

July 1, 1993

Docket Nos. 50-280
and 50-281

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
DESIGN PRESSURE (TAC NOS. M79634 AND M79635)

The Commission has issued the enclosed Amendment No. 179 to Facility Operating License No. DPR-32 and Amendment No. 179 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 14, 1990.

These amendments change the requested leak rate test pressure from 39.2 psig to 45 psig. Your requested change to reduce the leak test pressure for the emergency escape airlock seal from 45 psig to 10 psig has been denied. In addition, your request to correct a typographical error for the maximum service water temperature was previously granted in Amendment Nos. 153 and 150 dated April 11, 1991.

A copy of the Safety Evaluation, the Notice of Partial Denial, and the Notice of Issuance are also enclosed.

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. 179 to DPR-32
- 2. Amendment No. 179 to DPR-37
- 3. Safety Evaluation
- 4. Notice of Partial Denial
- 5. Notice of Issuance

cc w/enclosures:

See next page *Previously Concurred

OFC	:LA:PDII-2	:PM:PDII-2	:SCSB*	: D:PDII-2	: OGC	:
NAME	:E. Tana	:B. Buckley	:RBarrett	:H. Berkow	: R. Bachmann	:
DATE	: 2/22/93	: 2/27/93	:02/17/93	: 2/25/93	: 3/8/93	:

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FILENAME: SR79634.AMD

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

Surry Power Station

cc:
Michael W. Maupin, Esq.
Hunton and Williams
Riverfront Plaza, East Tower
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Richmond, Virginia 23219

Attorney General
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Richmond, Virginia 23219

Mr. Michael R. Kansler, Manager
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Post Office Box 315
Surry, Virginia 23883

Mr. M. L. Bowling, Manager
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Innsbrook Technical Center
Virginia Electric and Power Company
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Glen Allen, Virginia 23060

Senior Resident Inspector
Surry Power Station
U.S. Nuclear Regulatory Commission
Post Office Box 166, Route 1
Surry, Virginia 23883

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

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

Robert B. Strobe, M.D., M.P.H.
State Health Commissioner
Office of the Commissioner
Virginia Department of Health
P.O. Box 2448
Richmond, Virginia 23218

DATED: July 1, 1993

AMENDMENT NO. 179 TO FACILITY OPERATING LICENSE NO. DPR-32 - SURRY UNIT 1
AMENDMENT NO. 179 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

E. Tana

B. Buckley

A. Drozd, 8/D/1

R. Barrett, 8/H/7

OGC

D. Hagan, 3302 MNBB

G. Hill (8), P-137

Wanda Jones, MNBB-7103

C. Grimes, 11/F/23

ACRS (10)

OPA

OC/LFMB

M. Sinkule, R-II



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. 179
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 14, 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.

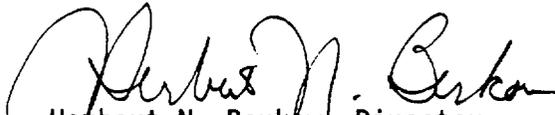
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B of Facility Operating License No. DPR-32 is hereby amended to read as follows:

(B) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 179, 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 its date of issuance and shall be implemented within 30 days.

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: July 1, 1993



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. 179
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 14, 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.

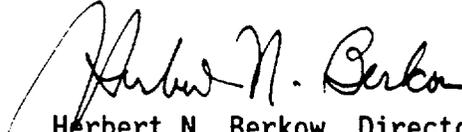
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B of Facility Operating License No. DPR-37 is hereby amended to read as follows:

(B) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 179, 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 its date of issuance and shall be implemented within 30 days.

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: July 1, 1993

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 179 TO FACILITY OPERATING LICENSE NO. DPR-32

AMENDMENT NO. 179 TO FACILITY OPERATING LICENSE NO. DPR-37

DOCKET NOS. 50-280 AND 50-281

Revise Appendix A as follows:

Remove Pages

TS 4.4-2

TS 4.4-3

Insert Pages

TS 4.4-2

TS 4.4-3

- b. The leakage rate test will be performed at a pressure of at least 45.0 psig.
 - c. The measured leakage rate L_{am} shall not exceed 75% of the design basis accident leakage rate (L_a) 0.1 weight percent per 24 hours at pressure P_a .
2. Type B and C tests will be performed at a pressure of at least 45.0 psig in accordance with the provisions of Appendix J, Section III.B and C. Within 72 hours after use of the personnel airlock, the seals will be tested to at least 45 psig to verify that they are properly sealed.

C. Acceptance Criteria

Type A, B, and C tests will be considered to be satisfactory if the acceptance criteria delineated in Appendix J, Sections III.A.5(b), III.B.3, and III.C.3 are met.

D. Retest Schedule

The retest schedules for Type A, B, and C tests will be in accordance with Section III.D of Appendix J.

