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May 24, 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
Request for Amendment; Snubber Visual Inspection Intervals

REFERENCE: (a) Generic Letter 90-09, "Alternative Requirements for Snubber Visual Inspection Intervals and Corrective Actions," dated December 11, 1990

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.

## DESCRIPTION

The proposed amendment would revise the Technical Specifications for both Units 1 and 2 to provide required snubber visual inspection intervals based on the number of inoperable snubbers found during the previous inspection in proportion to the size of the various snubber populations and categories. This requested change is based on the approach for determining visual inspection intervals developed in Generic Letter 90-09. In addition, the amendment would make various editorial revisions for consistency between Units 1 and 2 and remove unnecessary wording or notes.

## BACKGROUND

Snubbers are provided on plant systems to mitigate the effects of dynamic loading of systems and protect the structural integrity of that system. The Technical Specifications impose surveillance requirements for visual inspection and functional testing of safety-related snubbers. To verify that a snubber can operate within specific performance limits, functional testing is periodically performed that involves removing the snubber and testing it on a specially-designed test stand. Functional testing is intended to provide a high confidence level that the snubbers operate within the specified acceptance limits. The performance of visual examinations is a separate process that complements the functional testing program and provides additional confidence of snubber operability. The visual



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inspection involves the observation of the condition of installed snubbers to identify those that are damaged, degraded, or inoperable as caused by physical means, such as leakage, corrosion, or environmental exposure. In addition, service life monitoring is conducted to assure that the snubbers periodically undergo a performance evaluation.

## REQUESTED CHANGE

Change page 3/4 7-25 and associated Bases page B3/4 7-5 of the Unit 1 and Unit 2 Technical Specifications as shown on the marked-up pages attached to this transmittal. Also, insert new pages 3/4 7-26c and 3/4 7-26d to incorporate new Table 4.7-3 as shown in the attachment.

Two minor editorial changes to the Action Statement of Specification 3.7.8.1 are requested to achieve consistency between Unit 1 and Unit 2. An additional editorial change is requested to the lead paragraph of Surveillance Requirement 4.7.8.1 to achieve consistency in wording with the Generic Letter and correct a duplication of requirements.

Surveillance Requirement 4.7.8.1.a is requested to be revised to require visual inspections and incorporate the wording and table of the Generic Letter which determines the schedule of the inspections. The current method of determining schedule is replaced and two notes associated only with the previous schedule determination method are also deleted.

The Generic Letter proposed three changes to Surveillance Requirement 4.7.8.1.b. However, these items are not requested to be incorporated for the following reasons. First, Calvert Cliffs personnel prefer the current wording with regard to action to be taken for a suspect snubber. The current wording is considered to precisely describe the impact on operability and the required actions to be taken. Second, the words of the Generic Letter regarding snubbers connected to common hydraulic fluid reservoirs are not included since the Calvert Cliffs design does not include safety-related snubbers connected to a common hydraulic fluid reservoir. Finally, the current description of the required evaluation is maintained to retain the additional details regarding scope and purpose of the evaluation.

Changes to the Bases are also included to reflect these requested revisions to the Specifications.

## SAFETY ANALYSES/JUSTIFICATION

The current Calvert Cliffs Technical Specifications specify a schedule for snubber visual inspections that is based on the number of inoperable snubbers found during the previous visual inspection. The number used to determine the next inspection interval was generically developed irrespective of the size of the snubber population. Use of this criteria for plants similar to Calvert Cliffs with large numbers of snubbers causes the current visual inspection schedule to be excessive. Some plants have spent a significant amount of resources and have subjected plant personnel to additional radiological exposure to comply with these visual examination requirements.

