June 7, 2001

UNITED STATES OF AMERICA

Before the Nuclear Regulatory Commission

In the Matter of	)		
	)	Docket Nos.	50-280
Virginia Electric & Power Co.	)		50-281
	)		50-338
(Surry Power Station, Units 1 and 2	)		50-339
and	)		
North Anna Power Station,)	)		
Units 1 and 2	)		

APPLICATION FOR ORDER AND CONFORMING LICENSE AMENDMENTS TO TRANSFER FACILITY OPERATING LICENSES DPR-32, DPR-37, NPF-4 AND NPF-7

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

June 7, 2001

10 C.F.R. § 50.80
10 C.F.R. § 50.90
10 C.F.R. § 2.1215

United States Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555

Serial No. 01-324
NL&OS/GDM R3
Docket Nos. 50-280
50-281
50-338
50-339

Gentlemen:

APPLICATION FOR ORDER AND CONFORMING LICENSE AMENDMENTS FOR LICENSE TRANSFERS
SURRY POWER STATION UNITS 1 AND 2
NORTH ANNA POWER STATION UNITS 1 AND 2

Pursuant to 10 C.F.R. § 50.80, Virginia Electric and Power Company (Virginia Power) and Dominion Generation Corporation (Dominion Generation) hereby apply for an order consenting to the transfer of Facility Operating License Nos. DPR-32 and DPR-37 for the Surry Power Station, Units 1 and 2, and NPF-4 and NPF-7 for the North Anna Power Station, Units 1 and 2, from Virginia Power to Dominion Generation. Virginia Power and Dominion Generation also request conforming amendments to these licenses to delete references to Virginia Power and to authorize Dominion Generation to possess, use and operate the Surry and North Anna units, and to possess and use licensed materials at these units, under the same conditions and authorizations included in the current licenses.

Dominion Generation is being organized as a subsidiary of Virginia Power, and both will be wholly owned subsidiaries of Dominion Resources, Inc. (DRI). Virginia Power is proposing to transfer all of its generation assets, including its ownership interests in its nuclear facilities, to Dominion Generation pursuant to electric industry restructuring laws in the Commonwealth of Virginia, which require electric utilities in Virginia to separate generation from transmission and distribution functions. In response to these restructuring laws, Virginia Power is planning to structurally separate its generation functions from its transmission and distribution functions by transferring approximately $6 billion in generation assets to Dominion Generation, including the Surry and North Anna Power Stations. Dominion Generation will possess over 17,000 megawatts of

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generating capacity, with expected annual gross operating revenues exceeding $3.5 billion and annual net income exceeding $350 million. Through a series of transactions described in this application, Dominion Generation will become a subsidiary of Dominion Energy Holdings, Inc., which will be a holding company subsidiary of DRI holding all of DRI's generation assets.

This application does not require any amendments to the operating licenses other than those administrative or organizational changes needed to reflect the transfer of the licenses. The current nuclear operating organization will be transferred essentially intact into Dominion Generation. This application does not request approval of any physical changes to the nuclear facilities, or any changes to the conduct of operations. After the transfer of the licenses, the nuclear facilities will continue to be operated in accordance with their current licensing bases.

Virginia's restructuring laws call for the State Corporation Commission to direct the functional separation of generation from transmission and distribution by January 1, 2002. Virginia Power and Dominion Generation request that the NRC review this application on a schedule that will permit issuance of an order consenting to the transfer as promptly as possible, and in any event before November 30, 2001. Such consent should be immediately effective upon issuance and should permit the transfer and implementation date of the conforming amendments to occur up to one year after issuance or such later date as the NRC may permit. Virginia Power and Dominion Generation will keep the NRC informed if there are any significant changes in the status of other regulatory approvals or other developments that affect the schedule. Furthermore, it should be noted that there are license amendment requests for both North Anna and Surry Power Stations currently under NRC review that delete obsolete license conditions. Should either or both of these outstanding license amendment requests be approved and issued prior to the approval of this license transfer application, we will provide revised proposed license pages to the NRC Project Manager for the license transfer application that reflect the deletion of the obsolete license conditions.

Also, certain information included in Exhibit F of the attached license transfer application is confidential commercial information which Dominion Generation and Virginia Power request be withheld from public disclosure pursuant to 10 C.F.R. §§ 2.790 and 9.17(a)(4). A redacted version of exhibit F is provided in this application. A confidential version of Exhibit F is provided in a separate Addendum to this application, along with an affidavit supporting the request for withholding from public disclosure.

If the NRC requires additional information concerning this application, please contact Mr. Gary Miller at 804-273-2771. Service upon the applicants of comments, hearing requests, intervention petitions, or other pleadings should be made to Mr. David Lewis, Counsel for Virginia Power and Dominion Generation, at Shaw Pittman, 2300 N Street,

N.W., Washington, D.C. 20037 (Tel. 202-663-8474; fax. 202-663-8007); e-mail: david_lewis@shawpittman.com.

We appreciate your attention to this matter.

Very truly yours,

James P. O'Hanlon
President and Chief Operating Officer

Attachment

cc: NRC Region II Administrator
U.S. Nuclear Regulatory Commission
Region II
Sam Nunn Atlanta Federal Center
61 Forsyth St., SW, Suite 23T85
Atlanta, Georgia 30303-8931

M. J. Morgan
NRC Senior Resident Inspector
North Anna Power Station

R. A. Musser
NRC Senior Resident Inspector
Surry Power Station

Mr. J. A. Reasor
Old Dominion Electric Cooperative
Innsbrook Corporate Center
4201 Dominion Blvd.
Suite 300
Glen Allen, Virginia 23060

June 7, 2001

UNITED STATES OF AMERICA

Before the Nuclear Regulatory Commission

In the Matter of	)	
	)	Docket Nos. 50-280
Virginia Electric & Power Co.	)	50-281
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(Surry Power Station, Units 1 and 2)	)	50-339
(North Anna Power Station, Units 1 and 2)	)	

APPLICATION FOR ORDER AND CONFORMING LICENSE AMENDMENTS TO TRANSFER FACILITY OPERATING LICENSES

I. Introduction

Pursuant to 10 C.F.R. § 50.80, Virginia Electric and Power Company (Virginia Power) and Dominion Generation Corporation (Dominion Generation) hereby apply for an order consenting to the transfer of Facility Operating License Nos. DPR-32 and DPR-37 for the Surry Power Station, Units 1 and 2, and NPF-4 and NPF-7 for the North Anna Power Station, Units 1 and 2, from Virginia Power to Dominion Generation. Virginia Power and Dominion Generation also request conforming amendments to these licenses to delete references to Virginia Power and to authorize Dominion Generation to possess, use and operate the Surry and North Anna units, and to possess and use licensed materials at these units, under the same conditions and authorizations included in the current licenses.[1]

Dominion Generation is being organized as a subsidiary of Virginia Power, and both will be wholly owned subsidiaries of Dominion Resources, Inc. (DRI). Virginia Power is proposing to transfer all of its generation and related assets, including its ownership interests in its nuclear

[1] Old Dominion Electric Cooperative (ODEC) holds an 11.6 percent ownership interest in the North Anna Power Station. This application does not seek to transfer ODEC's interest or to delete the references to ODEC in the current licenses for North Anna.

facilities, to Dominion Generation pursuant to electric industry restructuring laws in the Commonwealth of Virginia, which require electric utilities in Virginia to separate generation from transmission and distribution functions. Virginia Power will retain its transmission and distribution assets and functions. Through a series of transactions described in this application, Dominion Generation will become a subsidiary of Dominion Energy Holdings, Inc., which will be a holding company subsidiary of DRI holding all of DRI's generation assets.

This application does not require any amendments to the nuclear licenses other than those administrative or organizational changes needed to reflect the transfer of the licenses. This application does not request approval of any physical changes to the nuclear facilities, or any changes to the conduct of operations. After the transfer of the licenses, the nuclear facilities will continue to be operated in accordance with their current licensing bases.

Marked-up pages showing the requested changes to the licenses and technical specifications are provided as Exhibit A to this application. Exhibit B is an evaluation showing that these amendments raise no significant hazards considerations.

II. Statement of the Purpose of the Transfer and Nature of the Transaction Making the Transfer Necessary or Desirable

The proposed transfers of the licenses for Virginia Power's nuclear facilities to Dominion Generation are part of the corporate restructuring of Virginia Power undertaken pursuant to the Virginia Electric Utility Restructuring Act. The Restructuring Act requires that the State Corporation Commission (SCC), which regulates electric service and rates in Virginia, direct the functional separation of generation, retail transmission, and distribution of all incumbent electric

utilities to be completed by January 1, 2002. The purpose of the Act is to establish retail choice for the generation component of electric service and to promote competition in the generation of electricity to take advantage of the economic efficiencies and lower costs that a market-based system offers.

In response to this Act, Virginia Power is proposing to structurally separate its generation functions from its transmission and distribution functions by transferring approximately $6 billion in generation assets to Dominion Generation. These assets include the Surry and North Anna Power Stations, other fossil and hydro plants, rights with respect to non-utility generation contracts, and other related assets. Dominion Generation would then operate as an Exempt Wholesale Generator, selling electricity within the wholesale market at competitive rates, subject to the jurisdiction of the Federal Energy Regulatory Commission (FERC). Virginia Power will retain its transmission and distribution assets and operations.

This reorganization is expected to occur as follows. Dominion Generation will initially be established as a subsidiary of Virginia Power. Thereafter, Virginia Power will transfer its generation assets to Dominion Generation, including (and subject to the NRC's consent and license amendments) title to the Surry and North Anna Power Stations (including all equipment, spare parts, fixtures, inventory, and other property necessary for the operation and maintenance of these facilities, and title to all new and used nuclear fuel and other licensed materials at the facilities, but excluding the switchyard, transmission lines, and other transmission assets).[2] At

[2] The assets to be transferred to Dominion Generation will include the independent spent fuel storage installations (ISFSIs) at North Anna and Surry. Virginia Power and Dominion Generation are submitting a separate application for NRC consent to the transfer of the specific licenses issued under 10 C.F.R. Part 72 for these ISFSIs.

the same time, Dominion Generation will assume all responsibility for the operation, maintenance, and eventual decommissioning of the facilities. With the possible exception of administrative support personnel (e.g., accounting, human relations, information technology) who could be assigned to Dominion Resources Services, Inc., or another entity, all employees in Virginia Power's nuclear organizations will become, at the time of transfer, employees of Dominion Generation. A separate subsidiary ("Dominion Energy Clearinghouse, Inc.") will also be established into which Virginia Power will transfer its trading and power marketing operations. Following the transfer of generation assets to Dominion Generation, Virginia Power will distribute the stock of Dominion Generation and Dominion Energy Clearinghouse, Inc. to Virginia Power's parent, DRI, in a tax-free spin-off. DRI will then contribute the stock to Dominion Energy Holdings, Inc., a newly formed holding company which will own all of the non-regulated electric generation assets within the DRI organization. Virginia Power and Dominion Generation request that the NRC consent to these license transfers, including any indirect transfer of control that the Commission may consider to occur as a result of the transfer of stock in the spin-off.

III. Supporting Information

A. Name of New Licensee

Dominion Generation Corporation

B. Address

Location: 120 Tredegar Street
Richmond, VA 23219

Mailing: P. O. Box 26532
Richmond, VA 23261

C. Description of Business or Occupation

Dominion Generation is being formed to own and operate Virginia Power's generation assets, and such other generating facilities as it may later build or acquire. Dominion Generation will be an Exempt Wholesale Generator.

D. Corporate Information

1. State of Incorporation and Place of Business

Dominion Generation is a corporation established under the laws of Virginia. Dominion Generation's principal place of business is Virginia.

2. Directors and Principal Officers

The names and addresses of the directors and principal officers of Dominion Generation, all of whom are U.S. citizens, are listed below:

Directors

Thos. E. Capps

Business: 100 Tredegar Street
Richmond, VA 23219

Thomas F. Farrell, II

Business: 120 Tredegar Street
Richmond, VA 23219

Principal Officers

Thomas F. Farrell, II – Chief Executive Officer

Business: 120 Tredegar Street
Richmond, VA 23219

James P. O'Hanlon – President and Chief Operating Officer

Business: 120 Tredegar Street
Richmond, VA 23219

David A. Christian – Senior Vice President – Nuclear Operations and Chief Nuclear Officer

Business: Innsbrook Technical Center
5000 Dominion Boulevard
Glen Allen, VA 23060

G. Scott Hetzer – Senior Vice President and Treasurer

Business: 100 Tredegar Street
Richmond, VA 23219

E. Paul Hilton – Senior Vice President – Bulk Sales

Business: Innsbrook Technical Center
5000 Dominion Boulevard
Glen Allen, VA 23060

Paul D. Koonce – Senior Vice President – Portfolio Management

Business: 120 Tredegar Street
Richmond, VA 23219

Edward J. Rivas – Senior Vice President – Fossil and Hydro

Business: Innsbrook Technical Center
5000 Dominion Boulevard
Glen Allen, VA 23060

John A. Shaw – Senior Vice President – Financial Management

Business: 120 Tredegar Street
Richmond, VA 23219

Martin L. Bowling, Jr. –Vice President – Operations/Regulated

Business: Innsbrook Technical Center
5000 Dominion Boulevard
Glen Allen, VA 23060

James W. Braswell – Vice President – Operations/Unregulated

Business: 120 Tredegar Street
Richmond, VA 23219

Malcolm G. Deacon, Jr. – Vice President – Technical Services

Business: 120 Tredegar Street
Richmond, VA 23219

Pamela F. Faggert – Vice President – Chief Environmental Officer

Business: Innsbrook Technical Center
5000 Dominion Boulevard
Glen Allen, VA 23060

Eugene S. Grecheck – Vice President – Nuclear Support Services

Business: Innsbrook Technical Center
5000 Dominion Boulevard
Glen Allen, VA 23060-6711

Leslie N. Hartz – Vice President – Nuclear Engineering

Business: Innsbrook Technical Center
5000 Dominion Boulevard
Glen Allen, VA 23060

James K. Martin – Vice President – Business Development

Business: 120 Tredegar Street
Richmond, VA 23219

Annetta R. Riekel – Vice President – Human Resources

Business: 120 Tredegar Street
Richmond, VA 23219

Richard T. Thatcher – Vice President – Market Services

Business: Innsbrook Technical Center
5000 Dominion Boulevard
Glen Allen, VA 23060

Patricia A. Wilkerson – Vice President and Secretary

Business: 100 Tredegar Street
Richmond, VA 23219

Richard H. Blount, II – Site Vice President - Surry

Business: Surry Power Station
5570 Hog Island Road
Surry, VA 23883

David A. Heacock – Site Vice President – North Anna

Business: North Anna Power Station
End of Route 700
Mineral, VA 23117

Lee D. Katz – Controller

Business: 120 Tredegar Street
Richmond, VA 23219

James P. Carney – Assistant Treasurer

Business: 100 Tredegar Street
Richmond, VA 23219

E. J. Marks, III – Assistant Secretary

Business: Dominion Tower
625 Liberty Avenue
Pittsburgh, PA 15222

Henry C. Riely – Assistant Secretary

Business: 100 Tredegar Street
Richmond, VA 23219

3. No Foreign Ownership or Control

Dominion Generation is not owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government.

4. No Agency

In seeking to become the licensed owner and operator of the Surry and North Anna Power Stations, Dominion Generation is not acting as the agent or representative of another person.

5. Relationship with Shareholders

Dominion Generation will be established initially as a subsidiary of Virginia Power, but its stock will then be transferred, in a tax-free spin-off, to Virginia Power's parent, DRI. DRI will then contribute the stock to Dominion Energy Holdings, Inc. After the transaction is complete, Dominion Generation will be an indirect, wholly owned subsidiary of DRI. A chart showing the corporate ownership of Dominion Generation is provided as Exhibit C.

DRI is the largest fully integrated natural gas and electric power provider in the United States with over $29 billion in assets, over $9 billion in annual revenue, and over $2 billion in annual operating cash flow. DRI's most recent annual report is attached as Exhibit D.

E. Technical Qualifications

Dominion Generation's internal organization will essentially mirror Virginia Power's current nuclear organization. Therefore, the technical qualifications of the organization operating Surry and North Anna will be unchanged.

The Chief Nuclear Officer, Site Vice Presidents, and all subordinate positions will remain the same, as will their duties and responsibilities. The clear lines of authority, responsibility, and communication from the highest management levels through intermediate levels to and including all operating organization positions will be maintained. The plant staff, including senior managers, will remain essentially unchanged by the transfer. Similarly, other than possible

realignment of administrative and support services (such as accounting, human relations, information technology, etc.), it is expected that the organizational structure, including lines of authority and communication, at and below the Site Vice President's position will not be changed by the transfer. If Dominion Generation determines that any senior management changes will be made contemporaneously with the transfer, Dominion Generation will ensure that any new managers meet all existing qualification requirements and will inform the NRC and provide the NRC with a résumé of the new manager prior to the license transfer.

An organization chart for Dominion Generation is provided as Exhibit E.

F. Financial Qualifications

In accordance with 10 C.F.R. § 50.33(f) and the Standard Review Plan on Power Reactor Licensee Financial Qualifications and Decommissioning Funding Assurance (NUREG-1577, Rev. 1), projected income statements for the five year period from January 1, 2002 through December 31, 2006 are provided as Exhibit F.[3] The projected income statements show that anticipated sales of energy and capacity from Dominion Generation's facilities provide reasonable assurance of an adequate source of funds to meet Dominion Generation's anticipated expenses.

[3] Certain information in Exhibit F is confidential commercial information which Dominion Generation and Virginia Power request be withheld from public disclosure pursuant to 10 C.F.R. §§ 2.790 and 9.17(a)(4). A redacted version of Exhibit F is provided in this application. A confidential version of Exhibit F is provided in a separate Addendum to this application, along with an affidavit supporting the request for withholding from public disclosure.

As reflected in the projected income statement, Dominion Generation will possess over 17,000 megawatts of generating capacity, including fossil, hydroelectric and nuclear units. While the projected income from the sales of nuclear capacity and energy is alone projected to be sufficient to cover nuclear expenses, Dominion's total net revenues exceed these expenses by a wide margin.

The revenues included in the projected income statements are derived from the sale of energy and capacity to Virginia Power under a power purchase agreement (PPA), as well as additional sale of energy and capacity in the wholesale market at market-based rates. Virginia Power will remain obligated under the Restructuring Act to provide generation service to all retail customers in its Virginia service territory at capped, cost-of-service based rates ("capped rates") during a transition period, and to act as a default service provider if required by the SCC.[4] To meet these obligations, Virginia Power will enter into a PPA with Dominion Generation to guarantee a source of generation service to Virginia Power retail customers who do not switch to a competitive service provider when given the opportunity to do so, or who do switch and then voluntarily or involuntarily return to capped rate service or default service if provided by Virginia Power. Pursuant to the PPA, Dominion Generation will also provide energy and

[4] Under the Restructuring Act, capped rates shall be established effective January 1, 2001 and expiring on July 1, 2007 (unless terminated earlier) for customers purchasing bundled electric transmission, distribution and generation services from an incumbent utility. The capped rates shall be the rates in effect for the incumbent utility on the effective date of the Restructuring Act, or just and reasonable rates subsequently placed into effect pursuant to an application filed by an incumbent utility with the SCC prior to January 1, 2001. Capped rates may be adjusted by the SCC in connection with utilities' recovery of fuel costs, changes in taxation, and financial distress of the utility beyond its control. A utility may petition the SCC to terminate the capped rates to all customers any time after January 1, 2004, and such capped rates may be terminated upon the SCC finding of an effectively competitive market for generation within the service territory of that utility.

capacity for Virginia Power's retail customers in North Carolina and for wholesale customers having existing generation supply contracts with Virginia Power.

