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Docket No. 50-338

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DCS MS-016

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. 34 to Facility Operating License No. NPF-4 for the North Anna Power Station, Unit No. 1 (NA-1). The license amendment is effective 7 days from the date of issuance.

The amendment consists of changes to the NA-1 Technical Specifications (TS) in response to your application transmitted by letter dated April 16, 1980 (Serial No. 344) and in our discussions with you regarding these matters.

These changes specify that the pressurizer power operated relief valves be tested in accordance with the requirements of ASME XI for Category B valves as specified in the NA-1 TS 4.0.5.

We have determined that your request for relief in accordance with 10 CFR 50.55a.(g)(6)(i) from the test frequency interval for pressurized PORVs as specified in ASME XI for Category B valves is not applicable and that the necessary relief is already specified by ASME XI, IHW-3400. Our basis for these actions is so stated in the enclosed Safety Evaluation.

Finally, corrected TS changes are included which were in error in our issuance of Amendments No. 33 and No. 13 for Facility Operating License No. NPF-4 and NPF-7, respectively, issued November 5, 1981. We have already discussed these errors with you so that the proper controls regarding these matters would be in effect until the corrected NA-1 & 2 TS pages were provided to you.

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

Sincerely,

Original signed by:

Leon B. Engle, Project Manager  
Operating Reactors Branch #3  
Division of Licensing

ORB#3:DL  
PKreutzer  
11/27/81

ORB#3  
LEngle/cb  
11/30/81

MEB:DE  
ACappucci  
11/30/81

OFFICE	Enclosures	& cc: See next page	ORB#1:DL	C-ORB#3:DL	AD-OR:DL	OELD
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			11/30/81	11/30/81	11/30/81	12/6/81

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USGPO: 1981-335-960

Mr. R. H. Leasburg

-2-

Enclosures:

1. Amendment No. 34 to NPF-4
2. Safety Evaluation
3. Notice of Issuance
4. Corrected NA-1 & 2 TS Pages 3/4 7-66 and  
3/4 7-49

cc w/enclosures:  
See next page

OFFICE ▶	.....	.....	.....	.....	.....	.....	.....
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Virginia Electric and Power Company

cc:

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Atomic Safety and Licensing  
Appeal Board Panel  
U.S. Nuclear Regulatory Commission  
Washington, D. C. 20555



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

VIRGINIA ELECTRIC AND POWER COMPANY

DOCKET NO. 50-338

NORTH ANNA POWER STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No.34  
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 (the licensee) dated April 16, 1980 (Serial No. 344) 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.

\*Although the application complies with applicable requirements, a portion of the application requested unnecessary relief from a requirement which is, in fact, not applicable to the facility.


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. 34, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective 7 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

  
Robert A. Clark, Chief  
Operating Reactors Branch #3  
Division of Licensing

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: December 9, 1981

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 34 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.

Page

3/4 4-32

## REACTOR COOLANT SYSTEM

### SURVEILLANCE REQUIREMENTS

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4.4.9.3.1 Each PORV shall be demonstrated OPERABLE by:

- a. Performance of a CHANNEL FUNCTIONAL TEST on the PORV actuation channel, but excluding valve operation, within 31 days prior to entering a condition in which the PORV is required OPERABLE and at least once per 31 days thereafter when the PORV is required OPERABLE.
- b. Performance of a CHANNEL CALIBRATION on the PORV actuation channel, at least once per 18 months.
- c. Verifying the PORV keyswitch is in the Auto position and the PORV isolation valve is open at least once per 72 hours when the PORV is being used for overpressure protection.
- d. Testing pursuant to Specification 4.0.5.

4.4.9.3.2 The RCS vent(s) shall be verified to be open at least once per 12 hours\* when the vent(s) is being used for overpressure protection.

\*Except when the vent pathway is provided with a valve which is locked, sealed, or otherwise secured in the open position, then verify these valves open at least once per 31 days.

## REACTOR COOLANT SYSTEM

### OVERPRESSURE PROTECTION SYSTEMS

#### LIMITING CONDITION FOR OPERATION

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3.4.9.3 At least one of the following overpressure protection systems shall be OPERABLE:

- a. Two power operated relief valves (PORVs) with a lift setting of: 1) less than or equal to 505 psig whenever any RCS cold leg temperature is less than or equal to 320°F, and 2) less than or equal to 430 psig whenever any RCS cold leg temperature is less than 140°F, or
- b. A reactor coolant system vent of greater than or equal to 2.07 square inches.

APPLICABILITY: When the temperature of one or more of the RCS cold legs is less than or equal to 320°F, except when the reactor vessel head is removed.

