

May 23, 1988

Docket Nos. 50-338  
and 50-339

Mr. D. S. Cruden  
Vice President - Nuclear  
Virginia Electric and Power Company  
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Dear Mr. Cruden:

SUBJECT: NORTH ANNA UNITS 1 AND 2 - ISSUANCE OF AMENDMENTS RE: REFUELING  
OPERATIONS IN MODE 6 ((TAC NOS. 66151 AND 66152)

The Commission has issued the enclosed Amendment Nos. 102 and 89 to Facility Operating License Nos. NPF-4 and NPF-7 for the North Anna Power Station, Units No. 1 and No. 2 (NA-1&2). The amendments revise the Technical Specifications (TS) in response to your letter dated April 1, 1987.

The amendments modify the NA-1&2 TS 3/4.9.10 to conform to the Standard Technical Specifications for Westinghouse Pressurized Water Reactors, NUREG-0452, Revision 3. The change will enhance operating flexibility and the time required for refueling operations while in Mode 6. In addition, the change will prevent contamination of the upper internals lifting rig during the removal of the reactor vessel upper internals during refueling operations.

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

Leon B. Engle, Project Manager  
Project Directorate 11-2  
Division of Reactor Projects-I/II  
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 102 to NPF-4
2. Amendment No. 89 to NPF-7
3. Safety Evaluation

cc w/enclosures:

See next page

\*See previous concurrences

LA:PDII-2*	PM:PDII-2*
DMiller	LEngle:bd
05/11/88	05/11/88

D:PDII-2*
HBerkow
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APH
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Mr. D. S. Cruden  
Virginia Electric & Power Company

North Anna Power Station  
Units 1 and 2

cc:

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

VIRGINIA ELECTRIC AND POWER COMPANY

OLD DOMINION ELECTRIC COOPERATIVE

DOCKET NO. 50-338

NORTH ANNA POWER STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 102  
License No. NPF-4

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Virginia Electric and Power Company et al., (the licensee) dated April 1, 1987, 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.

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2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.D.(2) of Facility Operating License No. NPF-4 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. , 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 issuance and shall be implemented within 14 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: May 23, 1988

ATTACHMENT TO LICENSE AMENDMENT NO. 102

TO FACILITY OPERATING LICENSE NO. NPF-4

DOCKET NO. 50-338

Replace the following page of the Appendix "A" Technical Specifications with the enclosed page as indicated. The revised page is identified by amendment number and contains vertical lines indicating the area of change. The corresponding overleaf page is also provided to maintain document completeness.

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## REFUELING OPERATIONS

### CONTAINMENT PURGE AND EXHAUST ISOLATION SYSTEM

#### LIMITING CONDITION FOR OPERATION

---

3.9.9 The Containment Purge and Exhaust isolation system shall be OPERABLE.

APPLICABILITY: MODE 6.

#### ACTION:

With the Containment Purge and Exhaust isolation system inoperable, close each of the Purge and Exhaust penetrations providing direct access from the containment atmosphere to the outside atmosphere. The provision of Specification 3.0.3 are not applicable.

#### SURVEILLANCE REQUIREMENTS

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4.9.9 The Containment Purge and Exhaust isolation system shall be demonstrated OPERABLE within 100 hours prior to the start of and at least once per 7 days during CORE ALTERATIONS by verifying that containment Purge and Exhaust isolation occurs on manual initiation and on a high radiation test signal from the containment gaseous and particulate radiation monitoring instrumentation channels.

REFUELING OPERATIONS

WATER LEVEL - REACTOR VESSEL

LIMITING CONDITION FOR OPERATION

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3.9.10 At least 23 feet of water shall be maintained over the top of the reactor pressure vessel flange.

APPLICABILITY: During movement of fuel assemblies or control rods within the reactor pressure vessel while in MODE 6.

ACTION:

With the requirements of the above specification not satisfied, suspend all operations involving movement of fuel assemblies or control rods within the pressure vessel. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

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4.9.10 The water level shall be determined to be at least its minimum required depth within 2 hours prior to the start of and at least once per 24 hours thereafter during movement of fuel assemblies or control rods.



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

VIRGINIA ELECTRIC AND POWER COMPANY

OLD DOMINION ELECTRIC COOPERATIVE

DOCKET NO. 50-339

NORTH ANNA POWER STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 89  
License No. NPF-7

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Virginia Electric and Power Company, et al., (the licensee) dated April 1, 1987, 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 2.C.(2) of Facility Operating License No. NPF-7 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. , 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 issuance and shall be implemented within 14 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: May 23, 1988

ATTACHMENT TO LICENSE AMENDMENT NO. 89

TO FACILITY OPERATING LICENSE NO. NPF-7

DOCKET NO. 50-339

Replace the following page of the Appendix "A" Technical Specifications with the enclosed page as indicated. The revised page is identified by amendment number and contains vertical lines indicating the area of change. The corresponding overleaf page is also provided to maintain document completeness.

