

**BALTIMORE GAS AND ELECTRIC COMPANY**

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VICE PRESIDENT  
SUPPLY

November 19, 1980

Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Washington, D. C. 20555

ATTENTION: Mr. Robert W. Reid, Chief  
Operating Reactors Branch #4  
Division of Operating Reactors

SUBJECT: Calvert Cliffs Nuclear Power Plant's Unit Nos. 1 and 2,  
Docket Nos. 50-317 and 50-318  
Inservice Inspection (ISI) Program Request  
For Relief From ASME Code Section XI Requirements  
Determined To Be Impractical

Dear Mr. Reid:

In accordance with 10 CFR 50.55a(g)(6)(i), we request the Commission to grant an additional exemption from an ASME Code Section XI requirement that has been determined to be impractical. In accordance with NRC Staff Guidance, letter dated November 24, 1976, the information concerning the exemption request is presented herein.

It has been determined that hydrostatic pressure testing for repairs, modifications, replacements, additions, and alterations in some instances is impractical; specifically, the hydrostatic pressure testing of Class 2 portions of steam and feedwater systems that cannot be isolated from the secondary side of the steam generators and are five (5) inches nominal pipe size and smaller.

The Code of Federal Regulations, Section 10 CFR 50.55a, invokes ASME Code Section XI for the inspection and testing of operating nuclear facilities. Calvert Cliffs Units 1 and 2 are required to follow the rules and regulations of ASME Code Section XI 1974 Edition with Addenda through Summer 1975 for Class 1, 2, and 3 piping and components. Subarticle IWA-4210 in this Code requires the performance of a pressure test in accordance with the provisions of IWA-5000 following welding on the pressure retaining boundary. Article IWC-5000 requires that the hydrostatic pressure test be at least 1.25 times the system design pressure for Class 2 pressure boundaries. Calvert Cliffs Steam Generators are limited by design to only ten (10) hydrostatic pressure tests on the secondary side. Two (2) hydrostatic pressure tests have been performed on the secondary side of the steam generators as of this date.

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Four additional hydrostatic pressure tests will be required to meet the once per interval ISI requirements over the forty (40) year life of the plant. This leaves only four (4) pressure testing cycles per steam generator reserved for testing after repairing and making new welds on the secondary pressure boundary.

It is proposed that repair welds and new welds on piping and components that are five (5) inches nominal pipe size and smaller and cannot be isolated from the secondary side of the steam generators be examined under normal operating pressure which corresponds with 100% rated reactor power in lieu of hydrostatic pressure testing in accordance with ASME Code Section XI. As an added requirement for welds exempted from hydrostatic pressure testing requirements, a surface examination shall be performed after completing removal of half of the first weld layer by grinding. Another surface exam will be performed after the final weld pass. Also, a 100% volumetric exam of completed butt welds on branch connections and associated piping and components greater than one (1) inch nominal pipe size will be performed. It is felt that these, in lieu of ASME Code Section XI requirements, will insure the integrity of the components requested for exemption from the hydrostatic pressure testing requirements.

A tabulation of the information required for this request of relief from ASME Code Section XI requirements, determined to be impractical, is presented below.

I. Components For Which Relief Is Requested:

A. Name and Number

Portions of the steam and feedwater systems extending from, but not including, the secondary side of steam generators 11, 12, 21, and 22, up to and including, the first outermost containment isolation valve that is either normally closed or capable of automatic closure during all modes of normal reactor operation. Those items involved are:

<u>Piping Line Number</u>	<u>Description</u>
DP-1	Feedwater Pump Discharge to Steam Generators
DB-3	Feedwater Penetration Piping
EB-1	Main Steam to Main Steam Isolation Valves
EB-5	Auxiliary Feedwater
EB-6	Steam Generator Blowdown Piping
EB-12	Main Steam Penetration Piping
EB-13	Auxiliary Feedwater Penetration Piping
EB-14	Steam Generator Blowdown Penetration Piping

<u>Piping Line Number</u>	<u>Description</u>
Miscellaneous	Associated Instrument Pipe and Tubing Connected to Steam Generators and Regulatory Guide 1.26 Class 2 Portions of Above Piping

Only repairs, modifications, replacements, additions or alteration to steam generator associated piping that cannot be isolated from the steam generator and are five (5) inches and smaller in nominal pipe size are requested for exemption from the hydrostatic pressure testing requirements of IWC-5000 prior to being placed into service. This is not an exemption from the interval requirement of hydrostatic pressure testing of these components, nor is it an exemption from hydrostatic testing of direct steam generator pressure boundary welding.

B. Function

Remove heat from the reactor coolant.

C. Code Class of Exemption Request Portions

<u>Piping Line Number</u>	<u>Original Design Class</u>	<u>Reg. Guide 1.26 Class</u>
DB-1	B31.1	2
DB-3	B31.7 Class 2	2
EB-1	B31.1	2
EB-5	B31.1	2
EB-6	B31.1	2
EB-12	B31.7 Class 2	2
EB-13	B31.7 Class 2	2
EB-14	B31.7 Class 2	2

II. Code Requirement From Which Relief Is Requested:

ASME Code Section XI 1974 Edition with Addenda through Summer 1975 requirement for hydrostatic pressure testing in accordance with Article IWC-5000 following repairs, modifications, replacements, additions and alterations. This requirement has been determined to be impractical for components five (5) inches and smaller in nominal pipe size that are not isolatable from the secondary side of the steam generators due to the limitation on the number of hydrostatic pressure tests allowed over the service life of the steam generators.

III. Supporting Information:

Calvert Cliffs Steam Generators are currently limited to eight (8) remaining hydrostatic pressure tests. Four (4) hydrostatic tests will be performed over the forty (40) year life to meet the once per interval required hydrostatic pressure test in accordance with ASME Code Section XI requirements for Class 2 components. The remaining four (4) hydrostatic test will be reserved for repairs, modifications, replacements, additions, and alterations not being requested for exemption as specified herein.

IV. In Lieu Of Testing:

- A. Examination of the components under normal operating pressure corresponding to 100% rated reactor power.
- B. Surface examination meeting ASME Code Section XI requirements after completing removal of half the first weld layer by grinding. Surface examination will be performed by the liquid penetrant method.
- C. Surface examination meeting ASME Code Section XI requirements after completing the weld. Surface examination will be performed by the liquid penetrant or magnetic particle methods.
- D. Volumetric examination on component butt welds greater than one (1) inch nominal pipe size. Ultrasonic and/or radiographic examination methods will be performed.

We have discussed this exemption request with Mr. Tonic Jernigan from the Office of Inspection and Enforcement, Region I, and with Mr. Ralph Architzel, our resident NRC inspector.

Should you have any further questions concerning this subject, please do not hesitate to contact us.

Very truly yours,

A. E. Lundvall, Jr.  
Vice President - Supply

ACL/smb

cc: Messrs. J. A. Biddison, Jr., Esquire  
G. F. Trowbridge, Esquire  
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