

August 8, 1991

Docket Nos. 50-280  
and 50-281

DISTRIBUTION  
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Mr. W. L. Stewart  
Senior Vice President - Nuclear  
Virginia Electric and Power Company  
5000 Dominion Blvd.  
Glen Allen, Virginia 23060

Dear Mr. Stewart:

SUBJECT: SURRY UNITS 1 AND 2 - ISSUANCE OF AMENDMENTS RE: INOPERABLE  
CONTROL RODS (TAC NOS. 76046 AND 76047)

The Commission has issued the enclosed Amendment No. 159 to Facility Operating License No. DPR-32 and Amendment No. 158 to Facility Operating License No. DPR-37 for the Surry Power Station, Unit Nos. 1 and 2, respectively. The amendments consist of changes to the Technical Specifications (TS) in response to your application transmitted by letter dated November 3, 1989, as supplemented April 27, 1990.

These amendments provide an allowed outage time and action statement for inoperable control rods.

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,

(Original Signed By)

Bart C. Buckley, Senior Project Manager  
Project Directorate II-2  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Enclosures:

- 1. Amendment No. 159 to DPR-32
- 2. Amendment No. 158 to DPR-37
- 3. Safety Evaluation

cc w/enclosures:  
See next page

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NAME	: Miller	: BBuckley	: RJones	: HBerlow	: M20Buck	:	:
DATE	: 7/30/91	: 7/30/91	: 7/31/91	: 8/15/91	: 8/11/91	:	:

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Mr. W. L. Stewart  
Virginia Electric and Power Company

Surry Power Station

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555

VIRGINIA ELECTRIC AND POWER COMPANY

DOCKET NO. 50-280

SURRY POWER STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 159  
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 November 3, 1989, as supplemented April 27, 1990, 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 Facility Operating License No. DPR-32 is hereby amended to read as follows:

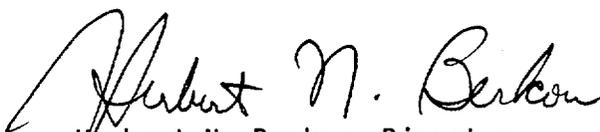
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(B) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 159, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Herbert N. Berkow, Director  
Project Directorate II-2  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: August 8, 1991



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555

VIRGINIA ELECTRIC AND POWER COMPANY

DOCKET NO. 50-281

SURRY POWER STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 158  
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 November 3, 1989, as supplemented April 27, 1990, 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 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. 158, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Herbert N. Berkow, Director  
Project Directorate II-2  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: August 8, 1991

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 159 FACILITY OPERATING LICENSE NO. DPR-32

AMENDMENT NO. 158 FACILITY OPERATING LICENSE NO. DPR-37

DOCKET NOS. 50-280 AND 50-281

Revise Appendix A as follows:

Remove Page

TS 3.12-8

Insert Page

TS 3.12-8

$\Delta T$  and Overtemperature  $\Delta T$  trip settings shall be reduced by the equivalent of 2% power for every 1% quadrant to average power tilt.

C. Inoperable Control Rods

1. A control rod assembly shall be considered inoperable if the assembly cannot be moved by the drive mechanism or the assembly remains misaligned from its group step demand position by more than  $\pm 24$  steps during the "Thermal Soak" period, as defined in Section 3.12.E.1.b, or  $\pm 12$  steps otherwise during power operation. No tolerance limit is required in the shutdown modes, but a rod shall be considered inoperable if the rod position indicators do not verify rod movement upon demand. Additionally, a full-length control rod shall be considered inoperable if its rod drop time is greater than 2.4 seconds to dashpot entry.
2. With more than one inoperable control rod assembly, as defined in 3.12.C.1, determine within 1 hour that the SHUTDOWN MARGIN requirements of Specification 3.12.A.3.c are satisfied and be in Hot Shutdown within 6 hours.
3. If more than one control rod assembly in a given bank are out of service because of a single failure external to the individual rod drive mechanism but remain trippable (i.e., programming circuitry), the provisions of Specifications 3.12.C.1 and 3.12.C.2 shall not apply. Either restore the affected assemblies to operable status in the next 2 hours or be in Hot Shutdown within the next 6 hours.
4. The provisions of Specifications 3.12.C.1 and 3.12.C.2 shall not apply during reactor physics tests in which the assemblies are intentionally misaligned.
5. Power operation may continue with one rod inoperable provided that within one hour either:
  - a. the rod is no longer inoperable as defined in Specification 3.12.C.1, or



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 159 TO FACILITY OPERATING LICENSE NO. DPR-32  
AND AMENDMENT NO. 158 TO 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 November 3, 1989, as supplemented April 27, 1990, Virginia Electric and Power Company (the licensee) requested changes to Section 3.12.C of the Surry Units 1 and 2 Technical Specifications. The proposed changes would provide an allowed outage time and action statement for inoperable control rods.

2.0 EVALUATION

Section 3.12.C.2 of the current Technical Specifications allows no more than one inoperable control rod when the reactor is critical. In this case, a control rod is considered inoperable if it cannot be moved by the drive mechanism, is misaligned by a certain amount, or has a rod drop time greater than 2.4 seconds. The proposed change would require the reactor to be brought to hot shutdown conditions within 6 hours when more than one rod is inoperable. This is acceptable since placing the reactor in hot shutdown obviates concerns about the development of undesirable xenon or power distributions and 6 hours allows sufficient time to shut down the unit in a controlled manner without challenging the safety systems. However, in order to be consistent with the Standard Technical Specifications, the staff also requested that the shutdown margin be verified within 1 hour and that boration be initiated if the required shutdown margin was not met. By letter dated April 27, 1990, the licensee agreed to this additional request and the staff, therefore, finds the proposed change acceptable.

Section 3.12.C.3 of the current Technical Specifications also allows the reactor to remain critical for up to 2 hours when more than one control rod is out of service because of a single failure external to the individual drive mechanism provided that immediate attention is directed toward making the necessary repairs. In the event the affected rods cannot be returned to service within the 2 hours, the reactor must be brought to hot shutdown conditions. The proposed change would further require the rods to be trippable in this out-of-service condition. In this case, the affected rods must be restored to operable status within 2 hours or the unit must be placed in hot shutdown within the next 6 hours. This is consistent with Standard Technical Specifications and is acceptable.

### 3.0 SUMMARY

Based on the above evaluation, the staff concludes that the requested changes to the Surry 1 and 2 Technical Specifications, in conjunction with the additional modification requested by the staff, are acceptable.

### 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 comment.

### 5.0 ENVIRONMENTAL CONSIDERATION

These amendments change a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. 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 these amendments involve no significant hazards consideration and there has been no public comment on such finding (55 FR 21982). Accordingly, these 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 these 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 these amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: L. Kopp

Date: August 8, 1991

DATED: August 8, 1991

AMENDMENT NO. 159 TO FACILITY OPERATING LICENSE NO. DPR-32 - SURRY UNIT 1  
AMENDMENT NO. 158 TO FACILITY OPERATING LICENSE NO. DPR-37 - SURRY UNIT 2

**Docket File**

NRC & Local PDRs

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PD Plant-specific file [Gray File]

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