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U. S. Nuclear Regulatory Commission
Washington, DC 20555

ATTENTION: Document Control Desk

SUBJECT: Calvert Cliffs Nuclear Power Plant
Unit No. 1; Docket No. 50-317
Emergency License Amendment Request; Unit 1 Control Room Emergency
Ventilation System Technical Specification Extension

- REFERENCES:
- (a) Letter from Mr. R. E. Denton (BGE) to NRC Document Control Desk, dated September 23, 1994, License Amendment Request; One-Time Technical Specification Changes to Support the 1995 Refueling Outage
 - (b) Letter from Mr. D. G. McDonald, Jr. (NRC) to Mr. R. E. Denton (BGE), dated January 11, 1995, Issuance of Amendments for Calvert Cliffs Nuclear Power Plant, Unit No. 1 (TAC No. M90500) and Unit No. 2 (TAC No. M90501)

Pursuant to 10 CFR 50.90, the Baltimore Gas and Electric Company hereby requests an Emergency Amendment to Operating License No. DPR-53 by incorporating the changes described below into the Technical Specifications for Calvert Cliffs Unit 1.

DESCRIPTION

The proposed emergency amendment would revise the Unit 1 Control Room Emergency Ventilation System (CREVS) Technical Specifications to provide an extension from 30 to 45 days of the allowed outage time for one train inoperable due to the emergency power supply being inoperable. This is an extension of the previously requested and approved change (References a and b).

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BACKGROUND

Currently, Calvert Cliffs Nuclear Power Plant uses three emergency diesel generators (EDGs) to provide the emergency onsite power supply. 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 and is capable of powering one emergency bus on either unit. Offsite AC electrical power is provided by three independent 500 kV transmission lines. These lines provide offsite power to the units during normal operations as well as during startup and shutdown. The system is also designed with the capability for a single 500 kV line to power both units simultaneously. This diversity ensures that the loss of two 500 kV lines will not result in a loss-of-offsite power. In addition to the three 500 kV transmission lines, there is a 69 kV line from Southern Maryland Electric Cooperative. This line is capable of supplying the power for all required safe shutdown loads for both units as described in Updated Final Safety Analysis Report Section 8.2.4.

Calvert Cliffs has a common Control Room for the two units and the CREVS consists of two redundant trains. The CREVS is designed so that the Control Room can be occupied under all plant conditions. Number 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. With either unit in Modes 1 through 4, the Technical Specifications require both trains of the CREVS to be operable.

As described in Reference (a), No. 21 EDG was scheduled to be upgraded during the 1995 Unit 2 Refueling Outage. The upgrade modification is being done to increase the electrical capacity of the existing EDGs to provide additional margin for the electrical loading of the 4 kV safety-related busses, thereby improving the margin of safety for the onsite electrical distribution system. The upgrade on No. 21 EDG resulted in No. 12 CREVS not having a safety-related emergency power supply during the upgrade. This required Baltimore Gas and Electric Company to request a one-time Technical Specification change to the Unit 1 CREVS (Reference a). This request was approved in Reference (b). The No. 21 EDG upgrade was expected to be completed within 30 days. On April 3, 1995, No. 21 EDG was taken out-of-service to begin the upgrade modifications. Modifications were completed on April 13, 1995, with testing starting on April 14. During testing, multiple problems were discovered that resulted in several test iterations. As of April 26, Number 10 cylinder was still experiencing low firing pressure and high exhaust temperature. Several corrective actions suggested by the vendor have been tried but have not corrected the problems. An engine analysis contractor was on site by April 27 to troubleshoot these problems. Troubleshooting is expected to be complete within a week. The necessary testing to restore No. 21 EDG as an emergency power supply for No. 12 CREVS should be completed within the following four days. However, the Unit 1 CREVS Action Statement will expire on May 3, requiring Unit 1 to be shut down. The upgrade modification is similar to modifications completed on No. 11 EDG during the 1994 Unit 1 Refueling Outage, and to those done elsewhere in the industry. We did not experience these problems during the No. 11 EDG upgrade and, therefore, did not foresee them on No. 21 EDG. As a consequence, the necessity for this emergency relief could not have been reasonably avoided.

During the period the No. 21 EDG is out-of-service, planned maintenance will be prohibited on three of the four offsite power sources. In addition, a temporary diesel generator will be connected to 4 kV Bus No. 24 to provide assurance that AC power would be available to No. 12 CREVS. These are the same compensatory measures approved for the 30-day allowed outage time extension (Reference b). There is no other Technical Specification that is affected by this extension. Number 11 EDG will be aligned to

4 kV Bus No. 11 and No. 12 EDG will be available as the "swing" diesel generator for Unit 1 to 4 kV Bus No. 14, or for Unit 2 to 4 kV Bus No. 21. Therefore, Unit 1 will have the two required safety-related EDGs to support power operation, and Unit 2 will have the one required safety-related EDG to support safe shutdown conditions. Without an extension of the Unit 1 CREVS Technical Specification 30-day allowed outage time for emergency power to 45 days, Unit 1 will be required to shutdown on May 3, 1995.

REQUESTED CHANGE

Change Specification 3.7.6.1 of the Unit 1 Technical Specifications as shown on the marked-up page attached to this transmittal.

SAFETY ANALYSIS

During the time No. 21 EDG is out-of-service, the loss of Control Room habitability 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 probability of a loss of both trains of CREVS is very low. Number 11 CREVS will have both its normal power source and its emergency power source available during this period. Number 12 CREVS will also have its normal power source available. Number 12 CREVS will not have a safety-related emergency power supply, but will have the temporary diesel generator available. Loss of all power to both trains of the CREVS would require a loss-of-offsite power, the failure of No. 11 EDG to start, and the failure of the temporary diesel generator to start. This sequence of events is highly unlikely.

DETERMINATION OF SIGNIFICANT HAZARDS

The proposed change has been evaluated against the standards in 10 CFR 50.92 and has been determined to not involve a significant hazards consideration, in that operation of the facility in accordance with the proposed amendments:

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 1E 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 line 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 an 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 1E emergency power supply for up to a total of 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.

ENVIRONMENTAL ASSESSMENT

The proposed amendment would change requirements with respect to the installation or use of a facility component located within the restricted area, as defined in 10 CFR Part 20, or changes to an inspection or surveillance requirement. We have determined that the proposed amendment involves no significant hazards consideration, and that operation with the proposed amendment would result in no significant change in the types or significant increases in the amounts of any effluents that may be released offsite, and in no significant increase in individual or cumulative occupational radiation exposure. Therefore, the proposed amendment is eligible for categorical exclusion as set forth in 10 CFR Part 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment is needed in connection with the approval of the proposed amendment.

SCHEDULE

This change is requested to be approved and issued by May 3, 1995. As discussed in the Background Section of this letter, issuance of this amendment is identified as impacting continued plant operation.

SAFETY COMMITTEE REVIEW

These proposed changes to the Technical Specifications and our determination of significant hazards have been reviewed by our Plant Operations and Safety Review Committee and Offsite Safety Review Committee. They have concluded that implementing these changes will not result in an undue risk to the health and safety of the public.

