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SUBJECT: Request relief from performing examinations on boiled connections as prescibed by ASME Section XI Article IWA-5242(a), "Insulated Components." Relief is requested to be approved by 990729.

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**Carolina Power & Light Company** 

Robinson Nuclear Plant 3581 West Entrance Road Hartsville SC 29550

RNP File No: 13510 Serial: RNP-RA/99-0016

JAN 2 0 1999

United States Nuclear Regulatory Commission Attn: Document Control Desk Washington, DC 20555

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2 DOCKET NO. 50-261/LICENSE NO. DPR-23

REQUEST FOR RELIEF FROM ASME BOILER AND PRESSURE VESSEL CODE, SECTION XI, REGARDING PRESSURE RETAINING BOLTED CONNECTIONS ON CLASS 2 BORATED SYSTEMS

Sir or Madam:

This letter requests relief in accordance with 10 CFR 50.55a(a)(3) from the requirements of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, 1986 Edition with no addenda, Section XI, involving pressure retaining bolted connections on borated systems for the H. B. Robinson Steam Electric Plant (HBRSEP), Unit No. 2.

Relief is being requested from performing examinations on bolted connections as prescribed by ASME Section XI, Article IWA-5242(a), "Insulated Components." Carolina Power and Light (CP&L) Company proposes to use the alternative requirements of ASME Code Case N-533, "Alternative Requirements for VT-2 Visual Examination of Class 1 Insulated Pressure Retaining Bolted Connections, Section XI, Division 1," and expand the application of these alternatives from Class 1 to Class 2 systems where compliance with the Code requirements is determined to be impractical.

Similar relief was granted for the Turkey Point Plant, Units 3 and 4 by letter dated August 17, 1998.

CP&L will implement this relief during the HBRSEP, Unit No. 2, Third Ten Year Inservice Inspection Interval. This relief is requested to be approved by July 29, 1999.

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If you have any questions concerning this matter, please contact Mr. H. K. Chernoff.

Very truly yours,

R. L. Warden

Manager - Regulatory Affairs

JSK/jsk Attachment

c: Mr. L. A. Reyes, NRC, Region II Mr. R. Subbaratnam, NRC, NRR NRC Resident Inspector, HBRSEP United States Nuclear Regulatory Commission Attachment to Serial: RNP-RA/99-0016

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# H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2 RELIEF REQUEST NO. 23 PRESSURE RETAINING BOLTED CONNECTIONS ON CLASS 2 BORATED SYSTEMS

#### Code Requirements for Which Relief is Requested

The American Society of Mechanical Engineers (ASME) Boiler & Pressure Vessel Code, 1986 Edition with no addenda, Section XI, paragraph IWA-5211 states that "pressure retaining components shall be subject to system pressure tests under which conditions visual examination VT-2 is performed in accordance with IWA-5240, to detect leakages." Paragraph IWA-5242 requires that "for systems borated for the purpose of controlling reactivity, insulation shall be removed from pressure retaining bolted connections for visual examination VT-2." Table IWC-2500-1, "Examination Categories," Category C-H, Items C7.10 through C7.80 requires VT-2 inspections each inspection period for Class 2 systems.

### **Specific Relief Requested**

Relief is requested from the requirements specified above for Class 2 pressure retaining bolted connections on systems borated for the purpose of controlling reactivity. Alternative examinations as specified in ASME Code Case N-533, "Alternative Requirements for VT-2 Visual Examination of Class 1 Insulated Pressure Retaining Bolted Connections, Section XI, Division 1," will be performed in lieu of compliance with the specified portions of the ASME Code.

#### **Alternative Examinations**

Carolina Power & Light (CP&L) Company proposes to examine bolted connections on systems borated for the purpose of controlling reactivity in accordance with the requirements of ASME Code Case N-533. This code case was written specifically for Class 1 systems; however, CP&L requests to apply it to Class 2 systems, where Code compliance is determined to be impractical. Note that Code Case N-533 has not been approved by the NRC and included in Regulatory Guide 1.147, "Inservice Inspection Code Case Acceptability, ASME Section XI, Division 1;" however, CP&L has been granted similar relief for Class 1 systems by NRC letter dated June 10, 1992.

For Class 2 systems, CP&L proposes to remove the insulation from bolted connections and perform a VT-2 visual examination in accordance with paragraph (b) of the code case once each period as defined by the Code. The connections are not required to be pressurized during the examination, and any evidence of leakage will be evaluated in accordance with IWA-5250, "Corrective Action."

In addition to the requirements of paragraph (a) of the code case, the system pressure test and VT-2 examination with the insulation installed on the bolted joints at normal pressure and temperature will include functional or inservice tests as required by the Code for Class 2 systems with the applicable hold times. These system pressure tests will be once each period for applicable Class 2 systems.

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#### **Basis for Requesting Relief**

The provisions of 10 CFR 50.55a(a)(3)(i) allow for the use of alternatives, when approved, to the requirements of the regulations providing that the alternative provides an acceptable level of quality and safety.

In order to achieve the test pressure required by paragraph IWC-5221, "System Pressure Test During System Functional and System Inservice Tests," portions of certain Class 2 systems containing the borated RCS fluid, such as the Residual Heat Removal (RHR) system, typically would achieve elevated temperatures. At elevated system temperatures, it is not desirable from a standpoint of personnel safety to remove or reinstall insulation.

For Class 2 systems, performing a VT-2 visual examination during a system pressure test as required by Code Case N-533, with the insulation in place, is an acceptable means to detect significant leakage when the appropriate hold time is imposed after pressurization prior to the VT-2 visual examination. Furthermore, performing a VT-2 visual examination after removal of the insulation at atmospheric or static pressure during outages, as specified by Code Case N-533, will allow the detection of evidence of borated water leakage as manifested in the form of boric acid residue. Evaluation of any boric acid residue observed at low energy conditions during outages provides additional time for the evaluation of the leakage and planning for the repair. During the course of these inspections, any evidence of leakage noted will be evaluated in accordance with IWA-5250 "Corrective Action," of the ASME Code.

Code Case N-533 was approved for use by ASME on March 14, 1995, as an acceptable alternative to the Code Requirements of IWA-5242(a), "Insulated Components." The code case recognizes that examination of bolted connections during plant shutdown would accomplish the desired results.

#### **Justification for Granting Relief**

The proposed alternative examination presented in the code case and this relief request will adequately detect evidence of leakage, in a manner comparable to the requirements of the ASME Code. Based on the preceding, CP&L believes that use of this code case and this relief provides an acceptable level of quality and safety by the use of an alternate method of performing VT-2 examinations. Therefore, the alternative is acceptable in accordance with 10 CFR 50.55a(a)(3)(i).

#### **Implementation Schedule**

CP&L will implement this relief during the H. B. Robinson, Unit 2, Third Ten Year Inservice Inspection Interval.

This relief is requested to be approved by July 29, 1999.