

November 28, 1984

*DOR 016*

Docket Ns. 50-339

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Mr. W. L. Stewart  
Vice President - Nuclear Operations  
Virginia Electric and Power Company  
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Dear Mr. Stewart:

The Commission has issued the enclosed Amendment No. 42 to Facility Operating License No. NPF-7 for the North Anna Power Station, Unit No. 2 (NA-2). The amendment revises the NA-2 Technical Specifications (TS) in response to your application dated March 15, 1984. The amendment is effective on the date of issuance.

The amendment deletes TS 4.8.1.1.2.C.6 which required verification on a simulated loss of a diesel generator (with offsite power not available) that loads are shed from the emergency bypasses and that subsequent loading of the diesel generator is in accordance with design equipment. Deletion of TS 4.8.1.1.2.C.6 is in conformance with the provisions of NRC Generic Letter No. 83-30 dated July 21, 1983. In addition, deletion of this TS will reduce the number of diesel generator ambient fast starts which addresses the concerns in NRC Generic Letter 83-41 dated December 16, 1983.

A copy of the Safety Evaluation is also enclosed. The notice of issuance will be included in the Commission's next monthly Federal Register notice.

Sincerely,

*/s/*

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

Enclosure:

1. Amendment No. 42 to NPF-7
2. Safety Evaluation

cc w/enclosures:

See next page

ORB#3:DL	**ORB#3:DL	**ORB#3:DL	**OELD	AD:OR:DL
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11/28/84	11/20/84	11/21/84	11/21/84	11/28/84

\*\*See previous concurrence

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Docket No. 50-339

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

Dear Mr. Stewart:

The Commission has issued the enclosed Amendment No. to Facility Operating License No. NPF-7 for the North Anna Power Station, Unit No. 2 (NA-2). The amendment revises the NA-2 Technical Specifications (TS) in response to your application dated March 15, 1984. The amendment is effective on the date of issuance.

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Sincerely,

Leon B. Engle, Project Manager  
Operating Reactors Branch #3  
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- 1. Amendment No. to NPF-7
- 2. Safety Evaluation

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ORB#3:DL  
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11/20/84

ORB#3:DL  
JRMiller  
11/21/84

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

VIRGINIA ELECTRIC AND POWER COMPANY

OLD DOMINION ELECTRIC COOPERATIVE

DOCKET NO. 50-339

NORTH ANNA POWER STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No.42  
License No. NPF-7

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Virginia Electric and Power Company (the licensee) dated March 15, 1984 complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

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

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 42, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective upon the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

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

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: November 28, 1984

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 42 TO FACILITY OPERATING LICENSE NO. NPF-7

DOCKET NO. 50-339

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

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## ELECTRICAL POWER SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

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1. Verifying the fuel level in the day tank.
  2. Verifying the fuel level in the fuel storage tank.
  3. Verifying the fuel transfer pump can be started and transfers fuel from the storage system to the day tank.
  4. Verifying the diesel starts from ambient condition and accelerates to at least 900 rpm in less than or equal to 10 seconds. The generator voltage and frequency shall be  $4160 \pm 420$  volts and  $60 \pm 1.2$  Hz within 10 seconds after the start signal. The diesel generator shall be started for this test by using one of the following signals with startup on each signal verified at least once per 124 days.
    - a) Manual.
    - b) Simulated loss of offsite power by itself.
    - c) Simulated loss of offsite power in conjunction with an ESF actuation test signal.
    - d) An ESF actuation test signal by itself.
  5. Verifying the generator is synchronized, loaded to greater than or equal to 2750 kw in less than or equal to 60 seconds, and operates for greater than or equal to 60 minutes.
  6. Verifying the diesel generator is aligned to provide standby power to the associated emergency busses.
- b. At least once per 92 days by verifying that a sample of diesel fuel from the fuel storage tank obtained as a DRAIN Sample in accordance with ASTM-D270-65, is within the acceptable limits specified in Table 1 of ASTM D975-74 when checked for viscosity, water and sediment.
- c. At least once per 18 months during shutdown by:
1. Subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for this class of standby service,
  2. Verifying that, on rejection of a load of greater than or equal to 610 kw the voltage and frequency are maintained within  $4160 \pm 420$  volts and  $60 \pm 1.2$  Hz.
  3. Verifying that the load sequencing timers are OPERABLE with times within the tolerances shown in Table 4.8-1.

