



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

March 15, 1989

Docket No. 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 TECHNICAL SPECIFICATION AMENDMENT AND TEMPORARY  
EXEMPTION CONCERNING RETEST SCHEDULAR REQUIREMENTS OF  
APPENDIX J TO 10 CFR PART 50 FOR TYPES B AND C LOCAL LEAK  
RATE TESTS (TAC NO. 71589)

The Commission has issued the enclosed Amendment No. 118 to Facility Operating License No. DPR-69 for the Calvert Cliffs Power Plant, Unit No. 2. This amendment consists of changes to the Technical Specifications (TS) in response to your application transmitted by letter dated December 14, 1988 as supplemented on February 17, 1989.

This amendment provides a temporary, one-time 28-day extension to the surveillance interval, required by TS Surveillance Requirement 4.6.1.2.d, for the performance of each individual Type B or C containment local leak rate test.

In addition, the NRC staff has reviewed your associated request, dated December 21, 1988 as supplemented on February 17, 1989, for a one-time temporary exemption from the retest schedule requirements of Sections III.D.2(a) and III.D.3 of Appendix J to 10 CFR Part 50. These sections require the performance of Types B and C containment local leakage rate retests, respectively, "during each reactor shutdown for refueling but in no case at intervals greater than two years." Your letter requested a one-time extension of up to four weeks (28 days) for performance of the Types B and C retests.

On the basis of the information supplied in your December 21, 1988 and February 17, 1989 letters, and as discussed in the enclosed Exemption, the NRC staff has concluded that this temporary exemption providing an approximate four week (28 day) extension from the Types B and C retest schedule requirements of Sections III.D.2(a) and III.D.3 of Appendix J to

DFOL  
11

*[Handwritten signature]*

Mr. G. C. Creel

- 2 -

March 15, 1989

10 CFR Part 50 is justified for Calvert cliffs Nuclear Power Plant Unit No. 2. Thus, your request for exemption is granted.

Please note that this surveillance interval retest extension shall expire upon reaching 199.9°F average reactor coolant system (RCS) temperature during initial RCS heatup following the Unit 2 Cycle 9 refueling outage.

Please note that this surveillance interval retest extension shall expire at 11:59 p.m. on April 12, 1989.

A copy of the related Safety Evaluation is enclosed.

A copy of the Exemption and a Notice of Issuance are being forwarded to the Office of the Federal Register for publication.

Sincerely,

ORIGINAL SIGNED BY

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

Enclosures:

1. Amendment No. 118 to DPR-69
2. Exemption
3. Safety Evaluation

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\*SEE PREVIOUS CONCURRENCE

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| DATE | :1/89   | :3/15/89    | :3/15/89* | :3/15/89 | :3/15/89 | :3/15/89 | : |

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Mr. G. C. Creel

- 2 -

10 CFR Part 50 is justified for Calvert cliffs Nuclear Power Plant Unit No. 2, ~~for a period up to 28 days before the Unit 2 Cycle 9 refueling outage.~~ Thus, your request for exemption is granted.

Please note that this surveillance interval retest extension shall expire ~~at 11:59 p.m. on April 12, 1989.~~ *(Change to reflect shift to mode 4 after refueling outage) (See signature page)*

A copy of the related Safety Evaluation is enclosed.

A copy of the Exemption and a Notice of Issuance are being forwarded to the Office of the Federal Register for publication.

Sincerely,

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

Enclosures:

1. Amendment No. to DPR-69
2. Exemption
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| CVogan      | ARM/LFMB             |        |
| SMcNeil     | LTripp, RI           |        |
| OGC         | EJordan              |        |

*no legal objection with corrections noted.*

|      |          |               |               |          |          |           |   |
|------|----------|---------------|---------------|----------|----------|-----------|---|
| OFC  | : PDI-1  | : PDI-1       | : OGC         | : PDI-1  | : AD:DRP | : D:DRP   | : |
| NAME | : CVogan | : SMcNeil:vr  | : S H Lewis   | : RCapra | : BBoger | : GLainas | : |
| DATE | : 1 / 89 | : 3 / 14 / 89 | : 3 / 15 / 89 | : 1 / 89 | : 1 / 89 | : 1 / 89  | : |

