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August 2, 2000

Re: Indian Point Unit No. 2  
Docket No. 50-247  
NL 00-102

Document Control Desk  
US Nuclear Regulatory Commission  
Mail Station P1-137  
Washington, DC 20555-0001

Subject: Request for Relief from the Requirements of American Society of  
Mechanical Engineers (ASME) Section XI Relief Request (RR) Nos. 53, 54, and 55

References: 1. 64 FR 51370, September 22, 1999, "Industry Codes and Standards,  
Amended Requirements"  
2. "Guidelines for the Implementation of Appendix VIII and 10 CFR  
50.55a," May 22, 2000, prepared by Electric Power Research Institute  
(EPRI) Non-Destructive Examination (NDE) Center

Pursuant to 10 CFR 50.55a(a)(3) and 10 CFR 50.55a(g)(5)(iii), Consolidated Edison  
Company of New York, Inc. (Con Edison) requests relief from the requirements of 10  
CFR 50 and Section XI of the ASME Code for Indian Point Unit No. 2. Specifically,  
Con Edison has prepared three relief requests. Attachments 1 through 3 provide the  
details of the relief requests along with the associated technical justification. A copy of  
ASME Code Case N-583, "Annual Training Alternative, Section XI, Division 1," that  
is associated with Relief Request No. 55 is provided as Attachment 4.

These three relief requests were made necessary by the changes adopted in 1999 to  
10 CFR 50.55a, "Codes and Standards," (Reference 1). These relief requests are  
consistent with the EPRI guidance on the implementation of these new requirements  
(Reference 2). Similar requests have been submitted for other nuclear power facilities.  
Requests for relief similar to IP-2 Relief Request 53 have been requested for the Duane  
Arnold and Fitzpatrick nuclear plants. Requests for relief similar to IP-2 Relief  
Request 54 have been requested for the Fitzpatrick and Hatch Nuclear Plants. Relief  
Requests similar to IP-2 Relief Request 55 have been requested for the Duane Arnold,  
Fitzpatrick and Hatch nuclear plants.

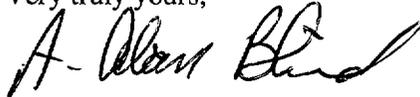
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Con Edison plans to use the proposed alternative requirements in activities associated with the upcoming steam generator replacement. Therefore, Con Edison Requests these relief requests be reviewed and approved prior to September 28, 2000.

No new regulatory commitments are made by Con Edison in this correspondence.

If you have any questions regarding this matter, please contact Mr. Charlie Jackson, Licensing and Environmental Manager, Steam Generator Replacement Project.

Very truly yours,

A handwritten signature in black ink that reads "A. Alan Bland". The signature is written in a cursive style with a large, stylized initial "A".

Attachments

C: Mr. Hubert J. Miller  
Regional Administrator-Region I  
US Nuclear Regulatory Commission  
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ATTACHMENT 1

Relief Request 53

**RELIEF REQUEST NUMBER 53**

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**COMPONENT IDENTIFICATION**

Code Class: Quality Group A & B  
Reference: IWA-2300  
Description: Alternate Qualification of Nondestructive Examination Personnel, related to Ultrasonic Examination to the requirements of Appendix VIII of the ASME B&PV Code 1995 Edition with 1996 Addenda

**CODE REQUIREMENT**

Sub-article IWA-2300 requires qualification of Non-Destructive Examination (NDE) personnel to CP-189 and the additional requirements of Section XI, Division 1. Relief is requested from the provision of sub-article IWA-2300, "Qualification of Nondestructive Examination Personnel." This requires that personnel performing NDE shall be qualified and certified using a written practice prepared in accordance with CP-189, and the additional requirements of Division 1.

**BASIS FOR RELIEF**

Pursuant to 10 CFR 50.55a(a)(3)(i) and (ii), relief is requested on the basis that the proposed alternative provides an acceptable level of quality and safety and that compliance with the specified requirement would impose a hardship or unusual difficulty without a compensating increase in the level of quality and safety. Consolidated Edison proposes that 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.

10 CFR 50.55a was amended in the Federal Register (Volume 64, No. 183 dated September 22, 1999) to require the use of the 1995 Edition, with the 1996 Addenda for Appendix VIII qualification requirements. This also imposes the requirements of IWA and Appendix VII of the 1995 Edition, with 1996 Addenda of Section XI. This includes sub-article IWA-2300, which requires a written practice prepared in accordance with CP-189, 1991 Edition, as amended by the requirements of Division 1.

This requires development, implementation, and to the extent possible, consolidation of multiple certification requirements into one or more written practices. This is needed to address the various NDE certification requirements contained in SNT-TC-1A, for non-Appendix VIII applications and CPM-189, for Appendix VIII applications. These are further modified by IWA-2300 and Appendix VII, as amended by respectively the 1989 Edition of Section XI or the 1995 Edition with 1996 Addenda of Section XI.