E. Inspection and Reporting of Tests

Inspection and reporting of tests will be in accordance with Section V of Appendix J.

F. The provisions of Specification 4.0.2 are not applicable.

Basis

The leak tightness testing of all liner welds was performed during construction by welding a structural steel test channel over each weld seam and performing soap bubble and halogen leak tests.

The containment is designed for a maximum pressure of 45 psig. The containment is maintained at a subatmospheric air partial pressure which varies between 9 psia and 11 psia depending upon the cooldown capability of the Engineered Safeguards and will not rise above 45 psig for any postulated loss-of-coolant accident.

The initial test pressure for the Type A test is 47.0 psig to allow for containment expansion and equalization. A review was performed to determine the effects of pressurizing containment above its design pressure of 45.0 psig. This review was based on the original containment test at 52 psig. During that test, the calculated stresses were found to be well within the allowable yield strength of the structural reinforcing bars, therefore performance of the Type A test at 47 psig will have no detrimental effect on the containment structure.

All loss-of-coolant accident evaluations have been based on an integrated containment leakage rate not to exceed 0.1% of containment volume per 24 hr.

The above specification satisfies the conditions of 10 CFR 50.54(o) which stated that primary reactor containments shall meet the containment leakage test requirements set forth in Appendix J.

The limitations on closure and leak rate for the containment airlocks are required to meet the restrictions on containment integrity and containment leak rate. Surveillance testing of the airlock seals provides assurance that the overall airlock leakage will not become excessive due to seal damage during the intervals between airlock leakage tests.

References

FSAR Section 5.4	Design Evaluation of Containment Tests and Inspections of Containment
FSAR Section 7.5.1	Design Bases of Engineered Safeguards Instrumentation
FSAR Section 14.5	Loss of Coolant Accident
10 CFR 50 Appendix J	"Primary Reactor Containment Leakage Testing for Water Cooled Power Reactors"



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 179 TO FACILITY OPERATING LICENSE NO. DPR-32
AND AMENDMENT NO. 179 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 14, 1990, Virginia Electric and Power Company (licensee) requested amendments, in the form of changes to the Technical Specifications, to Operating License Nos. DPR-32 and DPR-37 for the Surry Power Station, Units 1 and 2, respectively. The proposed changes would:

1. change the required leak rate test pressure from 39.2 psig to 45.0 psig,
2. reduce the leak test pressure for the emergency escape airlock seal from 45 psig to 10 psig, and
3. correct a typographical error for maximum service water temperature.

2.0 EVALUATION

2.1 Proposed Change 1

The request to change the leak rate testing pressure was made as a result of a reanalysis of the containment peak pressure, as indicated in the licensee's submittal. The new calculated peak pressure is 44.98 psig, as opposed to the previously calculated value of 39.2 psig. The design pressure is 45 psig.

The significant change of the calculated peak pressure is a result of the changes in the analytical methodology as well as changes to the containment systems. A brief history of the changes is as follows:

09/70:	Calculated P_{max}	39.2 psig	Hot Leg LOCA
12/78:	Calculated P_{max}	42.2 psig	Change to Cold Leg LOCA
06/80:	Calculated P_{max}	44.71 psig	Result of an additional sensitivity study
06/89:	Calculated P_{max}	44.98 psig	Result of the use of the measured containment spray pump flow rate instead of design flow

To perform the test at 45 psig, the containment is initially pressurized to 47 psig to allow for containment expansion and pressure equalization. The licensee estimates that the performance of the Type A test at 47 psig will have no detrimental effect on the containment structure since the calculated stresses were found to be well within the allowable yield strengths of the structural reinforcing bars.

2.2 Proposed Change 2

The request to approve the reduced leak test pressure for the airlock seal is not justified because the licensee has not adequately demonstrated that the 10 psig pressure test provides the required assurance that the emergency escape airlock seal will function as required to minimize outleakage during and following a LOCA. The NRC staff will review this issue further if the licensee elects to provide necessary additional supportive information.

2.3 Proposed Change 3

The request would correct a typographical error for the maximum service water temperature. This request was previously granted in Amendment Nos. 153 and 150 for Units 1 and 2, respectively, dated April 11, 1991, and therefore is not addressed here.

3.0 SUMMARY

The staff has reviewed the licensee's request and concluded that:

1. The licensee has performed a number of the containment peak pressure calculations which changed the maximum calculated peak pressure from 39.2 psig to 44.98 psig. In all of the analyses, the analytical tool used was the same as the one used as the basis for the issuance of the original plant license (i.e. Stone & Webster proprietary computer code LOCTIC). The resultant calculated peak pressure is bounded by containment design pressure (45 psig). Therefore, the staff finds the proposed change acceptable.
2. The staff is rejecting the Proposed Change 2 for the reasons discussed in Section 2.2 above.
3. The request to correct a typographical error was granted in Amendment Nos. 153 and 150 for Units 1 and 2, respectively, dated April 11, 1991.

