VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

November 10, 1994

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

Serial No. 94-591
NL&P/ETS R0
Docket Nos. 50-280
50-281
50-338
50-339
License Nos. DPR-32
DPR-37
NPF-4
NPF-7

Gentlemen:

VIRGINIA ELECTRIC AND POWER COMPANY
SURRY POWER STATION UNITS 1 AND 2
NORTH ANNA POWER STATION UNITS 1 AND 2
REGULATORY GUIDE 1.97 INSTRUMENTATION

Virginia Electric and Power Company requested and received NRC approval of several exceptions to Regulatory Guide 1.97 design and qualification criteria. We have reviewed the associated safety evaluations and their bases and have determined that additional clarification for several of the approved exceptions is required. For each exception requiring additional clarification, the information needed is provided in the attachment to this letter.

Should you have any additional questions or concerns regarding these clarifications, please contact us.

Very truly yours,

James P. O'Hanlon

James P. O'Hanlon
Senior Vice President - Nuclear

Attachment

180041

A003

cc: U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, N. W.
Suite 2900
Atlanta, Georgia 30323

Mr. M. W. Branch
NRC Senior Resident Inspector
Surry Power Station

Mr. R. D. McWhorter
NRC Senior Resident Inspector
North Anna Power Station

Attachment
Regulatory Guide 1.97
Clarification of Variable Qualification and Design Exceptions

- In letters dated November 15, 1993 and December 2, 1993 for North Anna and Surry Power Stations, respectively, the NRC approved the reclassification of accumulator level and pressure indication from Category 2 to Category 3 variables. In both letters the NRC requested information concerning the action that would be taken in the reclassification of these variables.

  At this time no physical plant modifications will be made to these transmitters or their associated instrumentation due to these Safety Evaluation Reports. However, we will reclassify the variables as Category 3 and remove the transmitters from the environmental qualification list and maintenance manuals. If the transmitters require replacement, Category 3 instruments will be used.

- In a letter to Surry Power Station dated January 14, 1994, the NRC approved a specific exception for Recirculation Spray Flow. However, the safety evaluation indicated that recirculation spray pump discharge motor amps and discharge pressure were being upgraded to Category 2 status for use as alternate indications of recirculation spray pump flow. This was not the intent of our original submittal. In letters dated November 29, 1990 and August 5, 1993, we stated that recirculation spray pump discharge pressure would be upgraded to Category 2 status. The use of recirculation spray pump motor amps was only to be used by the operators as an alternate means of monitoring the flow until the Category 2 pump discharge pressure transmitter could be installed.

  It is our position that upgrading recirculation spray pump discharge pressure to Category 2 status is adequate to meet compliance for this variable. Further, instrumentation for recirculation spray pump motor amps will not be upgraded and was only temporarily used as an alternate indication pending the pump discharge pressure upgrade.

- In letters dated May 10, 1985, Serial Numbers 85-094 and 85-123A for North Anna and Surry Power Station, respectively, we submitted a request to maintain containment sump water temperature as a Category 3 variable. This request was based upon the analysis performed by Virginia Electric and Power Company in response to Safety Guide 1, "Net Positive Suction Head for Emergency Core Cooling and Containment Heat Removal System Pumps," which analytically showed that adequate NPSH exists for the recirculation spray system pumps during any phase of a DBA. In addition, no operator actions are based upon containment sump water temperature.

  However, in the NRC's Safety Evaluation Reports dated April 21, 1994 and June 7, 1994 for North Anna and Surry Power Stations, respectively, the NRC's basis for maintaining Category 3 containment sump water temperature instrumentation was the use of Category 2 recirculation spray heat exchanger flow and inlet and outlet water temperature instrumentation as alternate means of monitoring the sump water temperature.

A clarification of the instrumentation installed in the recirculation spray system is required. In place of recirculation spray heat exchanger Category 2 inlet and outlet water temperature instrumentation we have installed Category 2 flow and inlet and outlet temperature instrumentation on the service water side of the heat exchangers. In addition, Category 2 recirculation spray pump discharge pressure instruments are installed to assess the operation of the recirculation spray side of the heat exchangers. It is our position that using Category 2 service water flow and temperature from the recirculation spray heat exchangers as well as the recirculation spray pump discharge pressure is adequate to monitor heat removal from containment. These diverse indications provide an adequate means to assess the ability of the recirculation spray pumps to meet their suction head requirements during any phase of a DBA.