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

August 24, 1994

Docket Nos. 50-317
and 50-318

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

Dear Mr. Denton:

SUBJECT: ISSUANCE OF AMENDMENTS FOR CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NO. 1 (TAC NO. M89587) AND UNIT NO. 2 (TAC NO. M89589)

The Commission has issued the enclosed Amendment No.193 to Facility Operating License No. DPR-53 and Amendment No.170 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 May 27, 1994.

The amendments revise the TS surveillance test intervals from monthly to quarterly for several channel functional tests for the Reactor Protection System and the Engineered Safety Feature Actuation System. In addition, an administrative change was made to remove an out-of-date footnote concerning the emergency diesel generator logic circuit modifications.

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

Enclosures:
1. Amendment No. 193 to DPR-53
2. Amendment No. 170 to DPR-69
3. Safety Evaluation

cc w/enclosures:
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

cc:

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DATED: August 24, 1994

AMENDMENT NO. 193 TO FACILITY OPERATING LICENSE NO. DPR-53-CALVERT CLIFFS UNIT 1
AMENDMENT NO. 170 TO FACILITY OPERATING LICENSE NO. DPR-69-CALVERT CLIFFS UNIT 2

Docket File
PUBLIC
PDI-1 Reading
S. Varga, 14/E/4
J. Calvo, 14/A/4
M. Boyle
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
J. Wermiel, 8/H/3
ACRS (10)
OPA
OC/LFDCB
PD plant-specific file
C. Cowgill, Region I

cc: Plant Service list

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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. 193
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 May 27, 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:

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2. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 193 , 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

P. T. Kuo, 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: August 24, 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. 170
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 May 27, 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. 170, 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

P. T. Kuo, 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: August 24, 1994

ATTACHMENT TO LICENSE AMENDMENTS

AMENDMENT NO. 193 FACILITY OPERATING LICENSE NO. DPR-53

AMENDMENT NO. 170 FACILITY OPERATING LICENSE NO. DPR-69

DOCKET NOS. 50-317 AND 50-318

Revise Appendix A as follows:

Remove Pages	Insert Pages
3/4 3-6	3/4 3-6
3/4 3-7	3/4 3-7
3/4 3-19	3/4 3-19
3/4 3-21	3/4 3-21
3/4 3-22	3/4 3-22
B 3/4 3-1	B 3/4 3-1

TABLE 4.3-1

REACTOR PROTECTIVE INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
1. Manual Reactor Trip	NA	NA	S/U(1)	NA
2. Power Level - High				
a. Nuclear Power	S	D(2),M(3),Q(5)	Q	1, 2
b. ΔT Power	S	D(4),R	Q	1
3. Reactor Coolant Flow - Low	S	R	Q	1, 2
4. Pressurizer Pressure - High	S	R	Q	1, 2
5. Containment Pressure - High	S	R	Q	1, 2
6. Steam Generator Pressure - Low	S	R	Q	1, 2
7. Steam Generator Water Level - Low	S	R	Q	1, 2
8. Axial Flux Offset	S	R	Q	1
9. a. Thermal Margin/Low Pressure	S	R	Q	1, 2
b. Steam Generator Pressure Difference - High	S	R	Q	1, 2
10. Loss of Load	NA	NA	S/U(1)	NA

TABLE 4.3-1 (Continued)

REACTOR PROTECTIVE INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
11. Wide Range Logarithmic Neutron Flux Monitor	S	R(5)	S/U(1)	1, 2, 3, 4, 5 and *
12. Reactor Protection System Logic Matrices	NA	NA	Q and S/U(1)	1, 2
13. Reactor Protection System Logic Matrix Relays	NA	NA	Q and S/U(1)	1, 2
14. Reactor Trip Breakers	NA	NA	M	1, 2 and *

TABLE 4.3-2

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
1. SAFETY INJECTION (SIAS)				
a. Manual (Trip buttons)	NA	NA	R	NA
b. Containment Pressure - High	S	R	Q	1, 2, 3
c. Pressurizer Pressure - Low	S	R	Q	1, 2, 3
d. Automatic Actuation Logic	NA	NA	M(1)(2)(3)	1, 2, 3
2. CONTAINMENT SPRAY (CSAS)				
a. Manual (Trip buttons)	NA	NA	R	NA
b. Containment Pressure - High	S	R	Q	1, 2, 3
c. Automatic Actuation Logic	NA	NA	M(1)(6)	1, 2, 3
3. CONTAINMENT ISOLATION (CIS)#				
a. Manual CIS (Trip buttons)	NA	NA	R	NA
b. Containment Pressure - High	S	R	Q	1, 2, 3
c. Automatic Actuation Logic	NA	NA	M(1)(4)	1, 2, 3

