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U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Mail Station OP1-17  
Washington, D.C. 20555

**SUSQUEHANNA STEAM ELECTRIC STATION  
WITHDRAWAL OF PROPOSED RELIEF REQUEST  
NO. RR-20 AND REVISION TO PROPOSED RELIEF  
REQUEST NO. RR-21 FOR THE INSERVICE  
INSPECTION PROGRAM FOR UNITS 1 AND 2  
PLA-5270**

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**Docket Nos. 50-387  
and 50-388**

*Reference: 1) Letter from R. G. Byram to USNRC titled "Proposed Relief Request No. RR-20 to Revise the Qualification and Certification of NDE Personnel For Section XI IWE and IWL Examinations," dated November 2, 2000 (PLA-5249), and*

*2) Letter from R. G. Byram to USNRC titled "Proposed Relief Request No. RR-21 to Revise the Qualification and Certification of NDE Personnel For Section XI Sub-Article IWA-2300 Examinations," dated November 2, 2000 (PLA-5250)*

The purpose of this letter is to withdraw proposed relief request number RR-20, submitted pursuant to reference 1, and to revise proposed relief request number RR-21, submitted pursuant to reference 2.

The purpose of the proposed relief request RR-20 was to allow the use of the SNT-TC-1A qualification and certification program of NDE personnel for Section XI IWE and IWL examinations until the end of the Second 10-Year Interval of the Inservice Inspection Program for the Susquehanna SES Units 1 and 2 (June 1, 2004). CP-189 is the existing qualification and certification program used for Section XI IWE and IWL examinations at Susquehanna. However, NRC will not allow the use of the SNT-TC-1A program until the end of the Second 10-Year Interval of the Inservice Inspection Program for the Susquehanna SES Units 1 and 2 (June 1, 2004) as was requested in the proposed RR-20; therefore, proposed relief request RR-20 is being withdrawn.

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Proposed relief request number RR-21 is being revised to adjust the "Applicable Time Period" of the relief that was requested in the original proposed relief request. RR-21 requested that PPL continue to use the SNT-TC-1A qualification and certification program of NDE personnel (relief be granted from using the CP-189 qualification and certification program) until the end of the Second 10-Year Interval of the Inservice Inspection Program for the Susquehanna SES Units 1 and 2 (June 1, 2004). The NRC rejected the "Applicable Time Period" relief as originally requested by PPL because NRC believes that sufficient time has been granted (from promulgation of the requirement to the present) for licenses to implement the CP-189 program.

This letter supplements the original proposed relief request RR-21 as presented in reference 2. The proposed revision to RR-21 is as follows:

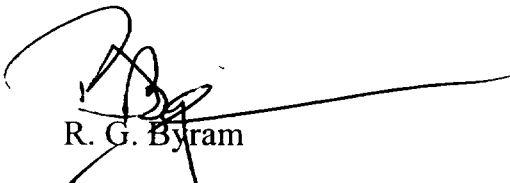
**Applicable Time Period**

PPL Susquehanna, LLC requests that this relief request be approved by January 31, 2001, in order to support the Unit 2 10<sup>th</sup> Refuel Outage that is scheduled to begin in March 2001. This relief will remain in effect until August 31, 2001.

This revision to the original proposal will make the PPL Susquehanna, LLC relief request number RR-21 consistent with other similar requests that have been approved by the NRC.

Please contact Mr. R. D. Kichline at 610-774-7705, if there are any questions concerning this submittal.

Sincerely,



R. G. Byram

Attachment

cc: Regional Administrator – Region 1  
Mr. S. L. Hansell, NRC Sr. Resident Inspector  
Mr. R. G. Schaaf, NRC Sr. Project Manager

**PPL Susquehanna, LLC**  
**Susquehanna SES Units 1 and 2**  
**Second 10-Year Interval**

**RELIEF REQUEST RR-21**

**System/Component(s) For Which Relief Is Requested**

All components subject to ultrasonic examination with Appendix VIII to the 1995 Edition with 1996 Addenda of ASME Section XI.

