

October 16, 2006

Mr. David A. Christian  
Senior Vice President  
and Chief Nuclear Officer  
Virginia Electric and Power Company  
Innsbrook Technical Center  
5000 Dominion Boulevard  
Glen Allen, VA 23060-6711

SUBJECT: NORTH ANNA POWER STATION, UNIT NOS. 1 AND 2, ISSUANCE OF  
AMENDMENTS REGARDING THE CONSOLIDATED LINE ITEM  
IMPROVEMENT PROCESS FOR THE STEAM GENERATOR TUBE  
INTEGRITY (TAC NOS. MD1838 AND MD1839)

Dear Mr. Christian:

The U.S. Nuclear Regulatory Commission has issued the enclosed Amendment Nos. 248 and 228 to Renewed Facility Operating License Nos. NPF-4 and NPF-7 for the North Anna Power Station, Unit Nos. 1 and 2. The amendments change the Technical Specifications (TSs) in response to your application dated May 22, 2006.

These amendments revise the existing steam generator tube surveillance program to be consistent with the U.S. Nuclear Regulatory Commission's approved Technical Specification Task Force (TSTF) Standard Technical Specification Change Traveler, TSTF-449, "Steam Generator Tube Integrity," Revision 4. TSTF-449 is part of the consolidated line item improvement process (CLIP).

A copy of the Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

/RA/

Stephen Monarque, Project Manager  
Plant Licensing Branch II-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket Nos. 50-338 and 50-339

Enclosures:

1. Amendment No. 248 to NPF-4
2. Amendment No. 228 to NPF-7
3. Safety Evaluation

cc w/encls: See next page

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DISTRIBUTION: Public

LPL2-1 R/F

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Package No. ML062900454

Tech Spec No. ML062900458

Amendment No. ML063000028

\*date of memo transmitting safety evaluation

OFFICE	NRR/LPL2-1/PM	NRR/LPD2-1/LA	NRR/ITSB/BC	NRR/CSGB/BC	OGC	NRR/LPL2-1/BC
NAME	SMonarque	MO'Brien	TJKobetz*	TBloomer*	MBarkman	EMarinos
DATE	9/28/06	9/28/06	06/26/2006	06/26/2006	10/10/06	10/12/06

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VIRGINIA ELECTRIC AND POWER COMPANY

DOCKET NO. 50-338

NORTH ANNA POWER STATION, UNIT NO. 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 248  
Renewed License No. NPF-4

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Virginia Electric and Power Company et al., (the licensee) dated May 22, 2006, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Renewed Facility Operating License No. NPF-4 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 248, are hereby incorporated in the renewed license. The /licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 180 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

*/RA/*

Evangelos C. Marinos, Chief  
Plant Licensing Branch II-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to License No. NPF-4  
and the Technical Specifications

Date of Issuance: October 16, 2006

VIRGINIA ELECTRIC AND POWER COMPANY

DOCKET NO. 50-339

NORTH ANNA POWER STATION, UNIT NO. 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 228  
Renewed License No. NPF-7

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Virginia Electric and Power Company et al., (the licensee) dated May 22, 2006, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Renewed Facility Operating License No. NPF-7 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 228, are hereby incorporated in the renewed license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 180 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

*/RA/*

Evangelos C. Marinos, Chief  
Plant Licensing Branch II-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to License No. NPF-7  
and the Technical Specifications

Date of Issuance: October 16, 2006

ATTACHMENT  
TO LICENSE AMENDMENT NO. 248  
RENEWED FACILITY OPERATING LICENSE NO. NPF-4  
DOCKET NO. 50-338  
AND  
TO LICENSE AMENDMENT NO. 228  
RENEWED FACILITY OPERATING LICENSE NO. NPF-7  
DOCKET NO. 50-339

Replace the following pages of the Licenses and the Appendix "A" Technical Specifications (TSs) with the enclosed pages as indicated. The revised pages are identified by amendment number and contain vertical lines indicating the areas of change.

Remove Pages

Licenses

License No. NPF-4, page 3  
License No. NPF-7, page 3

TSs

ii  
1.1-3  
1.1-4  
3.4.13-1  
3.4.13-2  
3.4.20-1  
3.4.20-2  
5.5-5  
5.5-6  
5.5-7  
5.5-8  
5.5-9  
5.5-10  
5.5-11  
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5.6-4  
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Insert Pages

Licenses

License No. NPF-4, page 3  
License No. NPF-7, page 3

TSs

ii  
1.1-3  
1.1-4  
3.4.13-1  
3.4.13-2  
3.4.20-1  
3.4.20-2  
5.5-5  
5.5-6  
5.5-7  
5.5-8  
5.5-9  
5.5-10  
5.5-11  
5.5-12  
5.5-13  
5.5-14  
5.5-15  
5.6-4  
5.6-5

TSs

Bii

B3.4.4-2

B3.4.5-3

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B3.4.6-3

B3.4.7-3

B3.4.13-2

B3.4.13-3

B3.4.13-4

B3.4.13-5

B3.4.13-6

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B3.4.20-1

B3.4.20-2

B.3.4.20-3

B.3.4.20-4

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B.3.4.20-6

B.3.4.20-7

B.3.4.20-8

TSs

Bii

B3.4.4-2

B3.4.5-3

B3.4.5-4

B3.4.6-3

B3.4.7-3

B3.4.13-2

B3.4.13-3

B3.4.13-4

B3.4.13-5

B3.4.13-6

B3.4.13-7

B3.4.20-1

B3.4.20-2

B.3.4.20-3

B.3.4.20-4

B.3.4.20-5

B.3.4.20-6

B.3.4.20-7

B.3.4.20-8



SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO  
AMENDMENT NO. 248 TO RENEWED FACILITY OPERATING LICENSE NO. NPF-4  
AND  
AMENDMENT NO. 228 TO RENEWED FACILITY OPERATING LICENSE NO. NPF-7  
VIRGINIA ELECTRIC AND POWER COMPANY  
NORTH ANNA POWER STATION, UNIT NOS. 1 AND 2  
DOCKET NOS. 50-338 AND 50-339

