

VIRGINIA ELECTRIC AND POWER COMPANY  
RICHMOND, VIRGINIA 23261

January 20, 1992

U. S. Nuclear Regulatory Commission  
Attn.: Document Control Desk  
Washington, D.C. 20555

Serial No. 92-001  
NL&P/TAH: R0  
Docket Nos.: 50-338  
License Nos.: NPF-4

Gentlemen:

**VIRGINIA ELECTRIC AND POWER COMPANY**  
**NORTH ANNA POWER STATION UNIT 1**  
**ONE-TIME EXTENSION TO CERTAIN SURVEILLANCE REQUIREMENTS**

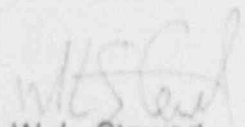
Pursuant to 10 CFR 50.90, Virginia Electric and Power Company requests an amendment, in the form of a license condition, to Operating License NPF-4 for North Anna Power Station Unit 1. The proposed license condition allows a one time extension of specific surveillance requirements for the ninth cycle of North Anna Unit 1 to allow surveillance testing to coincide with the Steam Generator Replacement Project, currently scheduled to begin in January 1993. As the proposed amendment request does not permit further addition of Technical Specification 4.0.2 surveillance extensions, the maximum surveillance interval increase will only be 1.5 months.

The list of specific surveillance tests and the discussion of the change is included in Attachment 1. The proposed license condition is in Attachment 2 and the Significant Hazards Determination Evaluation is in Attachment 3.

The Station Nuclear Safety and Operating Committee and the Management Safety Review Committee have reviewed the proposed change and determined that the request may involve an unreviewed safety question as defined in 10 CFR 50.59. The margin of safety assured by the required refueling surveillances may be slightly reduced by extending the surveillance intervals. However, we have concluded that extending the refueling outage surveillance intervals does not significantly reduce the reliability established by the normal operating surveillance requirements (e.g., daily, weekly, monthly surveillances). We evaluated the proposed change and determined that it does not involve a significant hazards consideration as defined in 10 CFR 50.92.

If you have any questions, please contact us.

Very truly yours,



W. L. Stewart  
Senior Vice President - Nuclear

Attachments

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P PDR

ADD 1

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NORTH ANNA POWER STATION - UNIT 1

LICENSE AMENDMENT REQUEST

EXTENSION OF 18 MONTH SURVEILLANCE INTERVALS

- |              |   |
|--------------|---|
| Attachment 1 | Discussion of Proposed Changes  |
| Attachment 2 | Proposed Changes – Unit 1 - Final Copy  |
| Attachment 3 | Significant Hazards Considerations Determination<br>(10 CFR 50.92 Evaluation) |

ATTACHMENT 1

LICENSE AMENDMENT REQUEST

EXTENSION OF 18 MONTH SURVEILLANCE INTERVALS

DISCUSSION

NORTH ANNA POWER STATION - UNIT 1

## DISCUSSION OF PROPOSED CHANGES

### Introduction

Currently, North Anna Technical Specifications require performing certain surveillance tests at 18 month intervals to coincide with the normal 18 month refueling cycles. The proposed change will extend the specified 18 month interval surveillance requirements for the ninth cycle of North Anna Unit 1 to allow the surveillance testing to coincide with the Steam Generator Replacement Project (SGRP) outage. The SGRP is currently scheduled to begin in January 1993.

### Background

The ninth fuel cycle for North Anna Unit 1 was originally scheduled to have ended in September 1992 and the surveillance testing required by Technical Specifications would have been performed then. Subsequently, we elected to shorten the current operating cycle to 13 months with the outage rescheduled for April 1992. However, because Unit 1 entered an unplanned outage on December 23, 1991 for steam generator tube inspections, the refueling outage for the ninth cycle has now been rescheduled to begin in January 1993. This schedule change considers the expected duration of the current outage and will permit optimum fuel burnup before the next refueling outage but will result in certain Technical Specification surveillance intervals (plus Technical Specification 4.0.2 allowable extensions) expiring prior to the beginning of the 1993 outage.

