

August 12, 1991

Docket Nos. 50-280  
and 50-281

DISTRIBUTION  
See attached sheet

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: PRIMARY COOLANT  
IODINE SPIKES (TAC NOS. 68987 AND 68870)

The Commission has issued the enclosed Amendment No. 160 to Facility Operating License No. DPR-32 and Amendment No. 159 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 in response to your application transmitted by letter dated July 1, 1988, as modified by letter dated October 20, 1989.

These amendments delete the requirement to submit a Special Report if the reactor coolant iodine limits are exceeded for 300 hours in a 6-month period. In addition, information regarding fuel burnup by core region has also been deleted. Finally, Technical Specification 6.6.A.2 has been revised to include an annual report in which the specific activity events will be reported. These changes are in accordance with NRC Generic Letter 85-19, "Reporting Requirements on Primary Coolant Iodine Spikes."

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

cc w/enclosures:  
See next page

[AMEND 68987/68870]

SEE PREVIOUS CONCURRENCE

LA: PDI-2  
PDI-2  
7/19/91

PM: PDI-2  
BBuckley:bd  
7/22/91

PRPB\*  
LCunningham  
06/28/91

D: PDI-2  
HBerkow  
7/23/91

OGC  
7/24/91

DFOI 11

9108150145 910812  
PDR ADDCK 05000280  
P PDR

**NRC FILE CENTER COPY**

OGC Concurrence Comment  
on package NOT TO ISSUE  
with expiration of  
5 month notice staff

DATED: August 12, 1991

AMENDMENT NO. 160 TO FACILITY OPERATING LICENSE NO. DPR-32 - SURRY UNIT 1  
AMENDMENT NO. 159 TO FACILITY OPERATING LICENSE NO. DPR-37 - SURRY UNIT 2

Docket File  
NRC & Local PDRs  
PDII-2 Reading  
S. Varga, 14/E/4  
G. Lainas, 14/H/3  
H. Berkow  
D. Miller  
B. Buckley  
OGC-WF  
D. Hagan, 3302 MNBB  
E. Jordan, 3302 MNBB  
B. Grimes, 9/A/2  
G. Hill (8), P-137  
Wanda Jones, P-130A  
C. Grimes, 11/F/23  
ACRS (10)  
GPA/PA  
OC/LFMB  
PD Plant-specific file [Gray File]  
M. Sinkule, R-II  
L. Cunningham (10D3)  
cc: Plant Service list



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555

August 12, 1991

Docket Nos. 50-280  
and 50-281

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Senior Vice President - Nuclear  
Virginia Electric and Power Company  
5000 Dominion Blvd.  
Glen Allen, Virginia 23060

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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,

*Bart C. Buckley*

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

cc w/enclosures:  
See next page

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

Surry Power Station

cc:

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Senior Resident Inspector  
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Mr. J. P. O'Hanlon  
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Mr. Sherlock Holmes, Chairman  
Board of Supervisors of Surry County  
Surry County Courthouse  
Surry, Virginia 23683

Mr. Martin Bowling  
Manager - Nuclear Licensing  
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5000 Dominion Blvd.  
Glen Allen, Virginia 23060

Dr. W. T. Lough  
Virginia State Corporation Commission  
Division of Energy Regulation  
Post Office Box 1197  
Richmond, Virginia 23209

Regional Administrator, Region II  
U.S. Nuclear Regulatory Commission  
101 Marietta Street N.W., Suite 2900  
Atlanta, Georgia 30323

C. M. G. Buttery, M.D., M.P.H.  
State Health Commission  
Office of the Commissioner  
Virginia Department of Health  
P.O. Box 2448  
Richmond, Virginia 23218



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. 160  
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 July 1, 1988, as modified October 20, 1989, 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:

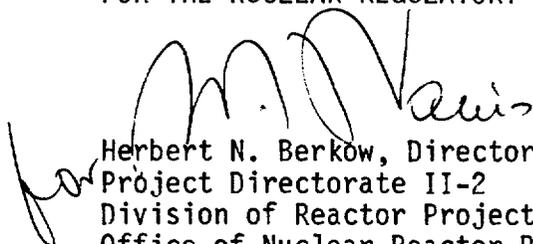
9108150187 910812  
PDR ADOCK 05000280  
P PDR

(B) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 160, 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

A handwritten signature in black ink, appearing to read "H. N. Berkow", is written over the typed name and title.