The PPA will be in the form of a firm wholesale supply contract similar to those used throughout the industry. Under the PPA, through July 1, 2007 (unless capped rates are eliminated sooner, which could occur under the Restructuring Act as early as January 1, 2004), Dominion Generation will receive the total rate revenue earned by Virginia Power under the capped rates in Virginia, retail sales in North Carolina, and wholesale supply contracts, less that portion of the rate revenue associated with the charges for transmission and distribution. In addition, Dominion Generation will receive the revenue that Virginia Power collects through a wires charge during the capped rate period. Pursuant to the Restructuring Act, this wires charge will equal the excess of Virginia Power's unbundled capped rates for generation over the projected market prices for generation and will be collected from customers choosing alternative suppliers of generation or receiving default service. After the capped rate period, Dominion Generation will be compensated at rates based upon competitive market prices for service provided to Virginia Power.

The Projected Income Statement in Exhibit F assumes that the capped rate collection will continue through July 1, 2007, since capped rates would only be terminated earlier upon a petition by Virginia Power. During this transition period, the Projected Income Statement assumes that Dominion Generation will receive the capped rates (less that portion of the rate revenue associated with the charges for transmission and distribution) for the amount of energy and capacity corresponding to Virginia Power's current native load (with an approximately one percent annual load growth). This assumption is appropriate because Virginia Power will receive

and pass on to Dominion Generation capped rates from its customers who choose to receive bundled services during the transition period, as well as a wires charge providing the excess of Virginia Power's unbundled capped rates for generation over the projected market prices for generation from any customers choosing alternative suppliers of generation. Thus, Dominion Generation will be able to sell at market price any capacity and energy freed up by customers choosing alternative suppliers and will in addition receive the wires charge bringing the total revenue for that energy and capacity up to the capped rate level. The projections of expenses in Exhibit F are based on Virginia Power's current five-year forecasts prepared for budgeting and long-range planning purposes.

A projected opening balance sheet is provided as Exhibit G. It is anticipated that following the transfer of generation assets, most of Virginia Power's debt securities will initially remain outstanding and will remain the legal obligations of Virginia Power. Responsibility for payment of the interest and principal on certain of these securities will become the obligation of Dominion Generation through an assignment and assumption agreement. The objective of this reallocation will be to maintain Virginia Power's existing credit rating and to secure an investment grade rating for Dominion Energy Holdings, Inc. The debt service payments allocated to Dominion Generation are included in the projected income statements.

Dominion Generation's projected assets and revenues also provide reasonable assurance that the company has the ability to bear the costs that might be associated with an outage at one or more of the units. The operations and maintenance cost over a six-month period at any unit is projected to be about $15 million. In comparison, Dominion Generation will have total assets of approximately $6 billion, annual gross operating revenues exceeding $3.5 billion, and annual net

income exceeding $350 million. Further, as explained above, Dominion Energy Holdings, Inc. is expected to have an investment grade credit rating, which will enable it to raise additional funds for Dominion Generation as necessary.

G. Decommissioning Funding

Dominion Generation will continue to meet the NRC's decommissioning funding requirements, as set forth in 10 C.F.R. § 50.75, by means of an external sinking fund with periodic contributions derived from cost-of-service based rates and non-bypassable charges. At the time of transfer, Virginia Power will transfer to Dominion Generation all of its decommissioning trusts for its nuclear facilities, including its Qualified and Nonqualified funds for the North Anna and Surry units. The balances in these funds as of December 31, 2000, and the projected balances as of the expected transfer date are shown in Exhibit H. Exhibit H also shows the minimum decommissioning funding requirement for each, as calculated in accordance with 10 C.F.R. § 50.75(c).

The Restructuring Act allows incumbent utilities to obtain SCC approval of a plan "to assure full funding of its nuclear decommissioning obligation." Virginia Power's functional separation plan, which has been submitted to the SCC for approval,[5] proposes to accomplish this objective by continuing to collect funds for decommissioning from ratepayers. For retail customers in Virginia receiving service from a competitive service provider, these funds will be collected until July 1, 2007, through the distribution component of the unbundled capped rates

[5] The SCC's decision on Virginia Power's restructuring plan is expected to be issued by the end of the year. Virginia Power will notify the NRC when its restructuring plan is approved and will inform the NRC if any of the assumptions in this application are materially altered by the SCC decision.

for retail electric service at the level presently being collected in cost-of-service based rates. For Virginia customers receiving bundled service, such funds will be recovered through bundled capped rates. In addition, Virginia Power will continue to collect decommissioning funds through its cost-of-service based rates for retail sales in North Carolina, for certain long-term wholesale contracts and for certain retail sales that are not subject to the SCC's jurisdiction.[6] Exhibit H also summarizes these continuing collections.

All decommissioning funds collected by Virginia Power will be separately identified and transferred to Dominion Generation, which will immediately deposit them in the trust accounts. A Decommissioning Funds Collection Agent Agreement to effectuate this conveyance is provided as Exhibit I hereto.

Thus, Virginia Power will be collecting directly and Dominion Generation will be collecting indirectly the decommissioning costs for North Anna and Surry through cost-of-service rates. Further, the mechanism for collecting decommissioning funds in the distribution component of the capped rates established under the Restructuring Act also meets the definition of a non-bypassable charge in 10 C.F.R. § 50.2. Exhibit J hereto provides worksheets demonstrating the adequacy of these continuing collections.

[6] These contracts include contracts with federal agencies, including military installations, the General Services Administration and other federal governmental agencies located within Virginia Power's service territory. Such contracts extend through October 1, 2006. They also include sales to state and local governmental entities, including municipalities. The contracts for these sales are assumed in Exhibit H to continue through the capped rate period until July 1, 2007.

H. Antitrust

In accordance with the Commission's decision in Kansas Gas and Electric Company (Wolf Creek Generating Station, Unit 1), CLI-99-19, 49 N.R.C. 441 (1999), antitrust review of license transfer applications after initial licensing are not required by the Atomic Energy Act. In addition, Surry Units 1 and 2 are licensed under section 104b of the Atomic Energy Act and are exempt from NRC antitrust review for that reason as well.

I. Other Licensing Considerations

1. Offsite Power

A suitable agreement will be put into place to ensure that Virginia Power, and/or any future Regional Transmission Operator (RTO) will continue to provide a reliable interconnection for delivery of offsite power to Dominion Generation's North Anna and Surry Power Stations. The agreement will require that the switchyard and associated transmission assets be maintained in compliance with General Design Criterion 17, and will require that any proposed modifications that could potentially affect the provision of reliable offsite power to safety-related equipment be provided to Dominion Generation for its review prior to implementation. The agreement will also require Virginia Power (and/or RTO) to schedule, perform and conduct maintenance activities for the transmission assets in the switchyard in accordance with applicable NRC requirements and commitments, including the maintenance rule. Entries by transmission and distribution personnel into the switchyard for maintenance work will be required to be coordinated with the licensee, and work on safety-related equipment will be controlled under the stations' QA programs. No equipment that could affect the provision of reliable offsite power to

the licensee will be taken out of service without the coordination of Dominion Generation, other than for operating contingencies and emergencies to correct or mitigate a situation affecting transmission reliability or safety.

2. Control of Exclusion Area

Upon approval of the transfer, Dominion Generation will own all of the exclusion areas for North Anna and Surry, including the real property on which the switchyard and onsite transmission lines are located. Dominion Generation will grant any necessary easement rights to Virginia Power (and/or RTO) for the purposes of connecting Dominion Generation to the transmission system for performing maintenance in the switchyards, subject to Dominion Generation's control and right to exclude personnel from the exclusion areas.

3. Nuclear Insurance

In accordance with Art. IV.2 of the NRC Indemnity Agreements for the Surry and North Anna Power Stations, Virginia Power and Dominion Generation request NRC approval of the assignment and transfer of the Price Anderson Indemnity Agreements for the Surry and North Anna Power Stations to Dominion Generation upon license transfer. Dominion Generation's Projected Income Statements provide adequate assurance that Dominion Generation will be able to pay the annual retrospective premium for the Surry and North Anna Power Stations, pursuant to 10 CFR § 140.21(e)-(f). Prior to the license transfer, Dominion Generation will obtain all required nuclear property damage insurance pursuant to 10 C.F.R. § 50.54(w) and nuclear energy liability insurance pursuant to section 170 of the Act and 10 C.F.R. Part 140.

4. Standard Contract for Disposal of Spent Nuclear Fuel

Upon closing, Dominion Generation will assume title to and responsibility for the storage and disposal of spent nuclear fuel at the Surry and North Anna units. Virginia Power will assign, and Dominion Generation will assume, Virginia Power's rights and obligations under the Standard Contract with the Department of Energy.

5. Continuation of the Current Licensing Basis

This application does not request approval of or involve any physical changes in the units, in plant configuration, or to the conduct of operations. After transfer of the license, the units will continue to be operated and maintained in accordance with each unit's current licensing basis, and Dominion Generation will assume all regulatory commitments. Other than the change in licensee, and the few related organizational changes described in this application, there will be no change in the current licensing bases for Surry Units 1 and 2 and North Anna Units 1 and 2 associated with this license transfer. No other licensing commitments to the NRC on the dockets of these facilities, other than those specifically described in this application, are being changed as a result of the license transfer.

As part of the transfer of generation assets, Dominion Generation will acquire all documents, correspondence, books, records, medical records, operating manuals, safety manuals and maintenance manuals, inspection reports, drawings, models, engineering designs, blueprints, as-built plans, specifications, procedures, studies, reports, quality assurance records, purchasing records and equipment repair, data, safety, maintenance or service records relating to the design, construction, licensing, regulation, operation or decommissioning of the units. Dominion

Generation will also acquire rights to any documents owned by third parties and licensed to Virginia Power which are used in or necessary to the licensing, operation or decommissioning of the units.

a) Quality Assurance Programs

Upon transfer, Dominion Generation will assume the authority and responsibility for the functions necessary to fulfill the quality assurance (QA) requirements of 10 CFR 50, Appendix B, and will assume the existing QA Programs developed and implemented under the Surry and North Anna licenses. No substantive changes will be made to the existing QA organization as a result of the transfer of the licenses to Dominion Generation. No changes will be made as a result of the transfer of the licenses that will result in a reduction in the commitments in the QA Program descriptions previously accepted by the NRC.

Any changes made to the existing QA Programs for Surry and North Anna will be made in accordance with 10 CFR 50.54(a). If Virginia Power or Dominion Generation identifies any changes to the QA Programs that would result in a reduction in commitments, they will apply to the NRC for approval of such changes, which will not be implemented until so approved. Determinations as to whether any proposed change(s) would result in a reduction in commitments will be made in accordance with Virginia Power's currently approved plans, programs and procedures.

b) Emergency Preparedness

Upon transfer, Dominion Generation will assume the authority and responsibility for functions necessary to fulfill the emergency planning and preparedness requirements specified in

10 C.F.R. § 50.47(b) and 10 C.F.R. Part 50, Appendix E, and will assume the existing Surry and North Anna emergency plans, as well as the Corporate Emergency Response Plan. Dominion Generation anticipates that no changes to the emergency plans will be made that will result in a decrease in the effectiveness of the plans, and that the plans will continue to meet the standards of 10 C.F.R. § 50.47(b) and the requirements of 10 C.F.R. Part 50, Appendix E. The license transfer will not adversely affect the effectiveness of the emergency planning organization or compliance with emergency preparedness requirements.

Any changes made to the existing emergency plans for Surry and North Anna will be made in accordance with 10 C.F.R. § 50.54(q). Any specific emergency plan changes will be submitted to the NRC within 30 days after the changes are made, pursuant to 10 C.F.R. § 50.54(q) and 10 C.F.R. Part 50, Appendix E, Section IV. If Virginia Power or Dominion Generation identifies any proposed changes that would decrease the effectiveness of the approved emergency plans, they will apply to the NRC for approval of such proposed changes, which will not be implemented until so approved. Determinations as to whether any proposed change(s) would result in a decrease in effectiveness will be made in accordance with Virginia Power's currently approved plans, programs, and procedures.

Dominion Generation does not anticipate any substantive changes to the existing emergency organizations as a result of this transfer. Ownership of or sufficient rights of control over off-site emergency sirens will be transferred to Dominion Generation. Existing agreements for other emergency support from organizations and agencies not affiliated with Virginia Power will be assigned to Dominion Generation. Virginia Power and Dominion Generation plan to notify the parties to such agreements in advance of the transfer of Surry and North Anna units to

Dominion Generation and advise those parties of Dominion Generation's responsibility for management and operation of those plants, effective as of the transfer date.

In sum, the license transfer will not adversely affect compliance with emergency preparedness requirements.

c) Security Plans

Upon transfer, Dominion Generation will assume the authority and responsibility for the functions necessary to fulfill the security planning requirements specified in 10 CFR Part 73, and will assume the existing NRC-approved physical security, guard training and qualification, and safeguards contingency plans developed and implemented by Virginia Power. Dominion Generation anticipates that no changes will be made as a result of the license transfers that will result in a decrease in the effectiveness of the plans, and that the plans will continue to meet the standards of 10 CFR Part 73, Appendix C.

Any changes made to the plans will be made in accordance with 10 CFR § 50.54(p). Any specific security plan changes will be submitted to the NRC within two months after the changes are made, pursuant to 10 C.F.R. § 50.54(p)(2). If Dominion Generation or Virginia Power identifies any proposed change that would decrease the effectiveness of the approved security plans, such proposed changes will not be implemented until approved by the NRC. Determination as to whether any proposed change(s) would result in a decrease in effectiveness will be made in accordance with Virginia Power's currently approved security plans, programs, and procedures.

d) Safety Analysis Report

The proposed license transfers and conforming administrative license amendments will not change or invalidate information presently appearing in the Safety Analysis Reports (SARs) for Surry Units 1 and 2 and North Anna Units 1 and 2 with the exception of the information changed as a result of this application. Changes necessary to accommodate the proposed transfers and conforming administrative license amendments will be incorporated into the SARs in accordance with 10 C.F.R. § 50.71(e) following NRC approval of the request for consent to transfer the licenses.

J. Agreement to Limit Access to Restricted Data

This application does not involve any Restricted Data or other classified defense information, and it is not expected that any such information will be raised or required by the licensed activities at the Surry or North Anna units. In the event that licensed activities do involve Restricted Data in the future, Dominion Generation agrees that it will appropriately safeguard such information and it will not permit any individual to have access to Restricted Data until the Office of Personnel Management investigates and reports to the NRC on the character, associations, and loyalty of such individual, and the NRC determines that permitting such person to have access to Restricted Data will not endanger the common defense and security of the United States.

K. Environmental Review

The proposed transfer will not result in any change in the types, or any increase in the amounts, of any effluents that may be released offsite, and will not cause any increase in

individual or cumulative occupational radiation exposure, at any of the transferred units. Further, the NRC has determined that license transfers are categorically exempt from further environmental review as stated in 10 C.F.R. § 51.22(c)(21). Accordingly, the NRC's actions will involve no significant environmental impact.

IV. Effective Date

Virginia Power and Dominion Generation request that the NRC review this application on a schedule that will permit issuance of an order consenting to the transfer as promptly as possible, and in any event before November 30, 2001. The restructuring and transfer of Virginia Power's generation assets also require approvals or actions from other agencies, including the Federal Energy Regulatory Commission, Virginia State Corporation Commission, North Carolina Utilities Commission, Securities and Exchange Commission and the Internal Revenue Service. The transfer of generation assets to Dominion Generation may also require approvals to be obtained from or notices to be provided to the Environmental Protection Agency, the Virginia Department of Environmental Quality, the West Virginia Division of Environmental Protection, the North Carolina Department of Environment and Natural Resources, the Maryland Department of the Environment, and the various counties and/or cities in which the Virginia Power generating assets are located. Virginia Power and Dominion Generation will keep the NRC staff informed as to the status of other necessary approvals and will notify the NRC staff when they are ready for the conforming license amendments to be issued.

V. Affirmation

I, James P. O'Hanlon, being duly sworn, state that I am President and Chief Operating Officer of Dominion Generation Corporation and Virginia Electric and Power Company, that I am authorized to sign and file this Application with the Nuclear Regulatory Commission on behalf of Dominion Generation Corporation and Virginia Electric and Power Company, and that the statements made and the matters set forth herein are true and correct to the best of my knowledge, information, and belief.

James P. O'Hanlon
President and Chief Operating Officer

STATE OF Virginia
City
~~COUNTY~~ OF Richmond

Subscribed and sworn to before me, a Notary Public, in and for the County and State above named, this 7th day of June, 2001.

Betty W. Moore

My Commission Expires: January 31, 2004

List of Exhibits

Exhibit A	Proposed Changes to the Facility Operating Licenses and Technical Specifications
Exhibit B	Determination of No Significant Hazards Considerations
Exhibit C	Corporate Ownership Structure
Exhibit D	Annual Report for Dominion Resources, Inc.
Exhibit E	Organization Chart for Dominion Generation Corporation
Exhibit F	Projected Income Statement (Non Proprietary Version)
Exhibit G	Opening Balance Sheet
Exhibit H	Status of Decommissioning Funds and Summary of Continuing Collections
Exhibit I	Decommissioning Funds Collection Agent Agreement
Exhibit J	Decommissioning Funding Worksheets

Addendum

The following attachments are bound separately in an Addendum to this Application:

Exhibit F	Projected Income Statement (Proprietary Version)

Affidavit of James P. O'Hanlon Supporting Withholding for Public Disclosure

Exhibit A

Proposed Changes to the Facility Operating Licenses and Technical Specifications Associated with the Proposed Transfer of North Anna and Surry Power Stations, Units 1, and 2, from Virginia Electric and Power Company to Dominion Generation Corporation

I. Reason for the Change

Virginia Electric and Power Company (Virginia Power) is proposing to transfer the licenses for its nuclear facilities to Dominion Generation Corporation (Dominion Generation) pursuant to electric industry restructuring laws in the Commonwealth of Virginia, which require electric utilities in Virginia to separate generation from transmission and distribution functions. All of Virginia Power's generation facilities will be transferred to Dominion Generation while Virginia Power will retain its transmission and distribution assets and functions.

Consequently, conforming changes to the Facility Operating Licenses and accompanying Technical Specifications for North Anna and Surry Power Stations, Units 1 and 2, are necessary to reflect the transfer of ownership of the nuclear facilities to Dominion Generation. The proposed changes delete references to Virginia Electric and Power Company and variations thereof and replace them with references to Dominion Generation Corporation and variations thereof. Other minor administrative changes are also being implemented as described below to facilitate the license transfers.

II. Basis for the Change

After the license transfer, Virginia Power will retain no responsibility for the regulatory obligations contained in License Nos. DPR-32 and 37 and NPF-4 and 7 for Surry Units 1 and 2 and North Anna Units 1 and 2, respectively. Accordingly, the entity to which that responsibility is being transferred, Dominion Generation Corporation, must be identified in the Facility Operating Licenses and accompanying Technical Specifications.