This License Amendment will add a License Condition to permit extending the specified 18 month Technical Specification surveillance intervals for the North Anna Unit 1 ninth fuel cycle. The proposed surveillance intervals will not exceed 24 months including any extension allowed under Technical Specification 4.0.2.

In addition, two License Conditions, 2.D.(3)s and 2.D.(3)t are deleted by this amendment. These License Conditions allowed extensions of the surveillance intervals for North Anna Unit 1 Cycles 7 and 8, respectively. These fuel cycles have been completed and the license conditions are no longer valid. Deleting these invalid License Conditions is only administrative in nature.

### **Affected Technical Specification Surveillances**

#### **Technical Specification - 4.1.3.2.1.b**

Rod Position Indicator Instrumentation

#### **Technical Specification - 4.3.1.1.1**

Items 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17

Reactor Trip System Instrumentation (Instrument Channel

Operability - Channel Calibration and Functional Test)

#### **Technical Specification - 4.3.1.1.2**

Items 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17

Reactor Trip System Instrumentation - Interlocks (Demonstrate total interlock function during channel calibration for each channel affected by interlock function.)

#### **Technical Specification - 4.3.1.1.3**

Items 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17

Reactor Trip System Instrumentation - Response Times

#### **Technical Specification - 4.3.2.1.1**

Items 1.c, 1.d, 1.e, 1.f, 2.c, 3.b.3, 4.c, 4.d, 5.a, 6.c and 6.d

Engineering Safety Feature Actuation System Instrumentation

(Instrument Channel Operability - Channel Calibration and Functional Test)

#### **Technical Specification - 4.3.2.1.2**

Items 1.c, 1.d, 1.e, 1.f, 2.c, 3.b.3, 4.c, 4.d, 5.a, 6.c and 6.d

Engineering Safety Feature Actuation System Instrumentation -

Interlocks (Demonstrate total interlock function during channel calibration for each channel affected by interlock function.)

#### **Technical Specification - 4.3.2.1.3**

Items 1.c, 1.d, 1.e, 1.f, 2.c, 3.b.3, 4.c, 4.d, 5.a, 6.c and 6.d

Engineering Safety Feature Actuation System Instrumentation -

Response Times

**Technical Specification - 4.3.3.1**

**Items 1.b.i, 1.b.ii, 2.c.ii, 2.c.iii and 2.c.iv**

Radiation Monitoring Instrumentation - Channel Calibration

**Technical Specification - 4.3.3.3.1**

**Items 1.a, 1.b, 2.a, 2.b, 2.c, 3.a, 4.a, 4.b, 4.c and 4.d**

Seismic Instrumentation - Channel Calibration

**Technical Specification - 4.3.3.5**

**Items 1, 2, 3, 4, 5, 6, 7 and 8**

Auxiliary Shutdown Panel Monitoring Instrumentation - Channel Calibration

**Technical Specification - 4.3.3.6**

**Items 1, 2, 3, 4, 5, 6, 7, 11, 12, 14, 15, 16, 17 and 18**

Accident Monitoring Instrumentation - Channel Calibration

**Technical Specification - 4.3.3.9.C**

Loose Parts Monitoring Instrumentation - Channel Calibration

**Technical Specification - 4.4.3.2.1.b**

Reactor Coolant System - Relief Valves (PORV Instrument Channel Calibration)

**Technical Specification - 4.4.9.3.1.b**

Reactor Coolant System Overpressure Protection Systems - Channel Calibration

**Technical Specification - 4.5.2**

**Items d.1, and g.2**

Emergency Core Cooling System - ECCS Subsystems -  $T_{avg} \geq 350^{\circ}\text{F}$   
(Visual inspection of Containment Sump screens for loose debris and verification of manual valve positions)

**Technical Specification - 4.5.3.1**

Emergency Core Cooling System - ECCS Subsystems -  $T_{avg} < 350^{\circ}\text{F}$   
(Demonstrate operability per SR 4.5.2)