## ELECTRICAL POWER SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

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4. Simulating a loss of offsite power by itself, and:
  - a) Verifying de-energization of the emergency busses and load shedding from the emergency busses.
  - b) Verifying the diesel starts on the auto-start signal, energizes the emergency busses with permanently connected loads within 10 seconds, energizes the auto-connected shutdown loads through the sequencing timers and operates for greater than or equal to 5 minutes while its generator is loaded with the shutdown loads. After energization of these loads, the steady state voltage and frequency shall be maintained at  $4160 \pm 420$  volts and  $60 \pm 1.2$  Hz.
5. Verifying that on an ESF actuation test signal (without loss of offsite power) the diesel generator starts on the auto-start signal and operates on standby for greater than or equal to 5 minutes.
6. Simulating a loss of offsite power in conjunction with an ESF actuation test signal, and
  - a) Verifying de-energization of the emergency busses and load shedding from the emergency busses.
  - b) Verifying the diesel starts from ambient condition on the auto-start signal, energizes the emergency busses with permanently connected loads within 10 seconds, energizes the auto-connected emergency (accident) loads through the sequencing times and operates for greater than or equal to 5 minutes while its generator is loaded with the emergency loads and maintains the steady state voltage and frequency at  $4160 \pm 420$  volts and  $60 \pm 1.2$  Hz.
  - c) Verifying that all diesel generator trips, except engine overspeed, generator differential and breaker over current are automatically bypassed upon loss of voltage on the emergency bus and/or a safety injection actuation signal.

## ELECTRICAL POWER SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

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7. Verifying the diesel generator operates for at least 24 hours. During the first 2 hours of this test, the diesel generator shall be loaded to greater than or equal to 3025 kw and during the remaining 22 hours of this test, the diesel generator shall be loaded to greater than or equal to 2750 kw. Within 5 minutes after completing this 24-hour test, perform Specification 4.8.1.1.2.c.4. |
  8. Verifying that the auto-connected loads to each diesel generator do not exceed the 2000 hour rating of 3000 kw. |
  9. Verifying the diesel generator's capability to: |
    - a) Synchronize with the offsite power source while the generator is loaded with its emergency loads upon a simulated restoration of offsite power,
    - b) Transfer its loads to the offsite power source, and
    - c) Proceed through its shutdown sequence.
  10. Verifying that the following diesel generator lockout features prevent diesel generator starting only when required: |
    - a) Remote Local Selection Switch
    - b) Emergency Stop Switch
- d. At least once per 10 years or after any modifications which could affect diesel generator interdependence by starting both diesel generators simultaneously, during shutdown, and verifying that both diesel generators accelerate to at least 900 rpm in less than or equal to 10 seconds.

4.8.1.1.3 Each diesel generator 125-volt battery bank and charger shall be demonstrated OPERABLE:

- a. At least once per 7 days by verifying that:
  1. The electrolyte level of each pilot cell is between the minimum and maximum level indication marks,
  2. The pilot cell specific gravity, corrected to 77°F and full electrolyte level, is greater than or equal to 1.200,
  3. The pilot cell voltage is greater than or equal to 2.08 volts, and

## ELECTRICAL POWER SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

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4. The overall battery voltage is greater than or equal to 125 volts.
- b. At least once per 92 days by verifying that:
1. The voltage of each connected cell is greater than or equal to 2.08 volts under float charge and has not decreased more than 0.05 volts from the value observed during the previous test,
  2. The specific gravity, corrected to 77°F and full electrolyte level, of each connected cell is greater than or equal to 1.200 and has not decreased more than 0.08 from the value observed during the previous test, and
  3. The electrolyte level of each connected cell is between the minimum and maximum level indication marks.
- c. At least once per 18 months by verifying that:
1. The cells, cell plates and battery racks show no visual indication of physical damage or abnormal deterioration.
  2. The cell-to-cell and terminal connections are clean, tight and coated with anti-corrosion material.
  3. The resistance of each cell-to-cell and terminal connection is less than or equal to 0.01 ohms.
  4. The battery charger will supply at least ten amperes at 125 volts for at least 4 hours.
- d. At least once per 60 months, during shutdown, by verifying that the battery capacity is at least 80% of the manufacturer's rating when subjected to a performance discharge test.

