



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO REQUESTS FOR RELIEF FROM INSERVICE INSPECTION REQUIREMENTS  
BALTIMORE GAS AND ELECTRIC COMPANY  
CALVERT CLIFFS UNITS NO. 1 AND NO. 2  
DOCKET NOS. 50-317 AND 50-318

INTRODUCTION

Technical Specification 4.0.5 for the Calvert Cliffs Unit Nos. 1 and 2 nuclear plants states that inservice examination of ASME Code Class 1, 2, and 3 components shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable addenda as required by 10 CFR 50.55a(g) except where specific written relief has been granted by the Commission. Certain requirements of later editions and addenda of Section XI are impractical to perform on older plants because of the design, component geometry, and materials of construction. Thus, 10 CFR 50.55a(g)(6)(i) authorizes the Commission to grant relief from those requirements upon making the necessary findings.

By letters dated December 5, 1978, March 29, 1980, November 19, 1980 and May 29, 1981, Baltimore Gas and Electric Company (BG&E) submitted requests for relief from certain Code requirements determined to be impractical to perform on the Calvert Cliffs Unit Nos. 1 and 2 nuclear plants during the inspection interval. Additional information concerning these requests for relief was submitted by BG&E letters dated July 22, 1982, August 30, 1982 and October 29, 1982. The programs are based on the requirements of the 1974 Edition through Summer 1975 Addenda of Section XI of the ASME Code.

EVALUATION

Requests for relief from the requirements of Section XI which have been determined to be impractical to perform have been reviewed by the NRC staff's contractor, Science Applications, Inc. The contractor's evaluations are presented in the Technical Evaluation Report (TER) attached. One request for relief, involving the repair of an arc strike on Class 2 piping, was not reviewed in the TER. This request was granted as shown in Table 2. The staff has reviewed the TER and agrees with the evaluations and recommendations except as indicated. A summary of the determinations made by the staff is presented in the following tables:

TABLE 1

CLASS 1 COMPONENTS

IWB-2600 ITEM NO.	IWB-2500 EXAM. CAT.	SYSTEM OR COMPONENT	AREA TO BE EXAMINED	REQUIRED METHOD	LICENSEE PROPOSED ALTERNATIVE EXAMINATION	RELIEF REQUEST STATUS
B1.2	B-B	Reactor Vessel Closure Head	5% of Circumfer- ential Weld (6-209B)	Volumetric	Visual During System Pressure Test & Cladding Examination	Granted Provided Examination Sample of Other Category B-B Weld be Increased to Achieve Equivalent Sample Size*
B1.4	B-D	Reactor Vessel Nozzles	Nozzle-To- Vessel Welds And Inside Radiused Sections	Volumetric: 25% of Welds And Radiused Sections Dur- ing 1st Period, 50% by End of Second Period, 100% by End of Interval	Volumetric: 25% During 1st Period, None During Second Period 100% During 3rd Period	Granted
B1.14	B-I-1	Reactor Vessel	Vessel Cladding	Visual Examination of Six Patches Distributed Evenly Over Three 40-month Periods	Visual When Core Barrel is Removed	Granted

\* Conversations with representatives of BG&E indicated that this provision is acceptable.

TABLE 2

CLASS 2 COMPONENTS\*

IWC-2600 ITEM NO.	IWC-2520 EXAM. CAT.	SYSTEM OR COMPONENT	AREA TO BE EXAMINED	REQUIRED METHOD	LICENSEE PROPOSED ALTERNATIVE EXAMINATION	RELIEF REQUEST STATUS
C2.1 (IWC-4000)	(Repair)	Shutdown Cooling- 2-inch Cross Connect	Arc Strike Repair Area	Volumetric- Radiography	None	Granted

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\* This request for relief is not described in the TER and is based upon a request dated May 29, 1981.

