

MAR 25 1982

Docket Nos. 50-280
50-281

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Posted
Amdt. 77
to DPR-37

Mr. R. H. Leasburg
 Vice President - Nuclear Operations
 Virginia Electric and Power Company
 Post Office Box 26666
 Richmond, Virginia 23261

Dear Mr. Leasburg:

The Commission has issued the enclosed Amendment No. 76 to Facility Operating License No. DPR-32 and Amendment No. 77 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 February 19, 1982.

These amendments revise the Technical Specifications to permit startup following shutdown, with the reactor coolant specific activity greater than 1.0 μ Ci/cc DOSE EQUIVALENT I-131, to accommodate iodine spiking. This provision is similar to that in Standard Technical Specifications.

Copies of the Safety Evaluation and the Notice of Issuance are also enclosed.

Sincerely,
 ORIGINAL SIGNED

Joseph D. Neighbors, Project Manager
 Operating Reactors Branch #1
 Division of Licensing

- Enclosures:
1. Amendment No. 76 to DPR-32
 2. Amendment No. 77 to DPR-37
 3. Safety Evaluation
 4. Notice of Issuance

cc w/encls:
 See next page

No legal objection to issue of notice of amendment. SECY reviews not requested.

ICE	DL:ORB#1	DL:ORB#1	DL:ORB#1	DL:ORB	OELD	ASL
SURNAME	CParrish	JDNeighbors	ms SAVARGA	TMowak	W. Houston	W. Houston
DATE	3/11/82	3/11/82	3/11/82	3/11/82	3/23/82	3/12/82

Mr. R. H. Leasburg
Virginia Electric and Power Company

cc: Mr. Michael W. Maupin
Hunton and Williams
Post Office Box 1535
Richmond, Virginia 23213

Mr. J. L. Wilson, Manager
P. O. Box 315
Surry, Virginia 23883

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College of William and Mary
Williamsburg, Virginia 23185

Donald J. Burke, Resident Inspector
Surry Power Station
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Surry, Virginia 23883

Mr. Sherlock Holmes, Chairman
Board of Supervisors of Surry County
Surry County Courthouse, Virginia 23683

Commonwealth of Virginia
Council on the Environment
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Regional Radiation Representative
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Mr. J. H. Ferguson
Executive Vice President - Power
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James P. O'Reilly
Regional Administrator - Region II
U. S. Nuclear Regulatory Commission
101 Marietta Street, Suite 3100
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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. 76
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 February 19, 1982, 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.

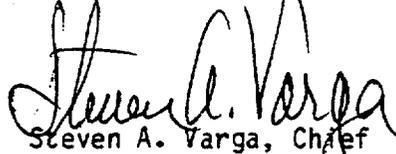
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B of Facility Operating License No. DPR-32 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 76, 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


Steven A. Varga, Chief
Operating Reactors Branch #1
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: March 25, 1982



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. 77
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 February 19, 1982, 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.

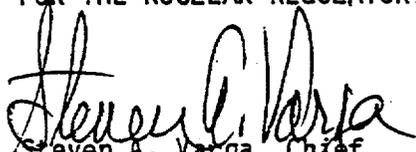
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B of Facility Operating License No. DPR-37 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 77, 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


Steven A. Varga, Chief
Operating Reactors Branch #1
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: March 25, 1982

ATTACHMENT TO LICENSE AMENDMENTS

AMENDMENT NO. 76 TO FACILITY OPERATING LICENSE NO. DPR-32

AMENDMENT NO. 77 TO FACILITY OPERATING LICENSE NO. DPR-37

DOCKET NOS. 50-280 AND 50-281

Revise Appendix A as follows:

Remove Pages

3.1-15a
3.1-17

Insert Pages

3.1-15a
3.1-17

2. The specific activity of the reactor coolant shall be limited to ≤ 1.0 $\mu\text{Ci}/\text{cc}$ DOSE EQUIVALENT-131 whenever the reactor is critical or the average temperature is greater than 500°F .
3. The requirements of D-2 above may be modified to allow the specific activity of the reactor coolant >1.0 $\mu\text{Ci}/\text{cc}$ DOSE EQUIVALENT I-131 but less than 10.0 $\mu\text{Ci}/\text{cc}$ 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 $\mu\text{Ci}/\text{cc}$ DOSE EQUIVALENT I-131 for more than 48 hours during one continuous time interval or exceeding 10.0 $\mu\text{Ci}/\text{cc}$ DOSE EQUIVALENT I-131, the reactor shall be shut down and cooled to 500°F or less within 6 hours after detection. With the total cumulative operating time at a primary coolant specific activity >1.0 $\mu\text{Ci}/\text{cc}$ DOSE EQUIVALENT I-131 exceeding 500 hours in any consecutive 6 month period, prepare and submit a Special Report to the NRC, Regional Administrator, Region II within 30 days indicating the number of hours above this limit.
4. If the specific activity of the reactor coolant exceeds 1.0 $\mu\text{Ci}/\text{cc}$ DOSE EQUIVALENT I-131 or $100/\bar{E}$ $\mu\text{Ci}/\text{cc}$, a report shall be prepared and submitted to the Commission pursuant to Specification 6.6.2.b(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. Fuel burnup by core region,
 - c. Clean-up flow history starting 48 hours prior to the first sample in which the limit was exceeded,
 - d. History of degassing operations, if any, starting 48 hours prior to the first sample in which the limit was exceeded, and
 - e. The time duration when the specific activity of the primary coolant exceeded 1.0 $\mu\text{Ci}/\text{cc}$ DOSE EQUIVALENT I-131.

boundary would be 0.30 Rem whole body and 0.28 Rem thyroid. Thus, these doses are well below the guidelines suggested in 10CFR100.

