

June 20, 1988

Docket Nos. 50-338
and 50-339

Mr. D. S. Cruden
Vice President - Nuclear
Virginia Electric and Power Company
Post Office Box 26666
Richmond, Virginia 23261

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Dear Mr. Cruden:

SUBJECT: NORTH ANNA UNITS 1 AND 2 - ISSUANCE OF AMENDMENTS RE: IN-CORE
THERMOCOUPLES (TAC NOS. 67839 AND 67840)

The Commission has issued the enclosed Amendment Nos. 104 and 91 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 March 30, 1988.

The amendments add in-core thermocouples to the Accident Monitoring Instrumentation, NA-1&2 TS Tables 3.3-10 and 4.3-7. The addition is in conformance with NUREG-0737 and Generic Letter 83-37.

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 II-2
Division of Reactor Projects-I/II
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 104 to NPF-4
2. Amendment No. 91 to NPF-7
3. Safety Evaluation

cc w/enclosures:
See next page

LA:PDII-2
DMiller
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PDR ADOCK 05000338
P PDR

Mr. D. S. Cruden
Virginia Electric & Power Company

North Anna Power Station
Units 1 and 2

cc:

Mr. William C. Porter, Jr.
County Administrator
Louisa County
P.O. Box 160
Louisa, Virginia 23093

James B. Kenley, M.D., Commissioner
Department of Health
109 Governor Street
Richmond, Virginia 23219

Michael W. Maupin, Esq.
Hunton and Williams
P. O. Box 1535
Richmond, Virginia 23212

Regional Administrator, Region II
U.S. Nuclear Regulatory Commission
101 Marietta Street N.W., Suite 2900
Atlanta, Georgia 30323

Mr. W. T. Lough
Virginia Corporation Commission
Division of Energy Regulation
P. O. Box 1197
Richmond, Virginia 23209

Mr. G. E. Kane
P. O. Box 402
Mineral, Virginia 23117

Ellyn R. Weiss, Esq.
Harmon, Weiss and Jordan
2001 S Street NW
Washington, DC 20009

Old Dominion Electric Cooperative
c/o Executive Vice President
Innsbrook Corporate Center
4222 Cox Road, Suite 102
Glen Allen, Virginia 23060

Mr. W. L. Stewart
Senior Vice President - Power
Virginia Electric and Power Co.
Post Office Box 26666
Richmond, Virginia 23261

Mr. Patrick A. O'Hare
Office of the Attorney General
Supreme Court Building
101 North 8th Street
Richmond, Virginia 23219

Resident Inspector/North Anna
c/o U.S. NRC
Senior Resident Inspector
Route 2, Box 78
Mineral, Virginia 23117



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. 104
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 March 30, 1988, 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. 104, 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: June 20, 1988

ATTACHMENT TO LICENSE AMENDMENT NO. 104

TO FACILITY OPERATING LICENSE NO. NPF-4

DOCKET NO. 50-338

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

Page

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3/4 3-51

INSTRUMENTATION

ACCIDENT MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.6 The accident monitoring instrumentation channels shown in Table 3.3-10 shall be OPERABLE.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

- a. With the number of OPERABLE accident monitoring channels less than the total number of channels shown in Table 3.3-10, either restore the inoperable channel(s) to OPERABLE status within 7 days or be in at least HOT SHUTDOWN within the next 12 hours.
- b. With the number of OPERABLE accident monitoring instrumentation channels less than the MINIMUM CHANNELS OPERABLE requirements of Table 3.3-10, either restore the inoperable channel(s) to OPERABLE status within 48 hours or be in at least HOT SHUTDOWN within the next 12 hours.
- c. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.6 Each accident monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the CHANNEL CHECK and CHANNEL CALIBRATION operations at the frequencies shown in Table 4.3-7.

