DCS MS-016

Docket Nos. 50-338
and 50-339

JUN 7 1984

DISTRIBUTION:
~~Docket File~~
NRC PDR
L PDR
SECY
ORB#3 Rdg
DEisenhut
OELD
LJHarmon
EJordan
JNGrace
LTremper
PMKretuzer-3
LEngle
Gray File +4
HDenton
RDiggs
OPA, CMiles
ACRS-10
DBrinkman
WJones
TBarnhart-8

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

Dear Mr. Stewart:

The Commission has issued the enclosed Amendment Nos. 58 and 40 to Facility Operating License 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 Technical Specifications (TS) in response to your letter dated March 15, 1984. The amendments are effective as of the date of issuance.

The amendments revise the NA-1&2 TS 3.4.10.2.a, 3.4.10.2.b and 3.4.10.2.c for Limiting Conditions of Operation; TS 4.4.10.2.1 and 4.4.10.2.2 for Surveillance Requirements; and TS Bases 3.4.10.2. These revisions delete the requirements for minimum and maximum temperature limits for A36 and A572 beams in the steam generator supports and delete verification requirements for determination of beam temperatures. The inservice inspection requirements for beam inspection on a 40 month basis will continue to provide a reasonable degree of assurance for the integrity of the support structure.

In addition, the deletion of the above noted NA-1&2 TS, negates the need for the tent-like enclosures and resistance space heaters which were required to achieve elevated temperatures.

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,

Original signed by

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

Enclosure:
1. Amendment No. 58 to NPF-4
2. Amendment No. 40 to NPF-7
3. Safety Evaluation

cc: See next page

ORB#3:DL	ORB#3:DL	ORB#3:DL	OELD	AD:OR:DL
PMKreutzer	LEngle/ph	JRMiller	W.D. Paton	GCLainas
6/4/84	6/4/84	6/5/84	6/6/84	6/ /84

8406210114 840607
PDR ADOCK 05000338
P PDR

On December 19, 1983, the NRC issued guidance to applicants and licensees concerning the revised reporting requirements, "Reporting Requirements of 10 CFR Part 50, Sections 50.72 and 50.73, and Standard Technical Specifications (Generic Letter No. 83-43)." The guidance contained in Generic Letter No. 83-43 included model Standard Technical Specifications for reporting requirements. The licensee's proposed TS changes for reporting requirements are consistent with this guidance. Since the proposed changes to the TS result only in changes to reporting requirements, no changes to facility operations will result. We find the proposed changes to the TS to be acceptable.

Environmental Consideration

We have determined that the amendments do 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 amendments involve 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 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 6, 1984

Principal Contributor:
D. Jaffe

Virginia Electric and Power Company

cc:
Richard M. Foster, Esquire
Musick, Williamson, Schwartz,
Leavenworth & Cope, P.C.
P. O. Box 4579
Boulder, Colorado 80306

Michael W. Maupin, Esquire
Hunton, Williams, Gay and Gibson
P. O. Box 1535
Richmond, Virginia 23212

Mr. Paul W. Purdom
Environmental Studies Institute
Drexel University
32nd and Chestnut Streets
Philadelphia, Pennsylvania 19104

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

Ellyn R. Weiss, Esquire
Sheldon, Harman, Roisman and Weiss
1725 I Street, N.W., Suite 506
Washington, DC 20006

Mr. E. W. Harrell
P. O. Box 402
Mineral, Virginia 23117

Mr. Anthony Gambardella
Office of the Attorney General
11 South 12th Street - Room 308
Richmond, Virginia 23219

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

Mr. J. H. Ferguson
Executive Vice President - Power
Virginia Electric and Power Co.
Post Office Box 26666
Richmond, Virginia 23261

Mrs. Margaret Dietrich
Route 2, Box 568
Gordonsville, Virginia 22042

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

U.S. Environmental Protection Agency
Region III Office
ATTN: Regional Radiation
Representative
Curtis Building
6th and Walnut Streets
Philadelphia, Pennsylvania 19106

Regional Administrator
Nuclear Regulatory Commission
Region II
Office of Executive Director
for Operations
101 Marietta Street, Suite 3100
Atlanta, Georgia 30303

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

Mr. Richard C. Klepper
Board of Supervisors
Louisa County Courthouse
P. O. Box 27
Louisa, Virginia 23093

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. 58
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 March 15, 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.D.(2) of Facility Operating License No. NPF-4 is hereby amended to read as follows:

   (2) <u>Technical Specifications</u>

   The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 58 , 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

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

Attachment:
Changes to the Technical
Specifications

Date of Issuance: June 7, 1984

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 58 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 amemdment number and contains vertical lines indicating the area of change. The corresponding overleaf pages are also provided to maintain document completeness.