#### ACTION:

- a. With one PORV inoperable, either restore the inoperable PORV to OPERABLE status within 7 days or depressurize and vent the RCS through 2.07 square inch vent(s) within the next 8 hours; maintain the RCS in a vented condition until both PORVs have been restored to OPERABLE status.
- b. With both PORVs inoperable, depressurize and vent the RCS through a 2.07 square inch vent(s) within 8 hours; maintain the RCS in a vented condition until both PORVs have been restored to OPERABLE status.
- c. In the event either the PORVs or the RCS vent(s) are used to mitigate a RCS pressure transient, a Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.9.2 within 30 days. The report shall describe the circumstances initiating the transient, the effect of the PORVs or vent(s) on the transient and any corrective action necessary to prevent recurrence.
- d. The provisions of Specification 3.0.4 are not applicable.



TABLES 3.7-4a AND 3.7-4b (Continued)

TABLE NOTATIONS

#LOCATION ABBREVIATIONS

Abbreviations

Area

A	Cubicle A
B	Cubicle B
C	Cubicle C
Pent.	Penetration Area Aux. Bldg.
P	Pressurizer Cubicle
RCA	Reactor Containment Annulus
MSVH	Main Steam Valve House
MSH	Main Steam Header - Turb. Bldg.
TBM	Turbine Bldg. Mezzanine
TBB	Turbine Bldg. Basement
SB	Service Bldg.
SG	Safeguards Bldg.
FWH	Feedwater Header - Turb. Bldg.
ABB	Auxiliary Bldg. Basement
FBB	Fuel Bldg. Basement
AFW	Auxiliary Feedwater Pump House

NOTE: Numbers indicate radial locations in reactor containment.

\* Snubbers may be added to safety related systems without prior License Amendment to Tables 3.7-4a and 3.7-4b provided that a revision to Tables 3.7-4a and 3.7-4b is included with the next License Amendment request.

\*\* Modifications to this table due to changes in high radiation areas may be made without prior License Amendment provided that a revision to Tables 3.7-4a and 3.7-4b is included with the next License Amendment request.

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TABLES 3.7-4a AND 3.7-4b (Continued)

TABLE NOTATIONS

#LOCATION ABBREVIATIONS

Abbreviations

Area

A	Cubicle A
B	Cubicle B
C	Cubicle C
Pent.	Penetration Area Aux. Bldg.
P	Pressurizer Cubicle
RCA	Reactor Containment Annulus
RCB	Reactor Containment Basement
RCP	Reactor Containment Penetration Area
MSVH	Main Steam Valve House
AFPH	Aux. Feedwater Pump House
MSH	Main Steam Header - Turb. Bldg.
TBM	Turbine Bldg. Mezzanine
TBB	Turbine Bldg. Basement
SB	Service Bldg.
SG	Safeguards Bldg.
QS	Quench Spray Area
FWH	Feedwater Header - Turb. Bldg.
ABB	Auxiliary Bldg. Basement
FBB	Fuel Bldg. Basement
RHR	Residual Heat Removal Mezzanine

NOTE: Numbers indicate radial location in reactor containment.

\*Snubbers may be added to safety related systems without prior License Amendment to Tables 3.7-4a and 3.7-4b provided that a revision to Tables 3.7-4a and 3.7-4b is included with the next License Amendment request.

\*\*Modifications to this table due to changes in high radiation areas may be made without prior License Amendment provided that a revision to Tables 3.7-4a and 3.7-4b is included with the next License Amendment request.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 34 TO

FACILITY OPERATING LICENSE NO. NPF-4

VIRGINIA ELECTRIC AND POWER COMPANY

NORTH ANNA POWER STATION, UNIT NO. 1

DOCKET NO. 50-338

Introduction:

By letter dated April 16, 1980 (Serial No. 344), the Virginia Electric and Power Company (the licensee) requested an amendment to the North Anna Power Station, Unit No. 1 (NA-1) Technical Specifications (TS). The licensee's proposed change would revise the NA-1 TS which presently requires that the testing of pressurizer Power Operated Relief Valves (PORVs) meets the inservice test requirements of the American Society of Mechanical Engineers (ASME) Category C valves. The licensee has proposed a test program for the NA-1 pressurizer PORVs which meets the requirements of ASME XI for Category B valves with the exception of the test frequency. Therefore, the licensee has requested relief from the test frequency interval as specified in 10 CFR 50.55a.(g)(6)(i).

Discussion:

The presently specified NA-1 TS 4.4.9.3.1.d requires that the pressurizer PORVs be tested pursuant to the inservice test requirements for ASME Category C valves pursuant to TS 4.0.5. ASME Category C valve testing is designed for valves which are self activating and, therefore, does not apply to PORVs. The licensee has proposed that the pressurizer PORVs be tested in accordance with the requirements of ASME XI for Category B valves as specified in the NA-1 TS 4.0.5. ASME XI requires that Category B valves be tested once every three months. The licensee has requested relief from the three month test interval because the cubicle in which the PORVs are located is not accessible during normal plant operations due to radiation levels that prohibit direct measurement of valve stroke times.