TABLE 3.3-10

ACCIDENT MONITORING INSTRUMENTATION

NORTH ANNA - UNIT 1

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Amendment No. 32, 34, 104

	<u>TOTAL NO. OF CHANNELS</u>	<u>MINIMUM CHANNELS OPERABLE</u>
1. Containment Pressure	2	1
2. Reactor Coolant Inlet Temperature-T _{hot} (wide range)	2	1
3. Reactor Coolant Inlet Temperature-T _{cold} (wide range)	2	1
4. Reactor Coolant Pressure-Wide Range	1	1
5. Pressurizer Water Level	1	1
6. Steam Line Pressure	2/steam generator	1/steam generator
7. Steam Generator Water Level-Narrow Range	2/steam generator	1/steam generator
8. Refueling Water Storage Tank Water Level	1	1
9. Boric Acid Tank Solution Level	1	1
10. Auxiliary Feedwater Flow Rate	1/steam generator	1/steam generator
11. Reactor Coolant System Subcooling Margin Monitor	2	1
12. PORV Position Indicator	2/valve	1/valve
13. PORV Block Valve Position Indicator	1/valve	1/valve
14. Safety Valve Position Indicator	1/valve	1/valve
15. Reactor Vessel Coolant Level Monitor	2	1
16. Containment Water Level (narrow range)	2	1
17. Containment Water Level (wide range)	2	1
18. In Core Thermocouples	4/core quadrant	2/core quadrant

TABLE 4.3-7

ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>
1. Containment Pressure	M	R
2. Reactor Coolant Inlet Temperature-T _{hot} (wide range)	M	R
3. Reactor Coolant Inlet Temperature-T _{cold} (wide range)	M	R
4. Reactor Coolant Pressure-Wide Range	M	R
5. Pressurizer Water Level	M	R
6. Steam Line Pressure	M	R
7. Steam Generator Water Level-Narrow Range	M	R
8. Refueling Water Storage Tank Water Level	M	R
9. Boric Acid Tank Solution Level	M	R
10. Auxiliary Feedwater Flow Rate	M	R
11. Reactor Coolant System Subcooling Margin Monitor	M	R
12. PORV Position Indicator	M	R
13. PORV Block Valve Position Indicator	M	R
14. Safety Valve Position Indicator	M	R
15. Reactor Vessel Coolant Level Monitor	M	R
16. Containment Water Level (narrow range)	M	R
17. Containment Water Level (wide range)	M	R
18. In Core Thermocouples	M	R

INSTRUMENTATION

FIRE DETECTION INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.7 As a minimum, the fire detection instrumentation for each fire detection zone shown in Table 3.3-11 shall be OPERABLE.

APPLICABILITY: Whenever equipment protected by the fire detection instrument is required to be OPERABLE.

ACTION:

With the number of OPERABLE fire detection instrument(s) less than the minimum number OPERABLE requirement of Table 3.3-11:

- a. Within 1 hour establish a fire watch patrol to inspect the zone(s) with the inoperable instrument(s) at least once per hour, unless the instrument(s) is (are) located inside the containment, then inspect the containment at least once per 8 hours or monitor the containment air temperature at least once per hour at the locations listed in Specification 4.6.1.5.1.
- b. Restore the inoperable instrument(s) to OPERABLE status within 14 days or prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the instrument(s) to OPERABLE status.
- c. The provisions for Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.7.1 Each of the above required fire detection instruments which are outside containment shall be demonstrated OPERABLE at least once per 6 months by performance of a CHANNEL FUNCTIONAL TEST. Fire detection instruments which are inside containment shall be demonstrated OPERABLE by the performance of a CHANNEL FUNCTIONAL TEST during each COLD SHUTDOWN exceeding 24 hours unless performed in the previous 6 months.

4.3.3.7.2 The NFPA Code 72D supervised circuits supervision associated with the detector alarms of each of the above required fire detection instruments shall be demonstrated OPERABLE at least once per 6 months.

4.3.3.7.3 The non-supervised circuits between the local panels in Specification 4.3.3.7.2 and the control room shall be demonstrated OPERABLE at least once per 31 days.



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. 91
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 March 30, 1988 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.