TABLE 3

CLASS 3 COMPONENTS

(SEE TABLE 4)

TABLE 4  
PRESSURE TEST

SYSTEM OR COMPONENT	IWC-5000 & IWD-5000 TEST PRESSURE REQUIREMENT	LICENSEE PROPOSED ALTERNATIVE TEST PRESSURE	RELIEF REQUEST STATUS
Class 1, 2 & 3	Hold Time Shall be Four Hours	Perform Test in Accordance with the 1977 Edition, Winter 1978 Addenda	Approved
Class 3, Diesel Generator Components	Test Pressure shall be 1.10 Times the System Design Pressure	Monitor Critical Parameters, weekly Load Test, and In-service Leak Test Each Inspection Period	Granted*
Salt Water Cooling Systems, Class 3	The System Test Pressure Shall be at Least 1.10 Times The System Design Pressure	Perform an In-service Leak Test Yearly on Above-Ground Portions to Verify System Integrity	Granted*
Service Water System Main Headers	The System Test Pressure Shall be at Least 1.10 Times The System Design Pressure	Perform an In-service Leak Test Yearly to Verify System Integrity	Granted*

\* By letter dated October 29, 1982, BG&E provided an appropriate basis for determining that the 1977 Edition Summer 1978 Addenda, is impractical for these pressure tests. Accordingly, these requests for relief are granted without additional provisions.

TABLE 4

PRESSURE TEST  
(CONTINUED)

SYSTEM OR COMPONENT	IWC-5000 & IWD-5000 TEST PRESSURE REQUIREMENT	LICENSEE PROPOSED ALTERNATIVE TEST PRESSURE	RELIEF REQUEST STATUS
Class 2 Steam And Feedwater Piping 5-inch Nominal Pipe Size And Smaller That Cannot be Isolated From Steam Generator Secondary Side After Repair	The System Pressure Shall be at Least 1.25 Times The System Design Pressure	Examine Components Under Normal Operating Pressure Corresponding to 100% Rated Reactor Power; Perform Liquid Penetrant Examinations on First And Last Weld Pass; Volumetric Examination of Welds Greater Than 1-inch Nominal Pipe Size.	Granted *

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\* Additional information contained in the BG&E letter dated August 30, 1982 was considered which had not been reviewed in the TER (see NRC letter dated November 19, 1982.)

TABLE 5

ULTRASONIC EXAMINATION TECHNIQUE

SYSTEM OR COMPONENT	REQUIREMENT	LICENSEE PROPOSED ALTERNATIVE TEST PRESSURE	RELIEF REQUEST STATUS
Piping Welds	Section XI, 1974 Edition, Appendix I or Article V of Section V	All Indications Which Exceed 100% of Reference Level Will be Evaluated And All Indications Which exceed 50% of Reference Level Will be Recorded	Granted With Additional Requirement That Indications 20% or Greater of Reference Level That Are Interpreted to be a Crack Must be Identified And Evaluated According to The Rules of Section XI*

\* Conversations with representatives from BG&E indicated that this provision is acceptable.



CONCLUSION

The relief from the Code is based upon our review of the information submitted by BG&E to support the determination that compliance with the ASME Code inservice inspection requirements would be impractical for the facility. We have determined that the inspections from which this relief is sought are impractical and pursuant to 10 CFR 50.55a(g)(6)(i), that the granting of this relief is authorized by law and will not endanger life or property, or the common defense and security, and is otherwise in the public interest. In making this determination, we have given due consideration to the burden that could result if these requirements were imposed on the facility. We have determined that the granting of this relief does not involve a significant increase in the probability or consequences of an accident previously evaluated, does not create the possibility of an accident of a type different from any evaluated previously, does not involve a significant reduction in a safety margin, and thus, does not involve a significant hazards consideration. Furthermore, we have determined that the granting of this relief from ASME Code requirements does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. We have concluded that the granting of this relief is insignificant from the standpoint of environmental impact and pursuant to 10 CFR 51.5(d)(4) that neither an environmental impact statement nor a negative declaration and environmental impact appraisal needs to be prepared in connection with this action.

Date: DEC 13 1982

Principal Contributors:

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Attachment: SAI Technical  
Evaluation Report