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

May 2, 1995

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 EMERGENCY AMENDMENT FOR CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NO. 1 (TAC NO. M92152)

Dear Mr. Denton:

The Commission has issued the enclosed Amendment No. 205 to Facility Operating License No. DPR-53 for the Calvert Cliffs Nuclear Power Plant, Unit No. 1. This amendment consists of changes to the Technical Specifications (TSs) in response to your application transmitted by letter dated April 28, 1995.

The amendment revises the control room emergency ventilation system TS 3.7.6.1, Limiting Condition For Operation. The revision extends the one-time increase in the allowed outage time for loss of emergency power only, from the 30 days previously approved, to 45 days. This extension is necessary to allow time to repair the Number 21 emergency diesel generator which failed its operability tests subsequent to modifications which have been recently completed.

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

Docket No. 50-317

Enclosures: 1. Amendment No. 205 to DPR-53
2. Safety Evaluation

cc w/encls: See next page

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DATED: May 2, 1995

AMENDMENT NO. 205 TO FACILITY OPERATING LICENSE NO. DPR-69-CALVERT CLIFFS UNIT 2

Docket File
PUBLIC
PDI-1 Reading
S. Varga, 14/E/4
J. Zwolinski, 14/H/3
L. Marsh
S. Little
D. McDonald
OGC
D. Hagan, T-4 A43
G. Hill (2), T-5 C3
C. Grimes, 11/E/22
ACRS (4)
OPA
OC/LFDCB
PD plant-specific file
C. Cowgill, Region I
Others as required

cc: Plant Service list

UNITED STATES
NUCLEAR REGULATORY COMMISSION
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BALTIMORE GAS AND ELECTRIC COMPANY

DOCKET NO. 50-317

CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 205
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 (BG&E the licensee) dated April 28, 1995, 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. 205, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications upon receipt.

3. This license amendment is effective as of the date of its issuance to be implemented upon receipt.

FOR THE NUCLEAR REGULATORY COMMISSION

Ledyard B. Marsh, 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: May 2, 1995

ATTACHMENT TO LICENSE AMENDMENTS

AMENDMENT NO. 205 FACILITY OPERATING LICENSE NO. DPR-53

DOCKET NO. 50-317

Revise Appendix A as follows:

Remove Pages	Insert Pages
3/4 7-16	3/4 7-16

3/4.7 PLANT SYSTEMS

3/4.7.6 CONTROL ROOM EMERGENCY VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.6.1 The Control Room Emergency Ventilation System shall be OPERABLE with:

a. Two filter trains,

b. Two air conditioning units,

c. Two isolation valves in each Control Room outside air intake duct,

d. Two isolation valves in the common exhaust to atmosphere duct, and

e. One isolation valve in the toilet area exhaust duct.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

a. With one filter train inoperable, restore the inoperable train 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.

b. With one air conditioning unit inoperable, restore the inoperable unit 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.

c. With one isolation valve per Control Room outside air intake duct inoperable, operation may continue provided the other isolation valve in the same duct is maintained closed; otherwise, be in at least HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours.

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* During the No. 21 emergency diesel generator upgrade in the 1995 Unit 2 refueling outage, the time to restore No. 12 filter train or air conditioning unit to OPERABLE status may be extended to 45 days (for loss of emergency power only) if the following is performed:

1. A temporary diesel generator shall be demonstrated available by starting it at least once per 7 days.

2. If ACTION 1 is not met, restore compliance with the ACTION within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 205 TO FACILITY OPERATING LICENSE NO. DPR-53

BALTIMORE GAS AND ELECTRIC COMPANY

CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NO. 1

DOCKET NO. 50-317

1.0 INTRODUCTION

By letter dated April 28, 1995, the Baltimore Gas and Electric Company (BG&E) submitted a request for changes to the Calvert Cliffs Nuclear Power Plant, Unit No. 1, Technical Specifications (TSs). The requested changes would revise the control room emergency ventilation system TS 3.7.6.1, Limiting Condition For Operation (LCO). The revision extends the one-time increase in the allowed outage time for loss of emergency power only, from the 30 days previously approved, to 45 days. This extension is necessary to allow time to repair the Number 21 emergency diesel generator which failed its operability tests subsequent to modifications which have been recently completed.

2.0 BACKGROUND

Currently, Calvert Cliffs Nuclear Power Plant (CCNP) uses three emergency diesel generators (EDGs) to provide emergency onsite power. These EDGs are designated as No. 11 EDG, No. 21 EDG, and No. 12 EDG. Normally, No. 11 EDG is dedicated to Unit 1, No. 21 EDG is dedicated to Unit 2, and No. 12 EDG is the "swing" EDG which is capable of powering one emergency bus on either unit. Offsite AC power is provided by three independent 500 kV transmission lines which provide power to the units during normal operations as well as during startup and shutdown, and an additional 69 kV line. Any one of these four lines is capable of supplying the power for all required safe shutdown loads for both units. In response to the station blackout rule, BG&E is modifying the CCNP electrical distribution system to include the tie-in of an alternate AC (AAC) diesel generator and upgrading the No. 21 EDG to increase its electrical output during the current Unit 2 outage.

