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February 7, 1991

Docket Nos. 50-280  
and 50-281

Posted

*Amolt. 149 to DPR-37*

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: CONTAINMENT  
VACUUM SYSTEM (TAC NOS. 77081 AND 77082)

The Commission has issued the enclosed Amendment No.152 to Facility Operating License No. DPR-32 and Amendment No.149 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 June 26, 1990.

These amendments delete TS 3.15, "Containment Vacuum System" and the associated bases from the Surry TS. For clarification, the time requirements for the reactor to be brought to the hot shutdown condition and the cold shutdown condition are specified in TS 3.8.B.

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. 152 to DPR-32
- 2. Amendment No. 149 to DPR-37
- 3. Safety Evaluation

cc w/enclosures:  
See next page

FC	LA:PD22	PM:PD22	D:PD22	SRLB	OGC		
NAME	<i>AM</i>	Buckley	<i>H</i>	<i>CM</i>	<i>BM</i>		
DATE	1/24/91	1/24/91	1/29/91	1/29/91	1/31/91		

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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. 152  
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 June 26, 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:

(B) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 152, 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: February 7, 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. 149  
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 June 26, 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. 149, 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: February 7, 1991

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 152 FACILITY OPERATING LICENSE NO. DPR-32

AMENDMENT NO. 149 FACILITY OPERATING LICENSE NO. DPR-37

DOCKET NOS. 50-280 AND 50-281

Revise Appendix A as follows:

Remove Pages

TS ii  
TS 3.8-2  
TS 3.8-4

Insert Pages

TS ii  
TS 3.8-2  
TS 3.8-4

TECHNICAL SPECIFICATION  
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4.13	DELETED	
4.14	DELETED	

6. Positive reactivity changes shall not be made by rod drive motion or boron dilution unless the containment integrity is intact.
7. The containment isolation valves shall be listed in Tables 3.8-1 and 3.8-2.

B. Internal Pressure

1. If the internal air partial pressure rises to a point 0.25 psi above the allowable value of the air partial pressure (TS Fig. 3.8-1), the reactor shall be brought to hot shutdown within 6 hours.
2. If the leakage condition cannot be corrected without violating the containment integrity or if the internal partial pressure continues to rise, the reactor shall be brought to cold shutdown within the next 30 hours.
3. If the internal pressure falls below 8.25 psia the reactor shall be placed in hot shutdown within 6 hours and in cold shutdown within the next 30 hours.
4. If the air partial pressure cannot be maintained greater than or equal to 9.0 psia, the reactor shall be brought to hot shutdown within 6 hours.

Basis

The Reactor Coolant System temperature and pressure being below 350°F and 450 psig, respectively, ensures that no significant amount of flashing steam will be formed and hence that there would be no significant pressure buildup in the containment if there is a loss-of-coolant accident.

If the containment air partial pressure rises to a point 0.25 psi above the allowable value, the reactor shall be brought to the hot shutdown condition. If a LOCA occurs at the time the containment air partial pressure is 0.25 psi above the allowable value, the maximum containment pressure will be less than 45 psig, the containment will depressurize in less than 1 hour, and the maximum subatmospheric peak pressure will be less than 0.0 psig.

If the containment air partial pressure cannot be maintained greater than or equal to 9.0 psia, the reactor shall be brought to the hot shutdown condition. The shell and dome plate liner of the containment are capable of withstanding an internal pressure as low as 3 psia, and the bottom mat liner is capable of withstanding an internal pressure as low as 8 psia.

#### References

FSAR Section 4.3.2	Reactor Coolant Pump
FSAR Section 5.2	Containment Isolation
FSAR Section 5.2.1	Design Bases
FSAR Section 5.5.2	Isolation Design
FSAR Section 6.3.2	Containment Vacuum System



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 152 TO FACILITY OPERATING LICENSE NO. DPR-32  
AND AMENDMENT NO. 149 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

Pursuant to 10 CFR 50.90, Virginia Electric and Power Company (VEPCO, the licensee) proposed to amend Facility Operating Licenses Nos. DPR-32 and DPR-37 for the Surry Power Station, Units 1 and 2. By letter dated June 26, 1990, VEPCO proposed to delete Technical Specification 3.15, "Containment Vacuum System" and its associated bases from the Surry Power Station, Units 1 and 2 Technical Specifications (TS). Currently, TS Section 3.15 requires that one of two mechanical vacuum pumps shall be operable whenever the reactor coolant system temperature/pressure is greater than 350°F or 450 psig, or whenever the reactor is critical. Thus, plant startup or continued power operation is prohibited unless each Surry Unit has at least one operable mechanical vacuum pump.

2.0 DISCUSSION AND EVALUATION

Surry, Units 1 and 2 each have two non-safety mechanical vacuum pumps which are used periodically to maintain the containment pressure between 9 and 10.55 psia (maximum) should the containment pressure rise from minor air leakage sources. In the event that both mechanical vacuum pumps are inoperable, TS Section 3.15 requires that the affected Surry Unit be in a hot shutdown condition within a period of 6 hours. Initially, the containment vacuum system steam air ejector is used to reduce the containment pressure from atmospheric pressure to the normal containment operating subatmospheric pressure and is then isolated from the containment. In this capacity, the containment vacuum system is used to prepare the containment for plant startup and operation, and performs no safety-related function. In the event that both mechanical vacuum pumps are inoperable, there would be no change on the conclusions previously drawn in the Final Safety Analysis Report, since plant shutdown is required by TS Section 3.8 should the containment pressure exceed 10.55 psia. The figure of 10.55 psia is the maximum containment pressure allowed by the TS and is the limiting safety consideration. Thus, the deletion of TS Section 3.15 will not diminish the degree of protection currently being provided to mitigate the consequences of postulated accidents. For clarification, TS Section 3.8 has been revised to specify the time that the reactor shall be brought to hot or cold shutdown should the containment operating conditions exceed the allowable TS requirements.

### 3.0 SUMMARY

The NRC staff has reviewed VEPCO's amendment request to delete the TS requirement to have the containment mechanical vacuum pumps operable prior to plant startup or during normal plant operation and finds it acceptable. Moreover, containment vacuum is still required by TS 3.8 to be maintained consistent with the initial conditions assumed in the accident analyses.

### 4.0 ENVIRONMENTAL CONSIDERATION

These amendments involve a change to a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. We have 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. 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.

### 5.0 CONCLUSION

We have 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, and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of these amendments will not be inimical to the common defense and security or to the health and safety of the public.

Dated: February 7, 1991

Principal Contributor:  
B. Buckley