VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

December 10, 1999

United States Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555

Serial No. 99-495B
SPS/CGL R2"
Docket Nos. 50-280, 50-281
License Nos. DPR-32, DPR-37

Gentlemen:

VIRGINIA ELECTRIC AND POWER COMPANY
SURRY POWER STATION UNITS 1 AND 2
ASME SECTION XI RELIEF REQUEST - SUPPLEMENTAL INFORMATION
CHANGE TO MORE SUBSTANTIAL TEMPORARY NON-CODE REPAIR
AND REQUEST FOR EXTENDED USE

On December 1, 1999, a conference call was held with the NRC staff to discuss the relief request submitted by our November 19, 1999 letter (Serial No. 99-495A) regarding the installation of a more substantial temporary non-Code repair of the 'D' component cooling heat exchanger service water discharge pipe. During that discussion, the NRC requested supplemental information clarifying the requirements being used in the design, fabrication, and installation of the repair. Although the more substantial temporary repair is non-Code and non-safety-related, its design, fabrication, installation, and analysis are in accordance with our normal programs and procedures. A more detailed description of the design and analysis of the temporary non-Code repair, as well as information regarding fabrication and installation, is provided below.

Design and Analysis of More Substantial Temporary Repair

The design was developed by our engineering organization and documented in an Engineering Transmittal (ET). The ET process is governed by a General Nuclear Standard and uses the same configuration management principles as our Design Change Package (DCP) process, including a review in accordance with our 10CFR50.59 process, document and program reviews, and independent review and approval by qualified individuals.

The approximately 40 inch diameter cylindrical portion of the enclosure is fabricated of ½ inch thick ASTM A36 carbon steel and is approximately 4 inches in height. The enclosure including the baseplate will fully enclose the existing 30 inch diameter pipe (with the soft patch remaining in place) from the concrete floor to the flange.

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Although the material for the cylindrical portion was procured as non-safety-related, the vendor provided a Certificate of Compliance certifying the material is ASTM A36. The material for the baseplate was taken from the Surry Stock System and was procured as safety-related A36 material. The top of the cylindrical portion of the enclosure will be fillet welded to the rim of the flange, and the bottom will be fillet welded to a 1 inch thick steel plate that is anchored to the concrete floor with sixteen ½ inch diameter Hilti bolts. The Hilti bolts have physical properties and allowable loads in accordance with the manufacturer's data sheets. The internal surface of the carbon steel enclosure will be coated for corrosion prevention (except in the immediate vicinity of the field welds), and the existing flange fasteners that will be enclosed in the cylinder will be coated with thread lubricant to inhibit corrosion.

The analysis for the more substantial repair was also documented in an ET. The enclosure was evaluated for design loading conditions including deadweight, design pressure of 25 psig, design temperature of 110 degrees F, and design basis seismic loading. Normal operating pressure in this line is approximately 5 psig. The cylindrical portion of the enclosure and the welds were analyzed using ASME Section III NF methodology. The baseplate portion of the enclosure was analyzed in accordance with ASME Section III, Appendix XI. Although the enclosure was not designed and analyzed in accordance with a pressure boundary code (i.e., B31.1), the evaluation has established that it has the capability to maintain the pressure boundary without loss of structural integrity under the above design loading conditions.

For your information, the original piping fabrication code for the discharge line was the American Waterworks Association (AWWA) Standard Specification C201. The original piping analysis was performed in accordance with USAS B31.1-1955 and later revised in accordance with ANSI B31.1-1967.

Fabrication and Installation of the More Substantial Temporary Repair

The fabrication and installation of the more substantial temporary repair is being performed in accordance with existing approved procedures used in our on-site nuclear grade work. The welding and coating activities comply with our Corporate Welding Manual and Specification for Outside Containment Protective Coatings, respectively. The design ET installation requirements specify visual inspection of the finished welds by quality inspection personnel. These inspections will be performed in accordance with the Corporate Welding Manual and the commitments detailed in the Virginia Power Quality Assurance Topical Report. The design ET also specifies that a nondestructive examination (NDE) be performed on the surface of the finished welds. Certified NDE technicians will conduct these examinations using appropriate NDE procedures from our existing nondestructive examination program.

As we indicated during the conference call, we plan to install the more substantial non-Code repair in mid-December under the purview of GL 90-05 for the remaining period of time until the Unit 1 Spring 2000 refueling outage. Additionally, we request the NRC's approval of our November 19, 1999 relief request for the use of the temporary non-Code repair for the subsequent additional operating cycle between the Unit 1 Spring 2000 and Fall 2001 refueling outages.

If you have any further questions concerning this request or require additional information, please contact us.

Very truly yours,

Leslie N. Hartz
Vice President - Nuclear Engineering and Services

Commitments contained in this letter: No new commitments.

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