December 1, 1986

MEMORANDUM FOR: Sholly Coordinator

FROM: Ashok C. Thadani, Director
PWR Project Directorate #8
Division of PWR Licensing-B

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SUBJECT: REQUEST FOR PUBLICATION IN BI-WEEKLY FR NOTICE - NOTICE OF CONSIDERATION OF ISSUANCE OF AMENDMENTS TO FACILITY OPERATING LICENSES AND PROPOSED NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION AND OPPORTUNITY FOR A HEARING

Baltimore Gas and Electric Company, Docket Nos. 50-317 and 50-318, Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2, Calvert County, Maryland

Date of amendment request: July 31, 1986 (partial)

Description of amendment request: The following proposed Technical Specification (TS) changes are in response to the Baltimore Gas and Electric Company (the licensee) application dated July 31, 1986. The remaining issue will be addressed in separate correspondence. The proposed TS changes would: (1) Modify the Units 1 and 2 TS Surveillance Requirement 4.7.1.5 for demonstrating the operability of each main steam isolation valve (MSIV) by requiring fullclosure of each MSIV in less than 6.0 seconds rather than the currently required 3.6 seconds; (2) Change the surveillance periods for performance of the Units 1 and 2 Snubber TS Surveillance Requirements 4.7.8.1.a, "Visual Inspections," 4.7.8.1.c, "Functional Tests," and 4.7.8.1.e, "Snubber Service Life Monitoring," from the current requirement of at least once every 18 months to at least once per refueling interval where refueling interval shall be defined as 24 months. The inspection period for TS 4.7.8.1.a with one inoperable snubber of each type per inspection period would be changed from 12 months to 16 months. Additionally, several administrative changes in TS 3/4.7.8, "Snubbers," are proposed.

Basis for proposed no significant hazards consideration determination:

Change No. 1 proposes to extend the MSIV full closure time required by TS 4.7.1.5 to a limit of "less than 6.0 seconds" from the currently required "within 3.6 seconds".

The Calvert Cliffs Updated Final Safety Analysis Report (UFSAR) assumes an MSIV closure time of a maximum 6.0 seconds after a trip signal is initiated under the pressure, temperature and flow conditions applicable to the assumed accident. Additionally, the UFSAR states that closure of the MSIV's within 6.0 seconds will prevent rapid flashing and blow down of the water stored in the shell side of the steam generator due to a steam line rupture event. Thus, a rapid, uncontrolled cooldown of the reactor coolant system (RCS) would be avoided.

Due to the current design of the MSIV's and their actuation system, these valves must be verified to close within 3.6 seconds under no load conditions to ensure that in a steam line rupture event where the MSIV experiences reverse flow, the MSIV will close in less than 6.0 seconds.

As the currently installed MSIV actuation system has contributed to consistent operational problems in properly closing the MSIVs', the licensee is replacing the existing MSIV internals and actuation system. The design of the new MSIV internals will permit the MSIV to close within 3.0 seconds, regardless of steam flow direction, when both hydraulic circuits are operating. Additionally, if one of the two hydraulic circuits fails, the MSIV will close in 5.0 seconds, again regardless of steam flow direction.

The licensee has evaluated the proposed change against the standards of 10 CFR 50.92 and has determined that the amendments would not:

(i) Involve a significant increase in the probability or consequences of an accident previously evaluated...

This extension in the surveillance closure time is for MSIV full closure under no load conditions. Due to the previous design of the MSIV internals, the valve had to close within 3.6 seconds under no load conditions to ensure it would close within 6.0 seconds in a reverse flow scenario. The new MSIV internals design is independent of steam flow direction. Therefore, the MSIV full closure time can be set at the limit of 6.0 seconds provided by the safety analysis, as the no load closure time will accurately reflect the accident closure time. As such, the proposed change does not involve any increase in the probability or consequences of an accident previously evaluated.

(ii) Create the possibility of a new or different type of accident from any accident previously evaluated...

This proposal maintains the MSIV full closure time within the limits analyzed in and bounded by the UFSAR safety analysis. Hence, this proposal does not create any possibility of a new or different type of accident.

(iii) Involve a significant reduction in margin of safety.

The full closure time of 3.6 seconds at no load conditions for the currently installed MSIV ensured that for a steam line rupture event with reverse flow, the MSIV would be fully closed within 6.0 seconds. As the closure time of the new MSIV design is independent of steam flow direction, requiring the MSIV to fully close in less than 6.0 seconds under no load conditions also ensures that the MSIV will close in less than 6.0 seconds under accident conditions. Therefore, this proposal will not involve any reduction in a margin of safety.

Based upon the above, the NRC staff agrees with the licensee's evaluation and proposes to determine that the proposed change to TS 4.7.1.5 involves no significant hazard consideration.

Change No. 2 would revise TS 3/4.7.8, "Snubbers" to reflect a change from an 18-month operating cycle to a 24-month operating cycle (refueling interval). Correspondingly, the proposal would extend the periods between performances of TS Snubber Surveillance Requirements 4.7.8.1.a, "Visual Inspections," 4.7.8.1.c, "Functional Tests," and 4.7.8.1.e, "Snubber Service Life Monitoring," from 18 to 24 months, a refueling interval. Likewise, the inspection period of TS 4.7.8.1.a for one inoperable snubber of each type per inspection period would be extended from 12 to 16 months.

The licensee has an established snubber inspection program which has operated on an 18-month cycle. This program has resulted in functionally testing over 260 small bore snubbers on Units 1 and 2 combined since 1978. Only one failure has been noted during these 260 tests.

The licensee evaluated the proposed change against the standards of 10 CFR 50.92 and has determined that the amendments would not:

(i) Involve a significant increase in the probability or consequences of an accident previously evaluated...

Snubber failure could impact the operation of a safety system or a non-safety system whose failure could impact safety related systems. Inspection experience has shown that only one of 260 small bore snubbers failed during the 7 years from 1978 to 1985 for Units 1 and 2 combined. Extending the snubber surveillance interval from 18 to 24 months would

therefore produce only a negligible increase in the probability of an accident previously evaluated. Additionally, the punitive nature of the TS requires an increasingly more frequent surveillance schedule if the snubber failure rate per inspection period increased. The severity of the consequences of snubber failures is time independent and would not be affected by increasing the inspection period. Hence, the proposed change does not involve any increase in the probability or consequences of an accident previously evaluated.

(ii) Create the possibility of a new or different type of accident from any accident previously evaluated...

As this proposal does not alter any snubber operability requirements other than surveillance interval, and since the ability to provide dynamic load support during a design basis seismic event is unaffected, no possibility of creating a new or different type of accident would result due to the proposed change.

(iii) Involve a significant reduction in margin of safety.

Extending the surveillance interval for snubber inspections and functional tests, based upon the very low snubber failure rate observed over a 7 year period, does not involve the significant reduction in any margin of safety.

Several administrative changes to TS 3/4.7.8, "Snubbers," have also been proposed as a part of change No. 2. The licensee has proposed to delete the notes in TS 4.7.8.1.c that the steam generator snubbers as specified need not be functionally tested until the refueling outage following June 30, 1985 and in TS 4.7.8.1.e that the snubber service life program shall be fully implemented by January 1, 1983. These requirements

are complete and have expired and as such, are no longer applicable to any TS requirements. Therefore, these changes are only administrative in nature and involve no significant hazards considerations.

Based upon the above, the NRC staff agrees with the licensee's evaluation and proposes to determine that the proposed changes involve no significant hazard consideration.

Local Public Document Room location: Calvert County Library, Prince Frederick, Maryland.

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NRC Project Director: Ashok C. Thadani

/s/

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