

NOV 26 1977

Docket No. 50-338

Virginia Electric & Power Company
ATTN: Mr. W. L. Proffitt
Senior Vice President - Power
P. O. Box 26666
Richmond, Virginia 23261

Gentlemen:

SUBJECT: ISSUANCE OF FACILITY OPERATING LICENSE NO. NPF-4 -
NORTH ANNA POWER STATION, UNIT NO. 1

The Nuclear Regulatory Commission (the Commission) has issued the enclosed Facility Operating License No. NPF-4 including Technical Specifications (Appendices A and B) to the Virginia Electric and Power Company for the North Anna Power Station, Unit No. 1, located in Louisa County, Virginia. License No. NPF-4 authorizes the Virginia Electric and Power Company to load nuclear fuel into the North Anna Power Station, Unit No. 1 and maintain it in a cold shutdown condition in accordance with Technical Specifications (Appendices A and B) of the license. The license also contains an environmental condition.

Also enclosed is a copy of the Federal Register Notice of Issuance of License No. NPF-4 by the Office of Nuclear Reactor Regulation, concerning North Anna Power Station, Unit No. 1.

Two signed originals of Amendment No. 2 to Indemnity Agreement No. B-80 which covers the activities authorized under Facility Operating License No. NPF-4 are being forwarded to you under separate cover. Please sign and return a copy to this office.

Sincerely,

for R.C. DeYoung
Roger S. Boyd, Director
Division of Project Management
Office of Nuclear Reactor Regulation

Enclosures:

1. Facility Operating License No. NPF-4,
with Technical Specifications
(Appendices A & B)
2. Federal Register Notice

(see Tech Specs)
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3. Amendment No. 2 to Indemnity Agreement
No. B-80 (2 originals)

OFFICE →	MR. L. P. M.	MR. 3: BC	MR. AD	MR. D: P
SURNAME →	MR. Ashbrook: BS	MR. Parr	MR. Vassallo	MR. Boyd
DATE →	11/26/77	11/26/77	11/26/77	11/26/77

See next page

NOV 26 1977

cc: Mrs. James C. Arnold
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Washington, D. C. 20001

Mr. Peter S. Hepp
Executive Vice President
Sun Shipping & Dry Dock Company
P. O. Box 540
Chester, Pennsylvania 19013

Department of the Interior
ATTN: Mr. Burce Blanchard
Environmental Projects Review
Department of the Interior
Room 5321
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State Corporation Commission
Commonwealth of Virginia
Blandon Building
Richmond, Virginia 23209

Mr. A. D. Johnson, Chairman
Board of Supervisors of
Louisa County
Trevillians, Virginia 23170

Ms. Susan T. Wilburn
Commonwealth of Virginia
Council on the Environment
903 9th Street Office Building
Richmond, Virginia 23219

Chief, Energy Systems (3 encl.)
Analyses Branch (AW-459)
Office of Radiation Programs
U.S. Environmental Protection
Agency
Room 645, East Tower
401 M Street, S. W.
Washington, D.C. 20460

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

Virginia Electric & Power Company - 3 -

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cc: Defense Mapping Agency
Aerospace Center (ADL)
St. Louis Air Force Station
St. Louis, Missouri 63118

Mr. Jack Anderson
Office of Federal Activities
Environmental Protection Agency
Room W-541, Waterside Mall
401 M Street, S. W.
Washington, D.C. 20460

VIRGINIA ELECTRIC AND POWER COMPANY

DOCKET NO. 50-338

NORTH ANNA POWER STATION, UNIT NO. 1

FACILITY OPERATING LICENSE

License No. NPF-4

1. The Nuclear Regulatory Commission (the Commission) having found that:
- A. The application for license filed by Virginia Electric and Power Company (the licensee) 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 and all required notifications to other agencies or bodies have been duly made;
 - B. Construction of the North Anna Power Station, Unit No. 1 (facility) has been substantially completed in conformity with Construction Permit No. CPPR-77 and the application, as amended, the provisions of the Act and the rules and regulations of the Commission;
 - C. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;
 - D. There is reasonable assurance: (i) that the activities authorized by this operating license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the rules and regulations of the Commission;
 - E. The licensee is technically and financially qualified to engage in the activities authorized by this operating license in accordance with the rules and regulations of the Commission;
 - F. The licensee has satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements," of the Commission's regulations;

