



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

September 26, 1994

Mr. Robert E. Denton
Vice President - Nuclear Energy
Baltimore Gas and Electric Company
Calvert Cliffs Nuclear Power Plant
1650 Calvert Cliffs Parkway
Lusby, MD 20657-4702

SUBJECT: ISSUANCE OF AMENDMENTS FOR CALVERT CLIFFS NUCLEAR POWER PLANT,
UNIT NO. 1 (TAC NO. M89921) AND UNIT NO. 2 (TAC NO. M89922)

Dear Mr. Denton:

The Commission has issued the enclosed Amendment No. 197 to Facility Operating License No. DPR-53 and Amendment No. 174 to Facility Operating License No. DPR-69 for the Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2, respectively. The amendments consist of changes to the Technical Specifications (TSs) in response to your application transmitted by letter dated June 8, 1994.

The amendments revise TS Section 4.7.1.2.c to extend the interval for three Auxiliary Feedwater surveillance requirements from 18 to 24 months.

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

Sincerely,

Daniel G. McDonald, Senior Project Manager
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

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P PDR

Docket Nos. 50-317
and 50-318

Enclosures: 1. Amendment No. 197 to DPR-53
2. Amendment No. 174 to DPR-69
3. Safety Evaluation

cc w/encs: See next page

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Mr. Robert E. Denton
Baltimore Gas & Electric Company

Calvert Cliffs Nuclear Power Plant
Unit Nos. 1 and 2

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DATED: September 26, 1994

AMENDMENT NO. 197 TO FACILITY OPERATING LICENSE NO. DPR-53-CALVERT CLIFFS
UNIT 1

AMENDMENT NO. 174 TO FACILITY OPERATING LICENSE NO. DPR-69-CALVERT CLIFFS
UNIT 2

Docket File

PUBLIC

PDI-1 Reading

S. Varga, 14/E/4

C. Miller, 14/A/4

M. J. Case

C. Vogan

J. Harold

D. McDonald

OGC

D. Hagan, 3302 MNBB

C. Liang, 8/E/23

G. Hill (4), P1-22

C. Grimes, 11/F/23

ACRS (10)

OPA

OC/LFDCB

PD plant-specific file

C. Cowgill, Region I

cc: Plant Service list



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

BALTIMORE GAS AND ELECTRIC COMPANY

DOCKET NO. 50-317

CALVERT CLIFFS NUCLEAR POWER PLANT UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 197
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 June 8, 1994, 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. 197, 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 and shall be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION



Michael J. Case, Acting Director
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: September 26, 1994



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

BALTIMORE GAS AND ELECTRIC COMPANY

DOCKET NO. 50-318

CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 174
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 June 8, 1994, 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. 174, 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 and shall be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION



Michael J. Case, Acting Director
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: September 26, 1994

ATTACHMENT TO LICENSE AMENDMENTS

AMENDMENT NO. 197 FACILITY OPERATING LICENSE NO. DPR-53

AMENDMENT NO. 174 FACILITY OPERATING LICENSE NO. DPR-69

DOCKET NOS. 50-317 AND 50-318

Revise Appendix A as follows:

Remove Pages
3/4 7-7

Insert Pages
3/4 7-7

3/4.7 PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- b. Before entering **MODE 3** after a **COLD SHUTDOWN** of at least 14 days by completing a flow test that verifies the flow path from the condensate storage tank to the steam generators.
- c. At least once per **REFUELING INTERVAL** by:
 - 1. Verifying that each automatic valve in the flow path actuates to its correct position (verification of flow-modulating characteristics not required) and each auxiliary feedwater pump automatically starts upon receipt of each AFAS test signal, and
 - 2. Verifying that the Auxiliary Feedwater System is capable of providing a minimum of 300 gpm nominal flow to each flow leg.*

* This surveillance may be performed on one flow leg at a time.

3/4.7 PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

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 - 2. Verifying that the Auxiliary Feedwater System is capable of providing a minimum of 300 gpm nominal flow to each flow leg .

* This surveillance may be performed on one flow leg at a time.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 197 TO FACILITY OPERATING LICENSE NO. DPR-53
AND AMENDMENT NO. 174 TO FACILITY OPERATING LICENSE NO. DPR-69
BALTIMORE GAS AND ELECTRIC COMPANY
CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NOS. 1 AND 2
DOCKET NOS. 50-317 AND 50-318

1.0 INTRODUCTION

By letter dated June 8, 1994, the Baltimore Gas and Electric Company (the licensee) submitted a request for changes to the Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2, Technical Specifications (TSs). The requested changes would revise Section 4.7.1.2.c to extend the Auxiliary Feedwater (AFW) System surveillance frequency to accommodate the 24-month fuel cycles currently in use at Calvert Cliffs. As requested in Generic Letter (GL) 91-04, "Changes In Technical Specification Surveillance Intervals To Accommodate a 24-month Fuel Cycle," the licensee provided an evaluation in support of the change which concludes the effect on safety is small and does not invalidate any assumption in the plant licensing basis.