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 12, 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. 159  
License No. DPR-37

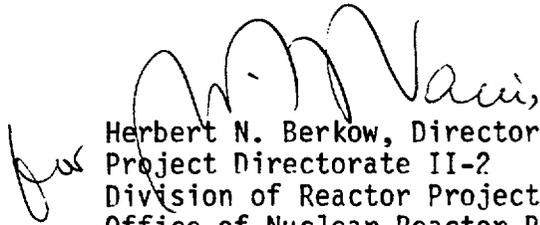
1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Virginia Electric and Power Company (the licensee) dated July 1, 1988, as modified October 20, 1989, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (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. 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

A handwritten signature in black ink, appearing to read "H. N. Berkow", is written over the typed name and title.

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 12, 1991

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 160 FACILITY OPERATING LICENSE NO. DPR-32

AMENDMENT NO. 159 FACILITY OPERATING LICENSE NO. DPR-37

DOCKET NOS. 50-280 AND 50-281

Revise Appendix A as follows:

<u>Remove Pages</u>	<u>Insert Pages</u>
TS 3.1-15a	TS 3.1-15a
TS 3.1-15b	TS 3.1-15b
TS 6.6-2	TS 6.6-2
TS 6.6-3	TS 6.6-3
TS 6.6-4	TS 6.6-4
TS 6.6-5	--

2. The specific activity of the reactor coolant shall be limited to  $\leq 1.0 \mu\text{Ci/cc}$  DOSE EQUIVALENT I-131 whenever the reactor is critical or the average temperature is greater than  $500^\circ\text{F}$ .
3. The requirements of D-2 above may be modified to allow the specific activity of the reactor coolant  $> 1.0 \mu\text{Ci/cc}$  DOSE EQUIVALENT I-131 but less than  $10.0 \mu\text{Ci/cc}$  DOSE EQUIVALENT I-131. Following shutdown, the unit may be restarted and/or operation may continue for up to 48 hours provided that operation under these circumstances shall not exceed 10 percent of the unit's total yearly operating time. With the specific activity of the reactor coolant  $> 1.0 \mu\text{Ci/cc}$  DOSE EQUIVALENT I-131 for more than 48 hours during one continuous time interval or exceeding  $10.0 \mu\text{Ci/cc}$  DOSE EQUIVALENT I-131, the reactor shall be shut down and cooled to  $500^\circ\text{F}$  or less within 6 hours after detection.
4. If the specific activity of the reactor coolant exceeds  $1.0 \mu\text{Ci/cc}$  DOSE EQUIVALENT I-131 or  $100/\bar{E} \mu\text{Ci/cc}$ , a report shall be prepared and submitted to the Commission pursuant to Specification 6.6.A.2. This report shall contain the results of the specific activity analysis together with the following information:
  - a. Reactor power history starting 48 hours prior to the first sample in which the limit was exceeded,
  - b. Clean-up system flow history starting 48 hours prior to the first sample in which the limit was exceeded,

- c. History of degassing operations, if any, starting 48 hours prior to the first sample in which the limit was exceeded,
- d. The time duration when the specific activity of the primary coolant exceeded 1.0  $\mu\text{Ci/cc}$  DOSE EQUIVALENT I-131,
- e. Results of the last isotopic analysis for radioiodine performed prior to exceeding the limit, results of analysis while the limit was exceeded, and results of one analysis after the radioiodine activity was reduced to less than the limit. Each result should include date and time of sampling and the radioiodine concentrations, and
- f. Graph of the I-131 concentration and one other radioiodine isotope concentration in  $\mu\text{Ci/cc}$  as a function of time for the duration of the specific activity above the steady-state level.

resumption or commencement of commercial power operation, or (3) 9 months following initial criticality, whichever is earliest. If the Startup Report does not cover all three events (i.e., initial criticality, completion of startup test program, and resumption or commencement of commercial power operations), supplementary reports shall be submitted at least every 3 months until all three events have been completed.