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- G. The issuance of this operating license will not be inimical to the common defense and security or to the health and safety of the public;
 - H. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of Facility Operating License No. NPF-4 subject to the conditions for protection of the environment set forth herein is in accordance with Appendix D to 10 CFR Part 50 of the Commission's regulations and all applicable requirements have been satisfied; and
 - I. The receipt, possession, and use of source, byproduct and special nuclear material as authorized by this license will be in accordance with the Commission's regulations in 10 CFR Part 30, 40, and 70, including 10 CFR Section 30.33, 40.32, and 70.23 and 70.31.
2. Facility Operating License No. NPF-4 is hereby issued to the Virginia Electric and Power Company, in accordance with the Atomic Safety and Licensing Board's Initial Decision dated November 26, 1977, to read as follows:

- A. This license applies to the North Anna Power Station, Unit No. 1, a pressurized water reactor and associated equipment (the facility), owned by the Virginia Electric and Power Company. The facility is located near Mineral, in Louisa County, Virginia, and is described in the "Final Safety Analysis Report" as supplemented and amended (Amendments 17 through 64) and the Environmental Report as supplemented and amended (Supplements 1 through 4).
- B. The licensee is authorized to perform steam generator moisture carryover studies at the North Anna Power Station. These studies involve the use of an aqueous tracer solution of two (2) curies of sodium-24. The licensee's personnel will be in charge of conducting these studies and be knowledgeable in the procedures. The licensee will impose personnel exposure limits, posting, and survey requirements in conformance with those in 10 CFR Part 20 to minimize personnel exposure and contamination during the studies. Radiological controls will be established in the areas of the chemical feed, feedwater, steam, condensate and sampling systems where the presence of the radioactive tracer is expected to warrant such controls. The licensee will take special precautions to minimize radiation exposure and contamination during both the handling of the radioactive tracer prior to injection and the taking of system samples following injection of the tracer. The licensee will insure that all regulatory requirements for liquid discharge are met during disposal of all sampling effluents and when reestablishing continuous blowdown from the steam generators after completion of the studies.

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C. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses the Virginia Electric and Power Company.

- (1) Pursuant to Section 103 of the Act and 10 CFR Part 50, "Licensing of Production and Utilization Facilities," to possess, use, and operate the facility at the designated location in Louisa County, Virginia in accordance with the procedures and limitations set forth in this license;
- (2) Pursuant to the Act and 10 CFR Part 70, to receive, possess and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Final Safety Analysis Report, as supplemented and amended;
- (3) Pursuant to the Act and 10 CFR Parts 30, 40 and 70 to receive, possess and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
- (4) Pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and
- (5) Pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

D. This license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter I: Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Sections 50.54 and 50.59 of Part 50, and Section 70.32 of Part 70; and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

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(1) Maximum Power Level

The licensee is authorized to load fuel and maintain the unit in an operational Mode 5 condition (cold shutdown condition). All reactor control rods must be inserted when in operational Mode 5. The reactor shall be maintained at a K_{eff} at no greater than 0.90. At no time shall the reactor be made critical following fuel loading.

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B attached hereto are hereby incorporated in this license. The licensee shall operate the facility in accordance with the Technical Specifications except for the following specific exemption:

- a. The licensee shall be exempted from compliance with the following Appendix A Technical Specifications applying to charcoal testing until (1) the first regularly scheduled refueling outage, or (2) the currently installed charcoal is replaced, whichever occurs first:

4.6.4.3.b.2
4.7.7.1.b.2
4.7.8.1.b.2

- E. The licensee shall maintain in effect and fully implement all provisions of the physical security plan approved by the Commission, including amendments and changes made pursuant to the authority of 10 CFR 50.54(p). The approved security plan consists of proprietary documents, collectively titled, "Security Program, North Anna Power Station, Units 1 and 2," as follows: Original submitted with letter, dated February 1974, as revised on July 15, 1975, and on September 15, 1977; and additional information submitted by letter dated September 23, 1977. In addition to the provisions of the licensee's security plan, the licensee shall perform or shall obtain written confirmation of the performance by others of the personnel screening and background investigations, as specified in ANSI N18.17, for all non-licensee employees who are granted un-escorted access to the protected area.

