

December 6, 1984

Docket Nos. 50-338  
and 50-339

Mr. W. L. Stewart  
Vice President - Nuclear Operations  
Virginia Electric and Power Company  
Post Office Box 26666  
Richmond, Virginia 23261

Dear Mr. Stewart:

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The Commission has issued the enclosed Amendment Nos. 60 and 44 to Facility Operating Licenses No. NPF-4 and No. NPF-7 for the North Anna Power Station, Units No. 1 and No. 2 (NA-1&2). The amendments revise the NA-1&2 Technical Specifications (TS) in response to your application dated December 30, 1983 as supplemented June 4, 1984. The amendments are effective as of the date of issuance.

The amendments correct an administrative error presently existing in the NA-1&2 TS. The change revises the P-7 reactor trip system interlock setpoint, as specified in the NA-1&2 TS Table 3.3-1, to indicate "pressure equivalent to 10 percent rated turbine power" instead of the presently stated and incorrect "Pressure equivalent to 10 percent rated thermal power."

A copy of the Safety Evaluation is enclosed. The notice of issuance will be included in the Commission's next monthly Federal Register notice.

Sincerely,

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

Enclosures:

1. Amendment No. 60 to NPF-4
2. Amendment No. 44 to NPF-7
3. Safety Evaluation

cc: See next page

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PMKretutzer

11/27/84

ORB#3:DL  
LEngle:dd

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ORB#3:DL  
JRMiller

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OELD  
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12/4/84

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12/6/84

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Virginia Electric and Power Company

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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. 60  
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 December 30, 1983 as supplemented June 4, 1984 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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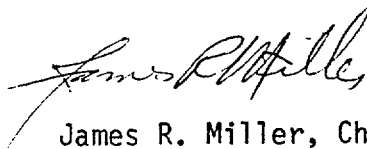
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.D.(2) of Facility Operating License No. NPF-4 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 60, 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



James R. Miller, Chief  
Operating Reactors Branch #3  
Division of Licensing

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: December 6, 1984

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO.60 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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TABLE 3.3-1 (Continued)  
REACTOR TRIP SYSTEM INTERLOCKS

<u>DESIGNATION</u>	<u>CONDITION</u>	<u>SETPOINT</u>	<u>ALLOWABLE VALUES</u>	<u>FUNCTION</u>
P-6	1 of 2 Intermediate range above setpoint (increasing power level)	$1 \times 10^{-10}$	$< 3 \times 10^{-10}$	Allows manual block of source range reactor trip
	2 of 2 Intermediate range below setpoint (decreasing power level)	$5 \times 10^{-11}$	$> 3 \times 10^{-11}$	Defeats the block of source range reactor trip
P-10	2 of 4 Power range above setpoint (increasing power level)	10%	<11%	Allows manual block of power range (low setpoint) and intermediate range reactor trips and intermediate range rod stop. Blocks source range reactor trip.
	3 of 4 Power range below setpoint (decreasing power level)	8%	>7%	Defeats the block of power range (low setpoint) and intermediate range reactor trips and intermediate range rod stop.
P-7	2 of 4 Power range above setpoint or 1 of 2 Turbine Impulse chamber pressure above setpoint	10%	<11%	Input to P-7.
		Pressure equivalent to 10% rated turbine power	<11%	Allows reactor trip on: Low flow or reactor coolant pump breakers open in more than one loop, Undervoltage (RCP busses) Underfrequency (RCP busses), Turbine Trip, Pressurizer low pressure, and Pressurizer high level.

(Power level increasing)



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. 44  
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 (the licensee) dated December 30, 1983 as supplemented June 4, 1984 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.

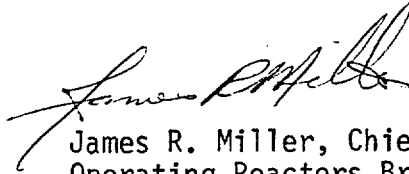
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-7 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 44, 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



James R. Miller, Chief  
Operating Reactors Branch #3  
Division of Licensing

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: December 6, 1984



ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO.44 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.

Page

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TABLE 3.3-1 (Continued)

- ACTION 9 - With a channel associated with an operating loop inoperable, restore the inoperable channel to OPERABLE status within 2 hours or be in HOT STANDBY within the next 6 hours; however, one channel associated with an operating loop may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.1.1.1.
- ACTION 10 - With one channel inoperable, restore the inoperable channel to OPERABLE status within 2 hours or reduce THERMAL POWER to below the P-8, (Block of Low Reactor Coolant Pump Flow and Reactor Coolant Pump Breaker Position) setpoint, within the next 2 hours. Operation below the P-8, (Block of Low Reactor Coolant Pump Flow and Reactor Coolant Pump Breaker Position) setpoint, may continue pursuant to ACTION 11.
- ACTION 11 - With less than the Minimum Number of Channels OPERABLE, operation may continue provided the inoperable channel is placed in the tripped condition within 1 hour.
- ACTION 12 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or be in HOT STANDBY within the next 6 hours and/or open the reactor trip breakers.

