

December 5, 2001

Mr. Oliver D. Kingsley, President  
and Chief Nuclear Officer  
Exelon Nuclear  
Exelon Generation Company, LLC  
4300 Winfield Road  
Warrenville, IL 60555

SUBJECT: REQUEST TO USE ALTERNATIVE TO AMERICAN SOCIETY OF  
MECHANICAL ENGINEERS BOILER AND PRESSURE VESSEL CODE,  
SECTION XI INSERVICE INSPECTION PROGRAM RELATED TO TRAINING  
FOR ULTRASONIC TESTING PERSONNEL FOR THE OYSTER CREEK  
NUCLEAR GENERATING STATION (TAC NO. MB0904)

Dear Mr. Kingsley:

By letter dated December 21, 2000, AmerGen Energy Company, LLC (AmerGen), submitted proposed Alternative VIII-1, Depth Sizing Criterion, and proposed Alternative VIII-2, Annual Training, for the Inservice Inspection (ISI) Program at the Oyster Creek Nuclear Generating Station (Oyster Creek). This submittal was supplemented by letter dated February 20, 2001, revising the proposed Alternative VIII-1, Depth Sizing Criteria. By proposed Alternative VIII-2, Annual Training, the licensee proposed to conduct annual ultrasonic testing training in accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.55a(b)(2)(xiv) requirements in lieu of Subarticle VII-4240 to Appendix VII of Section XI of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (Code). The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed the alternative proposed in Alternative VIII-2. The review of Alternative VIII-1 will be addressed by separate correspondence.

Based on the information provided, the NRC staff concludes that the alternative proposed by Alternative VIII-2 will provide an acceptable level of quality and safety. Therefore, pursuant to 10 CFR 50.55a(a)(3)(i), the NRC staff authorizes the ISI Program alternative proposed in Alternative VIII-2 for the third ISI 10-year interval at Oyster Creek. The NRC staff's safety evaluation is enclosed.

O. Kingsley

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If you have any questions, please contact Helen N. Pastis, Senior Project Manager, 301-415-1261.

Sincerely,

***/RA/***

L. Raghavan, Acting Chief, Section 1  
Project Directorate I  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket No. 50-219

Enclosure: Safety Evaluation

cc w/encl: See next page

O. Kingsley

-2-

December 5, 2001

If you have any questions, please contact Helen N. Pastis, Senior Project Manager,  
301-415-1261.

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**/RA/**

L. Raghavan, Acting Chief, Section 1  
Project Directorate I  
Division of Licensing Project Management  
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Oyster Creek Nuclear Generating Station

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SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

THIRD 10-YEAR INTERVAL INSERVICE INSPECTION PROGRAM PLAN

PROPOSED ALTERNATIVE VIII-2

AMERGEN ENERGY COMPANY, LLC

OYSTER CREEK NUCLEAR GENERATING STATION

DOCKET NO. 50-219

1.0 INTRODUCTION

The inservice inspection (ISI) of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (Code) Class 1, Class 2, and Class 3 components is to be performed in accordance with Section XI of the ASME Code and applicable editions and addenda as required by Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.55a(g), except where specific relief has been granted by the Commission pursuant to 10 CFR 50.55a(g)(6)(i). Pursuant to 10 CFR 50.55a(a)(3), alternatives to the requirements of paragraph (g) may be used, when authorized by the U.S. Nuclear Regulatory Commission (NRC), if the licensee demonstrates that: (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) on the date 12 months prior to the start of the 120-month interval, subject to the limitations and modifications listed therein. The ISI Code of record for the Oyster Creek Nuclear Generating Station (Oyster Creek), for the third 10-year interval is the 1986 Edition of the ASME Code. The components (including supports) may meet the requirements set forth in subsequent editions and addenda of the ASME Code incorporated by reference in 10 CFR 50.55a(b) subject to the limitations and modifications listed therein and subject to Commission approval.