**Technical Specification - 4.6.3 1.2.d**

Containment Isolation Valves - Cycling of Weight or Spring Loaded  
Check Valves

**Technical Specification - 4.7.1.1**

Plant System - Safety Valves (No additional Surveillance  
Requirements other than those required by Specification 4.0.3)

**Technical Specification - 4.7.9.1.a**

Residual Heat Removal System - Auto Closure Interlock Test

**Technical Specification - 4.7.10**

Item c

Snubbers - Large Bore Functional Testing

**Technical Specification - 4.8.1.1.2.d.1**

AC Sources - Inspect EDGs

**Technical Specification - 4.8.1.1.3.c**

AC Sources - EDG Battery Cell Conditions and Charger Capacity  
Items 1, 2, 3, and 4

**Technical Specification - 4.8.1.1.3.e**

AC Sources - EDG Battery Discharge Test

**Technical Specification - 4.8.2.3.2.c**

Items 1, 2, 3, and 4

DC Distribution - Battery Cell Conditions and Charger Capacity

**Technical Specification - 4.8.2.3.2.d**

DC Distribution - Battery Service Testing

**Technical Specification - 6.8.4.a (ii)**

Primary Coolant Sources Outside Containment (Integrated Leak Test  
Requirements)



### Summary

The deletion of License Conditions 2.D.(3)s and 2.D.(3)t is administrative in nature only as the terms of both License Conditions have expired and both have been satisfied.

Technical Specification 4.0.2 is an administrative control which ensures that surveillance tests are performed periodically and defines a reasonable extension period for such testing. The basis of this specification describes the surveillance requirements as "sufficiently restrictive to ensure that the reliability associated with the surveillance activity is not significantly degraded beyond that obtained from the nominal specified interval." The requested extension of the surveillance test intervals, due to the unplanned outage and the rescheduling of the ninth cycle refueling outage, may involve an unreviewed safety question as defined in 10 CFR 50.59 because the margin of safety provided by the surveillance frequencies required by Specification 4.0.2, may be slightly reduced by extending the intervals. However, because the maximum allowable extension would only be 1.5 months, we have concluded that the reliability defined by the normal surveillance intervals will not be significantly reduced by this extension. We base this conclusion on the following points:

- Current monitoring of instrumentation and ongoing TS surveillance tests provide assurance that the equipment involved in the extended surveillance tests will remain in an operable condition until their inspection at the next refueling outage.
- Periodic surveillance tests have been performed since the last refueling outage to monitor system and component performance and to detect any significant degradation. Surveillance testing will continue to be performed during the requested extension interval which provides added assurance that the reliability of equipment associated with the extended surveillance will not be significantly degraded by this one-time extension.
- Historically, the electronic components in the Reactor Protection System and Engineered Safety Features Actuation System have shown a very high degree of reliability. Typically, any failures associated with instruments in these systems have been catastrophic and not found during calibrations.

- All EQ transmitters that have an 18 month calibration requirement to maintain EQ qualifications have been or will be calibrated during this outage.
- SI Blackout testing of both emergency buses, SI Functional, CDA Functional, as well as various other safety system testing has been performed during this Steam Generator Inspection Outage.

We have also concluded that although there could be a slight reduction in the margin of safety provided by Specification 4.0.2, for the reasons explained above, this reduction is not significant and does not create a Significant Hazard as defined in 10 CFR 50.92.

### **ASME Section XI**

Section XI of the ASME Code defines a refueling interval as 18, but no more than 24 months. Based upon this definition, all ISI testing, required to be done at refueling intervals, does not have to be performed until the unit is shutdown for steam generator replacement.

NOTE: Facility Operating License Pages 4 and 5, have been reformatted and reprinted to create space for the proposed License Condition without requiring an additional page, "6a". They are included for continuity.