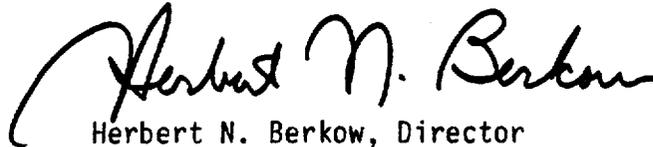
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-7 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 91, 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: June 20, 1988

ATTACHMENT TO LICENSE AMENDMENT NO. 91

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 3.3-10
ACCIDENT MONITORING INSTRUMENTATION

	<u>TOTAL NO. OF CHANNELS</u>	<u>MINIMUM CHANNELS OPERABLE</u>
1. Containment Pressure	2	1
2. Reactor Coolant Outlet Temperature-T _{hot} (wide range)	2	1
3. Reactor Coolant Inlet Temperature-T _{cold} (wide range)	2	1
4. Reactor Coolant Pressure-Wide Range	1	1
5. Pressurizer Water Level	1	1
6. Steam Line Pressure	2/steam generator	1/steam generator
7. Steam Generator Water Level-Narrow Range	2/steam generator	1/steam generator
8. Refueling Water Storage Tank Water Level	1	1
9. Boric Acid Tank Solution Level	1	1
10. Auxiliary Feedwater Flow Rate	1/steam generator	1/steam generator
11. Reactor Coolant System Subcooling Margin Monitor	2	1
12. PORV Position Indicator	2/valve	1/valve
13. PORV Block Valve Position Indicator	1/valve	1/valve
14. Safety Valve Position Indicator	1/valve	1/valve
15. Reactor Vessel Coolant Level Monitor	2	1
16. Containment Water Level (narrow range)	2	1
17. Containment Water Level (wide range)	2	1
18. In Core Thermocouples	4/core quadrant	2/core quadrant

TABLE 4.3-7

ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>
1. Containment Pressure	M	R
2. Reactor Coolant Outlet Temperature-T _{hot} (wide range)	M	R
3. Reactor Coolant Inlet Temperature-T _{cold} (wide range)	M	R
4. Reactor Coolant Pressure-Wide Range	M	R
5. Pressurizer Water Level	M	R
6. Steam Line Pressure	M	R
7. Steam Generator Water Level-Narrow Range	M	R
8. Refueling Water Storage Tank Water Level	M	R
9. Boric Acid Tank Solution Level	M	R
10. Auxiliary Feedwater Flow Rate	M	R
11. Reactor Coolant System Subcooling Margin Monitor	M	R
12. PORV Position Indicator	M	R
13. PORV Block Valve Position Indicator	M	R
14. Safety Valve Position Indicator	M	R
15. Reactor Vessel Coolant Level Monitor	M	R
16. Containment Water Level (narrow range)	M	R
17. Containment Water Level (wide range)	M	R
18. In Core Thermocouples	M	R

NORTH ANNA - UNIT 2

3/4 3-48

Amendment No. 49, 91



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NOS. 104 AND 91 TO

FACILITY OPERATING LICENSE NO. 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 March 30, 1988, 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 changes would add in-core thermocouples in the Accident Monitoring Instrumentation, TS Table 3.3-10 and 4.3-7.

DISCUSSION

The proposed change to add in-core thermocouples to the NA-1&2 Accident Monitoring Instrumentation, TS Tables 3.3-10 and 4.3-7 is in accordance with the requirements of NUREG-0737, Item II.F.2, "Instrumentation for Detection of Inadequate Core Cooling" and Generic Letter 83-37, "NUREG-0737 Technical Specifications."

Generic Letter No. 83-37, "NUREG-0737 Technical Specifications," requires that TS provide assurance that facility operation is maintained within acceptable limits for each facility in accordance with NUREG-0737.

The change would add in-core thermocouples to TS Table 3.3-10, Accident Monitoring Instrumentation and require 4 thermocouples per core quadrant for operability determination while allowing 2 thermocouples per quadrant as the minimum number of operable channels for operation. Also, the in-core thermocouples will be added to TS Table 4.3-7, Accident Monitoring Instrumentation Surveillance Requirements, requiring a "Channel Check" on a monthly basis and a "Channel Calibration" each refueling. These changes are in conformance with the sample provided in Enclosure 3 to Generic Letter 83-37, pages 15 and 16.

EVALUATION

The proposed changes are in conformance with NUREG-0737 and Generic Letter 83-37. Therefore, based on all of the above, we find these changes to be acceptable.

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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 or changes to surveillance requirements. 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: June 20, 1988

Principal Contributor:

Leon Engle