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

Calvert Cliffs Nuclear Power Plant

cc:

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King of Prussia, Pennsylvania 19406



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. 118  
License No. DPR-69

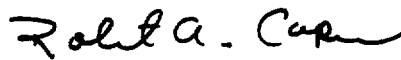
1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Baltimore Gas and Electric Company (the licensee) dated December 14, 1988 as supplemented February 17, 1989, complies with the standards and requirements of the Atomic Energy Act of 1954, as 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. 118, 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. Capra, Director  
Project Directorate I-1  
Division of Reactor Projects, I/II

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: March 15, 1989

ATTACHMENT TO LICENSE AMENDMENTS

AMENDMENT NO. 118 FACILITY OPERATING LICENSE NO. DPR-69

DOCKET NO. 50-318

Revise Appendix A as follows:

Remove Pages

3/4 6-3  
3/4 6-4\*

Insert Pages

3/4 6-3(t)<sup>1</sup>  
3/4 6-3<sup>2</sup>  
3/4 6-4\*

\* Overleaf provided for continuity purposes.

- 1 Page 3/4 6-3(t) contains a temporary change that is effective from the date of issuance of this amendment until reaching 199.9°F average reactor coolant system (RCS) temperature during initial RCS heatup following the Unit 2 Cycle 9 refueling outage.
- 2 Page 3/4 6-3 replaces page 3/4 6-3(t) and becomes effective upon reaching 199.9°F average reactor coolant system (RCS) temperature during initial RCS heatup following the Unit 2 Cycle 9 refueling outage.

## CONTAINMENT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

- b. If any periodic Type A test fails to meet either  $.75 L_a$  (259,500 SCCM) or  $.75 L_t$  (33,400 SCCM), the test schedule for subsequent Type A tests shall be reviewed and approved by the Commission. If two consecutive Type A Tests fail to meet either  $.75 L_a$  (259,500 SCCM) or  $.75 L_t$  (33,400 SCCM), a Type A test shall be performed at least every 18 months until two consecutive Type A tests meet either  $.75 L_a$  (259,500 SCCM) or  $.75 L_t$  (33,400 SCCM) at which time the above test schedule may be resumed.
  - c. The accuracy of each Type A test shall be verified by a supplemental test which:
    - 1. Confirms the accuracy of the Type A test by verifying that the difference between supplemental and Type A test data is within  $0.25 L_a$  (86,500 SCCM) or  $0.25 L_t$  (11,100 SCCM).
    - 2. Has a duration sufficient to establish accurately the change in leakage between the Type A test and supplemental test.
    - 3. Requires the quantity of gas injected into the containment or bled from the containment during the supplemental test to be equivalent to at least 25 percent of the total measured leakage rate at  $P_a$  (50 psig) or  $P_t$  (25 psig).
  - d.\* Type B and C tests shall be conducted with gas at  $P_a$  (50 psig) at intervals no greater than 24 months except for tests involving air locks.
  - e. Air locks shall be tested and demonstrated **OPERABLE** per Surveillance Requirement 4.6.1.3.
  - f. All test leakage rates shall be calculated using observed data converted to absolute values. Error analyses shall be performed to select a balanced integrated leakage measurement system.
  - g. Containment purge isolation valves shall be demonstrated **OPERABLE** any time upon entering MODE 5 from power operation modes, unless the last surveillance test has been performed within the past 6 months or any time after being opened and prior to entering MODE 4 from shutdown modes by verifying that when the measured leakage rate is added to the leakage rates determined pursuant to Technical Specification 4.6.1.2.d for all other Type B or C penetrations, the combined leakage rate is less than or equal to  $0.60 L_a$  (207,600 SCCM). The leakage rate for the containment purge isolation valves shall also be compared to the previously measured leakage rate to detect excessive valve degradation.
  - h. The containment purge isolation valve seals shall be replaced with new seals at a frequency to ensure no individual seal remains in service greater than 2 consecutive fuel reload cycles.
- \* One-time temporary exemption to Appendix "J" of 10 CFR Part 50 and amendment of Surveillance Requirement 4.6.1.2.d providing a 28-day schedular extension for each individual Type B and C test. Expires upon reaching 199.9°F average reactor coolant system (RCS) temperature during initial RCS heatup following the Unit 2 Cycle 9 refueling outage.