2.0 BACKGROUND

The AFW System is a safety-related system designed to provide an alternate supply of feedwater to the steam generators for the removal of decay heat and cooldown of the Reactor Coolant System if the Main Feedwater System, a nonsafety-related system, is unavailable. The AFW System can also be used for normal cooldown of the Reactor Coolant System and to fill the steam generators prior to normal operation.

The AFW System has two turbine-driven pumps and one motor-driven pump, drawing water from a condensate storage tank. The Auxiliary Feedwater Actuation Signal (AFAS) starts the motor-driven pump and opens the steam supply valves to the turbine-driven pumps when the level in either steam generator drops to a low level setpoint. Normal alignment of the turbine driven pumps has one pump start automatically and one remain in standby. Flow control valves regulate flow to the steam generators for removing decay heat. In the event of a high differential pressure between steam generators, such as a steam generator tube rupture or main steam line break, AFW flow to the affected steam generator is isolated when an AFAS block signal shuts the blocking valves in each AFW line to the affected steam generator.

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The AFW surveillances with 18-month frequencies verify:

- (1) each automatic valve in the flowpath actuates to its correct position upon receipt of each AFAS test signal (4.7.1.2.c.1);
- (2) each AFW pump automatically starts upon receipt of each AFAS test signal (4.7.1.2.c.1); and
- (3) the AFW System is capable of providing a minimum of 300 gallons per minute (gpm) nominal flow to each flow leg (4.7.1.2.c.2).

These surveillances ensure the AFW pumps, flow control valves, blocking valves and the electrical signal paths function properly.

3.0 EVALUATION

Subsequent to increasing the refueling interval from 18 months to 24 months, the licensee requested amendments to the TSs of both units which added the definition, "Refueling Interval - at least once per 24-months" to Table 1.2 of TS Definition 1.22, "Frequency Notation." The requested amendments adding the 24-month definition do not change the existing definition for, "R - at least once per 18-months." The 18-month frequency definition is necessary to assure the safety-related systems and components which have not yet been approved for 24-month surveillance intervals have their surveillances performed at the required 18-months intervals. This is accomplished during scheduled mid-cycle surveillance/maintenance outages until all the safety-related systems and components have been approved for the 24-month refueling interval. The Commission issued Amendment No. 133 to Facility Operating License No. DPR-53 and Amendment No. 114 to Facility Operating License No. DPR-69 for Unit Nos. 1 and 2, respectively, by letter dated December 21, 1988, which included the definition for a 24-month Refueling Interval.

The changes were consistent with the current guidance in GL 91-04 and, therefore, no other changes are necessary in relation to defining the existing surveillance intervals in the TSs to support the requested changes to the AFW system surveillance intervals.

GL 91-04 states that for cases where 18-month surveillances do not involve calibration of instruments that perform safety functions, licensees should evaluate the effect on safety of the change in surveillance intervals which supports a conclusion that the effect on safety is small. Licensees should confirm that historical maintenance and surveillance data do not invalidate this conclusion.

The licensee's evaluation of monthly and 18-month AFW surveillances from January 1, 1989, to December 31, 1993, on the components effected by this change found no test failures during the performance of Surveillance 4.7.1.2.c. Reliability data indicates that there has been only 1 turbine-driver AFW pump trip in over 70 starts during this period, 3 of which were demand starts. There have been no recorded failures of the motor-driven pump

to start during the period. In addition, no instruments are calibrated by the 18-month surveillances. Monthly and 18-month surveillance test both verify proper operation of the valves and that the appropriate AFW pumps start. The 18-month surveillance differs from the monthly surveillance in that the 18-month surveillance is performed with the pump discharge valve open to allow AFW flow into the steam generator and verifies the minimum AFW flow rate of 300 gpm in each leg using AFW flow indicating controllers.

The NRC staff has determined that the increase in the surveillance interval from 18 months to 24 months for the AFW system surveillance as specified in TSs 4.7.1.2.c.1 and 4.7.1.2.c.2 is acceptable. This determination is based on the historical data which indicates that extending the surveillance interval will not adversely affect the ability to detect degradation in the AFW system and does not invalidate any assumption in the plant licensing basis.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Maryland State official was notified of the proposed issuance of the amendments. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes surveillance requirements. The NRC staff has determined that the 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 the amendments involve no significant hazards consideration, and there has been no public comment on such finding (59 FR 42334). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 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 the amendments.

6.0 CONCLUSION

The Commission has concluded, 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, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor:
Jefferey F. Harold

Date: September 26, 1994

September 26, 1994

Mr. Robert E. Denton
Vice President - Nuclear Energy
Baltimore Gas and Electric Company
Calvert Cliffs Nuclear Power Plant
1650 Calvert Cliffs Parkway
Lusby, MD 20657-4702

SUBJECT: ISSUANCE OF AMENDMENTS FOR CALVERT CLIFFS NUCLEAR POWER PLANT,
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A copy of the related Safety Evaluation is enclosed. A Notice of Issuance will be included in the Commission's next regular biweekly Federal Register notice.

Sincerely,

Original signed by:

Daniel G. McDonald, Senior Project Manager
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

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