III. Safety Assessment

The proposed changes to the Facility Operating Licenses and accompanying Technical Specifications for Surry and North Anna Power Stations Units 1 and 2 identify Dominion Generation Corporation as the new owner and operator of the facilities and make minor changes that support the license transfers. No physical modifications are being made to plant systems or components nor are any significant changes in day-to-day operation of the units being affected. Therefore, the proposed changes are administrative in nature and will not adversely affect nuclear safety or safe plant operation.

IV. Description of the Proposed Changes

The proposed changes to the Facility Operating Licenses and accompanying Technical Specifications for Surry and North Anna Power Stations Units 1 and 2 include the following: 1) the deletion of references to Virginia Electric and Power Company (VEPCO) as the operator and owner of Surry and North Anna Power Stations Units 1 and 2, and 2) the authorization of Dominion Generation Corporation (Dominion Generation), to possess, use and operate Surry and North Anna Power Stations Units 1 and 2 under essentially the same conditions and authorization included in the existing licenses. The actual wording changes (marked-up and typed pages) associated with the conforming administrative amendments to the Facility Operating Licenses and accompanying Technical Specifications for Surry and North Anna Power Stations Units 1 and 2 are provided in Attachments 1 and 2 to this Exhibit, respectively. A summary of the proposed changes is listed below.

Surry Power Station Units 1 and 2

The following changes to the Surry Unit 1 Facility Operating License are proposed:

Surry Unit 1 License Section, page number	**Action Description**
Heading, page 1	Change "VIRGINIA ELECTRIC AND POWER COMPANY" to "DOMINION GENERATION CORPORATION" to reflect the ownership change.
Item d, page 1	Change "Virginia Electric and Power Company" to "Dominion Generation Corporation" to reflect the change in owner.
First sentence, page 2	Change "Virginia Electric and Power Company" to "Dominion Generation Corporation" to reflect the change in owner.
Item 3.B, Technical Specifications, page 3	Delete amendment number "223" to facilitate new amendment number pending this request.

The following changes to the Surry Unit 2 Facility Operating License are proposed:

Surry Units 2 License Section, page number	**Action Description**
Heading, page 1	Change "VIRGINIA ELECTRIC AND POWER COMPANY" to "DOMINION GENERATION CORPORATION" to reflect the ownership change.
Item d, page 1	Change "Virginia Electric and Power Company" to "Dominion Generation Corporation" to reflect the change in owner.
First sentence, page 2	Change "Virginia Electric and Power Company" to "Dominion Generation Corporation" to reflect the change in owner.
Item 3.B, Technical Specifications, page 3	Delete amendment number "223" to facilitate new amendment number pending this request.

The following changes to the Surry Units 1 and 2 Technical Specifications are proposed:

Technical Specification, page number	**Action Description**
TS 4.17 Shock Suppressors (Snubbers), Item F.1, page 4.17-6	Change "Virginia Electric and Power Company" to "licensee's" to reflect the change in owner.
TS 5.1 Site, Specification, page 5.1-1	Change "Virginia Electric and Power Company" to "Dominion Generation Corporation" to reflect the change in owner.
TS 6.1, Administrative Controls, page 6.1-2	Change "VEPCO's" to "the licensee's" to reflect the change in owner.

North Anna Power Station Unit 1

The following changes to the North Anna Power Station Unit 1 Facility Operating License are proposed:

License Section, page number	**Action Description**
Heading, page 1	Change "VIRGINIA ELECTRIC AND POWER COMPANY" to "DOMINION GENERATION CORPORATION" to reflect the ownership change.
Item 1.A, page 1	Change "Virginia Electric and Power Company (VEPCO)" to "Dominion Generation Corporation (Dominion Generation)" to reflect the change in owner.
Item 1.D, page 1	Change "VEPCO" to "Dominion Generation" to reflect the ownership change.
Item 1.E, page 1	Change "VEPCO" to "Dominion Generation" to reflect the ownership change.
Item 2, page 2	Change "Virginia Electric and Power Company" to "Dominion Generation Corporation " to reflect the ownership change.
Item 2.A, page 2	Change "Virginia Electric and Power Company" to "Dominion Generation Corporation" to reflect the ownership change.

Item 2.B, page 2	Change "VEPCO" to "The licensee" in five locations to reflect the ownership change.
Item 2.C(1), page 3	Change "VEPCO" to "Dominion Generation" in two locations to reflect the ownership change. Put a space between the words "possess" and "and" in the second line to correct an editorial error.
Item 2.C(2), page 3	Change "VEPCO" to "Dominion Generation" to reflect the ownership change.
Item 2.C(3), page 3	Change "VEPCO" to "Dominion Generation" to reflect the ownership change.
Item 2.C(4), page 3	Change "VEPCO" to "Dominion Generation" to reflect the ownership change.
Item 2.C(5), page 3	Change "VEPCO" to "Dominion Generation" to reflect the ownership change.
Item 2.D(1), page 4	Change "VEPCO" to "The licensee" to reflect the ownership change.
Item 2.D(2), page 4	Delete amendment number "224" to facilitate new amendment number pending this request.
Item 2.D(3), Item c, page 4	Change "Virginia Electric and Power Company" to "The licensee" to reflect the ownership change.
Item 2.D(3), Item d, page 4	Change "Virginia Electric and Power Company" to "The licensee" to reflect the ownership change.
Item 2.D(3), Item e, page 4	Change "Virginia Electric and Power Company" to "the licensee" to reflect the ownership change.
Item 2.D(3), Item f, page 4	Change "Virginia Electric and Power Company" to "The licensee" to reflect the ownership change.
Item 2.D(3), Item j, page 5	Change "Virginia Electric and Power Company" to "licensee" to reflect the ownership change.
Item 2.D(3), Item r, page 5	Change "Virginia Electric and Power Company" to "licensee" to reflect the ownership change.
Item 2.D(3), Item u, page 5	Change "VEPCO" to "The licensee" to reflect the ownership change.

Attachment 1, Construction Related Items to be Completed, 1st paragraph	Change "Virginia Electric and Power Company" to "licensee" to reflect the ownership change.
Attachment 1, Construction Related Items to be Completed, Item A	Change "Virginia Electric and Power Company" to "licensee" to reflect the ownership change.

The following changes to the North Anna Unit 1 Technical Specifications and Bases are proposed:

Technical Specification, page number	**Action Description**
Power Distribution Limits, Bases, B3/4 2-5	Change "Virginia Electric and Power Company" to "Dominion Generation" in two locations to reflect the ownership change.
TS 6.3.1, Footnote – page 6-5	Change "VEPCO's" to "the licensee's" to reflect the ownership change.

The following change to North Anna Unit 1 Appendix B, Environmental Protection Plan, is proposed:

Section, page number	**Action Description**
Cover page	Change "VIRGINIA ELECTRIC AND POWER COMPANY" to "DOMINION GENERATION CORPORATION" to reflect the ownership change.

The following change to North Anna Unit 1 Appendix C, Additional Conditions, is proposed:

Section, page number	**Action Description**
Cover page	Change "VIRGINIA ELECTRIC AND POWER COMPANY" to "DOMINION GENERATION CORPORATION" to reflect the ownership change.

North Anna Power Station Unit 2

The following changes to the North Anna Power Station Unit 2 Facility Operating License are proposed:

License Section, page number	**Action Description**
Heading, page 1	Change "VIRGINIA ELECTRIC AND POWER COMPANY" to "DOMINION GENERATION CORPORATION" to reflect the ownership change.
Item 1.A, page 1	Change "Virginia Electric and Power Company (VEPCO)" to "Dominion Generation Corporation (Dominion Generation)" to reflect the change in owner.
Item 1.E, page 1	Change "VEPCO" to "Dominion Generation" to reflect the ownership change.
Item 1.F, page 1	Change "VEPCO" to "Dominion Generation" to reflect the ownership change.
Item 2, page 2	Change "Virginia Electric and Power Company (VEPCO)" to "Dominion Generation Corporation (Dominion Generation or the licensee)" to reflect the ownership change.
Item 2.A, page 2	Change "VEPCO" to "Dominion Generation" to reflect the ownership change. Change "VEPCO's" to "the licensee's" to reflect the ownership change.
Item 2.B(1), page 2	Change "VEPCO" to "Dominion Generation" in two locations to reflect the ownership change.
Item 2.B(2), page 2	Change "VEPCO" to "Dominion Generation" to reflect the ownership change. Change "VEPCO's" to "the licensee's" to reflect the ownership change.
Item 2.B(3), page 2	Change "VEPCO" to "Dominion Generation" to reflect the ownership change.
Item 2.B(4), page 3	Change "VEPCO" to "Dominion Generation" to reflect the ownership change.

Item 2.B(5), page 3	Change "VEPCO" to "Dominion Generation" to reflect the ownership change.
Item 2.C(1), Maximum Power Level, page 3	Change "Vepco" to "Dominion Generation" to reflect the ownership change.
Item 2.C(2), Technical Specifications, page 4	Delete amendment number "205" to facilitate new amendment number pending this request.
Item 2.C(3), Initial Test Program, page 4	Change "VEPCO" to "The licensee" to reflect the ownership change. Change "VEPCO's" to "the licensee's" to reflect the ownership change.
Item 2.C(3), Initial Test Program, Item a, page 4	Change "VEPCO's" to "the licensee's" to reflect the ownership change.
Item 2.C(3), Initial Test Program, Item b, page 4	Change "VEPCO's" to "the licensee's" to reflect the ownership change.
Item 2.C(4), page 4	Change "VEPCO" to "The licensee" to reflect the ownership change.
Item 2.C(4), Item c, page 4	Change "VEPCO" to "The licensee" in the first paragraph and change "VEPCO" to "the licensee" in the second paragraph to reflect the ownership change.
Item 2.C(5), page 5	Change "VEPCO" to "the licensee" to reflect the ownership change.
Item 2.C(6), page 5	Change "VEPCO" to "the licensee" in the first sentence and change "VEPCO" to "The licensee" in the second sentence to reflect the ownership change.
Item 2.C(7), page 5	Change "VEPCO" to "the licensee" to reflect the ownership change.
Item 2.C(8), page 5	Change "VEPCO" to "the licensee" to reflect the ownership change. Change "VEPCO's" to "the licensee's" to reflect the ownership change.
Item 2.C(9), page 5	Change "VEPCO" to "The licensee" in two locations to reflect the ownership change.
Item 2.C(9), page 6	Change "VEPCO" to "The licensee" in two locations to reflect the ownership change.

Item 2.C(10), page 6	Change "VEPCO" to "the licensee" to reflect the ownership change.
Item 2.C(11), page 6	Change "VEPCO" to "the licensee" to reflect the ownership change.
Item 2.C(12), page 6	Change "VEPCO" to "The licensee" to reflect the ownership change. Change "VEPCO's" to "the licensee's" to reflect the ownership change.
Item 2.C(13), page 6a	Change "VEPCO" to "the licensee" to reflect the ownership change. Change "VEPCO's" to "the licensee's" to reflect the ownership change.
Item 2.C(14), page 6a	Change "VEPCO" to "the licensee" to reflect the ownership change.
Item 2.C(15)(a), page 7	Change "VEPCO" to "The licensee" to reflect the ownership change.
Item 2.C(15)(b), page 7	Change "VEPCO" to "The licensee" to reflect the ownership change.
Item 2.C(15)(d), page 7	Change "VEPCO" to "The licensee" to reflect the ownership change.
Item 2.C(15)(e), page 7	Change "VEPCO" to "The licensee" to reflect the ownership change. Change "VEPCO's" to "the licensee's" to reflect the ownership change.
Item 2.C(15)(f), page 7	Change "VEPCO" to "The licensee" to reflect the ownership change.
Item 2.C(15)(g), page 7	Change "VEPCO" to "The licensee" to reflect the ownership change.
Item 2.C(15)(h), page 7	Change "VEPCO" to "The licensee" to reflect the ownership change.
Item 2.C(15)(h)(6), page 8	Change "VEPCO" to "the licensee" to reflect the ownership change.
Item 2.C(16), page 8	Change "VEPCO" to "the licensee" to reflect the ownership change.
Item 2.C(17), page 8	Change "VEPCO" to "the licensee" to reflect the ownership change.
Item 2.C(18), page 8a	Change "VEPCO" to "the licensee" to reflect the ownership change.
Item 2.C(19), page 9	Change "VEPCO" to "the licensee" in two locations to reflect the ownership change.

Item 2.C(20)(a), page 9	Change "VEPCO" to "the licensee" to reflect the ownership change.
Item 2.C(20)(b), page 9	Change "VEPCO" to "the licensee" in two locations in the first paragraph and change "VEPCO" to "The licensee" in the second paragraph to reflect the ownership change.
Item 2.C(20)(c), page 9	Change "VEPCO" to "the licensee" to reflect the ownership change. Change "VEPCO" to "the licensee's" to reflect the ownership change.
Item 2.C(20)(d), page 9	Change "VEPCO" to "The licensee" to reflect the ownership change.
Item 2.C(20)(d), page 10	Change "VEPCO" to "the licensee" to reflect the ownership change.
Item 2.C(21)(b), page 10	Change "VEPCO's" to "the licensee's" to reflect the ownership change.
Item 2.C(21)(c), page 11	Change "VEPCO" to "The licensee" to reflect the ownership change.
Item 2.C(21)(d), page 11	Change "VEPCO" to "The licensee" to reflect the ownership change.
Item 2.C(21)(e), page 11	Change "VEPCO" to "The licensee" to reflect the ownership change.
Item 2.C(21)(f), page 11	Change "VEPCO" to "The licensee" to reflect the ownership change.
Item 2.C(21)(g), page 11	Change "VEPCO" to "The licensee" to reflect the ownership change.
Item 2.C(21)(h), page 11	Change "VEPCO" to "The licensee" in two locations to reflect the ownership change.
Item 2.C(21)(i), page 11	Change "VEPCO" to "The licensee" to reflect the ownership change.
Item 2.C(21)(i)(v), page 12	Change "VEPCO" to "The licensee" to reflect the ownership change.
Item 2.C(21)(j), page 12	Change "VEPCO" to "The licensee" to reflect the ownership change.
Item 2.C(23), page 12a	Change "VEPCO" to "The licensee" to reflect the ownership change.
Item 2.C(24), page 12a	Change "Virginia Electric and Power Company" to "The licensee" to reflect the ownership change.
Item 2.G, page 13	Change "VEPCO" to "the licensee" to reflect the ownership change.
Item 2.H, page 13	Change "VEPCO" to "The licensee" to reflect the ownership change.

Item 2.I, page 13	Change "Virginia Electric and Power Company" to "Dominion Generation" to reflect the ownership change.

The following changes to the North Anna Unit 2 Technical Specifications and Bases are proposed:

Technical Specification, page number	**Action Description**
Power Distribution Limits, Bases, B3/4 2-5	Change "Virginia Electric and Power Company" to "Dominion Generation" in two locations to reflect the ownership change.
TS 6.3.1, Footnote – page 6-6	Change "VEPCO's" to "the licensee's" to reflect the ownership change.

The following change to North Anna Unit 2 Appendix B, Environmental Protection Plan, is proposed:

Section, page number	**Action Description**
Cover page	Change "VIRGINIA ELECTRIC AND POWER COMPANY" to "DOMINION GENERATION CORPORATION" to reflect the ownership change.

The following change to North Anna Unit 2 Appendix C, Additional Conditions, is proposed:

Section, page number	**Action Description**
Cover page	Change "VIRGINIA ELECTRIC AND POWER COMPANY" to "DOMINION GENERATION CORPORATION" to reflect the ownership change.

Attachment 1

Marked-up and Proposed Operating Licenses and Accompanying Technical Specifications Pages

Surry Power Station Units 1 and 2

Marked-up Operating Licenses and Accompanying Technical Specifications Pages
Surry Power Station Units 1 and 2

DOMINION GENERATION CORPORATION
~~VIRGINIA ELECTRIC AND POWER COMPANY~~

DOCKET NO. 50-280

FACILITY OPERATING LICENSE

License No. DPR-32

The Atomic Energy Commission (the Commission) having found that:

a. Construction of the Surry Power Station Unit No. 1, (the facility) has been substantially completed in conformity with Provisional Construction Permit No. CPPR-43, the application, as amended, the provisions of the Atomic Energy Act of 1954, as amended (the Act) and the rules and regulations of the Commission;

b. The facility will operate in conformity with the application as amended, the provisions of the Act, and the rules and regulations of the Commission; and

c. There is reasonable assurance (i) that the activities authorized by the 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; and

d. The Dominion Generation Corporation ~~Virginia Electric and Power Company~~ is technically and financially qualified to engage in the activities authorized by the operating license in accordance with the rules and regulations of the Commission; and

e. The applicable provisions of 10 CFR Part 140 have been satisfied; and

f. The issuance of this license will not be inimical to the common defense and security or to the health and safety of the public.

Facility Operating License No. DPR-32 is hereby issued to the Dominion Generation Corporation ~~Virginia Electric and Power Company~~ as follows:

1. This license applies to the Surry Power Station, Unit No. 1, a pressurized, light water moderated and cooled reactor, and associated steam generators and electric generating equipment (the facility). The facility is located on the applicant's 840 acre site on a point of land called Gravel Neck on the James River, approximately fourteen miles northwest of Newport News and twenty-five miles northwest of Norfolk, Virginia, and is described in the Final Safety Analysis Report, as amended (Amendments Nos. 12-33).

2. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses the licensee:

   A. Pursuant to Section 104b 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 Surry County, Virginia, in accordance with the procedures and limitations set forth in this license;

   B. Pursuant to the Act and 10 CFR Parts 40 and 70, to receive, possess, and use at any time, source and 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;

   C. 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 scaled neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;

   D. 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;

   E. Pursuant to the Act 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.

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

A. Maximum Power Level

The licensee is authorized to operate the facility at steady state power levels not in excess of 2546 megawatts (thermal).

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. ~~223~~, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

C. Reports

The licensee shall make certain reports in accordance with the requirements of the Technical Specifications.

D. Records

The licensee shall keep facility operating records in accordance with the requirements of the Technical Specifications.

E. Deleted by Amendment 65

F. Deleted by Amendment 66 and again by Amendment 71

G. Steam Generator Repair Program

(1) The Surry Power Steam Generator Repair Program for Unit No. 1 is approved.

(2) During the steam generator repair program the following conditions shall be met:

(a) All fuel shall be removed from the reactor pressure vessel and stored in the spent fuel pool.