**ATTACHMENT 2**

**LICENSE AMENDMENT REQUEST**

**EXTENSION OF 18 MONTH SURVEILLANCE INTERVALS**

**FINAL COPY**

**NORTH ANNA POWER STATION - UNIT 1**

(1) Maximum Power Level

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. 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. 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. VEPCO may use two (2) fuel assemblies containing fuel rods clad with an advanced zirconium base alloy cladding material as described in the licensee's submittals dated February 20, 1987 and September 30, 1988.
- e. If 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.
- j. The Virginia Electric and Power Company 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 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 |
- t. Deleted by Amendment |
- u. Fire Protection

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.



- v. The performance interval for surveillance tests specifically identified in the licensee's letter dated January 20, 1992, normally 18 months to coincide with the normal 18 month refueling cycle, shall be extended to coincide with the Steam Generator Replacement Project and Cycle 9 Refueling Outage for North Anna Unit 1. The extended interval shall not exceed a total of 24 months.
- (4) The licensee 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.

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 to 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 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 Safeguard 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.

**ATTACHMENT 3**

**LICENSE AMENDMENT REQUEST**

**EXTENSION OF 18 MONTH SURVEILLANCE INTERVALS**

**DETERMINATION OF NO SIGNIFICANT HAZARDS CONSIDERATIONS  
(10 CFR 50.92 EVALUATION)**

**NORTH ANNA POWER STATION - UNIT 1**



## **BASIS FOR NO SIGNIFICANT HAZARDS DETERMINATION**

Currently, North Anna Technical Specifications require performing certain surveillance tests at 18 month intervals to coincide with the normal 18 month refueling cycles. The proposed change will extend the specified 18 month interval surveillance requirements for the ninth cycle of North Anna Unit 1 to allow the surveillance testing to coincide with the Steam Generator Replacement Project (SGRP) outage. The SGRP is currently scheduled to begin in January 1993.

### **Background**

The ninth fuel cycle for North Anna Unit 1 was originally scheduled to have ended in September 1992 and the surveillance testing required by Technical Specifications would have been performed then. Subsequently, we elected to shorten the current operating cycle to 13 months with the outage rescheduled for April 1992. However, because Unit 1 entered an unplanned outage on December 23, 1991 for steam generator tube inspections, the refueling outage for the ninth cycle has now been rescheduled to begin in January 1993. This schedule change considers the expected duration of the current outage and will permit optimum fuel burnup before the next refueling outage but will result in certain Technical Specification surveillance intervals (plus Technical Specification 4.0.2 allowable extensions) expiring prior to the beginning of the 1993 outage.

This License Amendment will add a License Condition to permit extending the specified 18 month Technical Specification surveillance intervals for the North Anna Unit 1 ninth fuel cycle. The proposed surveillance intervals will not exceed 24 months including any extension allowed under Technical Specification 4.0.2. Operation of North Anna Power Station Unit 1 in accordance with this change will not involve a significant hazards consideration as defined in 10 CFR 50.92 because it will not:

1. result in a significant increase in the probability or consequence of an accident previously evaluated. Current monitoring of plant conditions and continuation of the surveillance testing required during normal plant operation will continue to be performed as usual to assure conformance with Technical Specification OPERABILITY requirements.

2. create the possibility of a new or different kind of accident from any accident previously identified. Extending the surveillance interval for the performance of the specific tests will not create the possibility of any new or different kind of accidents. Current monitoring of plant conditions and continuation of the surveillance testing required during normal plant operation will continue to be performed as usual to assure conformance with Technical Specification OPERABILITY requirements.
3. result in a significant reduction in a margin of safety. Extending the surveillance interval for the performance of the specific tests could slightly reduce equipment reliability and margin of safety derived from required surveillances. However, current monitoring of plant conditions and continuation of the surveillance testing required during normal plant operation will continue to be performed as usual to assure conformance with Technical Specification OPERABILITY requirements and the bases thereof. Therefore, there will not be a significant reduction in the margin of safety during the extension.

Therefore, pursuant to 10 CFR 50.92, based on the above considerations, we have determined that this change does not involve a significant hazards consideration.