TABLE 3.3-1 (Continued)  
REACTOR TRIP SYSTEM INTERLOCKS

<u>DESIGNATION</u>	<u>CONDITION</u>	<u>SETPOINT</u>	<u>ALLOWABLE VALUES</u>	<u>FUNCTION</u>
P-6	1 of 2 Intermediate range above setpoint (increasing power level)	$1 \times 10^{-10}$	$< 3 \times 10^{-10}$	Allows manual block of source range reactor trip
	2 of 2 Intermediate range below setpoint (decreasing power level)	$5 \times 10^{-11}$	$> 3 \times 10^{-11}$	Defeats the block of source range reactor trip
P-10	2 of 4 Power range above set- point (increasing power level)	10%	$< 11\%$	Allows manual block of power range (low setpoint) and inter- mediate range reactor trips and intermediate range rod stop. Blocks source range reactor trip.
	3 of 4 Power range below set- point (decreasing power level)	8%	$> 7\%$	Defeats the block of power range (low setpoint) and inter- mediate range reactor trips and intermediate range rod stop.
P-7	2 of 4 Power range above set- point or 1 of 2 Turbine Impulse chamber pressure above setpoint	10%  Pressure equiv- alent to 10% rated turbine power	$< 11\%$  $< 11\%$	Input to P-7.  Allows reactor trip on: Low flow or reactor coolant pump breakers open in more than one loop, Undervoltage (RCP busses) Underfrequency (RCP busses), Turbine Trip, Pressurizer low pressure, and Pressurizer high level.

(Power level increasing)



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENTS NO. 60 AND NO. 44 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 letters dated December 30, 1983 and June 4, 1984, the Virginia Electric and Power Company (the licensee) requested a change to the Technical Specifications (TS) for the North Anna Power Station, Units No. 1 and No. 2 (NA-1&2). The proposed change would correct an administrative error presently existing in the NA-1&2 TS.

Specifically, the change would revise the P-7 reactor trip system interlock setpoint as specified in the NA-1&2 TS Table 3.3-1, Reactor Trip Systems Interlocks, to indicate "Pressure equivalent to 10 percent rated turbine power" instead of the presently specified "pressure equivalent to 10% rated thermal power."

Our discussion and evaluation of the proposed change is provided below.

Discussion:

The purpose of the P-7 interlock is to allow an orderly reactor startup when plant primary conditions are off normal and a unit is coming out of a shutdown condition. For example, not all reactor coolant pumps may be running, pressurizer level and pressure will be outside normal operating ranges and the turbine may not be latched and loaded to prevent uncalled for reactor trips during startup conditions, certain reactor trips such as Reactor Coolant System low flow, Reactor Coolant Pump breakers open, pressurizer low pressure, pressurizer high level, Reactor Coolant Pump Bus undervoltage or underfrequency and turbine unlatched are permitted to be blocked by the P-7 interlock provided power level is limited to 10 percent.

The determination of actual plant power level for the P-7 interlock is based on the P-10 interlock which serves as a direct measure of 10% rated thermal power (i.e. reactor power) and the P-13 interlock which, by design, is to be a measure of 10% rated turbine power. P-10 is sensed via the excore nuclear

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instrumentation system power range detectors, and P-13 is sensed via first stage impulse pressure in the high pressure turbine.

The existing TS for the P-13 input to the P-7 setpoint incorrectly relates to 10% rated reactor power.

Turbine impulse pressure is not a constant value at 10 percent rated thermal power since the turbine is not the only steam load. Use of auxiliary steam and/or steam dumps causes the turbine impulse pressure to vary for a given rated thermal power. Therefore, rated thermal power cannot be used as a measure of turbine power which is what the P-13 interlock is designed to reflect.

#### Evaluation:

The proposed change as discussed above provides consistency with the approved NA-1&2 Setpoint Study and Precautions, Limitations, and Setpoints (SS/PLS) documentation and will allow the affected systems to operate as approved and designed. The licensee's proposed change provides consistency with the approved NA-1&2 SS/PLS documentation and corrects a presently existing error in the NA-1&2 TS and is therefore administrative in nature. Based on the above, we find the licensee's 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 issued a proposed finding that these amendments involve no significant hazards consideration and there has been no public comment on such finding. Accordingly, these 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 these 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: December 6, 1984

Principal Contributor:

L. Engle, DL