alexander McNeil, Project Manager
Project Directorate I-1
Division of Reactor Projects, I/II

Enclosures:

1. Amendment No. 137 to DPR-53
2. Amendment No. 120 to DPR-69
3. Safety Evaluation

cc: w/enclosures
See next page

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[61710, 61711, 69242 AND 69243]

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Mr. G. C. Creel
Baltimore Gas & Electric Company

Calvert Cliffs Nuclear Power Plant

cc:

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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. 137
License No. DPR-53

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Baltimore Gas and Electric Company (the licensee) dated April 14, 1986, as supplemented on April 28, 1987, 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. 137, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective 14 days after the licensee's issuance of a notarized letter to the Commission providing official certification of the completion, approval and implementation, in accordance with the provisions of 10 CFR 50.59, of a new station battery design load study for current plant conditions.

FOR THE NUCLEAR REGULATORY COMMISSION



Robert A. Capra, Director
Project Directorate I-1
Division of Reactor Projects, I/II

Attachment:
Changes to the Technical
Specifications

Date of Issuance: May 18, 1989



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. 120
License No. DPR-69

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Baltimore Gas and Electric Company (the licensee) dated April 14, 1986, as supplemented on April 28, 1987, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's 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. 120, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective 14 days after the licensee's issuance of a notarized letter to the Commission providing official certification of the completion, approval and implementation, in accordance with the provisions of 10 CFR 50.59, of a new station battery design load study for current plant conditions.

FOR THE NUCLEAR REGULATORY COMMISSION



Robert A. Capra, Director
Project Directorate I-1
Division of Reactor Projects, I/II

Attachment:
Changes to the Technical
Specifications

Date of Issuance: May 18, 1989

ATTACHMENT TO LICENSE AMENDMENTS

AMENDMENT NO. 137 FACILITY OPERATING LICENSE NO. DPR-53

AMENDMENT NO. 120 FACILITY OPERATING LICENSE NO. DPR-69

DOCKET NOS. 50-317 AND 50-318

After these amendments become effective, revise Appendix A as follows:

Remove Pages

3/4 8-9*
3/4 8-10

Insert Pages

3/4 8-9*
3/4 8-10

*Overleaf provided for continuity purposes.

ELECTRICAL POWER SYSTEMS

LIMITING CONDITION FOR OPERATION (Continued)

- d. With single cells having a voltage decrease of more than 0.10 volts from the previous performance discharge test (4.8.2.3.2.f.) value, but still > 2.10 volts per surveillance requirement 4.8.2.3.2.b.1., either restore/replace cells or replace the affected battery with the Reserve Battery within 24 hours or be in HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.8.2.3.1 Each D.C. bus train shall be determined OPERABLE and energized at least once per 7 days by verifying correct breaker alignment and indicated power availability.

4.8.2.3.2 Each 125-volt battery bank and charger and the Reserve Battery shall be demonstrated OPERABLE:

- a. At least once per 7 days by verifying that:
 1. The electrolyte level of each pilot cell is between the minimum and maximum level indication marks.
 2. The pilot cell specific gravity, corrected to 77°F and full electrolyte level is ≥ 1.200 .
 3. The pilot cell voltage is ≥ 2.10 volts.
 4. The overall battery voltage is ≥ 125 volts.
- b. At least once per 92 days by verifying that:
 1. The voltage of each connected cell is ≥ 2.10 volts under float charge and has not decreased more than 0.10 volts from the value observed during the latest performance discharge test (4.8.2.3.2.f).
 2. The specific gravity, corrected to 77°F and full electrolyte level, of each connected cell is ≥ 1.200 and has not decreased more than 0.02 from the value observed during the previous test.
 3. The electrolyte level of each connected cell is between the minimum and maximum level indication marks.
- c. At least once per 18 months by verifying that:
 1. The cells, cell plates and battery racks show no visual indication of physical damage or deterioration.
 2. The cell-to-cell and terminal connections are clean, tight, and coated with anti-corrosion material.

ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- d. At least once per 18 months by verifying that the battery capacity, with the charger disconnected, is adequate to either:
 - 1. Supply and maintain in OPERABLE status all of the actual emergency loads for at least 2 hours when the battery is subjected to a battery service test. At the completion of this test, surveillance 4.8.2.3.2.e shall be performed for the affected battery. The battery shall be charged to at least 95% capacity in ≤ 24 hours, or
 - 2. Supply a dummy load simulating the emergency loads of the design duty cycle for at least 2 hours while maintaining the battery terminal voltage ≥ 105 volts. At the completion of this test, the battery shall be charged to at least 95% capacity in ≤ 24 hours, excluding the stabilization time. The emergency loads of the design duty cycle shall be documented and updated, as appropriate, in the system description contained in FSAR Chapter 8, and updated in accordance with 10 CFR 50.71(e).
- e. At least once per 18 months, the battery charger* shall be demonstrated capable of recharging the battery at a rate of ≤ 400 amperes while supplying normal D.C. loads or equivalent or greater dummy load.
- f. At least once per 60 months by verifying that the battery capacity is at least 80% of the manufacturer's rating when subjected to a performance discharge test. This performance discharge test shall be performed subsequent to the satisfactory completion of the required battery service test.

*Not applicable to the charger associated with the Reserve Battery.

ELECTRICAL POWER SYSTEMS

LIMITING CONDITION FOR OPERATION (Continued)

- d. With single cells having a voltage decrease of more than 0.10 volts from the previous performance discharge test (4.8.2.3.2.f.) value, but still ≥ 2.10 volts per surveillance requirement 4.8.2.3.2.b.1., either restore/replace cells or replace the affected battery with the Reserve Battery within 24 hours or be in HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.8.2.3.1 Each D.C. bus train shall be determined OPERABLE and energized at least once per 7 days by verifying correct breaker alignment and indicated power availability.

4.8.2.3.2 Each 125-volt battery bank and charger and the Reserve Battery shall be demonstrated OPERABLE:

- a. At least once per 7 days by verifying that:
 1. The electrolyte level of each pilot cell is between the minimum and maximum level indication marks.
 2. The pilot cell specific gravity, corrected to 77°F and full electrolyte level is ≥ 1.200 .
 3. The pilot cell voltage is ≥ 2.10 volts.
 4. The overall battery voltage is ≥ 125 volts.
- b. At least once per 92 days by verifying that:
 1. The voltage of each connected cell is ≥ 2.10 volts under float charge and has not decreased more than 0.10 volts from the value observed during the latest performance discharge test (4.8.2.3.2.f).
 2. The specific gravity, corrected to 77°F and full electrolyte level, of each connected cell is ≥ 1.200 and has not decreased more than 0.02 from the value observed during the previous test.
 3. The electrolyte level of each connected cell is between the minimum and maximum level indication marks.
- c. At least once per 18 months by verifying that:
 1. The cells, cell plates and battery racks show no visual indication of physical damage or deterioration.
 2. The cell-to-cell and terminal connections are clean, tight, and coated with anti-corrosion material.

ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- d. At least once per 18 months by verifying that the battery capacity, with the charger disconnected, is adequate to either:
 - 1. Supply and maintain in OPERABLE status all of the actual emergency loads for at least 2 hours when the battery is subjected to a battery service test. At the completion of this test, surveillance 4.8.2.3.2.e shall be performed for the affected battery. The battery shall be charged to at least 95% capacity in ≤ 24 hours, or
 - 2. Supply a dummy load simulating the emergency loads of the design duty cycle for at least 2 hours while maintaining the battery terminal voltage ≥ 105 volts. At the completion of this test, the battery shall be charged to at least 95% capacity in ≤ 24 hours, excluding the stabilization time. The emergency loads of the design duty cycle shall be documented and updated, as appropriate, in the system description contained in FSAR Chapter 8, and updated in accordance with 10 CFR 50.71(e).
- e. At least once per 18 months, the battery charger* shall be demonstrated capable of recharging the battery at a rate of ≤ 400 amperes while supplying normal D.C. loads or equivalent or greater dummy load.
- f. At least once per 60 months by verifying that the battery capacity is at least 80% of the manufacturer's rating when subjected to a performance discharge test. This performance discharge test shall be performed subsequent to the satisfactory completion of the required battery service test.

