

**VIRGINIA ELECTRIC AND POWER COMPANY**  
**RICHMOND, VIRGINIA 23261**

March 19, 2007

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

Serial No. 07-0169  
NAPS/JHL  
Docket Nos. 50-338  
50-339  
License Nos. NPF-4  
NPF-7

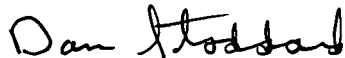
Gentlemen:

**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 2006.

If you have any questions, please contact us.

Very truly yours,



D. G. Stoddard  
Site Vice President

Attachment

cc: U. S. Nuclear Regulatory Commission  
Region II  
Atlanta Federal Center  
61 Forsyth St., SW, Suite 23T85  
Atlanta, Georgia 30303

Mr. J. T. Reece  
NRC Senior Resident Inspector  
North Anna Power Station

IE47

**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: 99-SE-MOD-04**

Document Evaluated: DCP 99-003 – Fuel Assembly Repair / NAPS / Units 1&2

Brief Description: Reconstitution of fuel assemblies following N2C13 shutdown.

Reason for Change: Dominion policy is such that fuel assemblies with known defective fuel rods may not be considered for reuse in subsequent reload designs. Also, Dominion has not always determined the root cause failure mechanism of discharged fuel assemblies. Reconstitution will allow fuel assemblies to be considered for subsequent core reload designs, and potentially aid in determination of the root cause failure mechanism of the assemblies.

Summary: DCP 99-003 describes the reconstitution of fuel assemblies following N2C13 shutdown. Reconstituting fuel assemblies, also known as fuel repair, is the process of removing fuel rods and replacing them with solid stainless steel filler rods. North Anna Vendor Procedure FP-VRA/VGB-FI1 controlled the performance of all fuel repair work, and had provisions for fuel inspections that are beyond the scope of DCP 99-003.

#### **REGULATORY EVALUATION: 06-SE-OT-01**

Document Evaluated: Technical Report NE-1473, Rev 0, Addendum 001, "Reload Safety Evaluation, North Anna 1 Cycle 19 Pattern AVE"

Brief Description: Evaluate the effect on the Large Break LOCA (LBLOCA) accident analysis of a previously unevaluated change to the AREVA Advanced Mark BW (AMBW) top nozzle that resulted in a reduced flow area and increased hydraulic resistance in the AMBW fuel assembly.

Reason for Change: Determine the effect on the LBLOCA accident analysis.

Summary: The evaluation considers the effect on the Large Break LOCA (LBLOCA) accident analysis of a previously unevaluated change to the AREVA Advanced Mark BW (AMBW) top nozzle that resulted in a reduced flow area and increased hydraulic resistance in the AMBW fuel assembly. The change results in a marginal increase in calculated Peak Clad Temperature (PCT) for AREVA AMBW fuel. The LBLOCA analysis of record for Westinghouse fuel is unaffected by the change to the AREVA AMBW top nozzle flow area and hydraulic resistance, since the analysis of Westinghouse fuel conservatively disregards the benefit of flow diversion from AMBW fuel to Westinghouse fuel.

## **REGULATORY EVALUATION: 06-SE-OT-02**

Document Evaluated: Technical Report NE-1453, Rev 0, Addendum 002, "Reload Safety Evaluation, North Anna 2 Cycle 18 Pattern MOE"

Brief Description: Evaluate the effect on the Large Break LOCA (LBLOCA) accident analysis of a previously unevaluated change to the AREVA Advanced Mark BW (AMBW) top nozzle that resulted in a reduced flow area and increased hydraulic resistance in the AMBW fuel assembly

Reason for Change: Determine the effect on the LBLOCA accident analysis.

### **Summary:**

The evaluation considers the effect on the Large Break LOCA (LBLOCA) accident analysis of a previously unevaluated change to the AREVA Advanced Mark BW (AMBW) top nozzle that resulted in a reduced flow area and increased hydraulic resistance in the AMBW fuel assembly. The change results in a marginal increase in calculated Peak Clad Temperature (PCT) for AREVA AMBW fuel. The LBLOCA analysis of record for Westinghouse fuel is unaffected by the change to the AREVA AMBW top nozzle flow area and hydraulic resistance, since the analysis of Westinghouse fuel conservatively disregards the benefit of flow diversion from AMBW fuel to Westinghouse fuel.

## **REGULATORY EVALUATION: 06-SE-MOD-01**

Document Evaluated: DCP 06-109, "Abandonment of Incore Thermocouples", NAPS Unit 1  
UFSAR Change Request FN 2006-006

Brief Description: Incore thermocouples 1-RC-TE-T20, 1-RC-TE-T29 and 1-RC-TE-T40 will be removed from service. Associated computer inputs to the Inadequate Core Cooling Monitor (ICCM) and Emergency Response Facility (ERF) /Plant Computer System (PCS) will be removed from scan.

Reason for Change: UFSAR Figure 4.4-20 requires revision to reflect abandonment of the thermocouples.

Summary: Three incore thermocouples have failed and a UFSAR change was required to support their abandonment. The abandoned incore thermocouples will be sealed with a compression tube fitting which will seal the RCS at the incore thermocouple high pressure fitting. Plugging the high pressure fitting will ensure that the pressure boundary integrity of the RCS is maintained. The remaining thermocouples provide sufficient data for monitoring core exit temperatures.

VIRGINIA ELECTRIC AND POWER COMPANY  
RICHMOND, VIRGINIA 23261

March 19, 2007

Attention: Document Control Desk  
Director, Spent Fuel Project Office  
Office of Nuclear Material Safety and Safeguards  
United States Nuclear Regulatory Commission  
Washington, D. C. 20555-0001

Serial No. 07-0170  
NAPS/JHL  
Docket Nos. 72-16  
72-56  
License No. SNM-2507

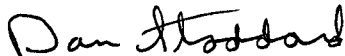
Gentlemen:

**VIRGINIA ELECTRIC AND POWER COMPANY (DOMINION)**  
**NORTH ANNA POWER STATION**  
**INDEPENDENT SPENT FUEL STORAGE INSTALLATION (ISFSI)**  
**SUMMARY OF FACILITY CHANGES, TESTS AND EXPERIMENTS**

Pursuant to 10 CFR 72.48(d)(2), a report containing a brief description of any changes, tests, and experiments, including a summary of the evaluation of each, must be submitted to the NRC – Office of Nuclear Material Safety and Safeguards, at intervals not to exceed 24 months. This letter is to notify you that there were no evaluations affecting the North Anna Power Station ISFSI facility during 2006.

If you have any questions, please contact us.

Very truly yours,



D. G. Stoddard  
Site Vice President

cc: U. S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, DC 20555-0001

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