(b) Temporary containment and ventilation systems shall be installed and operated for all cutting and grinding operations involving components with removable radioactive contamination greater than 2200 DPM per 100 cm^2 except

DOMINION GENERATION CORPORATION
~~VIRGINIA ELECTRIC AND POWER COMPANY~~

DOCKET NO. 50-281

FACILITY OPERATING LICENSE

License No. DPR-37

The Atomic Energy Commission (the Commission) having found that:

a. Construction of the Surry Power Station Unit No. 2, (the facility) has been substantially completed in conformity with Provisional Construction Permit No. CPPR-44, the application, as amended, the provisions of the Atomic Energy Act of 1954, as amended (the Act) and the rules and regulations of the Commission as set forth in Title 10, Chapter 1, Code of Federal Regulations; and

b. The facility will operate in conformity with the application as amended, the provisions of the Act, and the rules and regulations of the Commission; and

c. There is reasonable assurance (i) that the activities authorized by the 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; and

d. The ~~Virginia Electric and Power Company~~ Dominion Generation Corporation (the licensee) is technically and financially qualified to engage in the activities authorized by the operating license in accordance with the rules and regulations of the Commission; and

e. The applicable provisions of 10 CFR Part 140 of the Commission's regulations, "Financial Protection Requirements and Indemnity Agreements," have been satisfied; and

f. The issuance of this license will not be inimical to the common defense and security or to the health and safety of the public; and

g. In accordance with the requirements of Appendix D to 10 CFR Part 50, the operating license should be issued subject to conditions for protection of the environment set forth in the Technical Specifications incorporated herein.

Facility Operating License No. DPR-37 is hereby issued to the Dominion Generation Corporation ~~Virginia Electric and Power Company~~ as follows:

1. This license applies to the Surry Power Station, Unit No. 2, a pressurized, light water moderated and cooled reactor, and associated steam generators and electric generating equipment (the facility). The facility is located on the applicant's 840 acre site on a point of land called Gravel Neck on the James River, approximately fourteen miles northwest of Newport News and twenty-five miles northwest of Norfolk, Virginia, and is described in the Final Safety Analysis Report, as amended (Amendments Nos. 12-33).

2. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses the licensee:

   A. Pursuant to Section 104b 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 Surry County, Virginia, in accordance with the procedures and limitations set forth in this license;

   B. Pursuant to the Act and 10 CFR Parts 40 and 70, to receive, possess, and use at any time, source and 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;

   C. 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 scaled neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;

   D. 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;

   E. Pursuant to the Act 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.

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

A. Maximum Power Level

The licensee is authorized to operate the facility at steady state power levels not in excess of 2546 megawatts (thermal).

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. ~~223~~, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications. |

C. Reports

The licensee shall make certain reports in accordance with the requirements of the Technical Specifications.

D. Records

The licensee shall keep facility operating records in accordance with the requirements of the Technical Specifications.

E. Deleted by Amendment 54

F. Deleted by Amendment 59 and again by Amendment 65

G. Steam Generator Repair Program

(1) The Surry Power Steam Generator Repair Program for Unit No. 2 is approved.

(2) During the steam generator repair program the following conditions shall be met:

(a) All fuel shall be removed from the reactor pressure vessel and stored in the spent fuel pool.

(b) Temporary containment and ventilation systems shall be installed and operated for all cutting and grinding operations involving components with removable radioactive contamination greater than 2200 DPM per 100 cm^2 except

c. Snubber release rate, where required, is within the specified range in compression and tension. For snubbers specifically required not to displace under continuous load, the ability of the snubber to withstand load without displacement shall be verified.

F. Snubber Service Life Monitoring

1. A record of the service life of each snubber, the date at which the designated service life commences, and the installation and maintenance records on which the designated service life is based shall be maintained as required by the ~~Virginia Electric and Power Company~~ licensee's Operational Quality Assurance Program Topical Report.

2. Concurrent with the first inservice visual inspection and at least once per 18 months thereafter, the installation and maintenance records for each snubber shall be reviewed to verify that the indicated service life has not been exceeded or will not be exceeded prior to the next scheduled snubber service life review. If the indicated service life will be exceeded prior to the next scheduled snubber service life review, the snubber service life shall be reevaluated or the snubber shall be replaced or reconditioned so as to extend its service life beyond the date of the next scheduled service life review. This reevaluation, replacement or reconditioning shall be indicated in the records.

5.0 DESIGN FEATURES

5.1 SITE

Applicability

Applies to the location and boundaries of the site for the Surry Power Station.

Objective

To define those aspects of the site which will affect the overall safety of the installation.

Specification

The Surry Power Station is located in Surry County, Virginia, on property owned by ~~Virginia Electric and Power Company~~ Dominion Generation Corporation on a point of land called Gravel Neck which juts into the James River. It is approximately 46 miles SE of Richmond, Virginia, 17 miles NW of Newport News, Virginia, and 25 miles NW of Norfolk, Virginia. The minimum distance from a reactor centerline to the site exclusion boundary as defined in 10CFR100 is 1,650 ft. This is the distance for Unit 1, which is controlling. A map of the site is shown in TS Figure 5.1-1.

References

FSAR section 2.0 Site

FSAR Section 2.1 General Description

B. The facility organization shall conform to the following requirements:

1. Each member of the facility staff shall meet or exceed the minimum qualifications of ANS 3.1 (12/79 Draft)* for comparable positions, except for:

   a. The Superintendent - Radiological Protection shall meet or exceed the qualifications of Regulatory Guide 1.8, September 1975.

   b. The Superintendent Operations shall hold (or have previously held) a Senior Reactor Operator License for Surry Power Station or a similar design Pressurized Water Reactor plant.

   c. The Supervisor Shift Operations shall hold an active Senior Reactor Operator License for Surry Power Station.

2. Incumbents in the positions of Shift Supervisor, Assistant Shift Supervisor (SRO), Control Room Operator - Nuclear (RO), and Shift Technical Advisor, shall meet or exceed the requirements of 10 CFR 55.59(c) and 55.31(a)(4).

3. The Manager - Nuclear Training is responsible for ensuring that retraining and replacement training programs for the licensed facility staff meet or exceed the requirements of 10 CFR 55.59(c) and 55.31(a)(4). Also, a retraining and replacement training program for non-licensed facility staff shall meet or exceed the recommendations of Section 5 of ANS 3.1 (12/79 Draft)*.

4. Each on-duty shift shall be composed of at least the minimum shift crew composition for each unit as shown in Table 6.1-1.

5. A health physics technician shall be on site when fuel is in the reactor.

6. All core alterations shall be observed and directly supervised by either a licensed Senior Reactor Operator or Senior Reactor Operator limited to fuel handling who has no other concurrent responsibilities during this operation.

* Exceptions to this requirement are specified in ~~VEPCO's~~ the licensee's QA Topical Report, VEP-1, "Quality Assurance Program, Operational Phase."

Proposed Operating Licenses and Accompanying Technical Specifications Pages
Surry Power Station Units 1 and 2

DOMINION GENERATION CORPORATION

DOCKET NO. 50-280

FACILITY OPERATING LICENSE

License No. DPR-32

The Atomic Energy Commission (the Commission) having found that:

a. Construction of the Surry Power Station Unit No. 1, (the facility) has been substantially completed in conformity with Provisional Construction Permit No. CPPR-43, the application, as amended, the provisions of the Atomic Energy Act of 1954, as amended (the Act) and the rules and regulations of the Commission;

b. The facility will operate in conformity with the application as amended, the provisions of the Act, and the rules and regulations of the Commission; and

c. There is reasonable assurance (i) that the activities authorized by the 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; and

d. The Dominion Generation Corporation is technically and financially qualified to engage in the activities authorized by the operating license in accordance with the rules and regulations of the Commission; and

e. The applicable provisions of 10 CFR Part 140 have been satisfied; and

f. The issuance of this license will not be inimical to the common defense and security or to the health and safety of the public.

Facility Operating License No. DPR-32 is hereby issued to the Dominion Generation Corporation as follows:

1. This license applies to the Surry Power Station, Unit No. 1, a pressurized, light water moderated and cooled reactor, and associated steam generators and electric generating equipment (the facility). The facility is located on the applicant's 840 acre site on a point of land called Gravel Neck on the James River, approximately fourteen miles northwest of Newport News and twenty-five miles northwest of Norfolk, Virginia, and is described in the Final Safety Analysis Report, as amended (Amendments Nos. 12-33).

2. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses the licensee:

   A. Pursuant to Section 104b 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 Surry County, Virginia, in accordance with the procedures and limitations set forth in this license;

   B. Pursuant to the Act and 10 CFR Parts 40 and 70, to receive, possess, and use at any time, source and 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;

   C. 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 scaled neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;

   D. 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;

   E. Pursuant to the Act 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.

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

A. Maximum Power Level

The licensee is authorized to operate the facility at steady state power levels not in excess of 2546 megawatts (thermal).

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

C. Reports

The licensee shall make certain reports in accordance with the requirements of the Technical Specifications.

D. Records

The licensee shall keep facility operating records in accordance with the requirements of the Technical Specifications.

E. Deleted by Amendment 65

F. Deleted by Amendment 66 and again by Amendment 71

G. Steam Generator Repair Program

(1) The Surry Power Steam Generator Repair Program for Unit No. 1 is approved.

(2) During the steam generator repair program the following conditions shall be met:

(a) All fuel shall be removed from the reactor pressure vessel and stored in the spent fuel pool.

(b) Temporary containment and ventilation systems shall be installed and operated for all cutting and grinding operations involving components with removable radioactive contamination greater than 2200 DPM per 100 cm^2 except

DOMINION GENERATION CORPORATION
DOCKET NO. 50-281
FACILITY OPERATING LICENSE

License No. DPR-37

The Atomic Energy Commission (the Commission) having found that:

a. Construction of the Surry Power Station Unit No. 2, (the facility) has been substantially completed in conformity with Provisional Construction Permit No. CPPR-44, the application, as amended, the provisions of the Atomic Energy Act of 1954, as amended (the Act) and the rules and regulations of the Commission as set forth in Title 10, Chapter 1, Code of Federal Regulations; and

b. The facility will operate in conformity with the application as amended, the provisions of the Act, and the rules and regulations of the Commission; and

c. There is reasonable assurance (i) that the activities authorized by the 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; and

d. The Dominion Generation Corporation (the licensee) is technically and financially qualified to engage in the activities authorized by the operating license in accordance with the rules and regulations of the Commission; and

e. The applicable provisions of 10 CFR Part 140 of the Commission's regulations, "Financial Protection Requirements and Indemnity Agreements," have been satisfied; and

f. The issuance of this license will not be inimical to the common defense and security or to the health and safety of the public; and

g. In accordance with the requirements of Appendix D to 10 CFR Part 50, the operating license should be issued subject to conditions for protection of the environment set forth in the Technical Specifications incorporated herein.

Facility Operating License No. DPR-37 is hereby issued to the Dominion Generation Corporation as follows:

1. This license applies to the Surry Power Station, Unit No. 2, a pressurized, light water moderated and cooled reactor, and associated steam generators and electric generating equipment (the facility). The facility is located on the applicant's 840 acre site on a point of land called Gravel Neck on the James River, approximately fourteen miles northwest of Newport News and twenty-five miles northwest of Norfolk, Virginia, and is described in the Final Safety Analysis Report, as amended (Amendments Nos. 12-33).

2. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses the licensee:

   A. Pursuant to Section 104b 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 Surry County, Virginia, in accordance with the procedures and limitations set forth in this license;

   B. Pursuant to the Act and 10 CFR Parts 40 and 70, to receive, possess, and use at any time, source and 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;

   C. 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 scaled neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;

   D. 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;

   E. Pursuant to the Act 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.

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

A. Maximum Power Level

The licensee is authorized to operate the facility at steady state power levels not in excess of 2546 megawatts (thermal).

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

C. Reports

The licensee shall make certain reports in accordance with the requirements of the Technical Specifications.

D. Records

The licensee shall keep facility operating records in accordance with the requirements of the Technical Specifications.

E. Deleted by Amendment 54

F. Deleted by Amendment 59 and again by Amendment 65

G. Steam Generator Repair Program

(1) The Surry Power Steam Generator Repair Program for Unit No. 2 is approved.

(2) During the steam generator repair program the following conditions shall be met:

(a) All fuel shall be removed from the reactor pressure vessel and stored in the spent fuel pool.

(b) Temporary containment and ventilation systems shall be installed and operated for all cutting and grinding operations involving components with removable radioactive contamination greater than 2200 DPM per 100 cm^2 except

c. Snubber release rate, where required, is within the specified range in compression and tension. For snubbers specifically required not to displace under continuous load, the ability of the snubber to withstand load without displacement shall be verified.

F. Snubber Service Life Monitoring

1. A record of the service life of each snubber, the date at which the designated service life commences, and the installation and maintenance records on which the designated service life is based shall be maintained as required by the licensee's Operational Quality Assurance Program Topical Report.

2. Concurrent with the first inservice visual inspection and at least once per 18 months thereafter, the installation and maintenance records for each snubber shall be reviewed to verify that the indicated service life has not been exceeded or will not be exceeded prior to the next scheduled snubber service life review. If the indicated service life will be exceeded prior to the next scheduled snubber service life review, the snubber service life shall be reevaluated or the snubber shall be replaced or reconditioned so as to extend its service life beyond the date of the next scheduled service life review. This reevaluation, replacement or reconditioning shall be indicated in the records.

5.0 DESIGN FEATURES

5.1 SITE

Applicability

Applies to the location and boundaries of the site for the Surry Power Station.

Objective

To define those aspects of the site which will affect the overall safety of the installation.

Specification

The Surry Power Station is located in Surry County, Virginia, on property owned by Dominion Generation Corporation on a point of land called Gravel Neck which juts into the James River. It is approximately 46 miles SE of Richmond, Virginia, 17 miles NW of Newport News, Virginia, and 25 miles NW of Norfolk, Virginia. The minimum distance from a reactor centerline to the site exclusion boundary as defined in 10CFR100 is 1,650 ft. This is the distance for Unit 1, which is controlling. A map of the site is shown in TS Figure 5.1-1.

References

FSAR section 2.0 Site

FSAR Section 2.1 General Description

B. The facility organization shall conform to the following requirements:

1. Each member of the facility staff shall meet or exceed the minimum qualifications of ANS 3.1 (12/79 Draft)* for comparable positions, except for:

   a. The Superintendent - Radiological Protection shall meet or exceed the qualifications of Regulatory Guide 1.8, September 1975.

   b. The Superintendent Operations shall hold (or have previously held) a Senior Reactor Operator License for Surry Power Station or a similar design Pressurized Water Reactor plant.

   c. The Supervisor Shift Operations shall hold an active Senior Reactor Operator License for Surry Power Station.

2. Incumbents in the positions of Shift Supervisor, Assistant Shift Supervisor (SRO), Control Room Operator - Nuclear (RO), and Shift Technical Advisor, shall meet or exceed the requirements of 10 CFR 55.59(c) and 55.31(a)(4).

3. The Manager - Nuclear Training is responsible for ensuring that retraining and replacement training programs for the licensed facility staff meet or exceed the requirements of 10 CFR 55.59(c) and 55.31(a)(4). Also, a retraining and replacement training program for non-licensed facility staff shall meet or exceed the recommendations of Section 5 of ANS 3.1 (12/79 Draft)*.

4. Each on-duty shift shall be composed of at least the minimum shift crew composition for each unit as shown in Table 6.1-1.

5. A health physics technician shall be on site when fuel is in the reactor.

6. All core alterations shall be observed and directly supervised by either a licensed Senior Reactor Operator or Senior Reactor Operator limited to fuel handling who has no other concurrent responsibilities during this operation.

* Exceptions to this requirement are specified in the licensee's QA Topical Report, VEP-1, "Quality Assurance Program, Operational Phase."

Attachment 2

Marked-up and Proposed Operating Licenses and Accompanying Technical Specifications Pages

North Anna Power Station Units 1 and 2

Marked-up Operating License and Accompanying Technical Specifications Pages
North Anna Power Station Unit 1

~~11-18-83~~

DOMINION GENERATION CORPORATION
~~VIRGINIA ELECTRIC AND POWER COMPANY~~

OLD DOMINION ELECTRIC COOPERATIVE

DOCKET NO. 50-338

NORTH ANNA POWER STATION, UNIT NO. 1

FACILITY OPERATING LICENSE

Amendment No. ~~49~~
License No. NPF-4

1. The Nuclear Regulatory Commission (the Commission) having found that:

   A. The issuance of this license amendment issued to Dominion Generation Corporation (Dominion Generation) ~~the Virginia Electric and Power Company (VEPCO)~~ and the Old Dominion Electric Cooperative (ODEC) for the North Anna Power Station, Unit No. 1 (facility) 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, as amended, 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 to the 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;

   D. Dominion Generation ~~VEPCO~~ is technically and financially qualified to engage in the activities authorized by this amendment to the operating license in accordance with the rules and regulations of the Commission;

   E. Dominion Generation ~~VEPCO~~ and the Old Dominion Electric Cooperative (ODEC) have satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements," of the Commission's regulations;

   F. The issuance of this amendment to the operating license will not be inimical to the common defense and security or to the health and safety of the public;

G. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of Amendment No. 3 to 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;

H. The receipt, possession, and use of source, byproduct and special nuclear material as authorized by this amendment to the 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; and

I. The Old Dominion Electric Cooperative is a partial financial owner of the facility and will not operate the facility.

2. Amendment No. 3 hereby amends Facility Operating License No. NPF-4 to ~~the Virginia Electric and Power Company~~ Dominion Generation Corporation (licensee) in its entirety to read as follows:

A. This amendment to the 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~~ Dominion Generation Corporation and the Old Dominion Electric Cooperative. 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, Appendix L).

B. ~~VEPCO~~ 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. ~~VEPCO~~ The licensee personnel will be in charge of conducting these studies and be knowledgeable in the procedures. ~~VEPCO~~ 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. ~~VEPCO~~ 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. ~~VEPCO~~ 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.

C. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:

(1) Pursuant to Section 103 of the Act and 10 CFR Part 50, "Licensing of Production and Utilization Facilities," Dominion Generation ~~VEPCO~~ AND ODEC to ~~possessand~~ possess and Dominion Generation ~~VEPCO~~ to use, and operate the facility at the designated location in Louisa County, Virginia in accordance with the procedures and limitations set forth in this amendment to the license;

(2) Pursuant to the Act of 10 CFR Part 70, Dominion Generation ~~VEPCO~~ 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 of 10 CFR Parts 30, 40 and 70 Dominion Generation ~~VEPCO~~ 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, Dominion Generation ~~VEPCO~~ to receive, possess and use in amounts as required any byproducts, 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, 40 and 70, Dominion Generation ~~VEPCO~~ to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

D. This amendment to the license shall be deemed to contain and is subject to the condition 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:

(1) Maximum Power Level

The licensee ~~VEPCO~~ is authorized to operate the North Anna Power Station, Unit No. 1, at reactor core power levels not in excess of 2893 megawatts (thermal). *

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. ~~224~~, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

(3) Additional Conditions

The matters specified in the following conditions shall be completed to the satisfaction of the Commission within the stated time periods following the issuance of this amendment or within the operational restrictions indicated. The removal of these conditions shall be made by an amendment to the license supported by a favorable evaluation by the Commission:

c. The licensee ~~Virginia Electric and Power Company~~ shall not operate the reactor in operational modes 1 and 2 with less than three reactor coolant pumps in operation.

d. The licensee ~~Virginia Electric and Power Company~~ may use up to four (4) fuel assemblies containing advanced zirconium based alloys as described in the licensee's submittal dated September 4, 1996, as supplemented February 3, 1997.

e. If the licensee ~~Virginia Electric and Power Company~~ plans to remove or to make significant changes in the normal operation of equipment that controls the amount of radioactivity in effluents from the North Anna Station, the Commission shall be notified in writing regardless of whether the change affects the amount of radioactivity in the effluents.

f. The Additional Conditions contained in Appendix C, as revised through Amendment No. 214, are hereby incorporated into this license. The licensee ~~Virginia Electric and Power Company~~ shall operate the facility in accordance with the Additional Conditions.

