

February 16, 2001

Mr. Robert G. Byram  
Senior Vice President  
and Chief Nuclear Officer  
PPL Susquehanna, LLC  
2 North Ninth Street  
Allentown, PA 18101

SUBJECT: RELIEF REQUEST NO. 21 (RR-21) FROM AMERICAN SOCIETY OF  
MECHANICAL ENGINEERS BOILER AND PRESSURE VESSEL CODE (ASME  
CODE) SECTION XI, SUSQUEHANNA STEAM ELECTRIC STATION, UNITS 1  
AND 2 (TAC NOS. MB0462 AND MB0464)

Dear Mr. Byram:

In a letter dated November 2, 2000, as supplemented by letter dated January 16, 2001, PPL Susquehanna, LLC, submitted Relief Request No. 21 (RR-21) from the requirements of Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," of the ASME Code for the second 10-year inservice inspection (ISI) interval. The licensee submitted the request pursuant to 10 CFR 50.55a(a)(3)(i) and proposed an alternative that would allow initial certification and recertification of ultrasonic testing personnel in accordance with the requirements contained in the 1989 Edition of ASME Code, Section XI, until August 31, 2001.

The NRC staff reviewed the proposed relief request against the requirements of Section XI of the 1989 Edition of the ASME Code. The results are provided in the enclosed safety evaluation.

The NRC staff has concluded that the proposed alternative to the ASME Code requirements in RR-21 provides an acceptable level of quality and safety and is acceptable. Pursuant to 10 CFR 50.55a(a)(3)(i), the proposed alternative is authorized for RR-21 until August 31, 2001.

Sincerely,

***/RA/ P. Tam for***

Marsha Gamberoni, Chief, Section 1  
Project Directorate I  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket Nos. 50-387 and 50-388

Enclosure: Safety Evaluation

cc w/encl: See next page

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Marsha Gamberoni, Chief, Section 1  
Project Directorate I  
Division of Licensing Project Management  
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Docket Nos. 50-387 and 50-388

Enclosure: Safety Evaluation

cc w/encl: See next page

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SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SECOND 10-YEAR INTERVAL INSERVICE INSPECTION PROGRAM PLAN

REQUEST FOR RELIEF NO. RR-21

PPL SUSQUEHANNA, LLC

SUSQUEHANNA STEAM ELECTRIC STATION, UNITS 1 AND 2

DOCKET NOS. 50-387 AND 50-388

1.0 INTRODUCTION

The inservice inspection (ISI) of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code) Class 1, Class 2, and Class 3 components is to be performed in accordance with Section XI of the ASME Code and applicable addenda as required by Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.55a(g), except where specific written relief has been granted by the Commission pursuant to 10 CFR 50.55a(g)(6)(i). Pursuant to 10 CFR 50.55a(a)(3), it is stated in part that alternatives to the requirements of paragraph (g) may be used, when authorized by the 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) will 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) twelve months prior to the start of the 120-month interval, subject to the limitations and modifications listed therein. The ISI Code of record for Susquehanna Steam Electric Station (SSES), Units 1 and 2, second 10-year interval is the 1989 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

By letter dated November 2, 2000, as supplemented by letter dated January 16, 2001, PPL Susquehanna, LLC, the licensee, requested relief from certain ultrasonic testing (UT) requirements pertaining to UT training during the second 10-year ISI interval at SSES Units 1 and 2. RR-21 proposed using the American Society for Nondestructive Testing (ASNT) SNT-TC-1A, "Personnel Qualification and Certification in Nondestructive Testing," 1984 Edition as the qualification requirements for nondestructive examination of UT personnel until the licensee can implement CP-189, "Standard for Qualification and Certification of Nondestructive Testing Personnel," 1991 Edition.

## 2.0 RR-21, DELAYED IMPLEMENTATION OF CP-189

This relief request affects all components subject to the UT examination requirements of Appendix VIII to the 1995 Edition with 1996 Addenda of Section XI of the ASME Code.

### 2.1 Code Requirements for which Relief is Requested

The requirements of 10 CFR 50.55a(g)(6)(ii)(C) impose implementation of Appendix VIII to the 1995 Edition with 1996 Addenda of Section XI of the ASME Code. The implementation schedule for the Supplements to Appendix VIII are May 22, 2000, for Supplements 1, 2, 3, and 8; November 22, 2000, for Supplements 4 and 6; November 22, 2001, for Supplement 11; and November 22, 2002, for Supplements 5, 7, 10, 12, and 13. Appendix VIII references Appendix VII, which references Subarticle IWA-2300 of Section XI of the 1995 Edition with 1996 Addenda of the ASME Code. Subarticle IWA-2310 requires qualification of nondestructive (NDE) examiners according to CP-189, 1991 Edition, as amended by the requirements of Division 1 of the Code.

### 2.2 Licensee's Proposed Alternative to Code

The licensee proposes to continue initial certification and re-certification of UT personnel in accordance with the requirements contained in the 1989 Edition of ASME Code, Section XI, i.e., SNT-TC-1A, through August 31, 2001. Personnel performing UT examinations shall also meet the requirements specified in 10 CFR 50.55a(b)(2)(xv) for the qualification of personnel by demonstration. The combination of a written practice based on SNT-TC-1A and a performance-based demonstration for personnel performing UT examination of welds or components will ensure the structural integrity of the system/components.

### 2.3 Evaluation

The NRC staff performed a detailed comparison of SNT-TC-1A and CP-189. CP-189 contains essentially everything that is in SNT-TC-1A and some additional requirements. CP-189 has a larger definition of terms which are applicable to performance demonstrations than SNT-TC-1A. CP-189 requires written procedures detailing the program for qualifying and certifying UT personnel. CP-189 requires Level III personnel to answer more questions in the method-specific examination (questions on specifications, equipment, techniques, and procedures) and to pass a performance demonstration.

Except for Level III examiners, the changes from SNT-TC-1A to CP-189 are mostly programmatic and do not affect UT personnel skills. The CP-189 requirement that Level III examiners demonstrate proficiency in UT is addressed by the licensee in its submittal. Initial

certification and recertification of NDE personnel shall continue to be conducted in accordance with the requirements contained in the 1989 Edition of ASME Code, Section XI. Personnel performing ultrasonic examinations shall also meet the requirements specified in 10 CFR 50.55a which sets forth the requirements for the qualification of personnel by demonstration. The combination of a written practice based on SNT-TC-1A and a performance-based demonstration for personnel performing ultrasonic examination of welds or components will continue to ensure the structural integrity of the systems/components.

The ASME Code has provided for an orderly transition from SNT-TC-1A to CP-189 with the continued recognition of certifications until recertification is required. For Level I and II examiners, recertification is every 3 years, and for Level III examiners, recertification is every 5 years. However, the orderly transition by the ASME Code does not consider licensee-specific difficulties. The licensee is requesting a 12-month delay in implementing CP-189 to accommodate a scheduled refueling outage. The delay would provide the licensee with an opportunity to perform an orderly transition to CP-189 after the refueling outage. The programmatic differences between SNT-TC-1A and CP-189 should not affect the proficiency of UT personnel over the short time that this relief is being requested. Therefore, the NRC staff concludes that the proposed alternative would provide an acceptable level of quality and safety.

### 3.0 CONCLUSION

Based on the discussion above, the NRC staff has concluded that the proposed alternative RR-21 will provide an acceptable level of quality and safety. Pursuant to 10 CFR 50.55a(a)(3)(i), the proposed alternative RR-21 is authorized until August 31, 2001.

Principal Contributors: D. Naujock  
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Date: February 16, 2001