CCNP has a common control room for the two units. The control room emergency ventilation system (CREVS) consists of two redundant trains designated as No. 11 CREVS and No. 12 CREVS. No. 11 CREVS receives power from Unit 1 through 4 kV Bus No. 11 with No. 11 EDG as the emergency power supply and No. 12 CREVS receives power from Unit 2 through 4 kV Bus No. 24 with No. 21 EDG as the emergency power supply. In the past outages, when No. 21 EDG was not available as an emergency power supply, No. 12 EDG was used as the emergency power supply for the 4 kV Bus No. 24. The capability to align No. 12 EDG to 4 kV Bus No. 24 was removed prior to the work currently being performed to upgrade No. 21 EDG. This will result in No. 12 CREVS not having a safety-

related emergency power supply during the period of No. 21 EDG upgrade. However, Unit 1 is at full power during this No. 21 EDG upgrade period which was originally expected to last about 30 days. With either unit in Modes 1 through 4, the current TSs require both trains of the CREVS (Nos. 11 and 12) to be operable and one train was allowed to be inoperable for up to 7 days. Without a one-time extension of the Unit 1 CREVS TS from 7 days to 30 days of the allowed outage time (AOT), the scheduled modification to No. 21 EDG would require a dual unit 30-day outage.

Consequently, by letter dated September 23, 1994, BG&E requested an amendment to Operating License Nos. DPR-53 and DPR-69 for CCNP, Units 1 and 2, respectively. By letter dated January 11, 1995, Amendment No. 202 to Facility Operating License No. DPR-53 and Amendment No. 180 to Facility Operating License No. DPR-69 were issued. Amendment No. 202, in part, revised the Unit 1 CREVS TSs to allow a one-time extension from 7 to 30 days to the AOT for one train inoperable.

3.0 EVALUATION

As noted, the upgrade of the No. 21 EDG was scheduled to be completed within a 30-day time period. However, due to unforeseen circumstances, as detailed in Section 4.0 of this safety evaluation, BG&E has requested that the one-time increase in the AOT of 30 days for the CREVS approved in Amendment No. 202 be extended to a one-time AOT of 45 days.

During this AOT period of 45 days for the CRVS, the loss of control room habitability resulting from the loss of all power for the CREVS is the concern. The CREVS is required to maintain the control room temperature below a specified limit and to filter the control room air in the event of a radioactive release.

The No. 12 CREVS has its normal power supply available but does not have a safety-related emergency power supply during this 45 day AOT period. However, a temporary diesel generator is connected to 4 kV Bus No. 24 to assure that AC power is available to the No. 12 CREVS. In addition, during this period, planned maintenance will be prohibited on three of the above cited four offsite power sources. Therefore, the No. 11 CREVS will have both its normal and emergency power sources available during this 45 day AOT period. However, as noted, its emergency power source is not safety-related.

Loss of all power to both trains of CREVS would require loss of all offsite power sources, the failure of No. 11 EDG to start, and the failure of the temporary diesel generator to start. Consequently, BG&E concluded that the probability of a loss of both trains of CREVS resulting from loss of all power supply sources during the 45 day AOT period for the CREVS is very low.

4.0 STATEMENT OF EMERGENCY CIRCUMSTANCES

The No. 21 EDG was taken out-of-service on April 3, 1995, to perform the upgrade modifications. The current one-time 30 day AOT will expire on May 3,

1995, which would require Unit No. 1 to commence shutdown if the modifications were not completed, the necessary tests performed, and the No. 21 EDG declared operable. The modifications being performed are similar to the upgrade modifications completed on the No. 11 EDG during the 1994 Unit No. 1 refueling outage. In addition, these modifications have been successfully performed on these types of EDGs elsewhere in the industry. BG&E did not experience any significant problems during the No. 11 EDG modifications and did not anticipate any significant problems during the No. 21 EDG modifications based on previous industry experience.

The necessary upgrade modifications were completed by April 13, 1995, and testing was commenced on April 14, 1995. However, several complications arose during the testing which necessitated repeating tests and performing additional tests. Initial problems with the new control circuitry, low crankcase vacuum, and governor problems were corrected and tests were completed. Firing pressure runs were performed on April 20, 1995, with firing pressures found out-of-specification. Several vendor (Fairbanks Moris) recommendations were implemented but the problem persisted. The pistons and rings were changed out during the weekend of April 22, based on further vendor recommendations, and BG&E anticipated that the problems would be corrected. During the subsequent testing, the No. 10 cylinder still experienced low firing pressure and high exhaust temperature. At this point, on April 25, 1995, BG&E verbally informed the NRC staff that the one-time 30 day AOT would require an additional 15 day extension due to the unforeseen problems and that it was initiating an emergency technical specification amendment request which was received on April 28, 1995.

A diesel engine analysis contractor arrived on site on April 27, 1995, with specialized test equipment to trouble shoot these problem. BG&E indicated that the additional 15 days would be adequate to complete the trouble shooting, perform the necessary equipment modifications and, complete the required tests. BG&E has indicated that these actions will avoid an unnecessary shutdown of Unit No. 1.