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
4. MAIN STEAM LINE ISOLATION (SGIS)				
a. Manual SGIS (MSIV Hand Switches and Feed Head Isolation Hand Switches)	NA	NA	R	NA
b. Steam Generator Pressure - Low	S	R	Q	1, 2, 3
c. Automatic Actuation Logic	NA	NA	M(1)(5)	1, 2, 3
5. CONTAINMENT SUMP RECIRCULATION (RAS)				
a. Manual RAS (Trip Buttons)	NA	NA	R	NA
b. Refueling Water Tank - Low	NA	R	Q	1, 2, 3
c. Automatic Actuation Logic	NA	NA	M(1)	1, 2, 3
6. CONTAINMENT PURGE VALVES ISOLATION				
a. Manual (Purge Valve Control Switches)	NA	NA	R	NA
b. Containment Radiation - High Area Monitor	S	R	Q	6**

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
7. LOSS OF POWER				
a. 4.16 kv Emergency Bus Undervoltage (Loss of Voltage)	NA	R	Q	1, 2, 3
b. 4.16 kv Emergency Bus Undervoltage (Degraded Voltage)	NA	R	Q	1, 2, 3
8. CVCS ISOLATION				
West Penetration Room/Letdown Heat Exchanger Room Pressure - High	NA	R	Q	1, 2, 3, 4
9. AUXILIARY FEEDWATER				
a. Manual (Trip Buttons)	NA	NA	R	NA
b. Steam Generator Level - Low	S	R	Q	1, 2, 3
c. Steam Generator ΔP - High	S	R	Q	1, 2, 3
d. Automatic Actuation Logic	NA	NA	M(1)	1, 2, 3

TABLE 4.3-2 (Continued)

TABLE NOTATION

Containment isolation of non-essential penetrations is also initiated by SIAS (functional units 1.a and 1.c).

** Must be **OPERABLE** only in **MODE** 6 when the valves are required **OPERABLE** and they are open.

(1) The logic circuits shall be tested manually at least once per 31 days.

(2) SIAS logic circuits A-10 and B-10 shall be tested monthly with the exception of the Safety Injection Tank isolation valves. The SIAS logic circuits for these valves are exempted from testing during operation; however, these logic circuits shall be tested at least once per 18 months during shutdown.

(3) SIAS logic circuits A-5, and B-5 are exempted from testing during operation; however, these logic circuits shall be tested at least once per 18 months during shutdown.

(4) CIS logic circuits A-5 and B-5 are exempted from testing during operation; however, these logic circuits shall be tested at least once per 18 months during shutdown.

(5) SGIS logic circuits A-1 and B-1 are exempted from testing during operation; however, these logic circuits shall be tested at least once per 18 months during shutdown.

(6) CSAS logic circuits A-3 and B-3 are exempted from testing during operation; however, these logic circuits shall be tested at least once per 18 months during shutdown.

3/4.3.1 and 3/4.3.2 PROTECTIVE AND ENGINEERED SAFETY FEATURES (ESF) INSTRUMENTATION

The **OPERABILITY** of the protective and ESF instrumentation systems and bypasses ensure that 1) the associated ESF action and/or reactor trip will be initiated when the parameter monitored by each channel or combination thereof exceeds its setpoint, 2) the specified coincidence logic is maintained, 3) sufficient redundancy is maintained to permit a channel to be out of service for testing or maintenance, and 4) sufficient system functional capability is available for protective and ESF purposes from diverse parameters.

The **OPERABILITY** of these systems is required to provide the overall reliability, redundance and diversity assumed available in the facility design for the protection and mitigation of accident and transient conditions. The integrated operation of each of these systems is consistent with the assumptions used in the accident analyses.

The surveillance requirements specified for these systems ensure that the overall system functional capability is maintained comparable to the original design standards. The periodic surveillance tests performed at the minimum frequencies are sufficient to demonstrate this capability. The quarterly frequency for the channel functional tests for these systems is based on the analysis presented in the NRC-approved Topical Report CEN-327, "RPS/ESFAS Extended Test Interval Evaluation," as supplemented.