## CONTAINMENT SYSTEMS

### CONTAINMENT AIR LOCKS

#### LIMITING CONDITION FOR OPERATION

3.6.1.3 Each containment air lock shall be OPERABLE with:

- a. Both doors closed except when the air lock is being used for normal transit entry and exit through the containment, then at least one air lock door shall be closed, and
- b. An overall air lock leakage rate of  $\leq 0.05 L_g$  (17,300 SCCM), at  $P_g$ , 50 psig.

APPLICABILITY: MODES 1, 2, 3 and 4.

#### ACTION:

- a. With an air lock inoperable, except as a result of an inoperable door gasket, restore the air lock to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With an air lock inoperable due to an inoperable door gasket:
  1. Maintain the remaining door of the affected air lock closed and sealed, and
  2. Restore the air lock to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

#### SURVEILLANCE REQUIREMENTS

4.6.1.3 Each containment air lock shall be demonstrated OPERABLE:

- a.\* After each opening, except when the airlock is being used for multiple entries, then at least once per 72 hours by verifying that the seal leakage is  $< 0.0002 L_g$  (69.2 SCCM) as determined by precision flow measurement when the volume between the door seals is pressurized to a constant pressure of 15 psig.

\* Exemption to Appendix "J" of 10 CFR 50.

## CONTAINMENT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

- b. If any periodic Type A test fails to meet either  $.75 L_a$  (259,500 SCCM) or  $.75 L_t$  (33,400 SCCM), the test schedule for subsequent Type A tests shall be reviewed and approved by the Commission. If two consecutive Type A Tests fail to meet either  $.75 L_a$  (259,500 SCCM) or  $.75 L_t$  (33,400 SCCM), a Type A test shall be performed at least every 18 months until two consecutive Type A tests meet either  $.75 L_a$  (259,500 SCCM) or  $.75 L_t$  (33,400 SCCM) at which time the above test schedule may be resumed.
- c. The accuracy of each Type A test shall be verified by a supplemental test which:
  - 1. Confirms the accuracy of the Type A test by verifying that the difference between supplemental and Type A test data is within  $0.25 L_a$  (86,500 SCCM) or  $0.25 L_t$  (11,100 SCCM).
  - 2. Has a duration sufficient to establish accurately the change in leakage between the Type A test and supplemental test.
  - 3. Requires the quantity of gas injected into the containment or bled from the containment during the supplemental test to be equivalent to at least 25 percent of the total measured leakage rate at  $P_a$  (50 psig) or  $P_t$  (25 psig).
- d. Type B and C tests shall be conducted with gas at  $P_a$  (50 psig) at intervals no greater than 24 months except for tests involving air locks.
- e. Air locks shall be tested and demonstrated **OPERABLE** per Surveillance Requirement 4.6.1.3.
- f. All test leakage rates shall be calculated using observed data converted to absolute values. Error analyses shall be performed to select a balanced integrated leakage measurement system.
- g. Containment purge isolation valves shall be demonstrated **OPERABLE** any time upon entering **MODE 5** from power operation modes, unless the last surveillance test has been performed within the past 6 months or any time after being opened and prior to entering **MODE 4** from shutdown modes by verifying that when the measured leakage rate is added to the leakage rates determined pursuant to Technical Specification 4.6.1.2.d for all other Type B or C penetrations, the combined leakage rate is less than or equal to  $0.60 L_a$  (207,600 SCCM). The leakage rate for the containment purge isolation valves shall also be compared to the previously measured leakage rate to detect excessive valve degradation.
- h. The containment purge isolation valve seals shall be replaced with new seals at a frequency to ensure no individual seal remains in service greater than 2 consecutive fuel reload cycles.

Effective upon reaching 199.9°F average reactor coolant system (RCS) temperature during initial RCS heatup following the Unit 2 Cycle 9 refueling outage. Replaces page 3/4 6-3(t).