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Pursuant to 10 CFR Section 2.790(d), the security plan is being withheld from public disclosure because it is deemed to be commercial or financial information within the meaning of 10 CFR Section 9.5(a)(4) and subject to disclosure only in accordance with 10 CFR Section 9.12.

F. This license is subject to the following additional conditions for the protection of the environment:

(1) Before engaging in additional construction or operational activities which may result in an environmental impact that was not evaluated by the Commission, the licensee will prepare and record an environmental evaluation of such activity. When the evaluation indicates that such activity may result in a significant adverse environmental impact that was not evaluated, or that is significantly greater than that evaluated, in the Final Environmental Statement or any addendum thereto, the licensee shall provide a written evaluation of such activities and obtain prior approval from the Director, Office of Nuclear Reactor Regulation.

G. In accordance with the requirement imposed by the October 8, 1976, order of the United States Court of Appeals for the District of Columbia Circuit in Natural Resources Defense Council vs. Nuclear Regulatory Commission, No. 74-1385 and 74-1586 (cert. granted sub nom Vermont Yankee Nuclear Power Corp. vs. Natural Resources Defense Council, 45 U.S.L.W. 3570, February 22, 1977) that the Nuclear Regulatory Commission "shall make any licenses granted between July 21, 1976 and such time when the mandate is issued subject to the outcome of the proceedings herein," this license shall be subject to the outcome of such proceedings.

H. This license is effective as of the date of issuance and shall expire six months from said date, unless extended for good cause shown, or upon earlier issuance or denial of a subsequent licensing action.

FOR THE NUCLEAR REGULATORY COMMISSION

15/ R.C. DeYoung
for Roger S. Boyd, Director
Division of Project Management
Office of Nuclear Reactor Regulation

Concurrent by E. Case Concurrent by

Attachment:
Appendices A & B-
Technical Specifications

IA	DOR	DSE:BC	DSE:AD	D:DSE
IDintz	RClark	WRehan	VMalone	HDenton
11/26/77	11/26/77	11/26/77	11/26/77	11/26/77

Date of Issuance: November 26, 1977		Obtained by			
OFFICE	LWR-3:LA:LPM	LWR-3:BC	LWR:AD	OELD	D:DPM
SURNAME	MRnsb/book:bs	ODParr	DBVassallo	S. TREBY	RSBoyd
DATE	11/26/77	11/26/77	11/26/77	11/26/77	11/26/77

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-338

VIRGINIA ELECTRIC AND POWER COMPANY

NORTH ANNA POWER STATION, UNIT NO. 1

NOTICE OF ISSUANCE OF A FACILITY OPERATING LICENSE

Notice is hereby given that pursuant to the Initial Decision of the Atomic Safety and Licensing Board, dated November 26, 1977, the Nuclear Regulatory Commission (the Commission) has issued Facility Operating License No. NPF-4 to the Virginia Electric and Power Company authorizing the loading of fuel and maintaining the unit in an operational Mode 5 condition (cold shutdown condition). The North Anna Power Station, Unit No. 1 is a pressurized water nuclear reactor located at the licensee's site near Mineral in Louisa County, Virginia.

The Initial Decision is subject to review by an Atomic Safety and Licensing Appeal Board prior to its becoming final. Any decision or action taken by an Atomic Safety and Licensing Appeal Board in connection with the Initial Decision may be reviewed by the Commission.

The Commission has made appropriate findings as required by the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license. The application for the license complies with the standards and requirements of the Act and the Commission's rules and regulations.

The license is effective as of its date of issuance and shall expire on six months from said date, unless extended for good cause shown, or upon earlier issuance or denial of a subsequent licensing action.