The measurement of response time at the specified frequencies provides assurance that the protective and ESF action function associated with each channel is completed within the time limit assumed in the accident analyses. No credit was taken in the analyses for those channels with response times indicated as not applicable.

Response time may be demonstrated by any series of sequential, overlapping or total channel test measurements provided that such tests demonstrate the total channel response time as defined. Sensor response time verification may be demonstrated by either 1) in place, onsite or offsite test measurements or 2) utilizing replacement sensors with certified response times. The response time limits are contained in UFSAR Chapter 7, and updated in accordance with 10 CFR 50.71(e).

3/4.3.3 MONITORING INSTRUMENTATION

3/4.3.3.1 Radiation Monitoring Instrumentation

The **OPERABILITY** of the radiation monitoring channels ensures that 1) the radiation levels are continually measured in the areas served by the individual channels and 2) the alarm or automatic action is initiated when the radiation level trip setpoint is exceeded.

TABLE 4.3-1

REACTOR PROTECTIVE INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
1. Manual Reactor Trip	NA	NA	S/U(1)	NA
2. Power Level - High				
a. Nuclear Power	S	D(2),M(3),Q(5)	Q	1, 2
b. ΔT Power	S	D(4),R	Q	1
3. Reactor Coolant Flow - Low	S	R	Q	1, 2
4. Pressurizer Pressure - High	S	R	Q	1, 2
5. Containment Pressure - High	S	R	Q	1, 2
6. Steam Generator Pressure - Low	S	R	Q	1, 2
7. Steam Generator Water Level - Low	S	R	Q	1, 2
8. Axial Flux Offset	S	R	Q	1
9. a. Thermal Margin/Low Pressure	S	R	Q	1, 2
b. Steam Generator Pressure Difference - High	S	R	Q	1, 2
10. Loss of Load	NA	NA	S/U(1)	NA

TABLE 4.3-1 (Continued)

REACTOR PROTECTIVE INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
11. Wide Range Logarithmic Neutron Flux Monitor	S	R(5)	S/U(1)	1, 2, 3, 4, 5 and *
12. Reactor Protection System Logic Matrices	NA	NA	Q and S/U(1)	1, 2
13. Reactor Protection System Logic Matrix Relays	NA	NA	Q and S/U(1)	1, 2
14. Reactor Trip Breakers	NA	NA	M	1, 2 and *

TABLE 4.3-2

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
1. SAFETY INJECTION (SIAS)				
a. Manual (Trip buttons)	NA	NA	R	NA
b. Containment Pressure - High	S	R	Q	1, 2, 3
c. Pressurizer Pressure - Low	S	R	Q	1, 2, 3*
d. Automatic Actuation Logic	NA	NA	M(1)(2)(3)	1, 2, 3
2. CONTAINMENT SPRAY (CSAS)				
a. Manual (Trip buttons)	NA	NA	R	NA
b. Containment Pressure - High	S	R	Q	1, 2, 3
c. Automatic Actuation Logic	NA	NA	M(1)(6)	1, 2, 3
3. CONTAINMENT ISOLATION (CIS)#				
a. Manual CIS (Trip buttons)	NA	NA	R	NA
b. Containment Pressure - High	S	R	Q	1, 2, 3
c. Automatic Actuation Logic	NA	NA	M(1)(4)	1, 2, 3

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
4. MAIN STEAM LINE ISOLATION (SGIS)				
a. Manual SGIS (MSIV Hand Switches and Feed Head Isolation Hand Switches)	NA	NA	R	NA
b. Steam Generator Pressure - Low	S	R	Q	1, 2, 3
c. Automatic Actuation Logic	NA	NA	M(1)(5)	1, 2, 3
5. CONTAINMENT SUMP RECIRCULATION (RAS)				
a. Manual RAS (Trip Buttons)	NA	NA	R	NA
b. Refueling Water Tank - Low	NA	R	Q	1, 2, 3
c. Automatic Actuation Logic	NA	NA	M(1)	1, 2, 3
6. CONTAINMENT PURGE VALVES ISOLATION				
a. Manual (Purge Valve Control Switches)	NA	NA	R	NA
b. Containment Radiation - High Area Monitor	S	R	Q	6**

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
7. LOSS OF POWER				
a. 4.16 kv Emergency Bus Undervoltage (Loss of Voltage)	NA	R	Q	1, 2, 3
b. 4.16 kv Emergency Bus Undervoltage (Degraded Voltage)	NA	R	Q	1, 2, 3
8. CVCS ISOLATION				
West Penetration Room/Letdown Heat Exchanger Room Pressure - High	NA	R	Q	1, 2, 3, 4
9. AUXILIARY FEEDWATER				
a. Manual (Trip Buttons)	NA	NA	R	NA
b. Steam Generator Level - Low	S	R	Q	1, 2, 3
c. Steam Generator ΔP - High	S	R	Q	1, 2, 3
d. Automatic Actuation Logic	NA	NA	M(1)	1, 2, 3

TABLE 4.3-2 (Continued)

TABLE NOTATION

\# Containment isolation of non-essential penetrations is also initiated by SIAS (functional units 1.a and 1.c).