**Code Requirements**

10CFR50.55a(g)(6)(ii)(C) requires implementation of the ASME Code, Section XI, 1995 Edition, 1996 Addenda, with an expedited implementation for Appendix VII ultrasonic examinations. The Supplements to Appendix VII of Section XI, Division 1, 1995 Edition with the 1996 Addenda of the ASME Boiler and Pressure Vessel Code must be implemented in accordance with the following schedule: Supplements 1, 2, 3, and 8 – May 22, 2000; Supplements 4 and 6 – November 22, 2000; Supplement 11 – November 22, 2001; and Supplements 5, 7, 10, 12 and 13 – November 22, 2002. Related Subarticle IWA-2300, of the 1995 Edition, 1996 Addenda of ASME Section XI requires qualification of examiners to CP-189 as amended by Division 1.

The 1989 Edition of ASME Section XI, subarticle IWA-2300, defines the qualification requirements for NDE personnel as ASNT SNT-TC-1A, 1984, and the additional requirements of Division 1, including Appendix I.

**Relief Requested**

Pursuant to 10CFR50.55a(a)(3)(i), relief is requested to continue basing all requirements for initial certification and recertification of ultrasonic examination personnel on the 1989 Edition of Section XI. This includes use of ASNT SNT-TC-1A, 1984, as amended by IWA-2300 and Appendix VII of Section XI, 1989 Edition. These examinations will be performed during the second 10-year inspection interval.

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### **Basis for Relief**

The 1989 Edition of ASME Section XI, Subarticle IWA-2300, requires qualification of NDE personnel using a written practice prepared in accordance with ASNT SNT-TC-1A, 1984, and the additional requirements of Division 1, including Appendix I.

10 CFR 50.55a was amended in the Federal Register (64 FR 51370) to require the 1995 Edition, with the 1996 Addenda of Section XI, with an expedited implementation schedule for Appendix VIII qualification requirements. This imposed the requirements of Appendix VII of the 1995 Edition, with 1996 Addenda of Section XI. This includes Subarticle IWA-2300, which requires a written practice prepared in accordance with CP-189, 1991, as amended by the requirements of Division 1. Current certifications are not affected, paragraph IWA-2310 in the 1995 Edition with 1996 Addenda states that certifications based on SNT-TC-1A are valid until recertification is required.

This requires development, implementation, and to the extent possible consolidation of a multifaceted written practice, specific to Ultrasonic examination personnel, to address the various requirements contained in SNT-TC-1A and CP-189, as amended by different Editions and Addenda of Section XI, including IWA-2300 and Appendix VII. The requirements are phased in with implementation dates for certification and recertification requirements of May 22, 2000 for personnel examining piping and bolting, November 22, 2000 for personnel examining RPV welds and clad/basemetal interface, November 22, 2001 for weld overlays, and November 22, 2002 for nozzle and dissimilar metal welds.

Regardless of whether CP-189 or ASNT SNT-TC-1A is the base document used to prepare the written practice, all personnel conducting examinations to Appendix VIII requirements must be qualified in accordance with Appendix VIII and all personnel qualified through the PDI program must be qualified in accordance with Appendix VII. Additionally, for other than Appendix VIII ultrasonic examinations, all NDE examiners, (regardless of the method or except IWE/IWL) will continue to be certified in accordance with a written practice developed in accordance with ASNT SNT-TC-1A for the duration of this interval.

A direct comparison of the implementation requirements for Appendix VIII examinations using the 1984 Edition of SNT-TC-1A as modified by IWA-2300 and Appendix VII of the 1989 Edition of Section XI with the 1991 Edition of CP-189 as modified by IWA-2300 and Appendix VII of the 1995 Edition and 1996 Addenda of Section XI is considered to be unwieldy. Therefore, three less complex comparisons of technically significant items are attached. Qualifications of ultrasonic examination personnel to

## **RELIEF REQUEST RR-21**

SNT-TC-1A and the additional requirements of the 1989 Edition of Section XI, including Appendix VII are considered equivalent to Qualification to CP-189 as amended by the 95/96 Edition of Section XI.

In lieu of maintaining redundant, possibly conflicting programs, the proposed alternative of maintaining the current program for qualifications of UT personnel will simplify record keeping, satisfy the need to maintain personnel qualifications, eliminate redundant systems, and provide an acceptable level of quality and safety commensurate with the other NDE disciplines.