4.8.1.1.4 Reports - All diesel generator failures, valid or non-valid, shall be reported to the Commission pursuant to Specification 6.9.1. If the number of failures in the last 100 valid tests (on a per nuclear unit basis) is greater than or equal to 7, the report shall be supplemented to include the additional information recommended in Regulatory Position C.3.b of Regulatory Guide 1.108, Revision 1, August 1977.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 42 TO  
FACILITY OPERATING LICENSE NO. NPF-7  
VIRGINIA ELECTRIC AND POWER COMPANY  
OLD DOMINION ELECTRIC COOPERATIVE  
NORTH ANNA POWER STATION, UNIT NO. 2  
DOCKET NO. 50-339

Introduction:

By letter dated March 15, 1984, the Virginia Electric and Power Company (the licensee) requested a change to the Technical Specifications (TS) for the North Anna Power Station, Unit No. 2 (NA-2). The licensee's proposed change is in accordance with NRC Generic Letter No. 83-30, dated July 21, 1983. The proposed change would delete the NA-2 TS 4.8.1.1.2.C.6 which requires verification that on a simulated loss of the diesel generator (with offsite power not available), the loads are shed from the emergency busses and that subsequent loading of the diesel generator is in accordance with design requirements.

Discussion:

NRC Generic Letter No. 83-30 stated that the diesel generator Surveillance Requirement 4.8.1.1.2.d.6 in the Standard TS (STS) should be deleted. Generic Letter 83-30 went on to say that the current revision of the STS is not consistent with the provisions of General Design Criteria (GDC) 17, Regulatory Guide 1.108 and the NRC Standard Review Plan (SRPs 8.2 and 8.3.1). In order to rectify this inconsistency, the Surveillance Requirement 4.8.1.1.2.d.6 for diesel generator testing has been modified to delete this requirement which is in excess of the scope of GDC 17.

In addition, the revision as specified by Generic Letter 83-30 will provide consistency between the NA-1&2 TS and with the STS for Westinghouse Pressurized Water Reactors which is appropriately applied to NA-1&2. In addition, the proposed change will also reduce the number of diesel generator ambient fast starts which addresses the concerns expressed in NRC Generic Letter 83-41 dated December 16, 1983.

Evaluation:

The proposed change is in accordance with NR Generic Letter 83-30 and also will reduce the number of ambient starts-a concern expressed in NRC Generic Letter 83-41. In addition, the proposed change which would delete the NA-2 TS 4.8.1.1.2.C.6 will provide consistency between the NA-1&2 TS. Finally,

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even with the proposed deletion of the above Surveillance Requirement, the remaining Surveillance Requirements will provide sufficient information to assess the status of the diesel generators with regard to degradation and the ability of the diesel generators to serve as a standby (onsite) power supply. These requirements for periodic diesel generator testing include starting test, design load capacity test, load rejection test, auto-start test, load acceptance test and functional test. Therefore, based on all of the above, we find the licensee's proposed deletion of the NA-2 TS 4.8.1.1.2.C.6 to be acceptable.

Environmental Consideration:

This amendment involves a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that this amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.

Conclusion:

We have concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Date: November 28, 1984

Principal Contributor:  
L. Engle, DL/ORB#3

November 28, 1984

DL 016

MEMORANDUM FOR: Patricia M. Kreutzer, Licensing Assistant  
Operating Reactors Branch #3, DL

FROM: James R. Miller, Chief  
Operating Reactors Branch #3, DL

SUBJECT: REQUEST FOR PUBLICATION IN MONTHLY FR NOTICE - NOTICE  
OF ISSUANCE OF AMENDMENT TO FACILITY OPERATING LICENSE  
(TAC #54501)

Virginia Electric and Power Company, et al., Docket No. 50-339, North Anna  
Power Station, Unit No. 2, Louisa County, Virginia

Date of amendment request: March 15, 1984

Brief description of amendment: The amendment deletes TS 4.8.1.1.2.C.6 which required verification on a simulated loss of a diesel generator (with offsite power not available) that loads are shed from the emergency bypasses and that subsequent loading of the diesel generator is in accordance with design equipments. Deletion of TS 4.8.1.1.2.C.6 is in conformance with the provisions of NRC Generic Letter No. 83-30 dated July 21, 1983. In addition, deletion of this TS will reduce the number of diesel generator ambient fast starts which addresses the concerns in NRC Generic Letter 83-41 dated December 16, 1983.

Date of issuance: November 28, 1984

Effective date: November 28, 1984

Amendment No.: 42

Facility Operating License No. NPF-7. Amendment revised the Technical Specifications.

Date of initial notice in Federal Register: August 22, 1984 (49 FR 33353 at 33375)

The Commission's related evaluation of the amendment is contained in a Safety Evaluation dated November 28, 1984.

No significant hazards consideration comments received: No

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Local Public Document Room Locations: Board of Supervisors Office, Louisa County Courthouse, Louisa, Virginia 23093 and the Alderman Library, Manuscripts Department, University of Virginia, Charlottesville, Virginia 22901.

James R. Miller, Chief  
Operating Reactors Branch #3, DL

cc: L. B. Engle

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