A copy of (1) the Initial Decision, dated November 26, 1977; (2) Facility Operating License No. NPF-4, complete with Technical Specifications (Appendices "A" and "B"); (3) the report of the Advisory Committee on Reactor Safeguards, dated January 17, 1977; (4) the Office of Nuclear Reactor Regulation's Safety Evaluation Report dated June 4, 1976 and its 7 supplements; (5) the Final Safety Analysis Report and amendments thereto; (6) the applicant's Environmental Report dated June 17, 1970 and supplements thereto; (7) the Draft Environmental Statement dated December 12, 1972; and (8) the Final Environmental Statement dated April 1973 and its Addendum, dated November 1976, and (9) Affidavit of Alexander W. Dromerick concerning the issuance of a fuel load license for North Anna Power Station, Unit No. 1, are available for public inspection at the Commission's Public Document Room at 1717 H Street, N.W., Washington, D. C., and at the County Administrator's Office, Louisa County Courthouse, P. O. Box 27, Louisa, Virginia 23093, and the Alderman Library Manuscripts Department, University of Virginia, Charlottesville, Virginia, 22901. A copy of the license may be obtained upon request addressed to the United States Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Project Management.

Copies of the Safety Evaluation and its supplements (Document No. NUREG-0053) and the addendum to the Final Environmental Statement

(Document No. NUREG-0134) may be purchased, at current costs, from the National Technical Information Service, Springfield, Virginia 22161.

Dated at Bethesda, Maryland, this 26th day of November 1977.

FOR THE NUCLEAR REGULATORY COMMISSION

Olan D. Parr

Olan D. Parr, Chief
Light Water Reactors Branch No. 3
Division of Project Management

NOV 26 1977

Docket Nos. 50-338
50-339

AMENDMENT TO INDEMNITY AGREEMENT NO. B-80

AMENDMENT NO. 2

Effective NOV 26 1977, Indemnity Agreement No. B-80, between Virginia Electric and Power Company, and the Nuclear Regulatory Commission, dated April 16, 1976, as amended, is hereby further amended as follows:

Item 2a. of the Attachment to the indemnity agreement is deleted in its entirety and the following substituted therefor:

Item 2 - Amount of financial protection

a. \$1,000,000 (From 12:01 a.m., April 16, 1976, to
12 midnight, NOV 26 1977, inclusive)

\$140,000,000 (From 12:01 a.m., NOV 26 1977)

Item 3 of the Attachment to the indemnity agreement is deleted in its entirety and the following substituted therefor:

Item 3 - License number or numbers

SNM-1600 (From 12:01 a.m., April 16, 1976, to
12 midnight, NOV 26 1977, inclusive)

NPF-4 (From 12:01 a.m., NOV 26 1977)

Item 5 of the Attachment to the indemnity agreement is amended by adding the following:

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Mutual Energy Liability Policy (Facility Form) MF-96
issued by Mutual Atomic Energy Liability Underwriters.

FOR THE UNITED STATES NUCLEAR REGULATORY COMMISSION

Edson G. Case, Acting Director
Office of Nuclear Reactor Regulation

Accepted _____, 1977

By VIRGINIA ELECTRIC AND POWER COMPANY

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DISTRIBUTION FOR NORTH ANNA POWER STATION, UNIT NO. 1 OPERATING LICENSE
NO. NPF-4, DATED NOV 2 6 1977

Docket File (50-338)

NRC PDR

Local PDR

LWR #3 File

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J. Rutberg, OELD

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M. Rushbrook

F. J. Williams

H. Smith

B. Scott, DPM

IE (3)

N. Dube, MIPC

M. Jinks, ADM, w/4 encl.

W. Miller, ADM

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V. Moore, LDSE

M. Ernst, DSE

W. Gammill, DSE

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J. Knight, DSS

D. Ross, DSS

R. Tedesco, DSS

B. Scharf, ADM, w/10 encl.

OELD Files

D. Skovholt, DPM

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T. Abernathy

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J. Yore