In its Safety Evaluation Report provided by correspondence dated February 4, 2000, "Evaluation of Relief Requests Nos. 44, 45, and 49: Implementation of Subsections IWE and IWL of ASME Section XI for Containment Inspection for Indian Point Nuclear Generating Unit No. 2. (TAC No. MA6949)," the staff found the program of qualification and certification to ASNT SNT-TC-1A, 1984 Edition, to be appropriate for the Third Interval Inservice Inspection Program and that there was no benefit in having two separate certification programs when they both address the same topics.

Relief is requested in accordance with 10 CFR 50.55a(3)(ii) to continue basing requirements for initial certification and recertification of ultrasonic examination personnel on the 1989 Edition of

**RELIEF REQUEST NUMBER 53**

(Page 2 of 2)

Section XI. This includes use of ASNT SNT-TC-1A, 1984, as amended by IWA-2300 and Appendix VII of Section XI, 1989 Edition.

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.

A 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 is considered to be unwieldy and subjective because of their significant differences. Therefore, three less complex comparisons were prepared by EPRI in their draft, "Guideline for the Implementation of Appendix VIII and 10 CFR 50.55a," dated May 22, 2000 (pages 72 – 77).

**PROPOSED 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.

**PERIOD FOR WHICH RELIEF IS REQUESTED**

The remainder of the 3<sup>rd</sup> ten-year interval (through May 18, 2005)

**JUSTIFICATION FOR RELIEF**

As written, there are major differences between CP-189 and SNT-TC-1A. However these are minimized by the moderating effects of the applicable IWA-2300 requirements and the Appendix VII requirements. Compliance with the specified requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality or safety. For example, the 1995 Edition with the 1996 Addenda require near vision acuity of 20/25 or greater Snellon fraction while the 1989 Edition requires a Jaeger No. 1 print. Development and administration of a second or consolidated program would not enhance safety or quality and would create an unnecessary burden particularly in developing an additional written practice, tracking of certifications, duplication of paperwork, etc. This duplication would also apply to NDE vendor programs.

This request is similar to relief request number 44 that was previously approved by the staff by correspondence dated February 4, 2000, "Evaluation of Relief Requests Nos. 44, 45, and 49: Implementation of Subsections IWE and IWL of ASME Section XI on Containment Inspection for Indian Point Nuclear Generating Unit No. 2. (TAC No. MA6949)"

ATTACHMENT 2

Relief Request 54

**RELIEF REQUEST NUMBER 54**  
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**COMPONENT IDENTIFICATION**

Code Class: Quality Group A & B  
Reference: 10 CFR 50.55a(b)(2)(xv)(A), 10 CFR 50.55a(b)(2)(xv)G, and 10 CFR  
50.55a(b)(2)(xvi)  
Description: Alternate Ultrasonic Examination techniques with Single Sided Access for  
examination

**CODE REQUIREMENT**

10 CFR 50.55a(b)(2)(xv)(A), 10 CFR 50.55a(b)(2)(xv)G, and 10 CFR 50.55a(b)(2)(xvi), define new requirements for coverage and qualification demonstrations. These requirements affect both piping and reactor pressure vessel (RPV) examinations.

Relief is requested in accordance with 10 CFR 50.55a(a)(3)(ii). Previously issued qualifications do not meet the new requirements for single sided access, that are listed in the Final Rule, 10 CFR 50.55a(b)(2)(xv)(G)(1), (2) and 10 CFR 50.55a(b)(2)(xvi)(A)

**BASIS FOR RELIEF**

Pursuant to 10 CFR 50.55a(g)(5)(iii), relief is requested on the basis that compliance with the code requirement is impractical. Consolidated Edison proposes that as qualified through the Performance Demonstration Initiative (PDI), the best available techniques will be used from the accessible side of the weld.

The PDI is in agreement with the Final Rule regarding single sided access for piping. The Final Rule requires that if access is available, the weld shall be scanned in each of the four directions (parallel and perpendicular to the weld) where required. Coverage credit may be taken for single sided exams on ferritic piping. However, for austenitic piping, a procedure must be qualified with flaws on the inaccessible side of the weld.

Current technology is not capable of reliably detecting or sizing flaws on the far side of an austenitic weld for configurations common to US nuclear applications. To demonstrate that the best available technology was applied, PDI provides a best effort qualification instead of a complete single side qualification. PDI Performance Demonstration Qualification Summary (PDQS) austenitic piping certificates list the limitation that single side examinations is performed on best effort basis. This will require that the far side of the weld, which can only be accessed from one side, must be listed as no coverage.

**PROPOSED ALTERNATIVE PROVISIONS**

As qualified through the PDI, the best available techniques will be used from the accessible side of the weld.