Page

3/4 4-34
3/4 4-35
B 3/4 4-12

INDEX

LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

INDEX

LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

SURVEILLANCE REQUIREMENTS

4.4.10.1.1 In addition to the requirements of Specification 4.0.5, 1) the Reactor Coolant pump flywheels shall be inspected per the recommendations of Regulatory Position C.4.b of Regulatory Guide 1.14, Revision 1, August 1975, and 2) the flow straighteners in each steam generator-to-RCP elbow shall be ultrasonically examined whenever a RCP shaft deflection of greater than 20 mils is indicated and at least once per 18 months.

4.4.10.1.2 In addition to the requirements of Specification 4.0.5, at least one third of the main member to main member welds, joining A572 material, in the steam generator supports, shall be visually examined during each 40 month inspection interval.

3/4.4.10 STRUCTURAL INTEGRITY

ASME CODE CLASS 1, 2 & 3 COMPONENTS

LIMITING CONDITION FOR OPERATION

3.4.10.1 The structural integrity of ASME Code Class 1, 2 and 3 components shall be maintained in accordance with Specification 4.4.10.1.

APPLICABILITY: ALL MODES.

ACTION:

a. With the structural integrity of any ASME Code Class 1 component(s) not conforming to the above requirements, restore the structural integrity of the affected component(s) to within its limit or isolate the affected component(s) prior to increasing the Reactor Coolant System temperature more than 50°F above the minimum temperature required by NDT considerations.

b. With the structural integrity of any ASME Code Class 2 component(s) not conforming to the above requirements, restore the structural integrity of the affected component(s) to within its limit or isolate the affected component(s) prior to increasing the Reactor Coolant System temperature above 200°F.

c. With the structural integrity of any ASME Code Class 3 component(s) not conforming to the above requirements, restore the structural integrity of the affected component(s) to within its limit or isolate the affected component(s) from service.

d. With any RCP shaft deflection indication greater than 20 mils, the reactor shall be placed in at least HOT STANDBY within 1 hour, the affected RCP(s) tripped and then affected flow straightener plate(s) ultrasonically examined.

e. The provisions of Specification 3.0.4 are not applicable.

THIS PAGE WAS INTENTIONALLY LEFT BLANK

3/4.4.10 STRUCTURAL INTEGRITY

3/4.4.10.1 ASME CODE CLASS 1, 2 AND 3 COMPONENTS

The inspection programs for ASME Code Class 1, 2 and 3 Reactor Coolant System components ensure that the structural integrity of these components will be maintained at an acceptable level throughout the life of the plant. To the extent applicable, the inspection program for components is in compliance with Section XI of the ASME Boiler and Pressure Vessel Code.

vessel inside radius are essentially identical, the measured transition shift for a sample can be applied with confidence to the adjacent section of the reactor vessel. The heatup and cooldown curves must be recalculated when the ΔRT_{NDT} determined from the surveillance capsule is different from the calculated ΔRT_{NDT} for the equivalent capsule radiation exposure.

The pressure-temperature limit lines shown on Figure 3.4-2 for reactor criticality and for inservice leak and hydrostatic testing have been provided to assure compliance with the minimum temperature requirements of Appendix G to 10 CFR 50.

The number of reactor vessel irradiation surveillance specimens and the frequencies for removing and testing these specimens are provided in Table 4.4-3 to assure compliance with the requirements of Appendix H to 10 CFR Part 50.

The limitations imposed on pressurizer heatup and cooldown and spray water temperature differential are provided to assure that the pressurizer is operated within the design criteria assumed for the fatigue analysis performed in accordance with the ASME Code requirements.

The OPERABILITY of two PORVs or an RCS vent opening of greater than 2.07 square inches ensures that the RCS will be protected from pressure transients which could exceed the limits of Appendix G to 10 CFR Part 50 when one or more of the RCS cold legs are less than or equal to 320°F. Either PORV has adequate relieving capability to protect the RCS from overpressurization when the transient is limited to either (1) the start of an idle RCP with the secondary water temperature of the steam generator less than or equal to 50°F above the RCS cold leg temperatures or (2) the start of a charging pump and its injection into a water solid RCS.

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. 40
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 March 15, 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. 40 , 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: June 7, 1984

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 40 TO FACILITY OPERATING LICENSE NO. NPF-7

DOCKET NO. 50-339

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 contains vertical lines indicating the area of change. The corresponding overleaf pages are also provided to maintain document completeness.

Page

3/4 4-32
3/4 4-33
B 3/4 4-17

INDEX

LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

3/4.4.10 STRUCTURAL INTEGRITY

ASME CODE CLASS 1, 2 & 3 COMPONENTS

LIMITING CONDITION FOR OPERATION

3/4.10.1 The structural integrity of ASME Code Class 1, 2 and 3 components shall be maintained in accordance with Specification 4.4.10.1.