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* The maximum reactor power level shall be limited to 2748 megawatts (thermal) which is 95% of RATED THERMAL POWER in accordance with the licensee's submittal dated January 28, 1992 (Serial No. 92-042) for the period of operation until the steam generator replacement.

j. The ~~Virginia Electric and Power Company~~ licensee shall modify or replace the presently installed Barton Models No. 763 and No. 764 Lot 1 Transmitters used in safety related circuits inside containment with transmitters that have been demonstrated to provide a greater tolerance to harsh environments. The modifications or replacement of these transmitters shall be completed as soon as practicable but not later than June 30, 1982.

o. The provisions of Specification 4.0.4 are not applicable to the performance of surveillance activities associated with diesel generator battery Technical Specification 4.8.1.1.3.d until the completion of the initial surveillance interval associated with that specification.

r. The ~~Virginia Electric and Power Company~~ licensee shall perform a secondary water chemistry monitoring program to inhibit steam generator tube degradation. This program shall include:

1. Identification of a sampling schedule for the critical parameters and control points for these parameters;
2. Identification of the procedures used to quantify parameters that are critical to control points;
3. Identification of process sampling points;
4. Procedures for the recording and management of data;
5. Procedures defining corrective actions for off control point chemistry conditions; and
6. A procedure for identifying the authority responsible for the interpretation of the data and the sequence and timing of administrative events required to initiate corrective action.

s. Deleted by Amendment 162

t. Deleted by Amendment 162

u. Fire Protection

~~VEPCO~~ The licensee shall implement and maintain in effect all provisions of the approved fire protection program as described in the Final Safety Analysis Report for the facility and as approved in the SER dated February 1979 subject to the following provision:

The licensee may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

ATTACHMENT 1

CONSTRUCTION RELATED ITEMS TO BE COMPLETED

This attachment identifies certain items which must be completed to the Commission's satisfaction in accordance with the schedule listed below. The ~~Virginia Electric and Power Company~~ licensee shall not proceed beyond the authorized events without prior written authorization from the Commission.

A. Prior to initial criticality, the ~~Virginia Electric and Power Company~~ licensee shall operate Unit 1 in the cold shutdown and hot standby conditions only under the following conditions:

1. The reactor shall be maintained at a K_{eff} of no greater than 0.90 when in a cold shutdown condition (Operational Mode 5 condition).

2. The reactor shall be maintained at an average reactor coolant temperature at or above 350 degrees Fahrenheit with a K_{eff} of 0.90 or less and a reactor coolant system minimum boron concentration of 2000 parts per million when in a hot standby condition. This mode of operation is a modification of Operational Mode 3 stated in the Technical Specifications, Appendix A.

B. The following item must be completed prior to entry into operational Mode 2 for initial criticality:

1. Reverification of reactor coolant and other Class I systems expansion and restraint measurements at normal temperature and pressure.

C. The following item must be completed one week following entry into operational Mode 2:

1. Completion of the handwheel extension to the cross connect valves associated with the recirculation spray system.

a. abnormal perturbations in the radial power shape, such as from rod misalignment, effect $F^N_{\Delta H}$ more directly than F_Q,

b. although rod movement has a direct influence upon limiting F_Q to within its limit, such control is not readily available to limit $F^N_{\Delta H}$, and

c. errors in prediction for control power shape detected during startup physics tests can be compensated for in FQ by restricting axial flux distributions. This compensation for $F^N_{\Delta H}$ is less readily available.

Fuel rod bowing reduces the value of the DNB ratio. Credit is available to offset this reduction in the margin available between the safety analysis design DNBR value (1.46 for ~~Virginia Electric and Power Company~~ Dominion Generation statistical methods) and the limiting design DNBR value (1.26 for ~~Virginia Electric and Power Company~~ Dominion Generation statistical methods). A discussion of the rod bow penalty is presented in the FSAR.

The hot channel factor $F^M_Q(Z)$ is measured periodically and increased by a cycle and height dependent power factor, N(Z), to provide assurance that the limit on the hot channel factor, $F_Q(Z)$, is met. N(Z) accounts for the non-equilibrium effects of normal operation transients and was determined from expected power control maneuvers over the full range of burnup conditions in the core. The N(Z) function for normal operation is specified in the CORE OPERATING LIMITS REPORT per Specification 6.9.1.7.

3/4.2.4 QUADRANT POWER TILT RATIO

The quadrant power tilt ratio limit assures that the radial power distribution satisfies the design values used in the power capability analysis. Radial power distribution measurements are made during startup testing and periodically during power operation.

The limit of 1.02 at which corrective action is required provides DNB and linear heat generation rate protection with x-y plane power tilts.

The two hour time allowance for operation with a tilt condition greater than 1.02 but less than 1.09 is provided to allow identification and correction of a dropped or misaligned rod. In the event such action does not correct the tilt, the margin for uncertainty on F_Q is reinstated by reducing the power by 3 percent for each percent of tilt in excess of 1.0.

For purposes of monitoring QUADRANT POWER TILT RATIO when one excore detector is inoperable, the movable incore detectors are used to confirm that the normalized symmetric power distribution is consistent with the QUADRANT POWER TILT RATIO. The incore detector monitoring is done with a full incore flux map or two sets of 4 symmetric thimbles. The two sets of 4 symmetric thimbles is a unique set of 8 detector locations. These locations are C-8, E-5, E-11, H-3, H-13, L-5, L-11 and N-8.

6.3 FACILITY STAFF QUALIFICATIONS

6.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications of ANS 3.1 (12/79 Draft)* for comparable positions, except for:

1. The Superintendent - Radiological Protection shall meet or exceed the qualifications of Regulatory Guide 1.8, September 1975.
2. Incumbents in the positions of Shift Supervisor, Assistant Shift Supervisor (SRO), Control Room Operator - Nuclear (RO), and Shift Technical Advisor, shall meet or exceed the requirements of 10 CFR 55.59(c) and 55.31(a)(4).
3. The Superintendent Operations shall hold (or have previously held) a Senior Reactor Operator License for North Anna Power Station or a similar design Pressurized Water Reactor plant.
4. The Supervisor Shift Operations shall hold an active Senior Reactor Operator License for North Anna Power Station.

6.4 TRAINING

6.4.1 The Manager - Nuclear Training is responsible for ensuring that retraining and replacement training programs for the licensed facility staff meet or exceed the requirements of 10 CFR 55.59(c) and 55.31(a)(4). Also, a retraining and replacement training program for non-licensed facility staff shall meet or exceed the recommendations of Section 5 of ANS 3.1 (12/79 Draft)*.

6.5 REVIEW AND AUDIT

6.5.1 STATION NUCLEAR SAFETY AND OPERATING COMMITTEE (SNSOC)

FUNCTION

6.5.1.1 The SNSOC shall function to advise the Site Vice President on all matters related to nuclear safety.

the licensee's

* Exceptions to this requirement are specified in ~~VEPCO's~~ QA Topical Report, VEP-1, "Quality Assurance Program, Operational Phase."

~~02-20-96~~

APPENDIX B

TO FACILITY OPERATING LICENSE NO. NPF-4

NORTH ANNA POWER STATION, UNIT NO. 1

DOMINION GENERATION CORPORATION

~~VIRGINIA ELECTRIC AND POWER COMPANY~~

DOCKET NO. 50-338

ENVIRONMENTAL PROTECTION PLAN

APPENDIX C

TO FACILITY OPERATING LICENSE NO. NPF-4

NORTH ANNA POWER STATION, UNIT NO. 1

DOMINION GENERATION CORPORATION
~~VIRGINIA ELECTRIC AND POWER COMPANY~~

DOCKET NO. 50-338

ADDITIONAL CONDITIONS

Marked-up Operating License and Accompanying Technical Specifications Pages
North Anna Power Station Unit 2

~~11-18-83~~

DOMINION GENERATION CORPORATION
~~VIRGINIA ELECTRIC AND POWER COMPANY~~

OLD DOMINION ELECTRIC COOPERATIVE

DOCKET NO. 50-339

NORTH ANNA POWER STATION, UNIT NO. 2

FACILITY OPERATING LICENSE

Amendment No. ~~33~~
License No. NPF-7

1. The Nuclear Regulatory Commission (the Commission) having found that:

   A. The application for license filed by Dominion Generation Corporation (Dominion Generation) ~~Virginia Electric and Power Company (VEPCO)~~ complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's 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. 2 (facility) has been substantially completed in conformity with Construction Permit No. CPPR-78 and the application, as amended, the provisions of the Act and the regulations of the Commission;

   C. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the 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 Commission's regulations set forth in 10 CFR Chapter I;

   E. Dominion Generation ~~VEPCO~~ is technically and financially qualified to engage in the activities authorized by this operating license in accordance with the Commission's regulations set forth in 10 CFR Chapter I;

   F. Dominion Generation ~~VEPCO~~ and the Old Dominion Electric Cooperative have satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements", of the Commission's regulations;

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 NPF-7 subject to the conditions for protection of the environment set forth herein is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied;

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; and

J. The Old Dominion Electric Cooperative is a partial financial owner of the facility and will not operate the facility.

2. Pursuant to approval by the Nuclear Regulatory Commission at a meeting on August 20, 1980, the License for Fuel-Loading and Low-Power Testing issued on April 11, 1980 is superseded by Facility Operating License NPF-7 hereby issued to ~~Virginia Electric and Power Company (VEPCO)~~ Dominion Generation Corporation (Dominion Generation or the licensee) and the Old Dominion Electric Cooperative (ODEC) to read as follows:

A. This amendment to the license applies to the North Anna Power Station, Unit No. 2, a pressurized water nuclear reactor and associated equipment (the facility), owned by ~~VEPCO~~ Dominion Generation and ODEC. The facility is located near Mineral in Louisa County, Virginia and is described in ~~VEPCO's~~ the licensee's Final Safety Analysis Report as supplemented and amended (Amendments 17 through 69) and Environmental Report as supplemented and amended (Supplements 1 through 4).

B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:

(1) Pursuant to Section 103 of the Act and 10 CFR Part 50, ~~VEPCO~~ Dominion Generation and ODEC to possess and ~~VEPCO~~ Dominion Generation to use, and operate the facility at the designated location in Louisa County, Virginia, in accordance with the limitations set forth in this license;

(2) Pursuant to the Act and 10 CFR Part 70, ~~VEPCO~~ Dominion Generation 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 ~~VEPCO's~~ the licensee's Final Safety Analysis Report, as supplemented and amended;

(3) Pursuant to the Act and 10 CFR Parts 30, 40 and 70, ~~VEPCO~~ Dominion Generation 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, Dominion Generation ~~VEPCO~~ 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, 40 and 70, Dominion Generation ~~VEPCO~~ to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

C. This license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I 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:

(1) Maximum Power Level

Dominion Generation ~~Vepco~~ is authorized to operate the facility at steady state reactor core power levels not in excess of 2893 megawatts (thermal).

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. ~~205~~, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

(b) The current surveillance period for Surveillance Requirement 4.7.10.c may be extended beyond the time limit specified by Technical Specification 4.0.2.a. The required surveillance shall be completed prior to startup after the first refueling outage. The plant shall not be operated in Modes 1, 2, 3 or 4 until Surveillance Requirement 4.7.10.c has been completed. Upon accomplishment of the surveillance, the provisions of 4.0.2.a shall apply.

(3) Initial Test Program

The licensee ~~VEPCO~~ shall conduct the post-fuel-loading initial test program (set forth in Section 14 of the licensee's ~~VEPCO's~~ Final Safety Analysis Report, as amended) without making any major modifications of this program unless modifications have been identified and have received prior Commission approval. Major modifications are defined as:

a. Elimination of any test identified in Section 14 of the licensee's ~~VEPCO's~~ Final Safety Analysis Report, as amended, as essential;

b. Modification of test objectives, methods or acceptance criteria for any test identified in Section 14 of the licensee's ~~VEPCO's~~ Final Safety Analysis Report, as amended, as essential;

c. Performance of any test at a power level different from there described; and

d. Failure to complete any tests included in the described program (planned or scheduled for power levels up to the authorized power level).

(4) The licensee ~~VEPCO~~ shall take the following remedial actions, or alternative actions, acceptable to the Commission, with regard to the environmental qualification requirements for Class IE equipment:

a. Deleted by Amendment No. 90.

b. Deleted by Amendment No. 90.

c. The licensee ~~VEPCO~~ shall test the narrow and wide-range resistance temperature detectors for the reactor coolant system by the Loop Current Step Response method each calendar quarter until a long-term qualified resistance temperature detector is available. Resistance temperature detectors will be replaced if unsatisfactory Loop Current Step Response test results are acquired.

For narrow and wide-range resistance temperature detectors not replaced at a given refueling outage, the licensee ~~VEPCO~~ shall assure that resistance temperature detector cable connectors are adequately sealed and shall use the Arrhenius methodology to affirm that the resistance temperature detector material has not endured significant degradation due to environmental parameters. The results of this affirmation shall be added to central environmental qualification files.

(d) Deleted by Amendment No. 90.

(e) Deleted by Amendment No. 90.

(5) Prior to operating the facility at a power level above 25 percent, ~~VEPCO~~ the licensee shall develop a surveillance program for fiberglass spray pond piping and supports that is in compliance with the regulatory position in Revision 2 of Regulatory Guide 1.72, or an alternative position acceptable to the Commission.

(6) Prior to operating the facility at a power level above 90 percent, ~~VEPCO~~ the licensee shall perform secondary flow stability tests which have been approved by the Commission. ~~VEPCO~~ The licensee shall provide at least 24 hours notification to Office of Inspection and Enforcement (OIE) prior to conducting such approved tests so that these tests may be witnessed by the Commission.

The exceptions to Technical Specifications 3.3.2.1(a), 3.3.2.1(b), 3.5.2, 3.7.1.2, and 3.7.1.3, issued with Amendment No. 2 to the Fuel-Load and Low-Power Testing License dated August 1980 shall be in effect until these are completed.

(7) Prior to operating the facility at a power level above 90 percent, ~~VEPCO~~ the licensee shall demonstrate to the satisfaction of the NRC that the actual in-plant measurements of transformer tap settings are in agreement with their analysis.

(8) Prior to operating above 90 percent power, ~~VEPCO~~ the licensee shall complete the visual verification of operability of the 37 feedwater system hydraulic snubbers, designated in ~~VEPCO's~~ the licensee's letter dated August 7, 1980, at operating temperature to the satisfaction of the OIE.

(9) ~~VEPCO~~ The licensee is authorized to perform steam generator moisture carryover studies at the North Anna Station. These studies involve the use of an aqueous tracer solution of two (2) curies of sodium-24. The licensee personnel will be in charge of conducting these studies and be knowledgeable in the procedures. ~~VEPCO~~ 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. ~~VEPCO~~ 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. ~~VEPCO~~ The licensee will ensure 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.

(10) No later than October 11, 1980, ~~VEPCO~~ the licensee shall submit a design for the backup overcurrent protection system for containment electrical penetrations for Commission review and approval. The backup system shall be installed and operational prior to resuming power operation following the second refueling outage.

(11) No later than November 1, 1980, ~~VEPCO~~ the licensee shall implement the fire protection modifications as described in the Commission Safety Evaluation Report, "Fire Protection Program for North Anna Power Station, Units 1 and 2", dated February 1979 (see Amendment No. 8 to NPF-4 for the North Anna Power Station, Unit No. 1) except implementation of the modification of the alternate shutdown system shall be implemented no later than April 1, 1981.

(12) ~~VEPCO~~ The licensee shall implement the following modifications related to IE Bulletin 79-27 "Loss of Non-Class IE Instrumentation and Control Power System Bus During Operation" as specified in ~~VEPCO's~~ the licensee's letters, dated May 30 and July 9, 1980 on the following schedule:

(a) Prior to startup following the November 1, 1980 outage for Fire Protection Modifications:

Item 2 - Alternate Feed for Annunciators

Item 3, 4, 7 and 8: Alternate Power Supply for Vital SOV and Vital Instrument Panels.

Item 9 and 10: Loss of Voltage for Semi-Vital Buses

(b) Within six months from date of issuance of this license:

Item 6: Alternate Power to Gaitronics

Items 11, 12, 13 and 14: Change to Voltage Indication - 125 VDC Buses

(c) Prior to startup following the first refueling outage:

Items 1 and 5: Diverse Power Supply for T_h and T_c

(13) No later than May 22, 1981, ~~VEPCO~~ the licensee is required to complete to the satisfaction of the Commission its piping reanalysis which includes the seismic amplified response spectra identified in ~~VEPCO's~~ the licensee's letter of June 6, 1980, concerning Units 1 and 2, and submit the analysis to the Commission.

(14) No later than six months from the date of issuance of this license, ~~VEPCO~~ the licensee shall supply, to the satisfaction of the NRC, the plant specific information needed to confirm the validity of the main steam line and feedwater line break analyses.

(15) Prior to resuming power operation following the first refueling outage except as specifically noted in paragraphs (h)(2) and (h)(4) below:

(a) The licensee ~~VEPCO~~ shall submit the details of the inspection program for control rod guide thimble tube wall wear for Commission approval;

(b) The licensee ~~VEPCO~~ shall install inspection ports in the steam generators;

(c) Deleted.

(d) The licensee ~~VEPCO~~ shall install leak test connections on the RHR isolation valves;

(e) The licensee ~~VEPCO~~ shall demonstrate by test the backup depressurization capability of the PORV's using the same shutdown procedure as described in the licensee's ~~VEPCO's~~ procedure 2-OP-3.2 dated 7/23/80;

(f) The licensee ~~VEPCO~~ shall submit for Commission approval, the results of the tests applicable to North Anna Power Station, Unit 2, of a study concerning mixing of added borated water and cooldown under natural circulation conditions;

(g) The licensee ~~VEPCO~~ shall retest all engineered safety features reset control actions to verify proper reset action; and

(h) The licensee ~~VEPCO~~ shall implement the following design and procedural modifications with respect to diesel generator reliability;

(1) Complete a formal training program for all the mechanical and electrical maintenance and quality control personnel, including supervisors, who are responsible for the maintenance and availability of the diesel generators. The depth and quality of this training program shall be at least equivalent to that of training programs normally conducted by major diesel engine manufacturers;

(2) The lube oil system shall be modified to the manufacturer's recommendations for providing continuous lubrication of the lower portions of the engine. The modifications shall further provide for partial filling of the upper lube oil supply heater and a lube oil booster/ accumulator system which will force oil into the upper lube oil header during engine startup. The modifications shall be completed no later than the second refueling outage.