Enclosure

The NRC staff has reviewed the information submitted by AmerGen Energy Company, LLC (AmerGen or the licensee), in a letter dated December 21, 2000, with a supplemented letter dated February 20, 2001, requesting relief from certain ASME Code-required ultrasonic testing (UT) criteria. One of AmerGen's proposed alternatives to the ASME Code requirements is proposed Alternative VIII-2 for the third 10-year ISI interval at Oyster Creek. Alternative VIII-2 proposed changes to the annual training criteria for UT personnel.

## 2.0 ALTERNATIVE VIII-2, SUBARTICLE VII-4240 SUPPLEMENTAL TRAINING FOR UT PERSONNEL

### 2.1 ASME Code Requirements for which Relief is Requested

The licensee is requesting relief from the 1995 Edition with 1996 Addenda, Appendix VII to Section XI of the ASME Code, Subarticle VII-4240 for Appendix VIII qualified UT personnel and the 1989 Edition of Appendix VII to Section XI, Subarticle VII-4240 for non-Appendix VIII qualified UT personnel. Subarticle VII-4240 requires a minimum of 10 hours of annual UT training.

### 2.2 Licensee's Proposed Alternative to ASME Code

Pursuant to 10 CFR 50.55a(a)(3)(i), the licensee proposed conducting annual UT training in accordance with 10 CFR 50.55a(b)(2)(xiv) requirements in lieu of Subarticle VII-4240 to Appendix VII of Section XI of the ASME Code.

### 2.3 Evaluation

Subarticle VII-4240, Appendix VII of Section XI of the ASME Code requires 10 hours of annual training to impart knowledge of new developments, material failure modes, and any pertinent technical topics as determined by the licensee. No hands-on training or practice is required to be included in the 10 hours of training. This training is required of all UT personnel qualified to perform examinations of ASME Code, Class 1, 2, and 3 systems. Independent of the ASME Code, 10 CFR 50.55a(b)(2)(xiv) imposes for Appendix VIII UT personnel the requirement that 8 hours of hands-on training with flawed specimens containing cracks be performed no earlier than 6 months prior to performing examinations at a licensee's facility. The licensee contends that maintaining two separate UT annual training programs creates confusion, redundancies, and extra paper work.

As part of the NRC staff's rulemaking effort to revise 10 CFR 50.55a(b)(2), the issue of UT annual training requirements was reviewed. This review was included in the summary of comments on the changes to 10 CFR 50.55a, Codes and Standards, published on September 22, 1999, in the *Federal Register* (64 FR 51370). In the review, the NRC staff determined that the 10 hours of annual training requirement specified in the ASME Code was inadequate for two reasons. The first reason is that the training does not require practice with flawed specimens. Practice with flaws is necessary because signals can be difficult to interpret. The second reason is related to the length of training and its frequency. Studies have shown that an examiner's capability begins to diminish within 6 months if skills are not maintained. Therefore, examiners must practice on a frequent basis to maintain their capability for proper interpretation of flaws.

Based on resolution of public comments for the above rulemaking, the NRC staff accepted an industry initiative advanced by the Electric Power Research Institute (EPRI), which proposed 8 hours of hands-on practice with flawed specimens containing cracks. The practice would occur no earlier than 6 months prior to performing examinations at a licensee's facility. The initiative was adopted in 10 CFR 50.55a(b)(2)(xiv) for personnel maintaining their Appendix VIII qualifications. The NRC staff believes that the proposed alternative to use 10 CFR 50.55a(b)(2)(xiv) in lieu of Subarticle VII-4240 will maintain the skill and proficiency of UT personnel at or above the level provided in the ASME Code for annual UT training, thereby providing an acceptable level of quality and safety.

## 2.4 Conclusion

Based on the discussion above, the staff concludes that the alternative proposed in Alternative VIII-2 for the third 10-year interval will provide an acceptable level of quality and safety. Therefore, pursuant to 10 CFR 50.55a(a)(3)(i), the NRC staff authorizes the proposed alternative for the third 10-year interval.

Principal Contributor: H. N. Pastis

Date: December 5, 2001