### **Alternative Provisions**

Initial certification and recertification of NDE personnel shall continue to be conducted in accordance with the requirements contained in the 1989 Edition of ASME Section XI. Personnel performing ultrasonic examinations shall also meet the requirements specified in 10CFR50.55a as amended by 64 FR 51370 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.

### **Applicable Time Period**

PPL Susquehanna, LLC requests that this relief request be approved by January 31, 2001, in order to support the Unit 2 10<sup>th</sup> Refuel Outage that is scheduled to begin in March 2001. This relief request will remain in effect until August 31, 2001.

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### **Comparison Summary**

1. The first compares IWA-2300 from the 1995 Edition with the 1996 Addenda to the 1989 Edition the major difference is the specification of CP-189 as opposed to SNT-TC-1A:

While CP-189 is a “standard” while SNT-TC-1A is a “recommended practice”, this has no technical impact on the implementation of SNT-TC-1A. The “recommended practices” defined by the use of the word “should” in SNT-TC-1A are treated as requirements by the Susquehanna SES.

2. The second compares Appendix VII to the 95/96 Addenda to the 1989 Edition. There is little technical difference between the 1989 and 95/96 Editions. Both modify CP-189 and SNT-TC-1A as required to comply with Section XI, for example:

SNT-TC-1A contains simultaneous experience provisions that are not allowed by Appendix VII.

3. The last compares the 1991 Edition of CP-189 with the 1984 Edition of SNT-TC-1A as modified by Appendix VII, the major differences are mitigated by additional requirements contained in Section XI, for example:

CP-189 requires a “written practical”, (procedure preparation), and a “demonstration practical” for Level III personnel performing test or evaluating test results. This has no impact on Appendix VIII personnel, though not required by SNT-TC-1A, Appendix VIII requires a “practical” examination for a qualified examiner regardless of Level.

CP-189 defines several additional terms such as closed book examination, Documented, Education, Evaluation, Examination, Experience, General examination, Indication, Interpretation, Method, NDT Instructor, Practical examination, Procedure, and test technique. These definitions are consistent with common usage as applied to SNT-TC-1A and Section XI. Where deemed necessary, ASME Section XI has provided compensation. For example, the term “Outside Agency” is included in the 95/96 Edition to compensate because it is included in SNT-TC-1A but not in CP-189, conversely the 1989 Edition defines an NDE instructor that is not included in SNT-TC-1A.

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There are major differences between CP-189 and SNT-TC-1A. However, as illustrated in the comparisons, these are minimized by the moderating effects of the applicable IWA-2300 requirements and especially Appendix VII requirements. Qualifications of ultrasonic examination personnel to SNT-TC-1A and the additional requirements of the 1989 Edition of Section XI, including Appendix VII are considered equivalent to Qualification to CP-189 as amended by the 95/96 Edition of Section XI.

## RELIEF REQUEST RR-21

### **COMPARISON OF THE QUALIFICATION AND CERTIFICATION REQUIREMENTS OF ULTRASONIC EXAMINERS CERTIFIED TO CP-189, 1991, AND SNT-TC-1A, 1984, AS MODIFIED BY IWA AND APPENDIX VII OF 1989 AND 95/96 EDITION OF SECTION XI RESPECTIVELY**

#### Comparison No. 1

#### **Comparison of IWA-2300 from the 1995 Edition with the 1996 Addenda to the 1989 Edition**

The following is a summary of pertinent technical aspects of the implementation requirements contained in Subparagraph IWA-2300 to the two Editions of ASME Section XI identified below.

The comparison is complicated because some of the requirements may be Modified or omitted, simply because they are defined in another location or by another document. Several requirements, such as those for limited certification, differ somewhat but the differences are not considered technically relevant and they are not detailed in this technical comparison. These complications are representative of the increased burden when administering more than one program or a program based on varying requirements.