(3) The diesel generator operating procedures shall be modified to require loading the engine up to 50 to 75 percent of full load for one hour after eight hours of continuous no load operation;

(4) The fuel oil storage and transfer system shall be modified to include the installation of a separate high level alarm for each day tank, the installation of independent pressure switches for each pump which will be set to stop the pumps on high day tank level, and the submittal of Technical Specifications verifying proper operation of all transfer pump control switches and day tank high level alarms. Non-qualified pressure switches will be installed by October 31, 1982. These switches are being qualified by the manufacturer. Should these switches fail qualification tests, the non-qualified switches shall be replaced with qualified units. The modifications shall be completed no later than the second refueling outage. 36

(5) Each seven day fuel oil storage tank shall be provided with a seismic Category I, tornado missile, and flood protected emergency fill line. Each fill line shall have a shut-off valve, a strainer, and a truck fill connection consisting of a hose coupling with cap and chain; and

(6) With respect to vibration of Instruments and Controls, ~~VEPCO~~ the licensee shall either provide test results and results of analyses which qualify the engine skid mounted control cubicles for the severe vibrational stress that will be encountered during engine operation, or floor mount the skid mounted panels and control equipment presently furnished with the diesel generators.

(16) Within 90 days following issuance of the pending revision of Regulatory Guide 1.97, "Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant Conditions During and Following an Accident", ~~VEPCO~~ the licensee shall provide a schedule acceptable to the NRC for bringing this facility in compliance with Regulatory Guide 1.97, as revised.

(17) Prior to resuming power operation following the second refueling outage, ~~VEPCO~~ the licensee shall subject the low pressure turbines to an inservice inspection. The inspection shall consist of visual and volumetric examinations. The visual examination shall be applied to 100 percent of all the accessible surface of the rotors, discs and blading. The volumetric examination shall use an ultrasonic technique to fully examine the bore and keyway region of the discs in each low pressure turbine.

The inspection results and evaluation of this inservice inspection shall be reported to the NRC and shall be accepted by the Commission prior to startup following the second refueling outage.

The subject of the generation of turbine missiles for this facility is pending before the Atomic Safety and Licensing Appeal Board. The license condition imposed herein shall be subject to modification based on the resolution of this pending turbine missile issue.

(18) No later than five years from the date of issuance of this license, ~~VEPCO~~ the licensee shall demonstrate to the satisfaction of the Commission that its examination techniques provide a reliable means of detection and 36

evaluation of individual reactor vessel clad cracks should they grow larger than the acceptable standards contained in Section XI of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code.

(19) No later than five years from the date of issuance of this license, the licensee ~~VEPCO~~ shall perform radiation-thermal testing of the encapsulated saddle material used for shielding, and within six months thereafter, the licensee ~~VEPCO~~ shall evaluate the testing and provide the Commission with results of the evaluation.

(20) TMI Action Plan Conditions

Each of the following conditions references the appropriate section of Supplement No. 11 to the Safety Evaluation Report (NUREG-0053) for the North Anna Power Station, Unit 2, dated August 1980.

(a) Control Room Design Review (Section 22.2 Item I.D.1)

Within the schedule requirements of NUREG-0737, the licensee ~~VEPCO~~ shall submit an evaluation of the benefits of installing data recording and logging equipment in the control room to correct deficiencies associated with the trending of important parameters on strip chart recorders in use at most nuclear power plants, as part of their one-year control room design review. 6

(b) Training During Low-Power Testing (Section 22.2 Item I.G.1)

No later than one year from the date of issuance of this license, the licensee ~~VEPCO~~ shall complete the evaluation of the results of the low power test program for incorporation into the Surry Power Station simulator. Also within one year, the licensee ~~VEPCO~~ shall provide a report to the NRC describing changes made to the simulator model as a result of the tests.

The licensee ~~VEPCO~~ shall perform a boron mixing and cooldown test using decay heat within 31 days after burnup sufficient to produce at least 10 hours of decay head equivalent to one percent of rated thermal power.

(c) Auxiliary Feedwater System Reliability Evaluation (Section 22.2 Item II.E.1.1)

With respect to the AFW Endurance Test, the licensee ~~VEPCO~~ shall test the steam turbine driven pump after unit startup when steam will be available in accordance with the licensee's ~~VEPCO~~ letter, dated July 11, 1980.

(d) Upgrade Emergency Preparedness (Section 22.2 Item III.A.1.1)

The licensee ~~VEPCO~~ shall maintain in effect an emergency plan that meets:

(i) Regulatory requirement of 10 CFR Part 50, Appendix E, and

(ii) The operator Planning Objectives of NUREG-0654, "Criteria for Preparation and Evaluation of Radiological Preparedness in Support of Nuclear Power Plants," January 1980.

This plan shall provide an emergency operations facility as a base for coordinating onsite activities and interface with State, local, and Federal agencies.

No later than 90 days from the date of issuance of this license, the licensee ~~VEPCO~~ shall report to the NRC the status of any items related to emergency preparedness identified by FEMA or the NRC as requiring further action.

(21) TMI Action Plan Dated Conditions

Each of the following conditions references the appropriate section of Supplement No. 11 to the Safety Evaluation Report (NUREG-0053) for the North Anna Power Station, dated August 1980, and shall be completed to the satisfaction of the NRC.

(a) Shift Technical Advisor (Section 22.3 Item I.A.1.1)

During 1980, at least one Senior Reactor Operator (SRO) or an experienced degreed engineer who is a member of the Site Safety Engineering Staff shall be designated as the Shift Technical Advisor (STA).

All STA's shall be fully trained no later than by January 1, 1981. During 1980, all SRO's designated as STA's shall complete eight weeks of mathematics, physics, thermodynamics, fluid flow, heat transfer, instrumentation and control, chemistry, materials and structural analysis. Following this, STA's shall receive two weeks of design review and five weeks of system dynamic behavior including transient analysis and techniques for transient identification. The training program for engineers designated as STA's shall consist of 3 portions: academic training in thermodynamics, fluid flow, heat transfer and reactor theory; specific instruction in plant systems and Technical Specifications; and finally, simulator training.

The training shall be taught at the college level and equivalent to about 60 semester hours.

(b) Administration of Training Programs for License Operators (Section 22.3 Item I.A.2.3)

All license personnel and nuclear training coordinators at the facility are required to participate in the Requalification Program as specified in the licensee's ~~VEPCO's~~ letter dated March 28, 1980.

(c) Reactor Coolant System Vents (Section 22.2 Item II.B.1)

The licensee ~~VEPCO~~ shall submit procedural guidelines and analytical bases for the reactor coolant system vents. The reactor coolant system vents shall be installed no later than the implementation schedule of NUREG-0737.

(d) Plant Shielding (Section 22.3 Item II.B.2)

The licensee ~~VEPCO~~ shall complete modifications to assure adequate access to vital areas and protection of safety equipment following an accident resulting in a degraded core no later than January 1, 1983.

(e) Post-Accident Sampling (Section 22.3 Item II.B.3)

The licensee ~~VEPCO~~ shall complete corrective actions needed to provide the capability to promptly obtain and perform radioisotopic and chemical analysis of reactor coolant and containment atmosphere samples under degraded core conditions without excessive exposure at the first outage of sufficient duration but no later than January 1, 1983.

(f) Relief and Safety Valve Test Requirements (Section 22.3 Item II.D.1)

The licensee ~~VEPCO~~ shall complete tests to qualify the reactor coolant system relief and safety valves under expected operating conditions for design basis transients and accidents no later than July 1, 1982.

(g) Auxiliary Feedwater Initiation and Indication (Section 22.3 Item II.E.1.2)

The licensee ~~VEPCO~~ shall implement the modification to upgrade the safety-grade indications of AFW flow from semi-vital bus power to vital bus power no later than January 1, 1981.

(h) Containment Dedicated Penetrations (Section 22.3 Item II.E.4.1)

The licensee ~~VEPCO~~ shall install redundant remote actuated valves in series to isolate the containment vacuum pumps from the combustible gas control system. ~~The licensee~~ ~~VEPCO~~ shall also convert the manual valves in the hydrogen recombiner piping to remote manual actuation no later than the implementation schedule of NUREG-0737.

(i) Additional Accident Monitoring Instrumentation (Section 22.3 Item II.F.1)

The licensee ~~VEPCO~~ shall install and demonstrate the operability of instruments for continuous indication in the control room of the following variables. Each item shall be completed by the specified date in the condition:

(i) Containment pressure from 0 psia to three times the design pressure of the containment no later than the implementation schedule of NUREG-0737;

(ii) Containment water level from (1) the bottom to the top of the containment sump, and (2) the bottom of the containment to a level equivalent to 600,000 gallons of water no later than the implementation schedule of NUREG-0737.

(iii) Containment atmosphere hydrogen concentration from 0 to 10 volume percent shall be installed no later than January 1, 1983, and the hydrogen sampling system to be used in the interim shall remain in effect until January 1, 1983;

(iv) Containment radiation up to 10^7 R/hr. no later than the second refueling outage.

(v) Noble gas effluent from each potential release point from normal concentrations to 10^5 μCi/cc (Xe-133) no later than January 1, 1983.

The licensee ~~VEPCO~~ shall also provide capability for continuous sampling and for onsite analysis of the radioiodine and particulate effluent samples no later than January 1, 1983.

(j) Inadequate Core Cooling Instruments (Section 22.3 Item II.F.2)

The licensee ~~VEPCO~~ shall install and demonstrate the operability of additional instruments or controls needed to supplement installed equipment in order to provide unambiguous, easy-to-interpret indication of inadequate core cooling at the first outage of sufficient duration but no later than July 1, 1982.

(22) The license is authorized to receive from the Surry Nuclear Power Station Units No. 1 and 2, possess, and store irradiated Surry fuel assemblies containing special nuclear material, enriched to not more than 4.1% by weight U-235 subject to the following conditions:

a. Surry fuel assemblies may not be placed in North Anna Power Station Units No. 1 and 2 reactors.

b. Irradiated fuel shipped to North Anna shall have been removed from the Surry reactors no less than 730 days prior to shipment.

c. No more than 500 Surry irradiated fuel assemblies shall be received for storage at the North Anna Units No. 1 and 2 spent fuel pool.

(23) Fire Protection

The licensee ~~VEPCO~~ shall implement and maintain in effect all provisions of the approved fire protection program as described in the Final Safety Analysis Report for the facility and as approved in the SER dated February, 1979 subject to the following provision:

The licensee may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

(24) Lead Test Assemblies

The licensee ~~Virginia Electric and Power Company~~ may use up to four (4) fuel assemblies containing advanced zirconium based alloys as described in the licensee's submittal dated September 4, 1996, as supplemented February 3, 1997.

D. An exemption from certain requirements of Appendix J to 10 CFR Part 50 is described in the Office Nuclear Reactor Regulation's Safety Evaluation Report, Supplement No. 10. This exemption is authorized by law and will not endanger life or property or the common defense and security and is otherwise in the public interest. The exemption is, therefore, hereby granted. The granting of the exemption was authorized with the issuance of the License for Fuel-Loading and Low-Power Testing, dated April 11, 1980. The facility will operate, to the extent authorized herein, in conformity with the application, as amended, to provisions of the Act, and the regulations of the Commission.

E. Physical Protection

The licensee shall fully implement and maintain in effect all provisions of the Commission-approved physical security, guard training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and the authority of 10 CFR 50.90 and 10 CFR 50.54 (p). The plans, which contain Safeguards Information protected under 10 CFR 73.21, are entitled: "North Anna Power Station Physical Security Plan," with revisions submitted through February 24, 1988; "North Anna Power Station Guard Training and Qualification Plan," with revisions submitted through May 14, 1987; and "North Anna Power Station Safeguards Contingency Plan," with revisions submitted through January 9, 1987. Changes made in accordance with 10 CFR 73.55 shall be implemented in accordance with the schedule set forth therein.

F. The design of the reactor coolant pump and steam generator supports may be revised in accordance with the licensee's submittal dated November 6, 1986 (Serial No. 86-477A).

G. If ~~VEPCO~~ the licensee plans to remove or to make significant changes in the normal operation of equipment that controls the amount of radioactivity in effluents from the North Anna Power Station, the NRC shall be notified in writing regardless of whether the change affects the amount of radioactivity in the effluents.

H. ~~VEPCO~~ The licensee shall report any violations of the requirements contained in Section 2, Items C.(3) through C.(21), E, F and G of this license within 24 hours by telephone and confirmed by telegram, mailgram, or facsimile transmission to the Director of the Regional Office, or his designate, no later than the first working day following the violation, with a written followup report within 14 days.

I. The Additional Conditions contained in Appendix C, as revised through Amendment No. 195, are hereby incorporated into this license. ~~Virginia Electric and Power Company~~ Dominion Generation shall operate the facility in accordance with the Additional Conditions.

J. This license is effective as of the date of issuance and shall expire at midnight on August 21, 2020.

FOR THE NUCLEAR REGULATORY COMMISSION

Original signed by:
Harold R. Denton

Harold R. Denton, Director
Office of Nuclear Reactor Regulation

Attachment:
Appendices A, B, and C

Date of Issuance: AUG 21 1980

POWER DISTRIBUTION LIMITS

BASES

When $F^N_{\Delta H}$ is measured, 4% is the appropriate experimental error allowance for a full core map taken with the incore detection system. The specified limit for $F^N_{\Delta H}$ contains a 4% error allowance. Normal operation will result in a measured $F^N_{\Delta H}$ less than or equal to the limit specified in the CORE OPERATING LIMITS REPORT. The 4% allowance is based on the following considerations:

a. abnormal perturbations in the radial power shape, such as from rod misalignment, effect $F^N_{\Delta H}$ more directly than F_Q,

b. although rod movement has a direct influence upon limiting F_Q to within its limit, such control is not readily available to limit $F^N_{\Delta H}$, and

c. errors in prediction for control power shape detected during startup physics tests can be compensated for in F_Q by restricting axial flux distributions. This compensation for $F^N_{\Delta H}$ is less readily available.

Fuel rod bowing reduces the value of the DNB ratio. Credit is available to offset this reduction in the margin available between the safety analysis design DNBR value (1.46 for ~~Virginia Electric and Power Company~~ Dominion Generation statistical methods) and the limiting design DNBR value (1.26 for ~~Virginia Electric and Power Company~~ Dominion Generation statistical methods). A discussion of the rod bow penalty is presented in the FSAR.

The hot channel factor $F^M_Q(Z)$ is measured periodically and increased by a cycle and height dependent power factor, N(Z), to provide assurance that the limit on the hot channel factor, $F_Q(Z)$, is met. N(Z) accounts for the non-equilibrium effects of normal operation transients and was determined from expected power control maneuvers over the full range of burnup conditions in the core. The N(Z) function for normal operation is specified in the CORE OPERATING LIMITS REPORT per Specification 6.9.1.7.

3/4.2.4 QUADRANT POWER TILT RATIO

The quadrant power tilt ratio limit assures that the radial power distribution satisfies the design values used in the power capability analysis. Radial power distribution measurements are made during startup testing and periodically during power operation.

The limit of 1.02 at which corrective action is required provides DNB and linear heat generation rate protection with x-y plane power tilts.

The two hour time allowance for operation with a tilt condition greater than 1.02 but less than 1.09 is provided to allow identification and correction of a dropped or misaligned rod. In the event such action does not correct the tilt, the margin for uncertainty on F_Q is reinstated by reducing the power by 3 percent for each percent of tilt in excess of 1.0.

6.3 FACILITY STAFF QUALIFICATIONS

6.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications of ANS 3.1 (12/79 Draft)* for comparable positions, except for:

1. The Superintendent - Radiological Protection shall meet or exceed the qualifications of Regulatory Guide 1.8, September 1975.
2. Incumbents in the positions of Shift Supervisor, Assistant Shift Supervisor (SRO), Control Room Operator - Nuclear (RO), and Shift Technical Advisor, shall meet or exceed the requirements of 10 CFR 55.59(c) and 55.31(a)(4).
3. The Superintendent Operations shall hold (or have previously held) a Senior Reactor Operator License for North Anna Power Station or a similar design Pressurized Water Reactor plant.
4. The Supervisor Shift Operations shall hold an active Senior Reactor Operator License for North Anna Power Station.

6.4 TRAINING

6.4.1 The Manager - Nuclear Training is responsible for ensuring that retraining and replacement training programs for the licensed facility staff meet or exceed the requirements of 10 CFR 55.59(c) and 55.31(a)(4). Also, a retraining and replacement training program for non-licensed facility staff shall meet or exceed the recommendations of Section 5 of ANS 3.1 (12/79 Draft)*.

6.5 REVIEW AND AUDIT

6.5.1 STATION NUCLEAR SAFETY AND OPERATING COMMITTEE (SNSOC) FUNCTION

6.5.1.1 The SNSOC shall function to advise the Site Vice President on all matters related to nuclear safety.

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* Exceptions to this requirement are specified in ~~VEPCO's~~ the licensee's QA Topical Report, VEP-1, "Quality Assurance Program, Operational Phase."

~~02-20-96~~

APPENDIX B

TO FACILITY OPERATING LICENSE NO. NPF-7

NORTH ANNA POWER STATION, UNIT NO. 2

DOMINION GENERATION CORPORATION
~~VIRGINIA ELECTRIC AND POWER COMPANY~~

DOCKET NO. 50-339

ENVIRONMENTAL PROTECTION PLAN

~~8-26-98~~

APPENDIX C

TO FACILITY OPERATING LICENSE NO. NPF-7

NORTH ANNA POWER STATION, UNIT NO. 2

DOMINION GENERATION CORPORATION
~~VIRGINIA ELECTRIC AND POWER COMPANY~~

DOCKET NO. 50-339

ADDITIONAL CONDITIONS

Proposed Operating License and Accompanying Technical Specifications Pages
North Anna Power Station Unit 1

DOMINION GENERATION CORPORATION

OLD DOMINION ELECTRIC COOPERATIVE

DOCKET NO. 50-338

NORTH ANNA POWER STATION, UNIT NO. 1

FACILITY OPERATING LICENSE

Amendment No.
License No. NPF-4

1. The Nuclear Regulatory Commission (the Commission) having found that:

   A. The issuance of this license amendment issued to Dominion Generation Corporation (Dominion Generation) and the Old Dominion Electric Cooperative (ODEC) for the North Anna Power Station, Unit No. 1 (facility) 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, as amended, 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 to the 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;

   D. Dominion Generation is technically and financially qualified to engage in the activities authorized by this amendment to the operating license in accordance with the rules and regulations of the Commission;

   E. Dominion Generation and the Old Dominion Electric Cooperative (ODEC) have satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements," of the Commission's regulations;

   F. The issuance of this amendment to the operating license will not be inimical to the common defense and security or to the health and safety of the public;

G. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of Amendment No. 3 to 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;

H. The receipt, possession, and use of source, byproduct and special nuclear material as authorized by this amendment to the 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; and

I. The Old Dominion Electric Cooperative is a partial financial owner of the facility and will not operate the facility.

2. Amendment No. 3 hereby amends Facility Operating License No. NPF-4 to Dominion Generation Corporation (licensee) in its entirety to read as follows:

A. This amendment to the license applies to the North Anna Power Station, Unit No. 1, a pressurized water reactor and associated equipment (the facility), owned by the Dominion Generation Corporation and the Old Dominion Electric Cooperative. 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, Appendix L).

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 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.

C. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:

(1) Pursuant to Section 103 of the Act and 10 CFR Part 50, "Licensing of Production and Utilization Facilities," Dominion Generation AND ODEC to possess and Dominion Generation to use, and operate the facility at the designated location in Louisa County, Virginia in accordance with the procedures and limitations set forth in this amendment to the license;

(2) Pursuant to the Act of 10 CFR Part 70, Dominion Generation 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 of 10 CFR Parts 30, 40 and 70 Dominion Generation 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, Dominion Generation to receive, possess and use in amounts as required any byproducts, 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, 40 and 70, Dominion Generation to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

D. This amendment to the license shall be deemed to contain and is subject to the condition 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:

(1) Maximum Power Level

The licensee is authorized to operate the North Anna Power Station, Unit No. 1, at reactor core power levels not in excess of 2893 megawatts (thermal). *

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

(3) Additional Conditions

The matters specified in the following conditions shall be completed to the satisfaction of the Commission within the stated time periods following the issuance of this amendment or within the operational restrictions indicated. The removal of these conditions shall be made by an amendment to the license supported by a favorable evaluation by the Commission:

c. The licensee shall not operate the reactor in operational modes 1 and 2 with less than three reactor coolant pumps in operation.

d. The licensee may use up to four (4) fuel assemblies containing advanced zirconium based alloys as described in the licensee's submittal dated September 4, 1996, as supplemented February 3, 1997.

e. If the licensee plans to remove or to make significant changes in the normal operation of equipment that controls the amount of radioactivity in effluents from the North Anna Station, the Commission shall be notified in writing regardless of whether the change affects the amount of radioactivity in the effluents.

f. The Additional Conditions contained in Appendix C, as revised through Amendment No. 214, are hereby incorporated into this license. The licensee shall operate the facility in accordance with the Additional Conditions.

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* The maximum reactor power level shall be limited to 2748 megawatts (thermal) which is 95% of RATED THERMAL POWER in accordance with the licensee's submittal dated January 28, 1992 (Serial No. 92-042) for the period of operation until the steam generator replacement.

j. The licensee shall modify or replace the presently installed Barton Models No. 763 and No. 764 Lot 1 Transmitters used in safety related circuits inside containment with transmitters that have been demonstrated to provide a greater tolerance to harsh environments. The modifications or replacement of these transmitters shall be completed as soon as practicable but not later than June 30, 1982.

o. The provisions of Specification 4.0.4 are not applicable to the performance of surveillance activities associated with diesel generator battery Technical Specification 4.8.1.1.3.d until the completion of the initial surveillance interval associated with that specification.

r. The licensee shall perform a secondary water chemistry monitoring program to inhibit steam generator tube degradation. This program shall include:

1. Identification of a sampling schedule for the critical parameters and control points for these parameters;
2. Identification of the procedures used to quantify parameters that are critical to control points;
3. Identification of process sampling points;
4. Procedures for the recording and management of data;
5. Procedures defining corrective actions for off control point chemistry conditions; and
6. A procedure for identifying the authority responsible for the interpretation of the data and the sequence and timing of administrative events required to initiate corrective action.

s. Deleted by Amendment 162

t. Deleted by Amendment 162

u. Fire Protection

The licensee shall implement and maintain in effect all provisions of the approved fire protection program as described in the Final Safety Analysis Report for the facility and as approved in the SER dated February 1979 subject to the following provision:

The licensee may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

ATTACHMENT 1

CONSTRUCTION RELATED ITEMS TO BE COMPLETED

This attachment identifies certain items which must be completed to the Commission's satisfaction in accordance with the schedule listed below. The licensee shall not proceed beyond the authorized events without prior written authorization from the Commission.

A. Prior to initial criticality, the licensee shall operate Unit 1 in the cold shutdown and hot standby conditions only under the following conditions:

1. The reactor shall be maintained at a K_{eff} of no greater than 0.90 when in a cold shutdown condition (Operational Mode 5 condition).

2. The reactor shall be maintained at an average reactor coolant temperature at or above 350 degrees Fahrenheit with a K_{eff} of 0.90 or less and a reactor coolant system minimum boron concentration of 2000 parts per million when in a hot standby condition. This mode of operation is a modification of Operational Mode 3 stated in the Technical Specifications, Appendix A.

B. The following item must be completed prior to entry into operational Mode 2 for initial criticality:

1. Reverification of reactor coolant and other Class I systems expansion and restraint measurements at normal temperature and pressure.

C. The following item must be completed one week following entry into operational Mode 2:

1. Completion of the handwheel extension to the cross connect valves associated with the recirculation spray system.

a. abnormal perturbations in the radial power shape, such as from rod misalignment, effect $F^N_{\Delta H}$ more directly than F_Q,

b. although rod movement has a direct influence upon limiting F_Q to within its limit, such control is not readily available to limit $F^N_{\Delta H}$, and

c. errors in prediction for control power shape detected during startup physics tests can be compensated for in FQ by restricting axial flux distributions. This compensation for $F^N_{\Delta H}$ is less readily available.

Fuel rod bowing reduces the value of the DNB ratio. Credit is available to offset this reduction in the margin available between the safety analysis design DNBR value (1.46 for Dominion Generation statistical methods) and the limiting design DNBR value (1.26 for Dominion Generation statistical methods). A discussion of the rod bow penalty is presented in the FSAR.

The hot channel factor $F^M_Q(Z)$ is measured periodically and increased by a cycle and height dependent power factor, N(Z), to provide assurance that the limit on the hot channel factor, $F_Q(Z)$, is met. N(Z) accounts for the non-equilibrium effects of normal operation transients and was determined from expected power control maneuvers over the full range of burnup conditions in the core. The N(Z) function for normal operation is specified in the CORE OPERATING LIMITS REPORT per Specification 6.9.1.7.

3/4.2.4 QUADRANT POWER TILT RATIO

The quadrant power tilt ratio limit assures that the radial power distribution satisfies the design values used in the power capability analysis. Radial power distribution measurements are made during startup testing and periodically during power operation.

The limit of 1.02 at which corrective action is required provides DNB and linear heat generation rate protection with x-y plane power tilts.

The two hour time allowance for operation with a tilt condition greater than 1.02 but less than 1.09 is provided to allow identification and correction of a dropped or misaligned rod. In the event such action does not correct the tilt, the margin for uncertainty on F_Q is reinstated by reducing the power by 3 percent for each percent of tilt in excess of 1.0.

For purposes of monitoring QUADRANT POWER TILT RATIO when one excore detector is inoperable, the movable incore detectors are used to confirm that the normalized symmetric power distribution is consistent with the QUADRANT POWER TILT RATIO. The incore detector monitoring is done with a full incore flux map or two sets of 4 symmetric thimbles. The two sets of 4 symmetric thimbles is a unique set of 8 detector locations. These locations are C-8, E-5, E-11, H-3, H-13, L-5, L-11 and N-8.

6.3 FACILITY STAFF QUALIFICATIONS

6.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications of ANS 3.1 (12/79 Draft)* for comparable positions, except for:

1. The Superintendent - Radiological Protection shall meet or exceed the qualifications of Regulatory Guide 1.8, September 1975.
2. Incumbents in the positions of Shift Supervisor, Assistant Shift Supervisor (SRO), Control Room Operator - Nuclear (RO), and Shift Technical Advisor, shall meet or exceed the requirements of 10 CFR 55.59(c) and 55.31(a)(4).
3. The Superintendent Operations shall hold (or have previously held) a Senior Reactor Operator License for North Anna Power Station or a similar design Pressurized Water Reactor plant.
4. The Supervisor Shift Operations shall hold an active Senior Reactor Operator License for North Anna Power Station.

6.4 TRAINING

6.4.1 The Manager - Nuclear Training is responsible for ensuring that retraining and replacement training programs for the licensed facility staff meet or exceed the requirements of 10 CFR 55.59(c) and 55.31(a)(4). Also, a retraining and replacement training program for non-licensed facility staff shall meet or exceed the recommendations of Section 5 of ANS 3.1 (12/79 Draft)*.

6.5 REVIEW AND AUDIT

6.5.1 STATION NUCLEAR SAFETY AND OPERATING COMMITTEE (SNSOC)

FUNCTION

6.5.1.1 The SNSOC shall function to advise the Site Vice President on all matters related to nuclear safety.

* Exceptions to this requirement are specified in the licensee's QA Topical Report, VEP-1, "Quality Assurance Program, Operational Phase."

APPENDIX B

TO FACILITY OPERATING LICENSE NO. NPF-4

NORTH ANNA POWER STATION, UNIT NO. 1

DOMINION GENERATION CORPORATION

DOCKET NO. 50-338

ENVIRONMENTAL PROTECTION PLAN

APPENDIX C

TO FACILITY OPERATING LICENSE NO. NPF-4

NORTH ANNA POWER STATION, UNIT NO. 1

DOMINION GENERATION CORPORATION

DOCKET NO. 50-338

ADDITIONAL CONDITIONS

Proposed Operating License and Accompanying Technical Specifications Pages
North Anna Power Station Unit 2

DOMINION GENERATION CORPORATION

OLD DOMINION ELECTRIC COOPERATIVE

DOCKET NO. 50-339

NORTH ANNA POWER STATION, UNIT NO. 2

FACILITY OPERATING LICENSE

Amendment No.
License No. NPF-7

1. The Nuclear Regulatory Commission (the Commission) having found that:

   A. The application for license filed by Dominion Generation Corporation (Dominion Generation) complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's 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. 2 (facility) has been substantially completed in conformity with Construction Permit No. CPPR-78 and the application, as amended, the provisions of the Act and the regulations of the Commission;

   C. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the 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 Commission's regulations set forth in 10 CFR Chapter I;

   E. Dominion Generation is technically and financially qualified to engage in the activities authorized by this operating license in accordance with the Commission's regulations set forth in 10 CFR Chapter I;

   F. Dominion Generation and the Old Dominion Electric Cooperative have satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements", of the Commission's regulations;

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 NPF-7 subject to the conditions for protection of the environment set forth herein is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied;

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; and

J. The Old Dominion Electric Cooperative is a partial financial owner of the facility and will not operate the facility.

2. Pursuant to approval by the Nuclear Regulatory Commission at a meeting on August 20, 1980, the License for Fuel-Loading and Low-Power Testing issued on April 11, 1980 is superseded by Facility Operating License NPF-7 hereby issued to Dominion Generation Corporation (Dominion Generation or the licensee) and the Old Dominion Electric Cooperative (ODEC) to read as follows:

   A. This amendment to the license applies to the North Anna Power Station, Unit No. 2, a pressurized water nuclear reactor and associated equipment (the facility), owned by Dominion Generation and ODEC. The facility is located near Mineral in Louisa County, Virginia and is described in the licensee's Final Safety Analysis Report as supplemented and amended (Amendments 17 through 69) and Environmental Report as supplemented and amended (Supplements 1 through 4).

   B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:

      (1) Pursuant to Section 103 of the Act and 10 CFR Part 50, Dominion Generation and ODEC to possess and Dominion Generation to use, and operate the facility at the designated location in Louisa County, Virginia, in accordance with the limitations set forth in this license;

      (2) Pursuant to the Act and 10 CFR Part 70, Dominion Generation 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 licensee's Final Safety Analysis Report, as supplemented and amended;

      (3) Pursuant to the Act and 10 CFR Parts 30, 40 and 70, Dominion Generation 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, Dominion Generation 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, 40 and 70, Dominion Generation to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

C. This license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I 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:

(1) Maximum Power Level

Dominion Generation is authorized to operate the facility at steady state reactor core power levels not in excess of 2893 megawatts (thermal).

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

(b) The current surveillance period for Surveillance Requirement 4.7.10.c may be extended beyond the time limit specified by Technical Specification 4.0.2.a. The required surveillance shall be completed prior to startup after the first refueling outage. The plant shall not be operated in Modes 1, 2, 3 or 4 until Surveillance Requirement 4.7.10.c has been completed. Upon accomplishment of the surveillance, the provisions of 4.0.2.a shall apply.

(3) Initial Test Program

The licensee shall conduct the post-fuel-loading initial test program (set forth in Section 14 of the licensee's Final Safety Analysis Report, as amended) without making any major modifications of this program unless modifications have been identified and have received prior Commission approval. Major modifications are defined as:

a. Elimination of any test identified in Section 14 of Dominion Generation's Final Safety Analysis Report, as amended, as essential;

b. Modification of test objectives, methods or acceptance criteria for any test identified in Section 14 of the licensee's Final Safety Analysis Report, as amended, as essential;

c. Performance of any test at a power level different from there described; and

d. Failure to complete any tests included in the described program (planned or scheduled for power levels up to the authorized power level).

(4) The licensee shall take the following remedial actions, or alternative actions, acceptable to the Commission, with regard to the environmental qualification requirements for Class IE equipment:

a. Deleted by Amendment No. 90.

b. Deleted by Amendment No. 90.

c. The licensee shall test the narrow and wide-range resistance temperature detectors for the reactor coolant system by the Loop Current Step Response method each calendar quarter until a long-term qualified resistance temperature detector is available. Resistance temperature detectors will be replaced if unsatisfactory Loop Current Step Response test results are acquired.

For narrow and wide-range resistance temperature detectors not replaced at a given refueling outage, the licensee shall assure that resistance temperature detector cable connectors are adequately sealed and shall use the Arrhenius methodology to affirm that the resistance temperature detector material has not endured significant degradation due to environmental parameters. The results of this affirmation shall be added to central environmental qualification files.

(d) Deleted by Amendment No. 90.

(e) Deleted by Amendment No. 90.

(5) Prior to operating the facility at a power level above 25 percent, the licensee shall develop a surveillance program for fiberglass spray pond piping and supports that is in compliance with the regulatory position in Revision 2 of Regulatory Guide 1.72, or an alternative position acceptable to the Commission.

(6) Prior to operating the facility at a power level above 90 percent, the licensee shall perform secondary flow stability tests which have been approved by the Commission. The licensee shall provide at least 24 hours notification to Office of Inspection and Enforcement (OIE) prior to conducting such approved tests so that these tests may be witnessed by the Commission.

The exceptions to Technical Specifications 3.3.2.1(a), 3.3.2.1(b), 3.5.2, 3.7.1.2, and 3.7.1.3, issued with Amendment No. 2 to the Fuel-Load and Low-Power Testing License dated August 1980 shall be in effect until these are completed.

(7) Prior to operating the facility at a power level above 90 percent, the licensee shall demonstrate to the satisfaction of the NRC that the actual in-plant measurements of transformer tap settings are in agreement with their analysis.

(8) Prior to operating above 90 percent power, the licensee shall complete the visual verification of operability of the 37 feedwater system hydraulic snubbers, designated in the licensee's letter dated August 7, 1980, at operating temperature to the satisfaction of the OIE.

(9) The licensee is authorized to perform steam generator moisture carryover studies at the North Anna Station. These studies involve the use of an aqueous tracer solution of two (2) curies of sodium-24. The licensee 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 ensure 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.

(10) No later than October 11, 1980, the licensee shall submit a design for the backup overcurrent protection system for containment electrical penetrations for Commission review and approval. The backup system shall be installed and operational prior to resuming power operation following the second refueling outage.

(11) No later than November 1, 1980, the licensee shall implement the fire protection modifications as described in the Commission Safety Evaluation Report, "Fire Protection Program for North Anna Power Station, Units 1 and 2", dated February 1979 (see Amendment No. 8 to NPF-4 for the North Anna Power Station, Unit No. 1) except implementation of the modification of the alternate shutdown system shall be implemented no later than April 1, 1981.

(12) The licensee shall implement the following modifications related to IE Bulletin 79-27 "Loss of Non-Class IE Instrumentation and Control Power System Bus During Operation" as specified in the licensee's letters, dated May 30 and July 9, 1980 on the following schedule:

(a) Prior to startup following the November 1, 1980 outage for Fire Protection Modifications:

Item 2 - Alternate Feed for Annunciators

Item 3, 4, 7 and 8: Alternate Power Supply for Vital SOV and Vital Instrument Panels.

Item 9 and 10: Loss of Voltage for Semi-Vital Buses

(b) Within six months from date of issuance of this license:

Item 6: Alternate Power to Gaitronics

Items 11, 12, 13 and 14: Change to Voltage Indication - 125 VDC Buses

(c) Prior to startup following the first refueling outage:

Items 1 and 5: Diverse Power Supply for T_h and T_c

(13) No later than May 22, 1981, the licensee is required to complete to the satisfaction of the Commission its piping reanalysis which includes the seismic amplified response spectra identified in the licensee's letter of June 6, 1980, concerning Units 1 and 2, and submit the analysis to the Commission.

(14) No later than six months from the date of issuance of this license, the licensee shall supply, to the satisfaction of the NRC, the plant specific information needed to confirm the validity of the main steam line and feedwater line break analyses.

(15) Prior to resuming power operation following the first refueling outage except as specifically noted in paragraphs (h)(2) and (h)(4) below:

(a) The licensee shall submit the details of the inspection program for control rod guide thimble tube wall wear for Commission approval;

(b) The licensee shall install inspection ports in the steam generators;

(c) Deleted.

(d) The licensee shall install leak test connections on the RHR isolation valves;

(e) The licensee shall demonstrate by test the backup depressurization capability of the PORV's using the same shutdown procedure as described in the licensee's procedure 2-OP-3.2 dated 7/23/80;

(f) The licensee shall submit for Commission approval, the results of the tests applicable to North Anna Power Station, Unit 2, of a study concerning mixing of added borated water and cooldown under natural circulation conditions;

(g) The licensee shall retest all engineered safety features reset control actions to verify proper reset action; and

(h) The licensee shall implement the following design and procedural modifications with respect to diesel generator reliability;

(1) Complete a formal training program for all the mechanical and electrical maintenance and quality control personnel, including supervisors, who are responsible for the maintenance and availability of the diesel generators. The depth and quality of this training program shall be at least equivalent to that of training programs normally conducted by major diesel engine manufacturers;

(2) The lube oil system shall be modified to the manufacturer's recommendations for providing continuous lubrication of the lower portions of the engine. The modifications shall further provide for partial filling of the upper lube oil supply heater and a lube oil booster/ accumulator system which will force oil into the upper lube oil header during engine startup. The modifications shall be completed no later than the second refueling outage.

(3) The diesel generator operating procedures shall be modified to require loading the engine up to 50 to 75 percent of full load for one hour after eight hours of continuous no load operation;

(4) The fuel oil storage and transfer system shall be modified to include the installation of a separate high level alarm for each day tank, the installation of independent pressure switches for each pump which will be set to stop the pumps on high day tank level, and the submittal of Technical Specifications verifying proper operation of all transfer pump control switches and day tank high level alarms. Non-qualified pressure switches will be installed by October 31, 1982. These switches are being qualified by the manufacturer. Should these switches fail qualification tests, the non-qualified switches shall be replaced with qualified units. The modifications shall be completed no later than the second refueling outage.

(5) Each seven day fuel oil storage tank shall be provided with a seismic Category I, tornado missile, and flood protected emergency fill line. Each fill line shall have a shut-off valve, a strainer, and a truck fill connection consisting of a hose coupling with cap and chain; and

(6) With respect to vibration of Instruments and Controls, the licensee shall either provide test results and results of analyses which qualify the engine skid mounted control cubicles for the severe vibrational stress that will be encountered during engine operation, or floor mount the skid mounted panels and control equipment presently furnished with the diesel generators.

(16) Within 90 days following issuance of the pending revision of Regulatory Guide 1.97, "Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant Conditions During and Following an Accident", the licensee shall provide a schedule acceptable to the NRC for bringing this facility in compliance with Regulatory Guide 1.97, as revised.

