March 29, 2007

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: SURRY POWER STATION, UNIT NOS. 1 AND 2, ISSUANCE OF AMENDMENTS REGARDING STEAM GENERATOR TUBE INTEGRITY (TAC NOS. MD2097 AND MD2098)

Dear Mr. Christian:

The U.S. Nuclear Regulatory Commission has issued the enclosed Amendment No. 251 to Renewed Facility Operating License No. DPR-32 and Amendment No. 250 to Renewed Facility Operating License No. DPR-37 for the Surry Power Station, Unit Nos. 1 and 2, respectively. The amendments change the Technical Specifications (TSs) in response to your application dated May 26, 2006, as supplemented by letter dated January 19, 2007.

These amendments revise the Technical Specification (TS) requirements related to steam generator tube integrity and Reactor Coolant System (RCS) leakage definitions and requirements. The TSs have been revised to implement TS Task Force (TSTF) Standard TS Change Traveler, TSTF-449, "Steam Generator Tube Integrity," (TSTF-449, Rev. 4) with minor deviations to be consistent with Surry's custom TSs.

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/

Siva P. Lingam, Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-280 and 50-281

Enclosures:
1. Amendment No. 251 to DPR-32
2. Amendment No. 250 to DPR-37
3. Safety Evaluation

cc w/encls: See next page

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VIRGINIA ELECTRIC AND POWER COMPANY

DOCKET NO. 50-280

SURRY POWER STATION, UNIT NO. 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 251
Renewed License No. DPR-32

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Virginia Electric and Power Company (the licensee) dated May 26, 2006, as supplemented by letter dated January 19, 2007, 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 3.B of Renewed Facility Operating License No. DPR-32 is hereby amended to read as follows:

   (B) Technical Specifications

   The Technical Specifications contained in Appendix A, as revised through Amendment No. 251, 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.

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. DPR-32
and the Technical Specifications

Date of Issuance: March 29, 2007

VIRGINIA ELECTRIC AND POWER COMPANY

DOCKET NO. 50-281

SURRY POWER STATION, UNIT NO. 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 250
Renewed License No. DPR-37

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Virginia Electric and Power Company (the licensee) dated May 26, 2006, as supplemented by letter dated January 19, 2007, 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 3.B of Renewed Facility Operating License No. DPR-37 is hereby amended to read as follows:

   (B) Technical Specifications

   The Technical Specifications contained in Appendix A, as revised through Amendment No. 250, 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.

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 License No. DPR-37
and the Technical Specifications

Date of Issuance: March 29, 2007

ATTACHMENT

TO LICENSE AMENDMENT NO. 251

RENEWED FACILITY OPERATING LICENSE NO. DPR-32

DOCKET NO. 50-280

AND

TO LICENSE AMENDMENT NO. 250

RENEWED FACILITY OPERATING LICENSE NO. DPR-37

DOCKET NO. 50-281

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

Remove Pages	Insert Pages
License	License
License No. DPR-32, page 3	License No. DPR-32, page 3
License No. DPR-37, page 3	License No. DPR-37, page 3
TSs	TSs
ii	ii
iii	iii
1.0-8	1.0-8
3.1-13	3.1-13
3.1-13a	3.1-13a
3.1-14	3.1-14
-	3.1-14a
-	3.1-14b
3.1-15	3.1-15
3.1-15a	3.1-15a
-	3.1-26
-	3.1-27
-	3.1-28
-	3.1-29
-	3.1-30
-	3.1-31
4.1-9b	4.1-9b
4.1-9d	4.1-9d
-	4.13-1
-	4.13-2
4.19-1	4.19-1
4.19-2	4.19-2

Remove Pages	Insert Pages
TSs	TSs
4.19-3	-
4.19-4	-
4.19-5	-
4.19-6	-
4.19-7	-
4.19-8	-
4.19-9	-
4.19-10	-
4.19-11	-
4.19-12	-
-	6.4-11
-	6.4-12
6.6-3	6.6-3

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 251 TO

RENEWED FACILITY OPERATING LICENSE NO. DPR-32

AND

AMENDMENT NO. 250 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-37

VIRGINIA ELECTRIC AND POWER COMPANY

SURRY POWER STATION, UNIT NOS. 1 AND 2

DOCKET NOS. 50-280 AND 50-281

1.0 INTRODUCTION

By letter dated May 26, 2006 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML061510096), as supplemented by letter dated January 19, 2007 (ADAMS Accession No. ML070190655), Virginia Electric and Power Company (the licensee) submitted a request for changes to the Surry Power Station, Unit Nos. 1 and 2 (Surry 1 and 2), Technical Specifications (TSs).

The proposed changes would revise the existing steam generator (SG) tube surveillance program. The changes are modeled after TS Task Force (TSTF) Standard Technical Specification (STS) Change Traveler TSTF-449, Revision 4, "Steam Generator Tube Integrity," and the model safety evaluation prepared by the Nuclear Regulatory Commission (NRC) and published in the *Federal Register* on March 2, 2005 (70 FR 10298). 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 SG tube surveillance program (SG tube integrity), changes to the SG reporting requirements, and associated changes to the TS Bases.

The supplement dated January 19, 2007, provided clarifying information that did not change the scope of the original application and the initial proposed no significant hazards consideration determination.

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 safety evaluation (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), and made the model SE available for licensees to reference.

