



CHARLES CENTER • P.O. BOX 1475 • BALTIMORE, MARYLAND 21203-1475

GEORGE C. CREEL
VICE PRESIDENT
NUCLEAR ENERGY
(301) 260-4455

April 2, 1991

U. S. Nuclear Regulatory Commission
Washington, DC 20555

ATTENTION: Document Control Desk

SUBJECT: Calvert Cliffs Nuclear Power Plant
Unit Nos. 1 & 2; Docket Nos. 50-317 & 50-318
License Amendment Request: Containment Integrity Definition

Gentlemen:

The Baltimore Gas and Electric Company hereby requests an Amendment to its Operating License Nos. DPR-53 and DPR-69 for Calvert Cliffs Unit Nos. 1 & 2, respectively, with the submittal of the proposed changes to the Technical Specifications. This change would clarify the definition of containment integrity to eliminate an apparent conflict of action requirements.

DESCRIPTION

The proposed amendment would modify Definition 1.8, item 1.8.3, and Surveillance Requirement 4.6.1.1.b of the Calvert Cliffs, Units 1 and 2 Technical Specifications to indicate that the impact of the containment air locks on containment integrity is based on compliance with Specification 3.6.1.3 (Containment Air Locks). This would clarify that operation is required to be in accordance with the intended action requirements of Limiting Condition for Operation 3.6.1.3, rather than the action requirements of Limiting Condition for Operation 3.6.1.1.

BACKGROUND

The Calvert Cliffs Unit 2 Technical Specifications, as originally issued, and the subsequent conversion of Unit 1 to the Standardized Technical Specification format, were written such that the Definition and the Surveillance Requirement both require operable containment air locks to show containment integrity. In more recently issued Technical Specifications for other nuclear power plants, the Definition and the Surveillance Requirement both require compliance with the requirements of Specification 3.6.1.3. "Compliance with the requirements of Specification 3.6.1.3" provides for operation within the action requirements to suffice for containment integrity. With the current Calvert Cliffs wording, the containment integrity specification requires shutdown (Mode 5) within 36 hours and does not provide the intended out-of-service time of the action statement of Specification 3.6.1.3 for attempting repair of the air locks prior to requiring shutdown.

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The Calvert Cliffs Technical Specifications are currently worded such that they impose an unintended and unnecessary restriction. Baltimore Gas and Electric (BG&E) Company requests that they be changed to reflect the wording of more recently licensed nuclear power plants.

REQUESTED CHANGE

Change pages 1-2 and 3/4 6-1 of the Unit 1 and Unit 2 Technical Specifications as shown on the marked-up pages attached to this transmittal.

SAFETY ANALYSES

The containment air locks form a part of the containment pressure boundary. As such, air lock integrity and air tightness is essential to limit offsite doses from a Design Basis Accident (DBA) as described in the safety analysis. The DBAs which could occur at power and result in a release of radioactive material within containment are a loss of coolant accident (LOCA), a main steam line break, and a control element assembly ejection accident. Each of these DBAs assumes that the containment (and its air locks) is capable of performing its intended containment function such that the release of fission products to the environment is limited to a very small fraction of the containment volume. These events are described in Updated Final Safety Analysis Report (UFSAR) Chapter 14.

The containment design provides for an allowable leakage rate (L_a) of 0.20% of the containment air weight per day. This leakage rate was used in the offsite radiological dose calculations for Calvert Cliffs and is the basis for Technical Specification 3.6.1.2.a. An additional restriction imposed by 10 CFR Part 50, Appendix J, and Technical Specification 3.6.1.2.b, is that no more than 60% of this allowable leakage (L_a) be through Type B and C penetrations. The air locks are Type B penetrations. Each containment air lock is further limited, by Technical Specification 3.6.1.3.b, to an overall leakage rate of 5% of the allowable leakage (L_a).

Both of the containment air locks are designed with a door on each end. Both doors are required to be closed during operation unless the air lock is being used for transit entry and exit through the containment. Then, at least one door is required to be closed. Each door contains a double seal. The area between the double seal on a door is maintained pressurized to provide the leakage barrier. In accordance with Technical Specification Surveillance Requirement 4.6.1.3.a, the seal leakage of each containment air lock is routinely verified following its use to be no greater than 0.02% of the allowable containment leakage (L_a).

The operable seal of either door is sufficient to maintain the required containment barrier since each is designed to withstand the peak containment pressure calculated to occur following a DBA; however, both doors are kept closed when not in use to provide an additional barrier. Specification 3.6.1.3 was written to recognize this capability of a single door to serve as a leakage barrier and provided an allowed out-of-service time for one door in order to attempt repairs prior to requiring a shutdown. However, due to the wording by which the containment integrity requirements reference the air lock doors (stating that the doors must be operable), the intent to govern airlock doors with the action statements of Specification 3.6.1.3 is thwarted. Based on the design of the air lock doors, BG&E believes the containment integrity wording to be incorrect and unnecessarily restrictive. Thus, we request that the wording be revised.

DETERMINATION OF SIGNIFICANT HAZARDS

This proposed change has been evaluated against the standards in 10 CFR 50.92 and has been determined to involve no significant hazards considerations, in that operation of the facility in accordance with the proposed amendment:

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

The containment air locks are not considered as initiators for any previously evaluated accident. This change does not impact their design and therefore does not significantly increase the probability that they would initiate any previously evaluated accident.

The safety analyses consider the containment leakage barrier to be intact and maintaining the leakage at less than the assumed value at the initiation of the evaluated accidents that occur during operation. Since each air lock door is designed to provide that containment barrier and is periodically tested to assure that leakage is not excessive, this change will not significantly increase the consequences of any previously evaluated accidents.

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

This change does not involve a change to the design of the plant. The new method of operation will not involve any components which could initiate an accident. Therefore, this change would 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 margin of safety for the containment integrity technical specification is provided by assuring that the release of radioactive materials from the containment atmosphere will be restricted to those leakage paths and associated leak rates assumed in the accident analyses. Since each air lock door is designed to provide that containment barrier, this change does not involve a significant reduction in the margin of safety.

SCHEDULE

BG&E requests approval of this change by June 30, 1991. While issuance of this amendment is currently not identified as having an impact on outage completion or continued plant operation, your prompt consideration is appreciated.

SAFETY COMMITTEE REVIEW

These proposed changes to the Technical Specifications and our determination of significant hazards have been reviewed by our Plant Operations and Off-Site Safety Review Committees, and they have