(17) Prior to resuming power operation following the second refueling outage, the licensee shall subject the low pressure turbines to an inservice inspection. The inspection shall consist of visual and volumetric examinations. The visual examination shall be applied to 100 percent of all the accessible surface of the rotors, discs and blading. The volumetric examination shall use an ultrasonic technique to fully examine the bore and keyway region of the discs in each low pressure turbine.

The inspection results and evaluation of this inservice inspection shall be reported to the NRC and shall be accepted by the Commission prior to startup following the second refueling outage.

The subject of the generation of turbine missiles for this facility is pending before the Atomic Safety and Licensing Appeal Board. The license condition imposed herein shall be subject to modification based on the resolution of this pending turbine missile issue.

(18) No later than five years from the date of issuance of this license, the licensee shall demonstrate to the satisfaction of the Commission that its examination techniques provide a reliable means of detection and

evaluation of individual reactor vessel clad cracks should they grow larger than the acceptable standards contained in Section XI of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code.

(19) No later than five years from the date of issuance of this license, the licensee shall perform radiation-thermal testing of the encapsulated saddle material used for shielding, and within six months thereafter, the licensee shall evaluate the testing and provide the Commission with results of the evaluation.

(20) TMI Action Plan Conditions

Each of the following conditions references the appropriate section of Supplement No. 11 to the Safety Evaluation Report (NUREG-0053) for the North Anna Power Station, Unit 2, dated August 1980.

(a) Control Room Design Review (Section 22.2 Item I.D.1)

Within the schedule requirements of NUREG-0737, the licensee shall submit an evaluation of the benefits of installing data recording and logging equipment in the control room to correct deficiencies associated with the trending of important parameters on strip chart recorders in use at most nuclear power plants, as part of their one-year control room design review.

(b) Training During Low-Power Testing (Section 22.2 Item I.G.1)

No later than one year from the date of issuance of this license, the licensee shall complete the evaluation of the results of the low power test program for incorporation into the Surry Power Station simulator. Also within one year, the licensee shall provide a report to the NRC describing changes made to the simulator model as a result of the tests.

The licensee shall perform a boron mixing and cooldown test using decay heat within 31 days after burnup sufficient to produce at least 10 hours of decay head equivalent to one percent of rated thermal power.

(c) Auxiliary Feedwater System Reliability Evaluation (Section 22.2 Item II.E.1.1)

With respect to the AFW Endurance Test, the licensee shall test the steam turbine diven pump after unit startup when steam will be available in accordance with the licensee's letter, dated July 11, 1980.

(d) Upgrade Emergency Preparedness (Section 22.2 Item III.A.1.1)

The licensee shall maintain in effect an emergency plan that meets:

(i) Regulatory requirement of 10 CFR Part 50, Appendix E, and

(ii) The operator Planning Objectives of NUREG-0654, "Criteria for Preparation and Evaluation of Radiological Preparedness in Support of Nuclear Power Plants," January 1980.

This plan shall provide an emergency operations facility as a base for coordinating onsite activities and interface with State, local, and Federal agencies.

No later than 90 days from the date of issuance of this license, the licensee shall report to the NRC the status of any items related to emergency preparedness identified by FEMA or the NRC as requiring further action.

(21) TMI Action Plan Dated Conditions

Each of the following conditions references the appropriate section of Supplement No. 11 to the Safety Evaluation Report (NUREG-0053) for the North Anna Power Station, dated August 1980, and shall be completed to the satisfaction of the NRC.

(a) Shift Technical Advisor (Section 22.3 Item I.A.1.1)

During 1980, at least one Senior Reactor Operator (SRO) or an experienced degreed engineer who is a member of the Site Safety Engineering Staff shall be designated as the Shift Technical Advisor (STA).

All STA's shall be fully trained no later than by January 1, 1981. During 1980, all SRO's designated as STA's shall complete eight weeks of mathematics, physics, thermodynamics, fluid flow, heat transfer, instrumentation and control, chemistry, materials and structural analysis. Following this, STA's shall receive two weeks of design review and five weeks of system dynamic behavior including transient analysis and techniques for transient identification. The training program for engineers designated as STA's shall consist of 3 portions: academic training in thermodynamics, fluid flow, heat transfer and reactor theory; specific instruction in plant systems and Technical Specifications; and finally, simulator training.

The training shall be taught at the college level and equivalent to about 60 semester hours.

(b) Administration of Training Programs for License Operators (Section 22.3 Item I.A.2.3)

All license personnel and nuclear training coordinators at the facility are required to participate in the Requalification Program as specified in the licensee's letter dated March 28, 1980.

(c) Reactor Coolant System Vents (Section 22.2 Item II.B.1)

The licensee shall submit procedural guidelines and analytical bases for the reactor coolant system vents. The reactor coolant system vents shall be installed no later than the implementation schedule of NUREG-0737.

(d) Plant Shielding (Section 22.3 Item II.B.2)

The licensee shall complete modifications to assure adequate access to vital areas and protection of safety equipment following an accident resulting in a degraded core no later than January 1, 1983.

(e) Post-Accident Sampling (Section 22.3 Item II.B.3)

The licensee shall complete corrective actions needed to provide the capability to promptly obtain and perform radioisotopic and chemical analysis of reactor coolant and containment atmosphere samples under degraded core conditions without excessive exposure at the first outage of sufficient duration but no later than January 1, 1983.

(f) Relief and Safety Valve Test Requirements (Section 22.3 Item II.D.1)

The licensee shall complete tests to qualify the reactor coolant system relief and safety valves under expected operating conditions for design basis transients and accidents no later than July 1, 1982.

(g) Auxiliary Feedwater Initiation and Indication (Section 22.3 Item II.E.1.2)

The licensee shall implement the modification to upgrade the safety-grade indications of AFW flow from semi-vital bus power to vital bus power no later than January 1, 1981.

(h) Containment Dedicated Penetrations (Section 22.3 Item II.E.4.1)

The licensee shall install redundant remote actuated valves in series to isolate the containment vacuum pumps from the combustible gas control system. The licensee shall also convert the manual valves in the hydrogen recombiner piping to remote manual actuation no later than the implementation schedule of NUREG-0737.

(i) Additional Accident Monitoring Instrumentation (Section 22.3 Item II.F.1)

The licensee shall install and demonstrate the operability of instruments for continuous indication in the control room of the following variables. Each item shall be completed by the specified date in the condition:

(i) Containment pressure from 0 psia to three times the design pressure of the containment no later than the implementation schedule of NUREG-0737;

(ii) Containment water level from (1) the bottom to the top of the containment sump, and (2) the bottom of the containment to a level equivalent to 600,000 gallons of water no later than the implementation schedule of NUREG-0737.

(iii) Containment atmosphere hydrogen concentration from 0 to 10 volume percent shall be installed no later than January 1, 1983, and the hydrogen sampling system to be used in the interim shall remain in effect until January 1, 1983;

(iv) Containment radiation up to 10^7 R/hr. no later than the second refueling outage.

(v) Noble gas effluent from each potential release point from normal concentrations to 10^5 μCi/cc (Xe-133) no later than January 1, 1983.

The licensee shall also provide capability for continuous sampling and for onsite analysis of the radioiodine and particulate effluent samples no later than January 1, 1983.

(j) Inadequate Core Cooling Instruments (Section 22.3 Item II.F.2)

The licensee shall install and demonstrate the operability of additional instruments or controls needed to supplement installed equipment in order to provide unambiguous, easy-to-interpret indication of inadequate core cooling at the first outage of sufficient duration but no later than July 1, 1982.

(22) The license is authorized to receive from the Surry Nuclear Power Station Units No. 1 and 2, possess, and store irradiated Surry fuel assemblies containing special nuclear material, enriched to not more than 4.1% by weight U-235 subject to the following conditions:

a. Surry fuel assemblies may not be placed in North Anna Power Station Units No. 1 and 2 reactors.

b. Irradiated fuel shipped to North Anna shall have been removed from the Surry reactors no less than 730 days prior to shipment.

c. No more than 500 Surry irradiated fuel assemblies shall be received for storage at the North Anna Units No. 1 and 2 spent fuel pool.

(23) Fire Protection

The licensee shall implement and maintain in effect all provisions of the approved fire protection program as described in the Final Safety Analysis Report for the facility and as approved in the SER dated February, 1979 subject to the following provision:

The licensee may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

(24) Lead Test Assemblies

The licensee may use up to four (4) fuel assemblies containing advanced zirconium based alloys as described in the licensee's submittal dated September 4, 1996, as supplemented February 3, 1997.

D. An exemption from certain requirements of Appendix J to 10 CFR Part 50 is described in the Office Nuclear Reactor Regulation's Safety Evaluation Report, Supplement No. 10. This exemption is authorized by law and will not endanger life or property or the common defense and security and is otherwise in the public interest. The exemption is, therefore, hereby granted. The granting of the exemption was authorized with the issuance of the License for Fuel-Loading and Low-Power Testing, dated April 11, 1980. The facility will operate, to the extent authorized herein, in conformity with the application, as amended, to provisions of the Act, and the regulations of the Commission.

E. Physical Protection

The licensee shall fully implement and maintain in effect all provisions of the Commission-approved physical security, guard training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and the authority of 10 CFR 50.90 and 10 CFR 50.54 (p). The plans, which contain Safeguards Information protected under 10 CFR 73.21, are entitled: "North Anna Power Station Physical Security Plan," with revisions submitted through February 24, 1988; "North Anna Power Station Guard Training and Qualification Plan," with revisions submitted through May 14, 1987; and "North Anna Power Station Safeguards Contingency Plan," with revisions submitted through January 9, 1987. Changes made in accordance with 10 CFR 73.55 shall be implemented in accordance with the schedule set forth therein.

F. The design of the reactor coolant pump and steam generator supports may be revised in accordance with the licensee's submittal dated November 6, 1986 (Serial No. 86-477A).

G. If the licensee plans to remove or to make significant changes in the normal operation of equipment that controls the amount of radioactivity in effluents from the North Anna Power Station, the NRC shall be notified in writing regardless of whether the change affects the amount of radioactivity in the effluents.

H. The licensee shall report any violations of the requirements contained in Section 2, Items C.(3) through C.(21), E, F and G of this license within 24 hours by telephone and confirmed by telegram, mailgram, or facsimile transmission to the Director of the Regional Office, or his designate, no later than the first working day following the violation, with a written followup report within 14 days.

I. The Additional Conditions contained in Appendix C, as revised through Amendment No. 195, are hereby incorporated into this license. Dominion Generation shall operate the facility in accordance with the Additional Conditions.

J. This license is effective as of the date of issuance and shall expire at midnight on August 21, 2020.

FOR THE NUCLEAR REGULATORY COMMISSION

Original signed by:
Harold R. Denton

Harold R. Denton, Director
Office of Nuclear Reactor Regulation

Attachment:
Appendices A, B, and C

Date of Issuance: AUG 21 1980

When $F^N_{\Delta H}$ is measured, 4% is the appropriate experimental error allowance for a full core map taken with the incore detection system. The specified limit for $F^N_{\Delta H}$ contains a 4% error allowance. Normal operation will result in a measured $F^N_{\Delta H}$ less than or equal to the limit specified in the CORE OPERATING LIMITS REPORT. The 4% allowance is based on the following considerations:

a. abnormal perturbations in the radial power shape, such as from rod misalignment, effect $F^N_{\Delta H}$ more directly than F_Q,

b. although rod movement has a direct influence upon limiting F_Q to within its limit, such control is not readily available to limit $F^N_{\Delta H}$, and

c. errors in prediction for control power shape detected during startup physics tests can be compensated for in F_Q by restricting axial flux distributions. This compensation for $F^N_{\Delta H}$ is less readily available.

Fuel rod bowing reduces the value of the DNB ratio. Credit is available to offset this reduction in the margin available between the safety analysis design DNBR value (1.46 for Dominion Generation statistical methods) and the limiting design DNBR value (1.26 for Dominion Generation statistical methods). A discussion of the rod bow penalty is presented in the FSAR.

The hot channel factor $F^M_Q(Z)$ is measured periodically and increased by a cycle and height dependent power factor, N(Z), to provide assurance that the limit on the hot channel factor, $F_Q(Z)$, is met. N(Z) accounts for the non-equilibrium effects of normal operation transients and was determined from expected power control maneuvers over the full range of burnup conditions in the core. The N(Z) function for normal operation is specified in the CORE OPERATING LIMITS REPORT per Specification 6.9.1.7.

3/4.2.4 QUADRANT POWER TILT RATIO

The quadrant power tilt ratio limit assures that the radial power distribution satisfies the design values used in the power capability analysis. Radial power distribution measurements are made during startup testing and periodically during power operation.

The limit of 1.02 at which corrective action is required provides DNB and linear heat generation rate protection with x-y plane power tilts.

The two hour time allowance for operation with a tilt condition greater than 1.02 but less than 1.09 is provided to allow identification and correction of a dropped or misaligned rod. In the event such action does not correct the tilt, the margin for uncertainty on F_Q is reinstated by reducing the power by 3 percent for each percent of tilt in excess of 1.0.

6.3 FACILITY STAFF QUALIFICATIONS

6.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications of ANS 3.1 (12/79 Draft)* for comparable positions, except for:

1. The Superintendent - Radiological Protection shall meet or exceed the qualifications of Regulatory Guide 1.8, September 1975.
2. Incumbents in the positions of Shift Supervisor, Assistant Shift Supervisor (SRO), Control Room Operator - Nuclear (RO), and Shift Technical Advisor, shall meet or exceed the requirements of 10 CFR 55.59(c) and 55.31(a)(4).
3. The Superintendent Operations shall hold (or have previously held) a Senior Reactor Operator License for North Anna Power Station or a similar design Pressurized Water Reactor plant.
4. The Supervisor Shift Operations shall hold an active Senior Reactor Operator License for North Anna Power Station.

6.4 TRAINING

6.4.1 The Manager - Nuclear Training is responsible for ensuring that retraining and replacement training programs for the licensed facility staff meet or exceed the requirements of 10 CFR 55.59(c) and 55.31(a)(4). Also, a retraining and replacement training program for non-licensed facility staff shall meet or exceed the recommendations of Section 5 of ANS 3.1 (12/79 Draft)*.

6.5 REVIEW AND AUDIT

6.5.1 STATION NUCLEAR SAFETY AND OPERATING COMMITTEE (SNSOC) FUNCTION

6.5.1.1 The SNSOC shall function to advise the Site Vice President on all matters related to nuclear safety.

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* Exceptions to this requirement are specified in the licensee's QA Topical Report, VEP-1, "Quality Assurance Program, Operational Phase."

APPENDIX B

TO FACILITY OPERATING LICENSE NO. NPF-7

NORTH ANNA POWER STATION, UNIT NO. 2

DOMINION GENERATION CORPORATION

DOCKET NO. 50-339

ENVIRONMENTAL PROTECTION PLAN

APPENDIX C

TO FACILITY OPERATING LICENSE NO. NPF-7

NORTH ANNA POWER STATION, UNIT NO. 2

DOMINION GENERATION CORPORATION

DOCKET NO. 50-339

ADDITIONAL CONDITIONS

Exhibit B

NSHC Determination

The proposed changes to the Operating Licenses and Technical Specifications are administrative in nature. The changes identify the new owner and operator of North Anna Units 1 and 2 and Surry Units 1 and 2, as Dominion Generation Corporation.

In its regulations, at 10 C.F.R. § 2.1315, the NRC has made a generic determination regarding No Significant Hazards Consideration (NSHC) determinations required by 10 C.F.R. § 50.92. The determination is applicable to license amendments involving license transfers. In brief, the rule states that the NRC has determined that any amendment to the license of a utilization facility which does no more than conform the license to reflect the transfer action involves no significant hazards consideration. The proposed changes contained in this license amendment application are intended solely to conform the Licenses and associated Technical Specifications for North Anna Units 1 and 2 and Surry Units 1 and 2 to reflect the change in ownership as a result of a license transfer and thus meet the criteria specified by 10 C.F.R. § 2.1315.

Exhibit C

Corporate Ownership Structure
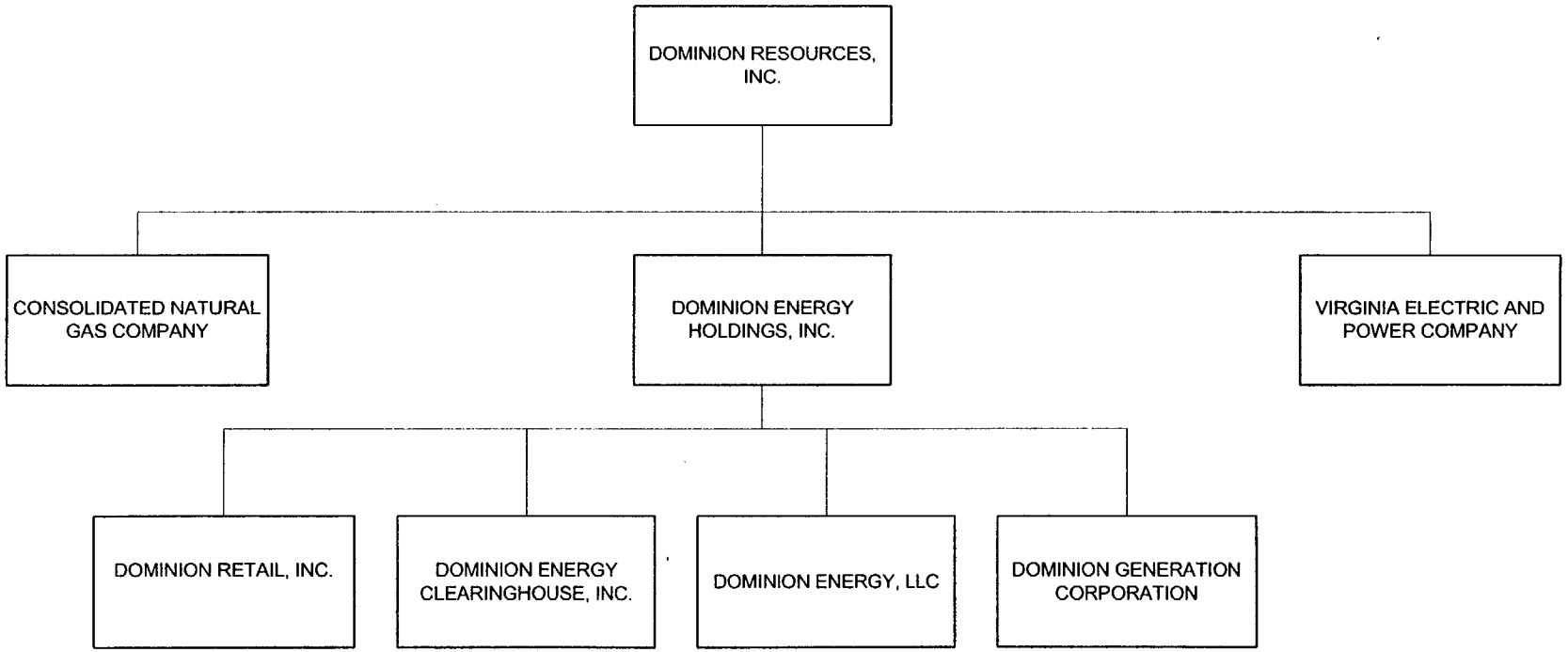
Exhibit C
Corporate Ownership Structure