The NRC staff does not believe that BG&E abused the emergency provisions of 10 CFR 50.91(a)(5) in this instance. As detailed above, the type of upgrade modifications being performed on the No. 21 EDG had successfully been completed previously by both BG&E and other industry members. BG&E anticipated that the firing pressure exhaust and temperature problems would have been corrected by the change out of the pistons and rings. When this did not occur, BG&E immediately contacted the NRC staff and initiated an emergency amendment request. Therefore, in accordance with 10 CFR 50.91(a)(5), the Commission has determined that emergency circumstances exist that warrant prompt action. The situation, as detailed above, could not have been reasonably avoided and BG&E and the Commission must act quickly. The time remaining between now and the time that the unit would be required to shut down, May 3, 1995, does not permit the Commission to publish a Federal Register notice allowing 30 days for prior public comment. The Commission has also determined that the requested amendment, as discussed in Section 6.0, does not involve a significant hazards consideration.

5.0 SUMMARY

Based on its review of BG&E's rationale and the evaluation described above, the NRC staff concurs with BG&E's conclusion that the likelihood of the loss of both trains of CREVS resulting from loss of emergency power is very low during the requested 45 day AOT. Therefore, the NRC staff finds that BG&E's proposed TS change to revise the Unit 1 CREVS TS 3.7.6.1 to provide a one-time extension from 30 days to 45 days to the AOT for one train inoperable is acceptable.

6.0 FINAL NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

The Commission has proved standards for determining whether a significant hazards consideration exists (10 CFR 50.92(c)). A proposed amendment to an operating license for a facility involves no significant hazards consideration if operation of the facility in accordance with the proposed amendment would not: (1) involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) create the possibility of new or different kind of accident from an accident previously evaluated; or (3) involve a significant reduction in a margin of safety.

The following evaluation by BG&E, with which we agree, demonstrates that the proposed amendment does not involve a significant hazards consideration.

1. Would not involve a significant increase in the probability or consequences of an accident previously evaluated.

   The Control Room Emergency Ventilation System (CREVS) is designed so that the Control Room can be occupied under all plant conditions. The CREVS is required to maintain the Control Room temperature and to filter the Control Room air in the event of a radioactive release. During the time No. 21 Emergency Diesel Generator is out-of-service, No. 12 CREVS will be without a Class IE emergency power source. The CREVS is not an initiator in any previously evaluated accidents. Therefore, the proposed change does not involve an increase in the probability of an accident previously evaluated.

   The CREVS is required to maintain the Control Room habitable following a radioactive release from a loss-of-coolant accident, a main steam break, or a steam generator tube rupture. There is a very low probability of an event occurring requiring Control Room isolation during the extended period. Requiring that the CREVS have both a normal power source and an emergency power source available ensures that one train of the system will be available so that the Control Room can be occupied under these conditions. The probability of a loss-of-offsite power is very low due to the highly redundant design of the offsite power supply. Planned maintenance on three of the offsite power supplies and associated relaying and devices within the switchyards will be prohibited during the extended period to maintain the low probability of a loss-of-offsite power event.

Number 12 CREVS train will continue to have its normal power source. Number 11 CREVS will have both its normal and emergency power supply available and this train is capable of maintaining the Control Room habitable. In addition, a temporary diesel generator is installed to provide assurance that an emergency power source will be available to No. 12 CREVS. The compensatory measures that will be taken during this period will ensure that the proposed change does not involve a significant increase in the consequences of an accident previously evaluated.

Therefore, the proposed change does not involve a significant increase in the probability or consequences of accident previously evaluated.

2. Would not create the possibility of a new or different type of accident from any accident previously evaluated.

   The CREVS is not being modified by this proposed change. The system will continue to operate in the same manner. Number 21 Emergency Diesel Generator will operate in a similar manner after it is returned to service and will be able to support unit operation after all the testing is completed. The installation of the temporary diesel generator during the extended period has been evaluated to ensure that it does not create any new accident initiators. Therefore, the proposed change does not create the possibility of a new or different type of accident from any accident previously evaluated.

3. Would not involve a significant reduction in a margin of safety.

   The operability of the CREVS during Modes 1 through 4 ensures that the Control Room will remain habitable under all plant conditions. The proposed change does not affect the function of the CREVS. The proposed change will allow one train of the CREVS to be without a Class IE emergency power supply for up to 45 days. This train will have the normal power supply available. The other train of the CREVS will have both its normal and emergency power supplies during this period. Compensatory measures that will be taken include prohibiting planned maintenance on the required offsite power sources, and installing a temporary diesel generator of sufficient capacity as a backup to the affected train. These measures will maintain the current margin of safety. Therefore, the proposed change does not involve a significant reduction in a margin of safety.

7.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Maryland State official was notified of the proposed issuance of the amendment. The State official had not comments.

8.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendment involves 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 made a final no significant hazards consideration with respect to this amendment. Accordingly, the amendment meets 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 amendment.

9.0 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 amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: Daniel McDonald

Date: May 2, 1995

May 2, 1995

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

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Sincerely,

Original signed by:

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