## CONTAINMENT SYSTEMS

### CONTAINMENT AIR LOCKS

#### LIMITING CONDITION FOR OPERATION

3.6.1.3 Each containment air lock shall be OPERABLE with:

- a. Both doors closed except when the air lock is being used for normal transit entry and exit through the containment, then at least one air lock door shall be closed, and
- b. An overall air lock leakage rate of  $\leq 0.05 L_a$  (17,300 SCCM), at  $P_a$ , 50 psig.

APPLICABILITY: MODES 1, 2, 3 and 4.

#### ACTION:

- a. With an air lock inoperable, except as a result of an inoperable door gasket, restore the air lock to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With an air lock inoperable due to an inoperable door gasket:
  1. Maintain the remaining door of the affected air lock closed and sealed, and
  2. Restore the air lock to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

#### SURVEILLANCE REQUIREMENTS

4.6.1.3 Each containment air lock shall be demonstrated OPERABLE:

- a.\* After each opening, except when the airlock is being used for multiple entries, then at least once per 72 hours by verifying that the seal leakage is  $< 0.0002 L_a$  (69.2 SCCM) as determined by precision flow measurement when the volume between the door seals is pressurized to a constant pressure of 15 psig.

\* Exemption to Appendix "J" of 10 CFR 50.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO EXEMPTION FROM APPENDIX J OF 10 CFR PART 50  
AND TO AMENDMENT NO. 118 TO FACILITY OPERATING LICENSE NO. DPR-69  
BALTIMORE GAS AND ELECTRIC COMPANY  
CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT 2  
DOCKET NO. 50-318  
ONE TIME SCHEDULAR EXTENSION FOR TYPES B AND C  
CONTAINMENT LOCAL LEAK RATE RETESTS

1.0 INTRODUCTION

By its letters dated December 14 and 21, 1988, both supplemented on February 17, 1989, the Baltimore Gas and Electric Company (BG&E), the licensee) requested respectively, for Calvert Cliffs Unit 2, a Technical Specification (TS) amendment to TS 3/4.6.1, "Primary Containment," and an exemption from the requirements of Sections III.D.2(a) and III.D.3 of Appendix J to 10 CFR Part 50 to provide to Unit 2 a one-time, temporary schedular extension of 28 days beyond the maximum allowed 2-year test interval for performing each individual Type B or C containment local leak rate test (LLRT). This TS amendment and exemption would expire upon reaching 199.9°F average reactor coolant system (RCS) temperature during initial RCS heatup following the Unit 2 Cycle 9 refueling outage, and then the required Types B and C LLRT intervals would revert back to "at least every two years."

2.0 BACKGROUND

Currently, Sections III.D.2(a) and III.D.3 of Appendix J to 10 CFR Part 50 and TS Surveillance Requirement 4.6.1.2.d require Types B and C LLRTs to be performed at intervals no greater than two years (24 months).

During the previous refueling outage, Calvert Cliffs Unit 2 shifted from an 18-month to a 24-month operating cycle. The last Types B and C LLRT testing program was conducted from March 9 to June 4, 1987 with the first Type B or C test completed on March 16, 1987. Unit 2 Cycle 8 is scheduled to end on March 25, 1989. Consequently, the Unit 2 LLRTs would not all be performed within the required 2-year test interval. The licensee discovered this discrepancy in November 1988 and subsequently requested this TS amendment and temporary exemption to preclude an unnecessary Unit 2 shutdown or a premature refueling shutdown with the subsequent discharge of fuel that would not have been fully burned.

### 3.0 EVALUATION

The containment is provided to prevent uncontrolled releases of radioactive materials to the environment if the barriers provided by the fuel cladding and the reactor coolant pressure boundary should be breached. The periodic Types B and C LLRTs are performed to provide assurance 1) of proper containment boundary maintenance and leak repair and 2) that the containment structure will continue to perform its function throughout the life of the plant, and more specifically, throughout each individual operating cycle. The ability of a containment to fulfill its function is demonstrated when it successfully passes an "as-found" condition containment integrated leak rate test (CILRT).