2. Annual Reports<sup>1</sup>

Reports required on an annual basis shall include:

- a. A tabulation on an annual basis of the number of station, utility and other personnel (including contractors) receiving exposures greater than 100 mrem/yr and their associated man-rem exposure according to work and job functions <sup>2</sup>, e.g., reactor operations and surveillance, inservice inspection, routine maintenance, special maintenance (describe maintenance), waste processing, and refueling. The dose assignment to various duty functions may be estimates based on pocket dosimeter, TLD, or film badge measurements. Small exposures totaling less than 20% of the individual total dose need not be accounted for. In the aggregate, at least 80% of the total whole body dose received from external sources shall be assigned to specific major work functions.

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Note: Footnotes 1 and 2 are located on page TS 6.6-17.

- b. The results of specific activity analysis in which the primary coolant exceeded the limits of Specification 3.1.D.4. In addition, the information itemized in Specification 3.1.D.4 shall be included in this report.

3. Monthly Operating Report

Routine reports of operating statistics and shutdown experience, including documentation of all challenges to the Reactor Coolant System PORV's or safety valves, shall be submitted on a monthly basis to the Director, Office of Management and Program Analysis, U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, with a copy to the Regional Office of Inspection and Enforcement, no later than the 15th of each month following the calendar month covered by the report.

Pages 6.6-4 through 6.6-9 have been deleted.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 160 TO FACILITY OPERATING LICENSE NO. DPR-32  
AND AMENDMENT NO.159 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

The licensee, Virginia Electric and Power Company, in its submittal dated July 1, 1988, as modified October 20, 1989, proposed to amend the Technical Specifications (TS) to Facility Operating License Nos. DPR-32 and DPR-37. The proposed amendments would revise TS Sections 3.1.D.3, 3.1.D.4 and 6.6.A.2. Technical Specification 3.1.D.3 currently requires that a Special Report be submitted if the reactor coolant iodine activity limits are exceeded for 300 hours in a 6-month period. This specification (3.1.D.3) would be eliminated with the appropriate reporting requirement being fulfilled under TS Section 6.6.A.2. Technical Specification Section 6.6.A.2 would be revised to include iodine spiking information in an annual report. Technical Specification Section 3.1.D.4 would also be revised to delete information regarding fuel burnup by core region.

2.0 EVALUATION

Generic Letter 85-19, "Reporting Requirements on Primary Coolant Iodine Spikes," states that licensees may eliminate the requirement in the TS to shut down a plant if the reactor coolant activity limits are exceeded for 800 hours in a 12-month period. This is due to the fact that the quality of nuclear fuel has been greatly improved over the past decade with the result that normal coolant iodine activity (i.e., in the absence of iodine spiking) is well below the limit. No corresponding shutdown requirement exists in the current Surry, Units 1 and 2 TS. However, Surry TS Section 3.1.D.3, which the licensee has proposed to delete, specifies that a Special Report be submitted if the reactor coolant iodine activity limits are exceeded for 300 hours in a 6-month period. Generic Letter 85-19 also states that the reporting requirements for iodine spiking can be reduced from a short-term report, such as a Licensee Event Report or a Special Report, to an item which is included in an annual report. The licensee initially proposed to revise TS Section 6.6.A.3 to include this information in the Monthly Operating Report; however, based on discussions with the staff, the licensee amended its initial application to require such reports on an annual basis. This is in accordance with the staff guidance set forth in Generic Letter 85-19, and is therefore acceptable.

Moreover, the licensee, in accordance with Generic Letter 85-19, proposed to delete information regarding fuel burnup by core region from TS Section 3.1.D.4. As stated in Generic Letter 85-19, 10 CFR 50.72(b)(1)(ii) requires the NRC to be immediately notified of fuel cladding failures that exceed expected values or that are caused by unexpected factors. This TS limit is no longer considered necessary on the basis that proper fuel management by licensees and existing reporting requirements should preclude ever approaching the limit.

Based on our review of the licensee's submittal, we conclude that the proposed amendments conform with the guidelines presented in Generic Letter 85-19 and are acceptable.

### 3.0 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.

### 4.0 ENVIRONMENTAL CONSIDERATION

These amendments relate to changes in reporting requirements. Accordingly, these amendments meet the eligibility criteria for categorical exclusion set forth in 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 these amendments.

### 5.0 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: B. Buckley

Date: August 12, 1991