January 3, 2003

Mr. David A. Christian
Senior Vice President-Nuclear
Virginia Electric and Power Company
5000 Dominion Blvd.
Glen Allen, Virginia 23060

SUBJECT: SURRY POWER STATION, UNITS 1 AND 2 - RESPONSE TO NRC BULLETIN 2002-02, "REACTOR PRESSURE VESSEL HEAD AND VESSEL HEAD PENETRATION NOZZLE INSPECTION PROGRAMS" (TAC NOS. MB5929 AND MB5930)

Dear Mr. Christian:

On August 9, 2002, the U.S. Nuclear Regulatory Commission (NRC) issued Bulletin 2002-02, "Reactor Pressure Vessel Head and Vessel Head Penetration Nozzle Inspection Programs." The Bulletin requested addressees to provide information related to their reactor pressure vessel (RPV) head and vessel head penetration (VHP) nozzle inspection programs for their respective facilities, including a summary discussion of inspection program plans to supplement their required visual inspections with non-visual nondestructive examination (NDE) methods, or justification for reliance on visual examinations as the primary method to detect degradation. Addressees were requested to respond to Item (1) of the Bulletin within 30 days of its issuance, or within 15 days of its issuance, to provide an alternative course of action, including the basis for acceptability of the proposed action.

By letter dated September 12, 2002, Virginia Electric and Power Company provided a response to Item (1) of the Bulletin, indicating its plans to perform RPV head and VHP nozzle inspections at Surry Power Station, Units 1 and 2. The response also indicated that Surry Power Station, Units 1 and 2, are in the category of plants considered to have high susceptibility to RPV head and VHP cracking, based on a susceptibility ranking of greater than 12 effective degradation years.

The NRC staff has reviewed your response to Item (1) of the Bulletin in which you committed to perform bare metal visual examination of the RPV head; volumetric NDE of the VHP nozzles (with the exception of four thermocouple instrumentation nozzles); and surface NDE of the J-groove welds and associated butter layer, during the next refueling outages for Units 1 and 2. The NRC staff finds this combination of NDE methods is sufficient to demonstrate compliance with applicable regulatory requirements and provides reasonable assurance of adequate protection of the public health and safety, if implemented properly with qualified and demonstrated equipment, personnel, and procedures.

In the response to Item (1) of the Bulletin, you specified that a "best effort" examination will be performed where potential limitations may restrict the area of coverage for the visual or volumetric NDE. You are requested to notify the staff of any limitations that preclude examination of 100 percent of each VHP prior to completion of the inspection to ensure the adequacy of the examination. Additionally, you stated that the inspection plans may change based on the fall 2002 inspection results at North Anna Unit 2, information obtained from other fall 2002 industry inspections, improvements gained in the industry's understanding of

examination technology and crack growth rate, or NRC acceptance of the Electric Power Research Institute Materials Reliability Program (MRP) inspection program. You are requested to notify the NRC staff in writing of any changes to your inspection plans 90 days prior to implementation.

The NRC staff also notes that your response to Item (1) did not address the frequency of non-visual examinations to be performed during future refueling outages. Also, your justification for reliance on visual examinations refers to the MRP inspection plan for pressurized-water reactor RPV upper head penetrations. The NRC staff has not completed its review of the MRP inspection plan and, as such, has not made a determination on the adequacy of the program for ensuring applicable regulatory requirements are met. You are requested to provide a summary description of your future inspection plans no later than 90 days prior to the start of the refueling outage after the next for both Units. The NRC staff's assessment of your justification and the adequacy of your long-term inspection program plans will be determined upon completion of the staff's review of your proposed long-term inspection plan and the MRP proposed inspection plan.

Please note that as stated in Item (2) of the Bulletin, you are to report to the Commission your inspection scope and results within 30 days after plant restart following the inspection of the RPV head and VHP nozzles.

Please contact me at (301) 415-1055 if you have any questions on this issue.

Sincerely,

/***RA***/

Christopher Gratton, Sr. Project Manager, Section 1
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50–280 and 50-0281

cc: See next page

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Please note that as stated in Item (2) of the Bulletin, you are to report to the Commission your inspection scope and results within 30 days after plant restart following the inspection of the RPV head and VHP nozzles.

Please contact me at (301) 415-1055 if you have any questions on this issue.

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