*Not applicable to the charger associated with the Reserve Battery.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 137 TO FACILITY OPERATING LICENSE NO. DPR-53
AND AMENDMENT NO. 120 TO FACILITY OPERATING LICENSE NO. DPR-69
BALTIMORE GAS AND ELECTRIC COMPANY
CALVERT CLIFFS NUCLEAR POWER PLANT, UNITS 1 AND 2
DOCKET NOS. 50-317 AND 50-318

INTRODUCTION

By the letter dated April 14, 1986, as supplemented on April 28, 1987, the Baltimore Gas and Electric Company (BG&E, the licensee) proposed to change the Units 1 and 2 Technical Specification (TS) 3/4.8.2.3, "Electrical Power Systems: D.C. Distribution - Operating," by deleting the 18-month station battery service test's dummy load profile from TS Surveillance Requirement 4.8.2.3.2.d.2. Instead, TS 4.8.2.3.2.d.2 shall specify that the load profile will be maintained in Chapter 8 of the Calvert Cliffs Nuclear Power Plant Units 1 and 2 Updated Final Safety Analysis Report (UFSAR) where it shall be controlled through the processes described in 10 CFR 50.59, "Changes, Tests and Experiments."

DISCUSSION AND EVALUATION

The licensee has requested to change the controlling documentation for the station battery load profile from the TS to the UFSAR in order to readily facilitate the shifting or modification of emergency loads between the four separate station batteries when necessitated by plant modifications and hardware additions.

This change is administrative in nature. No plant operations or equipment are immediately affected by this TS modification. TS 4.8.2.3.2.d will still continue to require the station batteries to successfully undergo 18-month battery service tests under design basis emergency loading conditions. The only effect of this change is that the actual design basis emergency loading conditions (or load profile) shall be specified in the UFSAR rather than the TS Surveillance Requirements. This shall permit the licensee greater flexibility in loading the station batteries to permit better load balancing and optimize station battery and safety system performance. In addition, any future load profile changes must be fully defined with an adequately reviewed and approved safety evaluation completed in accordance with the provisions of 10 CFR 50.59 prior to implementation. Finally, updating of the load profiles to reflect actual plant conditions could be performed on a real time basis

instead of being subjected to the time delays inherent in the TS amendment process (i.e., 30-day pre-notice). Consequently, the NRC staff has determined that the deletion of the dummy load profile from TS 4.8.2.3.2.d, with the accompanying addition of a reference to the load profile contained in Chapter 8 of the UFSAR, is acceptable.

Currently, the licensee is performing a new station battery load study. The current requirements of TS 4.8.2.3.2.d shall remain in effect until 14 days after the licensee issues a notarized letter to the Commission providing official certification of the completion, approval and implementation, in accordance with the provisions of 10 CFR 50.59, of the station battery new design load study reflecting current plant conditions at Calvert Cliffs.

INTENT

The intent of the proposed change is to remove the station battery service test load profile from the Technical Specifications and to relocate this load profile in Chapter 8 of the UFSAR where it shall be controlled in accordance with the processes provided in 10 CFR 50.59. Load profile changes will be permitted only after the completion and approval of a 10 CFR 50.59 safety evaluation.

ENVIRONMENTAL CONSIDERATION

These amendments involve a change to a surveillance requirement. The staff has determined that these amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that these amendments involve no significant hazards consideration and there has been no public comment on such finding. Accordingly, these amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR Sec 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of these amendments.

CONCLUSION

The Commission made a proposed determination that these amendments involve no significant hazards consideration, which was published in the Federal Register (53 FR 40982) on October 18, 1988. The Commission consulted with the State of Maryland. No public comments were received and the State of Maryland agreed with the issuance of the amendment.

Based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of these amendments will not be inimical to the common defense and security or to the health and safety of the public.

Dated: May 18, 1989

PRINCIPAL CONTRIBUTORS:

S.A. McNeil
C.E. Morris