Generally, the containment aspects experiencing the higher degradation rates are the containment penetrations and containment isolation valves which are tested through the Types B and C LLRTs at least every two years. Normally, the containment structure, itself, sees very little degradation, and so it is leak rate tested only every 40 months. Consequently, a containment's capability to provide its function of preventing uncontrolled radioactive releases, is largely dependent upon the leak-tightness and degradation rates of these containment penetrations and isolation valves. Historically, CILRT failures resulted from excessive leakage through one or more containment penetrations or isolation valves. Licensees experiencing CILRT failures are required to 1) have the CILRT retest schedule approved by the NRC staff following one failure and 2) conduct CILRT retests at an every 18-month frequency for two consecutive CILRT failures. Thus, if a licensee's containment penetrations and/or isolation valves are routinely experiencing significant degradation rates, the licensee's CILRTs will often fail and necessitate imposition of the punitive 18-month CILRT retest schedule.

In its February 17, 1989 supplement, BG&E provided a list of all individual components subjected to Types B and C testing which exceeded their maximum allowable leakage rate limits for all LLRTs previously conducted on the Unit 2 containment. The results showed very few containment isolation valve LLRT failures through six Type C test cycles with only one valve, SI-330, with recent recurring LLRT failures (two failures out of the last three times tested). The maximum leak rate exhibited in either of these two failures was 84,451 standard cubic centimeters per minute (SCCM) which developed over a period of at least 18 months.

Similarly for containment penetrations, six Type B test cycle results were presented with few containment penetration LLRT failures and with only two penetrations, 53/ZEB4 and 50/LLRT pressurization flange, with recent recurring LLRT failures (two failures out of the last three times tested). The maximum leak rates exhibited in these recurring failures were 324 SCCM and 161 SCCM, respectively.

Finally, the maximum combined Types B and C leak rate allowed by TS 3/4.6.1 is 207,600 SCCM while the maximum CILRT leak rate permitted is 346,000

SCCM. The licensee has not experienced any failure at Unit 2 to meet the combined Types B and C limit for any LLRT test cycle nor has it reported any Unit "as found" CILRT failure.

Consequently, the NRC staff has reviewed the reported Types B and C LLRT failures and has determined, based upon the LLRT history at Calvert Cliffs Unit 2, that the probability of any further significant degradation of the Unit 2 containment isolation valves and penetrations during a 28-day schedular extension, for each penetration and isolation valve, is negligible and furthermore, based upon the Unit 2 LLRT and CILRT history, that the Unit 2 containment structure should be capable of satisfactorily performing its function with this 28-day LLRT interval extension.

An increase in the possibility or the consequences of the containment structure's failure to fulfill its function and prevent uncontrolled radioactive releases could exist only as the result of a sequential degradation of the containment boundary followed by an event causing the failure of the fuel cladding and/or the reactor coolant pressure boundary. The probability of a cladding or reactor coolant pressure boundary failure is not affected by this proposed one-time 28-day LLRT schedular extension. Consequently, as the NRC staff has determined that this one-time 28-day schedular extension will not significantly increase the probability or magnitude of a containment boundary failure, the staff therefore concludes that 1) the proposed one-time temporary exemption to the schedular requirements of Sections III.D.2(a) and III.D.3 of Appendix J to 10 CFR Part 50 and 2) the proposed temporary amendment to TS Surveillance Requirement 4.6.1.2.d, both of which expire upon reaching 199.9°F average reactor coolant system (RCS) temperature during initial RCS heatup following the Unit 2 Cycle 9 refueling outage, are acceptable.

This evaluation is provided to support this one-time, temporary schedular extension only and is not applicable, nor can it be utilized, as justification for permanent Types B and C retest schedule extensions beyond the currently allowed maximum interval of two years.

#### 4.0 INTENT

The intent of the proposed changes is to allow, for one-time only, an LLRT Surveillance interval of 2 years and 28 days for each individual containment penetration or isolation valve subject to Types B and C testing. This change is being made so that Unit 2 will not be required to shutdown prematurely, but rather, may complete its full Cycle 8 operating cycle.