<b>1995 Edition with 1996 Addenda of Section XI</b>	<b>1989 Edition of Section XI</b>
IWA-2310 - Written practice is prepared using ANSI/ASNT "Standard" CP-189, 1991 Edition. Certifications based on SNT-TC-1A remain valid until recertification.	IWA-2310 - Written practice is prepared using ASNT "Recommended Practice" SNT-TC-1A, 1984 Edition. Certifications based on earlier editions remain valid until recertification.
IWA-2311 - The written practice shall specify the duties and responsibilities of the Principle Level III	
IWA-2312 - NDE methods listed in CP-1989 – Similar to 1989 IWA-2311	IWA-2311 - NDE methods listed in SNT-TC-1A – Similar to 95/96 IWA-2312



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<b>1995 Edition with 1996 Addenda of Section XI</b>	<b>1989 Edition of Section XI</b>
IWA-2313 - NDE methods not listed in CP-189 – Similar to 1989 IWA-2312	IWA-2312 – NDE methods not listed in SNT-TC-1A – Similar to 1989 IWA-2313
IWA-2314 - Level I and II recertified every 3 years, Level III every 5 years by examination per CP-189. ASNT Level III not required	IWA-2313 - Level I and II recertified every 3 years, Level III every 5 years by examination per SNT-TC-1A.
IWA-2321 - Snellen 20/25 using lower case letters with a known pre-measured height (see IWA-2322). Administered in accordance with a procedure, and by personnel, approved by an NDE Level III designated by the employer.	IWA-2321 - Jaeger number 1 or equivalent, conducted by personnel qualified to conduct the examinations
IWA-2322 - Requires use of 10x magnifier to measure height of letters.	
IWA-2323 - Level III qualifications evaluated by Basic, Method, Specific, and Practical examinations and the Demonstration examination (Level II Practical)	IWA-2322 - Level III qualifications determined by Basic, Method, and Specific examinations per SNT-TC-1A. (Demonstration examination would be required by Section XI, Appendix VIII)
CP-189 General, Specific and Practical examinations administered and graded by a Level III.	IWA-2323 - Level I and II qualifications determined by General and Specific examinations, and a Practical hands-on examination administered by a Level III.
95/96 Appendix VII is similar to 1989 Appendix VII (See detailed comparison following).	IWA-2324 - Defines requirements for administration of examinations. This is Modified by Appendix VII.
IWA-2330 - Level I responsibilities. identical to 1989 IWA-2330	IWA-2330 - Level I responsibilities. Identical to 95/96 IWA-2330
IWA-2340 - Level III education. Similar to 1989 IWA-2340	IWA-2340 - Level III education. Similar to 95/96 IWA-2340

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<b>1995 Edition with 1996 Addenda of Section XI</b>	<b>1989 Edition of Section XI</b>
IWA-2350 - Defines limited certification. Provides more definition than 1989.	IWA – 2350 - Defines limited certification requirements.
IWA-2360 - Allows certification directly to Level II. Defines additional Level III responsibilities.	Appendix VII allows certification directly to Level II. Defines similar Level III responsibilities.
IWA-2370 - Contains experience requirements for Level II candidates.	1989 Appendix VII contains requirements that are more stringent.

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## Comparison No. 2

### **Comparison of Appendix VII to the 1995 Edition with the 1996 Addenda to the 1989 Edition**

The following is a summary of pertinent technical aspects of the implementation requirements contained in Subparagraph IWA-2300 to the two Editions of ASME Section XI identified below.

The comparison is complicated because some of the requirements may be modified or omitted, simply because they are defined in another location or by another document. Several requirements, such as those for limited certification, differ somewhat but the differences are not considered technically relevant and they are not detailed in this technical comparison. These complications are representative of the increased burden when administering more than one program or a program based on varying requirements.

<b>95/96 APPENDIX VII</b>	<b>1989 APPENDIX VII</b>
VII-1000 - Scope - Modifies the requirements of IWA-2300 for Ultrasonic examiners	VII-1000 – identical to 95/96
VII-2000 - Qualification Levels - Identifies 5 qualification Levels as defined in CP-189	VII-2000 - essentially the same. Defines NDE Instructor qualification since it is not included in SNT-TC-1A.
VII-3000 - Written Practice – Defines the written practice, including the definition of an “outside agency” as an independent company or a functionally independent organization within the same company.	VII-3000 identical to 95/96 except “outside agency” is not defined.
<b>VIII-4000 - Qualification Requirements</b>	
CP-189 contains no simultaneous experience provisions.	Table VII-4110-1 states the simultaneous experience provision of SNT-TC-1A is not applicable.

