

June 28, 2000

Mr. Charles H. Cruse  
Vice President, Nuclear Energy  
Calvert Cliffs Nuclear Power Plant  
Baltimore Gas and Electric Company  
1650 Calvert Cliffs Parkway  
Lusby, MD 20657-4702

SUBJECT: INTERIM USE OF THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS  
BOILER AND PRESSURE VESSEL CODE (ASME CODE) SECTION XI, 1983  
EDITION FOR THE THIRD 10-YEAR INSPECTION INTERVAL OF CALVERT  
CLIFFS NUCLEAR POWER PLANT, UNIT NOS. 1 AND 2 (TAC NOS. MA8723  
AND MA8724)

Dear Mr. Cruse:

By letter dated April 18, 2000, Baltimore Gas and Electric Company (the licensee) for Calvert Cliffs Nuclear Power Plant, proposed to extend use of the 1983 Edition including the summer 1983 addenda of the ASME Code (the applicable Code for the second 10-year interval) as an interim Code during the third 10-year inspection interval of Calvert Cliffs Units 1 and 2 for a duration not to exceed the end of the spring 2001 Unit 2 refueling outage. The NRC staff had previously authorized use of the 1983 ASME Section XI as an interim Code with the start of the third 10-year interval on July 1, 1999, until the end of the Unit 1 outage of the year 2000 since the proposed 1998 Section XI Code was under review. Subsequently, the NRC letter dated April 5, 2000, "Safety Evaluation of Proposed Alternate American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code) Section XI, 1998 edition for the Third 10-year Inspection Interval-Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2" authorized use of the 1998 Code as stated in the letter.

Based on our review, the staff finds the licensee's proposal to extend the use of the 1983 edition, with the summer 1983 addenda of the ASME Code as an interim Code during the third 10-year inspection interval at Calvert Cliffs Units 1 and 2 until the end of the spring 2001 Unit 2 refueling outage, to be acceptable. However, in conjunction with implementation of the interim Code during this period, the licensee is required to comply with implementation of Appendix VIII of Section XI "Performance Demonstration for Ultrasonic Examination Systems," in conducting inservice inspections as required by 10 CFR 50.55a(g)(6)(ii)(C).

C. Cruse

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Pursuant to 10 CFR 50.55a(a)(3)(i), the staff authorizes the licensee's proposed use of the 1983 ASME Section XI Code including the summer 1983 addenda through the spring 2001 Unit 2 outage since it provides an acceptable level of quality and safety. The staff's evaluation is contained in the enclosure.

Sincerely,

***/RA/***

Marsha Gamberoni, Acting Chief, Section I  
Project Directorate I  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket Nos. 50-317 and 50-318

Enclosure: As stated

cc w/encl: See next page

C. Cruse

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Marsha Gamberoni, Acting Chief, Section I  
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Office of Nuclear Reactor Regulation

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and no major changes were made.

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SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
ON THE THIRD 10-YEAR INTERVAL INSERVICE INSPECTION  
PROPOSED INTERIM ASME CODE, SECTION XI,  
CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NOS. 1 AND 2  
DOCKET NUMBERS 50-317 AND 50-318

1.0 INTRODUCTION

The inservice inspection (ISI) of the American Society of Mechanical Engineers (ASME) Code Class 1, 2, and 3 components shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code (ASME Code) and applicable addenda as required by 10 CFR 50.55a(g), except where specific written relief has been granted by the Commission pursuant to 10 CFR 50.55a(g)(6)(i). 10 CFR 50.55a(a)(3) states that alternatives to the requirements of paragraph (g) may be used, when authorized by the NRC, if (i) the proposed alternatives would provide an acceptable level of quality and safety or (ii) compliance with the specified requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

Pursuant to 10 CFR 50.55a(g)(4), ASME Code Class 1, 2, and 3 components (including supports) shall meet the requirements, except the design and access provisions and the preservice examination requirements, set forth in the ASME Code, Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," to the extent practical within the limitations of design, geometry, and materials of construction of the components. The regulations require that inservice examination of components and system pressure tests conducted during the first 10-year interval and subsequent intervals comply with the requirements in the latest edition and addenda of Section XI of the ASME Code incorporated by reference in 10 CFR 50.55a(b) 12 months prior to the start of the 120-month interval, subject to the limitations and modifications listed therein. The applicable ASME Code, Section XI, for Calvert Cliffs Plant's third 10-year ISI interval which commenced on July 1, 1999 is the 1989 Edition. However, with staff approval, the licensee updated its ISI program requirements to the 1998 Edition of the ASME Section XI Code.