** Must be **OPERABLE** only in **MODE** 6 when the valves are required **OPERABLE** and they are open.

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(3) SIAS logic circuits A-5 and B-5 are exempted from testing during operation; however, these logic circuits shall be tested at least once per 18 months during shutdown.

(4) CIS logic circuits A-5 and B-5 are exempted from testing during operation; however, these logic circuits shall be tested at least once per 18 months during shutdown.

(5) SGIS logic circuits A-1 and B-1 are exempted from testing during operation; however, these logic circuits shall be tested at least once per 18 months during shutdown.

(6) CSAS logic circuits A-3 and B-3 are exempted from testing during operation; however, these logic circuits shall be tested at least once per 18 months during shutdown.

3/4.3.1 and 3/4.3.2 PROTECTIVE AND ENGINEERED SAFETY FEATURES (ESF) INSTRUMENTATION

The **OPERABILITY** of the protective and ESF instrumentation systems and bypasses ensure that 1) the associated ESF action and/or reactor trip will be initiated when the parameter monitored by each channel or combination thereof exceeds its setpoint, 2) the specified coincidence logic is maintained, 3) sufficient redundancy is maintained to permit a channel to be out of service for testing or maintenance, and 4) sufficient system functional capability is available for protective and ESF purposes from diverse parameters.

The **OPERABILITY** of these systems is required to provide the overall reliability, redundance and diversity assumed available in the facility design for the protection and mitigation of accident and transient conditions. The integrated operation of each of these systems is consistent with the assumptions used in the accident analyses.

The surveillance requirements specified for these systems ensure that the overall system functional capability is maintained comparable to the original design standards. The periodic surveillance tests performed at the minimum frequencies are sufficient to demonstrate this capability. The quarterly frequency for the channel functional tests for these systems is based on the analysis presented in the NRC-approved Topical Report CEN-327, "RPS/ESFAS Extended Test Interval Evaluation," as supplemented.

The measurement of response time at the specified frequencies provides assurance that the protective and ESF action function associated with each channel is completed within the time limit assumed in the accident analyses. No credit was taken in the analyses for those channels with response times indicated as not applicable.

Response time may be demonstrated by any series of sequential, overlapping or total channel test measurements provided that such tests demonstrate the total channel response time as defined. Sensor response time verification may be demonstrated by either 1) in place, onsite or offsite test measurements or 2) utilizing replacement sensors with certified response times. The response time limits are contained in UFSAR Chapter 7, and updated in accordance with 10 CFR 50.71(e).

3/4.3.3 MONITORING INSTRUMENTATION

3/4.3.3.1 Radiation Monitoring Instrumentation

The **OPERABILITY** of the radiation monitoring channels ensures that 1) the radiation levels are continually measured in the areas served by the individual channels and 2) the alarm or automatic action is initiated when the radiation level trip setpoint is exceeded.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 193 TO FACILITY OPERATING LICENSE NO. DPR-53

AND AMENDMENT NO. 170 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 May 27, 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 (TS). The requested changes would revise the TS surveillance test interval from monthly to quarterly for several channel functional tests for the Reactor Protective System (RPS) and the Engineered Safety Feature Actuation System (ESFAS). In addition, an administrative change to the ESFAS table would remove an out-of-date footnote concerning the Emergency Diesel Generator (EDG) logic circuit modifications.

2.0 BACKGROUND

The staff issued Supplement 1 to Generic Letter (GL) 83-28, "Required Actions Based on Generic Implications of Salem ATWS Events," on October 7, 1992. Item 4.5.2 of the GL requested licensees to confirm that on-line functional testing of the RPS is being performed and that existing test intervals required by their TS are adequate for achieving high RPS reliability. In response, Combustion Engineering (CE) performed an analysis, CEN-327, to evaluate the availability of the RPS given the 30-day test interval required by the TS. A follow-up to the original analysis, CEN-327 Supplement 1, was performed to determine the impact of extending the surveillance test intervals for selected components in the RPS and ESFAS.