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## REFUELING OPERATIONS

### WATER LEVEL - REACTOR VESSEL

#### LIMITING CONDITION FOR OPERATION

---

3.9.10 At least 23 feet of water shall be maintained over the top of the reactor pressure vessel flange.

APPLICABILITY: During movement of fuel assemblies or control rods within the reactor pressure vessel while in MODE 6.

#### ACTION:

With the requirements of the above specification not satisfied, suspend all operations involving movement of fuel assemblies or control rods within the pressure vessel. The provisions of Specification 3.0.3 are not applicable.

#### SURVEILLANCE REQUIREMENTS

---

4.9.10 The water level shall be determined to be at least its minimum required depth within 2 hours prior to the start of and at least once per 24 hours thereafter during movement of fuel assemblies or control rods.

## REFUELING OPERATIONS

### SPENT FUEL PIT WATER LEVEL

#### LIMITING CONDITION FOR OPERATION

---

3.9.11 At least 23 feet of water shall be maintained over the top of irradiated fuel assemblies seated in the storage racks.

APPLICABILITY: Whenever irradiated fuel assemblies are in the spent fuel pit.

#### ACTION:

With the requirements of the specification not satisfied, suspend all movement of fuel assemblies and crane operations with loads in the spent fuel pit areas and place the load in a safe condition. Restore water level to within its limit within 4 hours. The provisions of Specification 3.0.3 are not applicable.

#### SURVEILLANCE REQUIREMENTS

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4.9.11 The water level in the spent fuel pit shall be determined to be at least at the minimum required depth at least once per 7 days when irradiated fuel assemblies are in the spent fuel pit.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NOS. 102 AND 89 TO  
FACILITY OPERATING LICENSE NOS. NPF-4 AND NPF-7  
VIRGINIA ELECTRIC AND POWER COMPANY  
OLD DOMINION ELECTRIC COOPERATIVE  
NORTH ANNA POWER STATION, UNITS NO. 1 AND NO. 2  
DOCKET NOS. 50-338 AND 50-339

INTRODUCTION

By letter dated April 1, 1987, the Virginia Electric and Power Company (the licensee) requested amendments to the North Anna Power Station, Units No. 1 and No. 2 (NA-1&2) Technical Specifications (TS). The proposed amendments are in conformance with NUREG-0452, Revision 3, "Standard Technical Specifications for Westinghouse Pressurized Water Reactors," and the NRC letter dated August 15, 1980 which was issued to all Westinghouse Pressurized Water Reactor licensees.

DISCUSSION

The current NA-1&2 TS 3/4.9.10 requires at least 23 feet of water be maintained over the top of the reactor pressure vessel flange during core alterations while in Mode 6. The basis for TS 3/4.9.10 is to ensure that sufficient water depth is available to prevent inadvertent exposure of a fuel assembly during transfer from the vessel seated position to the fuel transfer system and to remove iodine fission products held within the fuel-clad gap released from a fuel assembly if an accidental fuel assembly rupture occurred.

The proposed change would allow the reactor vessel water level to be lowered to the level of the upper internals in order to install the upper internals lifting rig. As the upper internals are lifted, the reactor vessel water level will be increased. Removing the upper internals in this manner prevents contamination of the upper internals lifting rig.

The present NA-1&2 TS 3/4.9.10 is unclear with respect to allowing the reactor vessel water level to be lowered to the level of the upper internals in order to install the upper internals lifting rig while in Mode 6. As presently specified, the NA-1&2 3/4.9.10 states that at least 23 feet of water shall be maintained over the top of the reactor vessel flange during core alterations while in Mode 6. Therefore, the proposed change would require at least 23 feet of water be maintained over the top of the reactor vessel flange during the movement of fuel assemblies or control rods within the reactor pressure vessel while in Mode 6.

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### EVALUATION

The proposed change to the NA-1&2 3/4.9.10 would remove the ambiguity as noted above and enhance refueling operations while in Mode 6. In addition, the proposed change is in conformance with NUREG-0452, Revision 3, Westinghouse Standard TS for Westinghouse Pressurized Water Reactors and the clarification provided by NRC letter dated August 15, 1980. Therefore, based on all of the above, the staff finds the proposed change to be acceptable.

### ENVIRONMENTAL CONSIDERATION

These amendments involve a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The 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 published a proposed finding that the amendments involve no significant hazards consideration and there has been no public comment on such finding. Accordingly, the 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 the amendments.

### 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 the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Date: May 23, 1988

### Principal Contributors:

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