#### 5.0 STATE CONSULTATIONS

A Notice of Consideration of Issuance of Amendment to Facility Operating License and Opportunity for Hearing was published in the Federal Register on January 30, 1989 (54 FR 4354). No hearing requests or intervention petitions were received. The State of Maryland was notified of this matter. No comments were received.

## 6.0 ENVIRONMENTAL CONSIDERATION

Pursuant to 10 CFR 51.21, 51.32, and 51.35, an environmental assessment and finding of no significant impact was published in the Federal Register on March 15, 1989 (53 FR 10757).

Accordingly, based upon the environmental assessment, the Commission has determined that issuance of this amendment and exemption will not have a significant effect on the quality of the human environment.

## 7.0 CONCLUSION

We have concluded based upon the considerations, discussed above, that: (1) this action is authorized by law, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (3) such activities will be conducted in compliance with the Commission's regulations, (4) the issuance of this amendment and exemption will not be inimical to the common defense and security, to property, or to the health and safety of the public, and (5) this action is otherwise in the public interest.

### PRINCIPAL CONTRIBUTOR:

S. McNeil

Dated: March 15, 1989

## UNITED STATES NUCLEAR REGULATORY COMMISSION

In the Matter of  
BALTIMORE GAS AND ELECTRIC  
COMPANY  
(Calvert Cliffs Nuclear  
Power Plant Unit 2)

)  
)  
)  
)  
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EXEMPTION

## I.

The Baltimore Gas and Electric Company (the licensee) is the holder of Facility Operating License No. DPR-69, which authorizes operation of the Calvert Cliffs Nuclear Power Plant Unit No. 2 (the facility). The license provides, among other things, that the facility is subject to all rules, regulations and Orders of the Nuclear Regulatory Commission (the Commission) now or hereafter in effect.

The facility is one of two pressurized water reactors located at the licensee's site in Calvert County, Maryland.

## II.

Sections III.D.2(a) and III.D.3 of Appendix J to 10 CFR Part 50 respectively require that Types B and C containment local leak rate tests (LLRTs) be performed during each reactor shutdown for refueling but in no case at intervals greater than two years.

During the previous Calvert Cliffs Unit 2 refueling outage, the LLRT testing program was conducted from March 9 to June 4, 1987 with the first Type B and C test completed on March 16, 1987. The current operating cycle (Cycle 8) was the first 24-month operating cycle at Calvert Cliffs Unit 2.

This Cycle is scheduled to end with a Unit 2 shutdown on March 25, 1989. Consequently, the Unit 2 LLRTs would not all be performed within the required 2-year test interval unless the licensee chose to shut down prematurely and 1) reload the core without having fully utilized the soon-to-be discharged spent fuel or 2) perform the Types B and C tests and subsequently operate for an additional 9-10 days before refueling with the same Types B and C tests possibly repeated again during the upcoming refueling outage or during the following operating cycle. Therefore, the licensee has requested a temporary exemption from these requirements to permit an extension of up to 28 days for the performance of each individual Type B or C LLRT. This temporary exemption would expire upon reaching 199.9°F average reactor coolant system (RCS) temperature during initial RCS heatup following the Unit 2 Cycle 9 refueling outage.

In the transformation from an 18-month to a 24-month operating cycle, the licensee has shown good faith in attempting to perform and comply with all surveillance test that previously would have not needed to be performed until the next refueling outage. This good faith effort was exhibited by the licensee when it conducted an extensive mid-Cycle 8 Unit 2 outage that was initiated to perform 18-month refueling interval surveillance tests to ensure that their associated test intervals did not exceed the allowed periods. Unfortunately, the licensee, in analyzing its testing program to determine which surveillance needed mini-outage retesting, failed to note that the Types B and C LLRT retest intervals for certain containment penetrations and isolation valves would exceed the maximum 2-year interval before the next refueling outage. This deficiency was not noted by the licensee until November 1988.

III.

Pursuant to 10 CFR 50.12, "The Commission may, upon application by any interested person or upon its own initiative, grant exemptions from the requirements of the regulations of [10 CFR Part 50], which are ... Authorized by law, will not present an undue risk to the public health and safety, and are consistent with the common defense and security." Further, Section 50.12(a)(2) provides inter alia, "The Commission will not consider granting an exemption unless special circumstances are present. Special circumstances are present whenever ... (v) the exemption would provide only temporary relief from the applicable regulation and the licensee has made good faith efforts to comply with the regulation."

