

VIRGINIA ELECTRIC AND POWER COMPANY  
RICHMOND, VIRGINIA 23261

March 24, 2008

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

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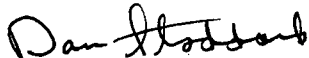
Gentlemen:

**VIRGINIA ELECTRIC AND POWER COMPANY (DOMINION)**  
**NORTH ANNA POWER STATION UNITS 1 AND 2**  
**SUMMARY OF FACILITY CHANGES, TESTS AND EXPERIMENTS**

Pursuant to 10 CFR 50.59(d)(2), enclosed is a summary description of Facility Changes, Tests and Experiments identified in Regulatory Evaluations implemented at the North Anna Power Station during 2007.

If you have any questions, please contact Page Kemp at (540) 894-2295.

Very truly yours,



D. G. Stoddard  
Site Vice President

Attachment

cc: U. S. Nuclear Regulatory Commission  
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NRC Senior Resident Inspector  
North Anna Power Station

IE47

KRR

**ATTACHMENT**

**10 CFR 50.59 SUMMARY DESCRIPTION OF  
FACILITY CHANGES, TESTS AND EXPERIMENTS**

**North Anna Power Station Units 1 and 2**

**Virginia Electric and Power Company  
(Dominion)**

## **NORTH ANNA UNITS 1 & 2**

### **10 CFR 50.59 SUMMARY DESCRIPTION OF FACILITY CHANGES, TESTS AND EXPERIMENTS**

#### **REGULATORY EVALUATION: 07-SE-OT-01**

**Document Evaluated:** Engineering Transmittal-NAF-07-0047, Rev. 0, Changes to the North Anna Containment Analyses and LOCA Alternate Source Term Analyses for Reduced RS Pump Flow Rates

**Brief Description:** The plant safety analysis was revised to reduce the minimum assumed flow rates for the inside and outside recirculation spray (RS) pumps.

**Reason for Change:** Implement changes to the North Anna Units 1 and 2 UFSAR Chapter 6 containment analysis and LOCA Alternate Source Term analysis in UFSAR Chapter 15 to incorporate a reduction in the minimum recirculation spray (RS) pump flow rates.

**Summary:** The IRS pump flow rate is changed from 3100 gpm to 3050 gpm. The ORS pump flow rate is changed from 3450 gpm to 3350 gpm. This change was made to provide margin for the RS pump test program. For NRC GSI-191, the design basis debris head loss that is applied to the RS strainers increases the suction head loss and reduces the minimum delivered flow.

The GOTHIC containment analyses in calculations SM-1511-1, SM-1512-00B, and SM-1513-1 demonstrate that the containment design criteria continue to be met for revised flow rates of 3050 gpm for the IRS pumps (50 gpm reduction) and 3350 gpm for the ORS pumps (100 gpm reduction). The LOCA containment depressurization analyses continue to be bounded by the limits from the LOCA dose consequences analysis basis from Technical Specification Change Request N-051. Containment pressure is less than or equal to 42.7 psig (Pa) in the first hour after a LOCA, is less than 2.0 psig during the period 1-6 hours after the LOCA, is sub-atmospheric within 6 hours, and remains sub-atmospheric thereafter. Further, the containment pressure and temperature profiles remain within the equipment qualification limits. The reduced flow rates were also analyzed for the effect on NPSH available for the RS and low head safety injection (LHSI) pumps. There was a 0.1 ft reduction in RS pump NPSH margin and a 0.3 ft reduction in the LHSI pump NPSH margin during recirculation. The LHSI and RS pumps continue to have sufficient NPSH margin to meet the new design basis head loss requirements.