3.0 TECHNICAL EVALUATION

In the licensee's May 26, 2006, application, as supplemented by letter dated January 19, 2007, the licensee proposed changes to the TSs that are modeled after TSTF STS Change Traveler, TSTF-449, "Steam Generator Tube Integrity." There were minor differences between TSTF-449 and the licensee's application. These included differences in the facility licensing basis (than that discussed in TSTF-449) and differences in TS format and numbering. These differences are discussed below.

With respect to the differences in the facility licensing basis, the differences did not invalidate the technical evaluation on TSTF-449; rather they resulted in the licensee having to slightly deviate from some of the modifications discussed in TSTF-449. For example, TSTF-449 has specific definitions of the modes of operation whereas for Surry the "modes of operation" are termed "reactor operation" conditions. There are slight differences between the operating conditions (e.g., temperature) associated with these reactor operation conditions when compared to the modes in TSTF-449. These differences resulted in the licensee having slightly different requirements (associated with the "reactor operation" conditions) than that discussed in TSTF-449 (although in some instances the licensee would specify the temperature corresponding to the TSTF-449 mode of operation in their TS rather than referencing the reactor operation condition to make their submittal more consistent with TSTF-449). Another example is that the licensee indicated that the dose consequences are within the limits of Title 10 of the *Code of Federal Regulations* (10 CFR), Part 50, Section 50.67, (rather than Part 100 as indicated in TSTF-449) since the licensee's current licensing basis is based on 10 CFR 50.67.

Another example is that the licensee indicated in their Bases that the accident analyses for a SG tube rupture assumes the contaminated secondary fluid is released to the atmosphere via power operated relief valves or safety valves (rather than only being briefly released to the atmosphere via safety valves with the majority being discharged to the main condenser as indicated in TSTF-449). Since the licensee's accident analysis differs from that assumed in TSTF-449, they did not incorporate the text from TSTF-449 rather they incorporated a sentence that reflects their accident analysis. Since these differences in the licensing basis were minor in nature, they were consistent with the plant's licensing basis, or they were consistent with the intent of TSTF-449, the NRC staff determined they were acceptable.

With respect to the differences in the numbering of the TSs, these differences were administrative in nature and did not affect the technical adequacy of the submittal. As a result, the NRC staff determined they were acceptable. As a result of the differences in the format of their TSs, the licensee relocated many of the TSTF-449 requirements into the appropriate sections of its TSs (e.g., the limiting conditions for operation and action statements are in different sections than the surveillance requirements). In addition, there were some changes in the Bases section of TSTF-449 that were not incorporated into the licensee's submittal, since the licensee did not have the corresponding paragraphs in their Bases. For example, the licensee did not have several references to their SG tube surveillance program in their existing Bases so it did not need to delete these changes in order to adopt TSTF-449. These differences in TS format also resulted in listing the requirements in sentence format rather than

tabular format and using slightly different terminology. Since these differences were administrative in nature and did not affect the technical adequacy of the submittal, the NRC staff determined they were acceptable.

In addition to the above, the licensee also proposed a few changes that went beyond TSTF-449. For example, the licensee also proposed changes to the requirements pertaining to reactor coolant system operational leakage that went beyond TSTF-449 (e.g., adding definitions to TS 1.X, and modifying the action statements in TS 3.1.C). Since these proposed TS changes, including the changes to the Bases, were generally consistent with the standard TSs as modified to reflect the plant's licensing basis, the NRC staff determined that the proposed changes were acceptable. The licensee also had minor wording changes to preclude confusion. For example, the licensee replaced "performed" with "completed" to avoid confusion regarding when the verification that primary-to-secondary leakage was within limits was to be performed/completed. Another example is that the licensee proposed, in part, to limit accident-induced leakage to 1 gallon per minute for all SGs. Since this proposal was more restrictive than that required by TSTF-449 (which limited accident-induced leakage, in part, to 1 gallon per minute per SG), the NRC staff found it acceptable.

The remainder of the application was consistent with, or more limiting than, TSTF-449.

In summary, the NRC staff determined that the model safety evaluation 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, (2) a revised TS Section 3.1.C, "RCS [Reactor Coolant System] Operational Leakage," (3) a new TS Section 3.1.H, "Steam Generator (SG) Tube Integrity," (4) a new TS Section 4.13, "RCS Operational Leakage," (5) a revised TS Section 4.19, "Steam Generator Tube Integirty," (6) a new TS Section 6.4.Q, "Steam Generator (SG) Program," (7) a new TS Section 6.6.A.3, "Steam Generator Tube Inspection Report," and (8) revised Table of Content pages to reflect the proposed changes.

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 tube integrity that the NRC staff finds 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 assurance 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 10 CFR Parts 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 26, 2006, application and January 19, 2007, supplement conform to the requirements of 10 CFR 50.36 and establish a TS framework that will provide reasonable assurance 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 46941, published August 15, 2006). The amendments also relate to changes in recordkeeping, reporting, or administrative procedures or requirements. Accordingly, the amendments meet the eligibility criteria for categorical exclusions set forth in 10 CFR 51.22(c)(9) and 10 CFR 51.22(c)(10). 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 Contributors: Trent Wertz
Leslie Miller

Date: March 29, 2007

Surry Power Station, Units 1 & 2

cc:

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