APPLICABILITY: ALL MODES

ACTION:

a. With the structural integrity of any ASME Code Class 1 component(s) not conforming to the above requirements, restore the structural integrity of the affected component(s) to within its limits or isolate the affected component(s) prior to increasing the Reactor Coolant System temperature more than 50°F above the minimum temperature required by NDT considerations.

b. With the structural integrity of any ASME Code Class 2 component(s) not conforming to the above requirements, restore the structural integrity of the affected component(s) to within its limit or isolate the affected component(s) prior to increasing the Reactor Coolant System temperature above 200°F.

c. With the structural integrity of any ASME Code Class 3 component(s) not conforming to the above requirements, restore the structural integrity of the affected component(s) to within its limit or isolate the affected component(s) from service.

d. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.4.10.1.1 In addition to the requirements of Specification 4.0.5, the Reactor Coolant pump flywheels shall be inspected per the recommendations of Regulatory Position C.4.b of Regulatory Guide 1.14, Revision 1, August 1975.

4.4.10.1.2 In addition to the requirements of Specification 4.0.5, at least one third of the main member to main member welds, joining A572 material, in the steam generator supports, shall be visually examined during each 40 month inspection interval.

SURVEILLANCE REQUIREMENTS

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 key switch 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.

4.4.9.3.3 The pressurizer water volume shall be verified to be less than or equal to 457 cubic feet at least once per 12 hours when the pressurizer 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.

THIS PAGE INTENTIONALLY LEFT BLANK

THIS PAGE INTENTIONALLY LEFT BLANK

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 58 AND NO. 40 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 March 15, 1984, the Virginia Electric and Power Company (the licensee) requested an amendment in the form of changes to the Technical Specifications (TS) to Facility Operating Licenses No. NPF-4 and No. NPF-7 for the North Anna Power Station, Units No. 1 and No. 2, respectively.

The proposed changes would delete the requirements for minimum and maximum temperature limits for A36 and A572 beams in the steam generator supports and would delete verification requirements for determination of beam temperatures.

Discussion:

The NA-1&2 TS 3.4.10.2.a and c require that, with pressurizer pressure greater than 1000 pounds per square inch gauge (psig), the temperature of the steam generator supports shall be greater than 85 degrees Fahrenheit (°F) for ASTM A36 beams and greater than 225°F for ASTM A572 beams. The A36 beams are monitored in the lower region of the supports at a bottom level corner, and the A572 material is monitored at a middle level corner during unit operation and at a top level corner during startup. TS 3.4.10.2.b also requires that the temperature monitored at the top level corner be less than 335°F.

These TS requirements were in response to the statement of the Advisory Committee on Reactor Safeguards in a partial report, dated October 26, 1976, for NA-1&2. These requirements were addressed in Section 5.4.3 of Supplement No. 6 of the NA Safety Evaluation Report, dated February 1977.

In order to achieve these elevated temperatures, the supports are now insulated by the use of tent-like enclosures and heated by resistance space heaters. Through normal use, these blankets have become contaminated and have deteriorated to the degree that replacement of all blankets will be required every 7 years over the remaining life of NA-1&2. Continued use of these blankets would result in an estimated occupational dose exposure of 50 man-rem per year.

Subsequent to the issuance of the NA-1&2 TS for elevated temperatures for steam generator supports, this matter was identified by the NRC as unresolved safety Issue A-12, "Potential for Low Fracture Toughness and Lamellar Tearing in PWR Steam Generator and Reactor Coolant Pump Supports," the resolution of which is summarized in NUREG-0577, Revision 1, bearing the same title and published October 1983.

Evaluation:

The staff concurs with the licensee's request for deleting the steam generator TS requirements addressed above. The basis for the staff's concurrence with the TS revision is presented in NUREG-0577, Revision 1, Appendix C, "Valve Impact Analysis for A-12; Potential for Low Fracture Toughness and Lamellar Tearing in PWR Steam Generator and Reactor Coolant Pump Supports," wherein the staff concluded (Section 2.1) that corrective measures such as heating of steam generator supports should not be required for operating PWRs. Therefore, we find the licensee's proposed change for deleting the minimum and maximum temperature limits for A36 and A572 beams in the steam generator supports and verification requirements for determination of beam temperatures to be acceptable.

The deletion of these TS requirements will no longer require the use of insulating tents, and removal of these tents will augment the licensee's ability to maintain individual occupational doses at as low as is reasonably achievable levels and within the limits of 10 CFR Part 20.

Environmental Consideration:

We have determined that the amendments are administrative in nature and do 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 amendments involve 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 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 7, 1984

Principal Contributors:
J. Halapatz
L. B. Engle