1.0 INTRODUCTION

By letter dated May 22, 2006 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML061430062), Virginia Electric and Power Company (the licensee) submitted a request for changes to the North Anna Power Station, Unit Nos. 1 and 2 (North Anna 1/2), Technical Specifications (TSs). The proposed amendments are modeled after TS Task Force (TSTF) Change TSTF-449, Revision 4, "Steam Generator Tube Integrity," and the model safety evaluation (SE) prepared by the Nuclear Regulatory Commission (NRC) and published in the *Federal Register* on March 2, 2005 (70 FR 10298) under the consolidated line item improvement process (CLIIP). In this regard, the scope of the application includes changes to the definition of leakage, changes to the primary-to-secondary leakage requirements, changes to the steam generator (SG) tube surveillance program (SG tube integrity), changes to the SG reporting requirements, and associated changes to the TS Bases.

2.0 REGULATORY EVALUATION

The background, description, and applicability of the proposed changes associated with the SG tube integrity issue and the applicable regulatory requirements were included in the NRC staff's model SE published in the *Federal Register* on March 2, 2005 (70 FR 10298). The "Notice of Availability of Model Application Concerning Technical Specification; Improvement To Modify Requirements Regarding Steam Generator Tube Integrity; Using the Consolidated Line Item Improvement Process" was published in the *Federal Register* on May 6, 2005 (70 FR 24126), which made the model SE available for licensees to reference.

### 3.0 TECHNICAL EVALUATION

#### 3.1 Overview

In its May 22, 2006, application, the licensee proposed changes to the TSs that are modeled after TSTF-449. There were minor differences between TSTF-449 and the licensee's application. These included differences associated with the facility having a different licensing basis (than that discussed in TSTF-449) and differences in TS numbering since the licensee has a different TS numbering sequence (than that assumed in TSTF-449). With respect to the differences in the facility licensing basis, the differences did not invalidate the technical evaluation of TSTF-449; rather they resulted in the licensee having to slightly deviate from some of the modifications discussed in TSTF-449. For example, in the Bases Section on Reactor Coolant System Operational Leakage, the licensee currently has more details concerning its accident analyses than what is present in the standard TSs (which were modified in TSTF-449). As a result, several of the changes discussed in TSTF-449 were not applicable. This level of detail was also used in the new Bases Section on SG Tube Integrity. Since these differences were either administrative in nature or consistent with the plant's licensing basis, the NRC staff determined they were acceptable. The remainder of the application was generally consistent with or more conservative than TSTF-449. As a result, the NRC staff determined that the model SE is applicable to this review and finds the proposed changes acceptable.

Consistent with TSTF-449, the proposed TS changes include: (1) a revised definition of LEAKAGE in TS 1.1, (2) a revised TS 3.4.13, "RCS (Reactor Coolant System) Operational LEAKAGE," (3) a new TS 3.4.20, "Steam Generator (SG) Tube Integrity," (4) a revised TS 5.5.8, "Steam Generator (SG) Program," (5) a revised TS 5.6.7, "Steam Generator Tube Inspection Report," and (6) a revised Table of Contents pages to reflect the proposed changes.

#### 3.2 Conclusion

The proposed TS changes establish a programmatic, largely performance-based regulatory framework for ensuring SG tube integrity is maintained. The NRC staff finds that it addresses key shortcomings of the current framework by ensuring that SG programs are focused on accomplishing the overall objective of maintaining tube integrity. It incorporates performance criteria for evaluating SG tube integrity that the NRC staff finds to be consistent with the structural margins and the degree of leak tightness assumed in the current plant licensing basis. The NRC staff finds that maintaining these performance criteria provides reasonable expectation that the SGs can be operated safely without increase in risk.

The revised TSs will contain limited specific details concerning how the SG Program is to achieve the required objective of maintaining tube integrity; the intent being that the licensee will have the flexibility to determine the specific strategy for meeting this objective. However, the NRC staff finds that the revised TSs include sufficient regulatory constraints on the establishment and implementation of the SG Program such as to provide reasonable assurance that tube integrity will be maintained.

Failure to meet the performance criteria will be reportable pursuant to the requirements in Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50 Sections 50.72 and 50.73. The NRC reactor oversight process provides a process by which the NRC staff can verify that the licensee has identified any SG Program deficiencies that may have contributed to such an

occurrence and that appropriate corrective actions have been implemented.

In conclusion, the NRC staff finds that the TS changes proposed by the licensee in its May 22, 2006, application conform to the requirements of 10 CFR 50.36 and establish a TS framework that will provide reasonable assurance such that SG tube integrity is maintained without undue risk to public health and safety.

#### 4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Virginia State official was notified of the proposed issuance of the amendments. The State official had no comments.

#### 5.0 ENVIRONMENTAL CONSIDERATION

The amendments change requirements with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and change surveillance requirements. The NRC staff has determined that the amendments involve no significant increase in the amounts and no significant change in the types of any effluents that may be released offsite and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (71 FR 43537). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

#### 6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: E. Thomas

Date: October 16, 2006

North Anna Power Station, Units 1 & 2

cc:

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