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

Pursuant to 10 CFR 51.21, 51.32 and 51.35, an environmental assessment and finding of no significant impact was prepared and published in the Federal Register (58 FR 6424). Accordingly, based upon the environmental assessment, the NRC staff has determined that the issuance of these amendments will not have a significant effect on the quality of the human environment.

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 Contributors: A. Drozd
B. Buckley

Date: July 1, 1993

UNITED STATES NUCLEAR REGULATORY COMMISSIONGEORGIA POWER COMPANYDOCKET NOS. 50-321 AND 50-366NOTICE OF PARTIAL DENIAL OF AMENDMENT TO FACILITY OPERATING LICENSE
AND OPPORTUNITY FOR HEARING

The U.S. Nuclear Regulatory Commission (the Commission) has denied a request by Virginia Electric and Power Company, (the licensee) for amendments to Facility Operating License Nos. DPR-32 and DPR-37 issued to the licensee for operation of the Surry Power Station, Units 1 and 2. Notice of Consideration of the amendments was published in the FEDERAL REGISTER on February 12, 1991.

The licensee's application of November 14, 1990, proposed three changes to the Technical Specifications (TS) relating to containment leak rate testing. One of these changes was previously granted. The second is authorized by the current amendments. The third requested a reduction in the emergency escape airlock seal from 45 psig to 10 psig. This specific change to reduce the leak test pressure for the airlock seal is not justified because the licensee has not adequately demonstrated the 10 psig pressure test provides the required assurance that the emergency airlock seal will function as required to minimize outleakage during and following a loss-of-coolant accident. The requested change is therefore denied. The licensee was notified of the Commission's denial by letter dated July 1, 1993.

By August 11, 1993, the licensee may demand a hearing with respect to the denial described above. Any person whose interest may be affected by this proceeding may file a written petition for leave to intervene.

A request for hearing or petition for leave to intervene must be filed with the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC., 20555, Attention: Docketing and Services Branch, or may be delivered to the Commission's Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC, by the above date.

A copy of any petitions should also be sent to the Office of the General Counsel, U.S. Nuclear Regulatory Commission, Washington, DC, 20555, and to Michael W. Maupin, Esq., Hunton and Williams, Riverfront Plaza East Tower, 915E. Byrd Street, Richmond, Virginia 23219, attorney for the licensee.

For further details with respect to this action, see (1) the application for amendment dated November 14, 1990, and (2) the Commission's letter to the licensee dated July 1, 1993.

These documents are available for public inspection at the Commission's Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC 20555, and at the local public document room located at the Swem Library, College of William and Mary, Williamsburg, Virginia 23185. A copy of item (2) may be obtained upon request addressed to the U.S. Nuclear Regulatory

Commission, Washington, D.C. 20555, Attention: Document Control Desk.

Dated at Rockville, Maryland, this 1st day of July 1993.

FOR THE NUCLEAR REGULATORY COMMISSION

A handwritten signature in black ink, appearing to read "Herbert N. Berkow". The signature is written in a cursive style with a large initial "H".

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

UNITED STATES NUCLEAR REGULATORY COMMISSIONVIRGINIA ELECTRIC AND POWER COMPANYDOCKET NOS. 50-280 AND 50-281NOTICE OF ISSUANCE OF AMENDMENTS TOFACILITY OPERATING LICENSES

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 179 to Facility Operating License No. DRP-32 and Amendment No. 179 to Facility Operating License No. DPR-37, issued to the Virginia Electric and Power Company (the licensee), which revised the Technical Specifications for operation of the Surry Power Station, Units 1 and 2, located in Surry County, Virginia. The amendments were effective as of the date of their issuance.

The amendments revised the Technical Specifications to increase the containment leak test pressure from 39.2 psig to 45.0 psig.

The application for 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 of the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendments.

Notice of Consideration of Issuance of Amendments and Opportunity for Hearing in connection with this action was published in the FEDERAL REGISTER on February 12, 1991 (56 FR 5712).

Also in connection with the action, the Commission prepared an Environmental Assessment and Finding of No Significant Impact, which was published in the FEDERAL REGISTER on January 28, 1993 (58 FR 6424).

For further details with respect to the action, see (1) the application for amendments dated November 14, 1990, (2) Amendment No. 179 to License No. DPR-32, and Amendment No. 179 to License No. 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, the Gelman Building, 2120 L Street NW., Washington, DC, and at the Swem Library, College of William and Mary, Williamsburg, Virginia 23185.

Dated at Rockville, Maryland this 1st day of July , 1993.

FOR THE NUCLEAR REGULATORY COMMISSION

Bart C. Buckley

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