Calvert Cliffs Unit 1 contains 108 accessible snubbers and 218 inaccessible snubbers. Unit 2 contains 109 accessible snubbers and 172 inaccessible snubbers. Inspection results for Calvert Cliffs have typically identified none or a single inoperable snubber during each inspection and resulted in subsequent inspection intervals of 18 months. The subsequent inspection interval was designed to vary inversely with the number of inoperable snubbers identified during an inspection and was maximized at 18 months to match the predominant fuel cycle of the early 1980s. This inspection frequency was intended to maintain a constant level of snubber protection for the systems and was

provided in a sliding scale to encourage the adoption of proven maintenance methods and materials with the goal of maximizing the inspection interval.

An alternative inspection schedule has been developed based on a Nuclear Regulatory Commission (NRC) staff sponsored study conducted using a Snubber Utility Group data base. In this development, a probabilistic and statistical methodology was used to maintain the reliability and confidence level of snubber operability. The results indicate that the operating life span (time-to-failure) of any individual snubber is independent of any other snubber, and that it does not change over two cycles. The alternative inspection schedule has been developed to maintain the same confidence level of snubber operability as the existing schedule and is based on very low industry snubber visual examination failures. Also considered is the capability of functional testing alone to assure high confidence in snubber operability. The alternative schedule also varies inversely with the number of inoperable snubbers identified during an inspection. However, the alternative inspection schedule also considers the number of inoperable snubbers found in proportion to the sizes of the various snubber populations or categories for each snubber type. Also, the alternative inspection schedule is adjusted to accommodate the use of 24-month fuel cycles. The Generic Letter indicates the NRC endorses this alternative inspection schedule on the basis that it provides this same high confidence level, reduces radiological exposure and is highly cost effective.

Of 6,881 visual inspections that have been conducted at Calvert Cliffs, only 19 failures have occurred (less than 0.28%). These inspection results are similar to those of the industry used as the basis for Generic Letter 90-09. Therefore, the alternative inspection schedule is proposed for implementation at Calvert Cliffs in order to reduce future occupational exposure and reduce resource requirements. The proposed revision allows longer inspection intervals for low numbers of failures and requires shorter inspection intervals for high numbers of failures. The proposed revision also includes some minor editorial changes and minor formatting changes (which do not impact the requirements), and a minor revision to reflect that the Calvert Cliffs design does not include hydraulic fluid reservoirs which are common to multiple snubbers (reference previous Unit 1 and 2 Amendments 103 and 73, respectively).

## 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 amendment:

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

The proposed method for determining the snubber visual inspection interval is equivalent to the previous method with regard to assuring the capability of the system which it supports. The proposed interval increase does not significantly change the failure rate and provides an equivalent assurance of operability. 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.*

This revision will continue to assure the ability of the equipment to provide dynamic load support during a seismic event. Therefore, the proposed method for determining the snubber visual inspection intervals does not create a 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 proposed method for determining the snubber visual inspection interval is equivalent to the previous method with regard to assuring the capability of the system which it supports. The functional testing continues to provide incentive for proper maintenance and assurance of the capability of the snubbers. Therefore, the proposed change does not involve a significant reduction in the margin of safety.

## SCHEDULE

This change is requested to be approved and issued by September 1, 1991, to allow time for appropriate planning of the next refueling outage.

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 Off-Site Safety Review Committee, and they have concluded that implementation of these changes will not result in an undue risk to the health and safety of the public.

Very truly yours,

GCC

STATE OF MARYLAND :
: TO WIT :
COUNTY OF CALVERT :

I hereby certify that on the 23rd day of May, 1991, before me, the subscriber, a Notary Public of the State of Maryland in and for Calvert, personally appeared George C. Creel, being duly sworn, and states that he is Vice President of the Baltimore Gas and Electric Company, a corporation of the State of Maryland; that he provides the foregoing information for the purposes therein set forth; that the statements made are true and correct to the best of his knowledge, information, and belief; and that he was authorized to provide the information on behalf of said Corporation.

WITNESS my Hand and Notarial Seal:

Michelle D Hall
Notary Public

My Commission Expires:

February 2, 1994
Date

GCC/ERG/erg/bjd/dlm

Attachments

cc: D. A. Brune, Esquire
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