By letter dated April 18, 2000, Baltimore Gas and Electric Company, the licensee for Calvert Cliffs Nuclear Power Plant, proposed to continue use of the 1983 edition including the summer 1983 addenda of the ASME Code (the applicable Code for the second 10-year interval) as an interim Code during the third 10-year inspection interval of Calvert Cliffs Units 1 and 2 for the duration not to exceed the end of the spring 2001 Unit 2 refueling outage. The staff had previously authorized use of 1983 ASME Section XI as an interim Code since the start of the third 10-year interval that began on July 1, 1999, through the end of the Unit 1 outage of the

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year 2000 since the proposed 1998 Section XI Code was under review. Subsequently, the NRC letter dated April 5, 2000, "Safety Evaluation of Proposed Alternate American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code) Section XI, 1998 edition for the Third 10-year Inspection Interval-Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2" authorized use of the 1998 Code as stated in the letter. The staff has evaluated the licensee's request to extend use of the 1983 ASME Section XI Code including the summer 1983 addenda until the end of the spring 2001 Unit 2 refueling outage.

## 2.0 EVALUATION

Calvert Cliffs Units 1 and 2 entered into the third 10-year inspection interval on July 1, 1999, following an NRC-approved extension of the second 10-year inspection interval that began on April 1, 1987. In a letter dated June 21, 1999, the staff approved the licensee's proposed use of the 1983 ASME Section XI Code including the summer 1983 addenda (Code in effect during the second inspection interval) as an interim Code until the end of the Unit 1 spring 2000 refueling outage or until the NRC review of the proposed 1998 ASME Section XI Code was completed. By letter dated April 5, 2000, "Safety Evaluation of Proposed Alternate American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code) Section XI, 1998 edition for the Third 10-year Inspection Interval-Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2" the staff authorized use of the 1998 Code as stated in the letter.

By letter dated April 18, 2000, Baltimore Gas and Electric Company, the licensee for Calvert Cliffs Nuclear Power Plant, proposed to extend use of the 1983 edition including the summer 1983 addenda of the ASME Code as the interim Code during the third 10-year inspection interval of Calvert Cliffs Units 1 and 2 for the duration not to exceed the end of the spring 2001 Unit 2 refueling outage. The basis for the licensee's request is to avert the potential hardship associated with implementing the required "Written Practice for Nondestructive Examination (NDE) Program" and other scheduled activities dependent on the effective year of the ASME Code, Section XI.

The written practice for NDE personnel qualifications, components examined, or percentage of examinations credited during an inspection period etc, are Code-specific and are addressed in the ISI program plan for the inspection interval. The staff believes that the development and implementation of a program plan addressing the Code-specific elements would invariably require a lead time of 1 year prior to the start of the interval. The regulations have factored this consideration in the provision for Code update for subsequent inspection intervals under 50.55a(g)(4)(ii) by stating that examinations must "... comply with the requirements of the latest edition and addenda of the Code incorporated by reference in paragraph (b) of this section twelve months prior to the start of the 120-month inspection interval,..." which essentially provides at least 12 months of lead time for implementation of a new Code.

The staff's evaluation is also based on the safety impact due to continued use of the 1983 ASME Code, Section XI, including the Summer 1983 Addenda in the third 10-year ISI until the end of the spring 2001 outage of Unit 2. This Code has been the applicable Code for the second 10-year interval and was continued into the third 10-year interval covering the recent Unit 1 outage. Within the limited scope of ISI activities of the Unit 1 outage and the upcoming Unit 2 outage during spring 2001, the requirements of this interim Code are not believed to be less restrictive than that of the applicable 1998 Code. Therefore, in the staff's view, there is no compromise to public health and safety with the limited continued use of the 1983 ASME

Section XI Code including the 1983 addenda. The staff notes that the licensee has maintained an effective ISI program which conforms to the requirements of the Code. The rules for ISI including the mandatory requirements and the non-mandatory guidance provided in the Code assure component integrity and, thus, protection of life and property. Therefore, the staff has determined that continued use of this Code as an interim ISI Code during the current interval until the end of the spring 2001 outage of Unit 2 will provide an acceptable level of quality and safety. The staff has further determined that examinations performed during the current inspection period using the subject Code may be credited towards the examination requirements of the later Code since duplication of inservice examination of a component because of a Code change will not necessarily result in enhancement of safety. Therefore, the percentage of examinations completed using the subject Code during the inspection period may also be credited to the required percentage of examinations when the 1998 Section XI Code is implemented at Calvert Cliffs Units 1 and 2.

In conjunction with implementation of the interim Code during the third 10-year inspection interval, the licensee is required to comply with implementation of Appendix VIII of Section XI "Performance Demonstration for Ultrasonic Examination Systems," in conducting ISIs as required by 10 CFR 50.55a(g)(6)(ii)(C).

### 3.0 CONCLUSION

The staff concludes that the use of the 1983 ASME Section XI Code including the summer 1983 Addenda as an interim Code for the third 10-year inspection interval of Calvert Cliffs Units 1 and 2 until the end of the spring 2001 outage of Unit 2, will provide an acceptable level of quality and safety. Since the subject Code provides equivalent protection as that provided by the 1998 ASME Section XI Code, the staff has determined that the licensee may also take credit for any and all inservice examinations performed under this Code to be applicable towards the requirements of the 1998 Code. The proposed alternative is authorized pursuant to 10 CFR 50.55a(a)(3)(i) for both units of Calvert Cliffs during the third 10-year ISI interval.

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Date: June 28, 2000

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Unit Nos. 1 and 2

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