Permitting startup and/or reactor operation to continue for limited time periods with the reactor coolant's specific activity > 1.0 $\mu\text{Ci/cc}$ but < 10.0 $\mu\text{Ci/cc}$ DOSE EQUIVALENT I-131 accomodates possible iodine spiking phenomenon which may occur following changes in thermal power. Operation within these limits must be restricted to no more than 10 percent of the unit's yearly operating time since the activity levels allowed may slightly increase the 2 hour thyroid dose at the site boundary following a postulated steam generator tube rupture. The basis for the 500°F temperature contained in the Specification is that the saturation pressure corresponding to 500°F , 680.8 psia, is well below the pressure at which the atmospheric relief valves on the secondary side could be actuated. Measurement of \bar{E} will be performed at least twice annually. Calculations required to determine \bar{E} will consist of the following: 1. \bar{E} shall be the average (weighed in proportion to the

concentration of each radionuclide in the reactor coolant at the time of sampling) of the sum of the average beta and gamma energies per disintegration (in MeV) for isotopes, other than iodines, with half lives greater than 15 minutes, making up at least 95% of the total non-iodine activity in the coolant.

2. A determination of the beta and gamma decay energy per disintegration of each nuclide determined in (1) above by applying known decay energies and schemes.
3. A calculation of \bar{E} by appropriate weighing of each nuclide's beta and gamma energy with its concentration as determined in (1) above.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 76 TO FACILITY OPERATING LICENSE NO. DPR-32
AND AMENDMENT NO. 77 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

Introduction

By letter dated February 19, 1982, Virginia Electric and Power Company (the licensee) requested amendments to the Surry Power Station, Unit Nos. 1 and 2 licenses which would change the Technical Specifications to permit startup with a reactor coolant specific activity greater than 1.0 $\mu\text{Ci/cc}$ DOSE EQUIVALENT I-131.

Discussion and Evaluation

The Surry Technical Specifications currently permit continued operation if the specific activity exceeds 1.0 $\mu\text{Ci/cc}$ DOSE EQUIVALENT I-131 but remains less than 10.0 $\mu\text{Ci/cc}$. This action is permitted to accommodate possible iodine spiking phenomenon which may occur following changes in thermal power. Operation with specific activities $>1.0 \mu\text{Ci/cc}$ is not permitted to exceed 10 percent of a unit's total yearly operating time.

This change to the Technical Specifications would permit the Surry units to restart following a shutdown but would not change the total amount of time permitted above 1.0 $\mu\text{Ci/cc}$. This provision is the same as permitted by the NRC-approved Standard Technical Specifications.

We have reviewed this request and conclude that it is acceptable since the total time above 1.0 $\mu\text{Ci/cc}$ is not changed and startup in this sense is a continuation of power following a change in thermal power.

A provision in the Standard Technical Specifications is that a report must be made of the cumulative operating time over 500 hours in any 6 month consecutive period with $>1.0 \mu\text{Ci/cc}$ DOSE EQUIVALENT I-131. We feel that this provision should be in the Surry Technical Specifications and have the licensee's consent to add it.

Environmental Consideration

We have determined that the amendments do not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendments involve an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR §51.5(d)(4), that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of these amendments.

Conclusion

We have concluded, based on the considerations discussed above, that: (1) because the amendments do not involve a significant increase in the probability or consequences of accidents previously considered and do not involve a significant decrease in a safety margin, the amendments do not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) 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.

Date: March 25, 1982

UNITED STATES NUCLEAR REGULATORY COMMISSIONDOCKET NOS. 50-280 AND 50-281VIRGINIA ELECTRIC AND POWER COMPANYNOTICE OF ISSUANCE OF AMENDMENTS TO FACILITY
OPERATING LICENSES

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 76 to Facility Operating License No. DPR-32 and Amendment No. 77 to Facility Operating License No. DPR-37 issued to Virginia Electric and Power Company (the licensee), which revised Technical Specifications for operation of the Surry Power Station, Unit Nos. 1 and 2, respectively, (the facilities), located in Surry County, Virginia. The amendments are effective as of the date of issuance.

The amendments revise the Technical Specifications to permit startup following shutdown, with the reactor coolant's specific activity greater than 1.0 $\mu\text{Ci/cc}$ DOSE EQUIVALENT I-131, to accommodate iodine spiking. This provision is similar to that in Standard Technical Specifications.

The application for the amendments complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendments. Prior public notice of these amendments was not required since these amendments do not involve a significant hazards consideration.

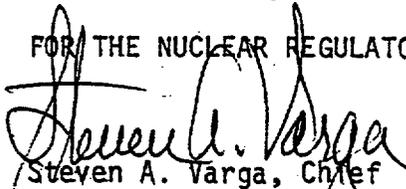
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The Commission has determined that the issuance of these amendments will not result in any significant environmental impact and that pursuant to 10 CFR §51.5(d)(4) an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with issuance of these amendments.

For further details with respect to this action, see (1) the application for amendments dated February 19, 1982, (2) Amendment Nos. 76 and 77 to License Nos. DPR-32 and DPR-37, and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N.W., Washington, D. C. and at the Swem Library, College of William and Mary, Williamsburg, Virginia 23185. A copy of items (2) and (3) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Licensing.

Dated at Bethesda, Maryland, this 25th day of March, 1982.

FOR THE NUCLEAR REGULATORY COMMISSION


Steven A. Varga, Chief
Operating Reactors Branch #1
Division of Licensing