In March 1989, CE issued CEN-327, Supplement 1, which presented changes in RPS reliability that resulted from extending the test intervals from 30 days to 90 days for all RPS trip parameters, and recommended a 90-day test interval with sequential testing. It was demonstrated that the surveillance test interval for RPS and ESFAS components can be increased to 90-days with no significant increase in RPS unavailability.

In November 1989, the staff issued a Safety Evaluation Report (SER) for CEN-327 and CEN-327, Supplement 1. The staff stated that it was acceptable to extend the surveillance test intervals for the RPS and ESFAS from 30 days to 90 days for all CE plants (excluding Maine Yankee). This approval was

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contingent on each plant confirming that instrument drift occurring over the proposed surveillance test interval would not cause the setpoint values to exceed those assumed in the safety analysis and specified in the TSs. In addition, the staff stated that licensees: (1) must confirm that they have reviewed instrument drift information for each channel involved, (2) have to determine that drift occurring in that channel over the period of extended surveillance test interval would not cause the setpoint value to exceed the allowable value as calculated for that channel by the licensee's methodology, (3) should have onsite records of the as-found and as-left values showing actual calculations and supporting data for planned future NRC audits.

3.0 EVALUATION

The RPS and ESFAS provide actuation signals to the safety equipment needed to mitigate the consequences of accidents and transients. The licensee is requesting to extend the surveillance test interval for the RPS and ESFAS from monthly to quarterly. Specifically, it is requested that Table 4.3-1, Reactor Protective Instrumentation Surveillance Requirements, Functional Units 1 - 14 and Table 4.3-2, ESFAS Instrumentation Surveillance Requirements, Functional Units 1 - 9 surveillance interval be changed from monthly to quarterly. The licensee performed a plant-specific instrument drift analysis to determine the effect on instrument drift when the RPS and ESFAS instrumentation functional surveillance test interval in increased from monthly to quarterly. A 120-day drift interval was calculated to bound the quarterly interval plus the 25 percent maximum allowable extension period permitted in the TS. A review of the affected RPS and ESFAS instrumentation channels determined that the instrument drift for the extended surveillance test intervals do not exceed the current 30-day setpoint assumptions. Three years of observed, monthly, as-found and as-left data for each channel of the applicable instrumentation functions were reviewed for the plant-specific evaluation. The onsite records of the as-found and as-left values showing the calculations and supporting data are available onsite for inspection.

The requested changes to the ESFAS and RPS surveillance test are consistent with the changes that were evaluated by CE in CEN-327 and CEN-327, Supplement 1. The staff prepared a SER based on the CE documents and approved the CE methodology to satisfy requirements set forth in GL 83-28. The requested changes to increase the surveillance test intervals from monthly to quarterly satisfies the requirements set forth in GL 83-28 and the analysis was perform utilizing accepted methodology; therefore, the changes are acceptable.

In addition, it was request to remove an out-of-date footnote from TS Table 4.3-2. Previous amendments added a footnote to the ESFAS Table 4.3-2 that exempted the monthly test for the Safety Injection Actuation Signal logic circuits A-10 and B-10 until the EDG logic circuit modifications were completed. The proposed removal of the footnote from the ESFAS Table 4.3-2 is an administrative change. The modifications referenced by the footnote have been completed; therefore, this change is acceptable.

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 37062). 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:
Jeffrey F. Harold

Date: August 24, 1994

Docket Nos. 50-317
and 50-318

August 24, 1994

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

Dear Mr. Denton:

SUBJECT: ISSUANCE OF AMENDMENTS FOR CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NO. 1 (TAC NO. M89587) AND UNIT NO. 2 (TAC NO. M89589)

The Commission has issued the enclosed Amendment No. 193 to Facility Operating License No. DPR-53 and Amendment No. 170 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 May 27, 1994.

The amendments revise the TS surveillance test intervals from monthly to quarterly for several channel functional tests for the Reactor Protection System and the Engineered Safety Feature Actuation System. In addition, an administrative change was made to remove an out-of-date footnote concerning the emergency diesel generator logic circuit modifications.

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

Enclosures:
1. Amendment No. 193 to DPR-53
2. Amendment No. 170 to DPR-69
3. Safety Evaluation

cc w/enclosures:
See next page

Distribution:
See attached sheet

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