Despite a good faith effort to comply with the provisions of the rule, the licensee will not be able to comply with the maximum allowable retest interval for all Types B and C LLRTs without conducting an extensive, premature outage at Unit 2. This exemption provides only temporary relief from the applicable regulations.

As discussed in our Safety Evaluation, dated March 15, 1989, there are several reasons for concluding that this extension to the maximum 2-year Types B and C LLRT retest interval will not adversely affect protection of the public health and safety. First, this extension is a one-time occurrence spanning, at a maximum, only 28 days during which containment integrity could be necessary. It is more probable that containment integrity will be needed for only the first 10-14 days of this extension period. However, the full 28-day period represents an interval extension of less than 4% of the maximum allowable retest interval during which no significant further degradation of either the containment penetrations or of the containment

isolation valves is likely. Second, this retest extension will not increase the possibility of events that require containment integrity, primarily the loss of coolant accident (LCOA). Finally, for this interval extension to significantly increase the consequences or size of a radiological release to the outside environment, a significant degradation of the containment boundary must occur during the 28-day extension followed by an event requiring containment integrity. As neither is probable during the 28-day extension, their sequential occurrence is quite unlikely.

#### IV.

Accordingly, the Commission has determined, pursuant to 10 CFR 50.12(a), that (1) a temporary exemption as described in Section III. is authorized by law, will not present an undue risk to the public health and safety, and is consistent with the common defense and security and (2) in this case, special circumstances are present as described in Section III. Therefore, the Commission hereby grants the following exemption:

The Baltimore Gas and Electric Company is exempt from the requirements of Sections III.D.2(a) and III.D.3 of Appendix J to 10 CFR Part 50, for performing Types B and C local leak rate retests on the Calvert Cliffs Unit 2 containment penetrations and isolation valves, in that the allowable retest interval for each individual Type B or C test may be extended to 2 years and 28 days vice the maximum 2-year interval specified in these sections. This exemption expires upon reaching 199.9°F average reactor coolant system (RCS) temperature during the initial RCS heatup following the Unit 2 Cycle 9 refueling outage. Upon expiration, the licensee shall comply with the provisions of these sections.

Pursuant to 10 CFR 51.32, the Commission has determined that the granting of this exemption will not result in any significant environmental impact (53 FR 10757).

This exemption is effective upon issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

ORIGINAL SIGNED BY

Gus C. Lainas, Acting Director  
Division of Reactor Projects I/II  
Office of Nuclear Reactor Regulation

Dated at Rockville, Maryland,  
this 15<sup>th</sup> day of March 1989.

\*SEE PREVIOUS CONCURRENCE

|      |         |              |           |          |          |                |
|------|---------|--------------|-----------|----------|----------|----------------|
| OFC  | :PDI-1  | :PDI-1       | :OGC      | :PDI-1   | :AD:DRP  | :Acting D:DRP: |
| NAME | :CVogan | :SMcNeill:vr | :SHLewis  | :RCapra  | :BBoger  | :GLainas       |
| DATE | :1/89   | :3/15/89     | :3/15/89* | :3/15/89 | :3/15/89 | :3/15/89       |

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Pursuant to 10 CFR 51.32, the Commission has determined that the granting of this exemption will not result in any significant environmental impact ( FR ).

This exemption is effective upon issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Gus C. Lainas, Acting Director  
Division of Reactor Projects I/II  
Office of Nuclear Reactor Regulation

Dated at Rockville, Maryland,  
this        day of March 1989.

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|------|----------|---------------|-------------|-----------|-----------|-----------------|
| OFC  | : PDI-1  | : PDI-1       | : OGC       | : PDI-1   | : AD:DRP  | : Acting D:DRP: |
| NAME | : CVogan | : S McNeil:vr | : S H Lewis | : R Capra | : B Boger | : G Lainas      |
| DATE | : / /89  | : 3/14/89     | : 3/15/89   | : 3/15/89 | : / /89   | : / /89         |

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