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<b>95/96 APPENDIX VII</b>	<b>1989 APPENDIX VII</b>
Paragraph VII-4223 requires previously qualified individuals to meet the requirements for training	Both Appendices in paragraph VII-4300 state that to be considered for examination the Level I, II, and III candidates shall have successfully completed the training required in VII-4200.
Paragraph VII-4240 states that no examination is required for the annual retraining.	
Paragraph VII-4310 (a) states that a random selection process must be controlled by the written practice so no individual takes the same examination more than once.	
Paragraph VII-4310 (b) allows the use of “grading units” to produce a specimen bank for the practical examination.	
Paragraph VII-4330 (a) Level III examinations per IWA-2300, Basic, Method, Specific, Practical, Demonstration, contains rules for Level II practical examination. An Appendix VIII practical is acceptable.	While the 1989 Appendix VIII contains no requirements for a practical examination, it would be required for the mandatory Appendix VIII.
Paragraph VII-4330 (b) allows recertification of Level III personnel using only the Method and Specific Examinations	IWA-2313 requires recertification using Basic, Method, and Specific written examinations
Not addressed	VII-6000 – Defines duties of the ANII

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### Comparison No. 3

#### **Comparison of the 1991 Edition of CP-189 with the 1984 Edition of SNT-TC-1A as Modified by Appendix VII**

The following is a summary of pertinent technical aspects of the implementation requirements contained in CP-189, 1991; and SNT-TC-1A, 1984.

Comparisons are not detailed in those areas where CP-189 is modified by the requirements of Appendix VII. Please note that the word “should” typically identifies what is considered a requirement in SNT-TC-1A, while CP-189 typically uses the word “shall”. Industry practice is to treat SNT-TC-1A recommendations as requirements. Several paragraphs are identified as similar. This is subjective. For example, while SNT-TC-1A does not specifically require suspension of an examiners certification for a lapsed vision examination, it is considered to be implied, and it is industry practice to do so.

<b>CP-189</b>	<b>SNT-TC-1A</b>
1.0 – Scope – CP-189 is a standard that establishes the minimum requirements.	1.0 – Scope – SNT-TC-1A is a recommended practice establishing guidelines.
2.0 – Definitions – More inclusive (19 terms) and more concise. Some Modified by Appendix VII.	2.0 – Definitions Less inclusive (7 terms)
<b>3.0 – Levels of Qualification</b>	
3.1 – Classification	Modified by Appendix VII
3.2 – Level III	4.3 (3) – Similar to CP-189
3.3 – Level II	4.3 (2) – Similar to CP-189
3.4 – Level I	Modified by Appendix VII
3.5 – Trainee	4.2 – Similar to CP-189
3.6 – NDE Instructor	Modified by Appendix VII
<b>4.0 - Qualification Requirements</b>	
4.1 – Training	Modified by Appendix VII
4.2 – Experience	Modified by Appendix VII
4.3 – Previous Training and Experience	Modified by Appendix VII

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CP-189	SNT-TC-1A
4.4 – NDT Instructor	Modified by Appendix VII
4.5 – Outside services	Modified by Appendix VII
5.0 – Qualification and Certification	
5.1 – Procedure	Modified by Appendix VII
5.2 – Procedure requirements	Modified by Appendix VII
5.3 – Approval – “written practice” approved by Level III	Modified by Appendix VII – Requires that “written practice” specify responsibilities.
6.0 - Examinations	
6.1 – Vision	Modified by IWA-2300
6.2 – Level III Examination	Modified by Appendix VII
6.3 – Level I and II Examination	Modified by Appendix VII
6.4 – Administration and grading	Modified by Appendix VII
6.5 – Reexamination	Modified by Appendix VII
6.6 – Administration of Examinations – prohibits one’s self or one’s subordinate from preparing or administering an exam.	Not specifically addressed
7.0 - Expiration, Suspension, Revocation, and Reinstatement of Employer Certification	
7.1 – Expiration	Similar to CP-189
7.2 – Suspension	Similar to CP-189
7.3 – Revocation	Similar to CP-189
7.4 – Reinstatement	Similar to CP-189
8.0 - Employer Recertification	
8.1 – NDT Level I and II	Modified by Appendix VII
8.2 – NDT Level III	Modified by Appendix VII
9.0 - Records	
9.1 – Responsibility for Documentation	Modified by Appendix VII
9.2 – Contents of Certification Record	Modified by Appendix VII