Evaluation:

The NRC has adopted the position that the pressurizer PORVs should be included in the inservice test program as Category B valves and tested to the requirements of Section XI. Also, PORVs have been shown to have a high probability of sticking open when once activated which can contribute significantly to the probability of a small break Loss-of-Coolant Accident (LOCA). In addition, pressurizer PORVs are not needed for overpressure protection during power operation. Therefore, we have concluded that routine exercising of the pressurizer PORVs every three months is "not practical" and therefore not required by ASME XI, IWB-3400.

It is noted that the function of the pressurizer PORVs during reactor startup and shutdown is to protect the reactor vessel and coolant system from low temperature-overpressurization conditions. Therefore, it is the NRC position that pressurizer PORVs should be exercised prior to initiation of system conditions for which reactor vessel protection is needed. The following test schedule has been recommended and is already in effect for NA-2:

1. Full stroke exercising should be performed during cooldown prior to achieving the water solid condition in the pressurizer and during cold shutdown prior to heat up.
2. Stroke timing should be performed at each cold shutdown or, as a minimum, once each refueling cycle.
3. Fail safe actuation testing is permitted by the Code to be performed at each cold shutdown if the valves cannot be tested during power operation. This testing should be performed at each cold shutdown.

It is our position that the above test schedule is also applicable for NA-1.

Finally, in the event that a pressurizer PORV should fail open, protection against a small break LOCA can be ensured by closing the pressurizer PORV isolation valves upstream from the PORVs. Therefore, we have recommended that isolation valves be tested in accordance with ASME XI.

Based on the above, we have determined that the licensee's request for testing the NA-1 PORVs in accordance with the requirements of ASME XI for Category B valves is acceptable. The licensee's request for relief from the three month test interval pursuant to 10 CFR 50.55a.(g) is not required as stated above and is hereby denied. The test schedule for pressurizer PORVs already in effect for NA-2 shall also be applicable for NA-1. Also, pressurizer PORV isolation valves are presently tested in accordance with NA-1 TS which we find acceptable. Finally, the above changes for the NA-1 TS are identical to the currently approved NA-2 TS.

#### Administrative Changes:

In Amendments No. 33 and No. 13 for NA-1 & 2 respectively, issued November 10, 1981, the NA-1 & 2 TS were revised to incorporate the inservice surveillance requirements for safety related snubbers in response to the NRC letter dated November 20, 1980. By administrative error, the NA-1 & 2 TS regarding Tables 3.7-4a and 3.7-4b (Continued), page 3/4 7-66 and page 3/4 7-49 stated that: (\*Snubbers may be added to and deleted from safety systems...). The NA-1 & 2 TS are hereby corrected to read on pages 3/4 7-66 and 3/4 7-49, respectively, and: (\*Snubbers may be added to safety systems...).

### Environmental Consideration

We have determined that the amendment does 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 amendment involves 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 this amendment.

### Conclusion

We have concluded, based on the considerations discussed above, that: (1) because the amendment does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant decrease in a safety margin, the amendment does 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 this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Dated: December 9, 1981

UNITED STATES NUCLEAR REGULATORY COMMISSIONDOCKET NO. 50-338VIRGINIA ELECTRIC AND POWER COMPANYNOTICE OF ISSUANCE OF AMENDMENT TO FACILITY  
OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 34 to Facility Operating License No. NPF-4 issued to the Virginia Electric and Power Company (the licensee) which revised the Technical Specifications for operation of the North Anna Power Station, Unit No. 1 (the facility) located in Louisa County, Virginia. The amendment is effective 7 days from the date of issuance.

The amendment revises the Technical Specifications to specify that the inservice test requirements for pressurizer power operated relief valves are in accordance with the American Society of Mechanical Engineers Section XI for Category B valves.

The application for the amendment 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 amendment. Prior public notice of the amendment was not required since the amendment does not involve a significant hazards consideration.

The Commission has determined that the issuance of the amendment 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 the amendment.

For further details with respect to this action, see (1) the application for amendment dated April 16, 1980 (Serial No. 344), (2) Amendment No. 34 to Facility Operating License No. NPF-4; and (3) the Commission's related Safety Evaluation. These items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N. W., Washington, D. C. 20555 and at the Board of Supervisor's Office, Louisa County Courthouse, Louisa, Virginia 23093 and at the Alderman Library, Manuscripts Department, University of Virginia, Charlottesville, Virginia 22901. 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 9th day of December, 1981.

FOR THE NUCLEAR REGULATORY COMMISSION

A handwritten signature in black ink, appearing to read "Leon B. Engle".

Leon B. Engle, Acting Chief  
Operating Reactors Branch #3  
Division of Licensing