**RELIEF REQUEST NUMBER 54**  
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**PERIOD FOR WHICH RELIEF IS REQUESTED**

The remainder of the 3<sup>rd</sup> ten-year interval (through May 18, 2005)

**JUSTIFICATION FOR RELIEF**

Reactor Pressure Vessel (RPV) qualifications have been performed which met the requirements of the ASME Code and the PDI Program at the time of certification. Some of these qualifications list a single sided capability. However, these demonstrations do not meet the new requirements for single sided access qualifications that are listed in the Final Rule, 10 CFR 50.55a(b)(2)(xv)(G)(1), (2), and 10 CFR 50.55a(b)(2)(xvi)(A). Licensees and PDQS certificate holders, which list single side qualifications are to be notified of these differences by the Electric Power Research Institute (EPRI). New certificates will be issued by EPRI as amended single sided procedures are demonstrated and qualified. There are no currently qualified procedures.

ATTACHMENT 3

Relief Request 55

**RELIEF REQUEST NUMBER 55**

(Page 1 of 2)

**COMPONENT IDENTIFICATION**

Code Class: Quality Group A & B  
Reference: VII-4240 of Appendix VII  
Description: Alternate Training Hours for Ultrasonic Examination Personnel

**CODE REQUIREMENT**

Sub-article VII-4240 requires a minimum of 10 hours of annual training. Relief is requested from the provision of Sub-article VII-4240, Annual Training. This requires supplemental training on an annual basis to impart knowledge of new developments, material failure modes, and any pertinent technical topics as determined by the employer. The extent of training shall be a minimum of 10 hours.

**BASIS FOR RELIEF**

Pursuant to 10 CFR 50.55a(a)(3)(i), relief is requested on the basis that the proposed alternative provides an acceptable level of quality and safety. Consolidated Edison proposes that annual training as required by VII-4240, will be conducted in accordance with Code Case N-583.

10 CFR 50.55a was amended in the Federal Register (Volume 64, No. 183 dated September 22, 1999) to require the 1995 Edition, with the Addenda of Section XI for Appendix VIII qualification requirements. This also imposes the requirements of Appendix VII of the 1995 Edition with 1996 Addenda of Section XI. This includes Sub-article VII-4240, which requires a minimum of 10 hours of annual training.

This paragraph in the final rule states: "(xiv) Appendix VIII personnel qualification. All personnel qualified for performing ultrasonic examinations in accordance with section VIII shall receive 8 hours of hand-on training on specimens that contain cracks. This training must be received no earlier than 6 months prior to performing ultrasonic examinations at a licensee's facility."

Code Case N-583 responds to an inquiry about what alternative to the annual training requirements in Appendix VII-4240 may be used. The reply states, "... supplemental practice may be used to maintain UT personnel examination skills. Personnel shall practice UT techniques by examining or by analyzing prerecorded data from materials or welds containing flaws similar to those that may be encountered during inservice examinations. This practice shall be at least 8 hours per year and shall be administered by an NDE Instructor or Level III; no examination is required."

**RELIEF REQUEST NUMBER 55**  
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**PROPOSED ALTERNATIVE PROVISIONS**

Annual training as required by VII-4240, will be conducted in accordance with Code Case N-583.

**PERIOD FOR WHICH RELIEF IS REQUESTED**

Remainder of 3<sup>rd</sup> Ten-Year Interval (through May 18, 2005)

**JUSTIFICATION FOR RELIEF**

Paragraph 2.4.1.1.1 in the Federal Register contained the following statement, "The NRC had determined that this requirement (10 hours of training on an annual basis) was inadequate for two reasons. The first reason was that the training does not require laboratory work and examination of flawed specimens. Signals can be difficult to interpret and, as detailed in the regulatory analysis for this rulemaking, experience and studies indicate the examiner must practice on a frequent basis to maintain the capability for proper interpretation. The second reason is related to the length of the training and its frequency. Studies have shown that an examiner's capability begins to diminish within approximately 6 months if skills are not maintained. Thus, the NRC had determined that 10 hours of annual training is not sufficient practice to maintain skills, and that an examiner must practice on a more frequent basis to maintain proper skill level . . . The PDI program has adopted a requirement for 8 hours of training, but it is required to be hands-on practice. In addition, the training must be taken no earlier than 6 months prior to performing examinations at a licensee's facility. PDI believes that 8 hours will be acceptable relative to an examiner's abilities in this highly specialized skill area because personnel can gain knowledge of new developments, material failure modes, and other pertinent technical topics through other means. Thus the NRC has decided to adopt in the Final Rule the PDI position on this matter. These changes are reflected in § 50.55a(b)(2)(xiv) of the final rule."

ATTACHMENT 4

ASME Code Case N-583

CASES OF ASME BOILER AND PRESSURE VESSEL CODE

Approval Date: August 14, 1997

*See Numerical Index for expiration  
and any reaffirmation dates.*

Case N-583  
Annual Training Alternative  
Section XI, Division 1

*Inquiry:* What alternative to the annual training requirements of Appendix VII-4240 may be used?

*Reply:* It is the opinion of the Committee that, as an alternative to the requirements of Appendix VII-4240, supplemental practice may be used to maintain UT personnel examination skills. Personnel shall practice UT techniques by examining or by analyzing pre-recorded data from material or welds containing flaws similar to those that may be encountered during inservice examinations. This practice shall be at least 8 hr per year and shall be administered by an NDE Instructor or Level III; No examination is required.