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September 20, 2000

Re: Indian Point Unit No. 2
Docket No. 50-247
NL 00-120

US Nuclear Regulatory Commission
ATTN: Document Control Desk
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) No. 57

In accordance with the provisions of 10 CFR 50.55a(a)(3)(i), Consolidated Edison requests relief from specified inservice inspection requirements in Section XI of the ASME Boiler and Pressure Vessel Code for Indian Point Unit No. 2. The attachment to this letter provides relief request No. 57 for NRC review and approval.

Consolidated Edison is requesting NRC approval to use wire type penetrameters in lieu of plaque type penetrameters for performing radiographic inspections. The proposed alternative provides an acceptable level of quality and safety.

Regulatory Guide 1.147, Revision 12 dated May 1999, "Inservice Inspection Code Case Acceptability, ASME Section XI, Division 1," endorsed use of Code Case N-416-1, "Alternate Pressure Test Requirement for Welded Repairs or Installation or Replacement Items by Welding, Class 1, 2, and 3, Section XI, Division 1." By letter dated August 16, 1999, Consolidated Edison notified the NRC of our intent to use ASME Code Case N-416-1. ASME Code Case N-416-1 invokes the 1992 Edition, no Addenda, of the ASME Code, Section III in the performance of nondestructive examination of welded repairs or installation of replacement components by welding.

ASME Section III, Articles NB-5111 and NC-5111, require that "... Radiographic examination shall be in accordance with Section V, Article 2, except that ... the penetrameters of Table NB-5111-1 (NC-5111-1) shall be used in lieu of those shown in Table T-276" (of ASME Section V). Tables NB-5111-1 and NC-5111-1 specify only plaque type penetrameters. They do not specifically address the equivalency or use of wire type Image Quality Indicators (IQIs). However, equivalent wire type IQIs were incorporated into these tables in the 1993 Addenda of the 1992 Edition of the ASME Section III Code.

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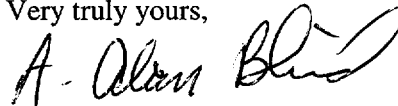
There is existing precedent for this request for relief. Consolidated Edison's request for relief is consistent with requests submitted for Browns Ferry Nuclear Plant, Unit 2 and 3, dated April 27, 1999 and San Onofre Nuclear Generating Station, Units 2 and 3, by letter dated August 26, 1998. The NRC staff approved these requests by letter dated April 29, 1999 and by letter dated April 19, 1999, respectively.

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

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

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

Very truly yours,



Attachments

C: Mr. Hubert J. Miller
Regional Administrator-Region I
US Nuclear Regulatory Commission
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Mr. Patrick D. Milano, Project Manager
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ATTACHMENT

Relief Request 57

RELIEF REQUEST NUMBER 57
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COMPONENT IDENTIFICATION

Code Class: 1, 2, and 3
Reference: ASME Code, Section III, 1992 Edition, No Addenda
Description: Use of Wire Type Penetrameters In Lieu of Plaque Type Image Quality Indicators (IQIs)

CODE REQUIREMENT

ASME Code Section III, 1992 Edition, no Addenda, Articles NB-5111 and NC-5111 require that "... Radiographic examination shall be in accordance with Section V, Article 2, except that ... the penetrameters of Table NB-5111-1 (NC-5111-1) shall be used in lieu of those shown in Table T-276" (of ASME Section V).

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.

Regulatory Guide 1.147, Revision 12, dated May 1999, "Inservice Inspection Code Case Acceptability, ASME Section XI, Division 1," endorsed use of Code Case N-416-1, "Alternate Pressure Test Requirement for Welded Repairs or Installation or Replacement Items by Welding, Class 1, 2, and 3, Section XI, Division 1." By letter dated August 16, 1999, Consolidated Edison notified the NRC of our intent to use ASME Code Case N-416-1. ASME Code Case N-416-1 invokes the 1992 Edition, no Addenda, of the ASME Code, Section III in the performance of nondestructive examination of welded repairs or installation of replacement components by welding.

ASME Section III, Articles NB-5111 and NC-5111, require that "... Radiographic examination shall be in accordance with Section V, Article 2, except that ... the penetrameters of Table NB-5111-1 (NC-5111-1) shall be used in lieu of those shown in Table T-276" (of ASME Section V). Tables NB-5111-1 and NC-5111-1 specify only plaque type penetrameters. They do not specifically address the equivalency or use of wire type Image Quality Indicators (IQIs). However, equivalent wire type IQIs were incorporated into these tables in the 1993 Addenda of the 1992 Edition of the ASME Section III Code.

The use of wire type IQIs are superior to plaque type IQIs for some nuclear piping component applications. Wire IQIs can be placed directly across the area of interest, thus encompassing the objects range of density and geometry. The one-inch minimum length of the essential IQI wire eliminates the problem or indicator loss due to distortion, anomalies, and part geometry. The wire type IQIs provide the same function as the plaque type penetrameters by indicating a change in thickness and spatial resolution of the image without the use of shim blocks and pipe standards.

PROPOSED ALTERNATIVE PROVISIONS

Consolidated Edison proposes to use wire type IQIs for radiography examinations as provided for in ASME Section III, 1992 Edition with 1993 Addenda.

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PERIOD FOR WHICH RELIEF IS REQUESTED

Remainder of 3rd Ten-Year Interval

JUSTIFICATION FOR RELIEF

Plaque type penetrameters are difficult to use due to their physical placement and radiograph characteristics. The placement of flat plaques on curved surfaces of pipe components usually requires shimming. After positioning the plaque on test material and performing a radiographic examination, the recorded radiographic characteristics of the essential T-hole are often obscured or distorted due to specimen anomalies, part geometry, or film artifacts outside the area of interest. These difficulties create re-shoot conditions. The re-shoots have a negative ALARA impact due to the additional radiation exposure to the radiography crew.

There is existing precedent for this request for relief. Consolidated Edison's request for relief is consistent with requests submitted for Browns Ferry Nuclear Plant, Unit 2 and 3, dated April 27, 1999 and San Onofre Nuclear Generating Station, Units 2 and 3, by letter dated August 26, 1998. The NRC staff approved the requests for relief by letter dated April 29, 1999 and by letter dated April 19, 1999, respectively.

In the Safety Evaluation Reports associated with the approval of these requests, the NRC staff found that wire penetrameters listed in Table NB-5111-1 (NC-5111-1) in the ASME Code, Section III, 1992 Edition with 1993 Addenda would provide an acceptable level of quality and safety.