

ATTACHMENT 1

Proposed Technical Specific    1 Changes

Unit 1

8512270134 851219  
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### 3/4.8 ELECTRICAL POWER SYSTEMS

#### 3/4.8.1 A. C. SOURCES

##### OPERATING

##### LIMITING CONDITION FOR OPERATION

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3.8.1.1 As a minimum, the following A. C. electrical power sources shall be OPERABLE:

- a. Two physically independent circuits between the offsite transmission network and the onsite Class IE distribution system, and
- b. Two separate and independent diesel generators:
  1. Each with a separate day tank containing a minimum of 750 gallons of fuel, and
  2. A fuel storage system containing a minimum of 45,000 gallons of fuel, and
  3. A separate fuel transfer pump.

APPLICABILITY: MODES 1, 2, 3 and 4.

##### ACTION:

- a. With one offsite circuit of 3.8.1.1.a inoperable, demonstrate the OPERABILITY of the remaining A. C. sources by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter. If either EDG has not been successfully tested within the past 24 hours, demonstrate its OPERABILITY by performing Surveillance Requirement 4.8.1.1.2.a.4 separately for each such EDG within 24 hours. Restore the offsite circuit to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the following 30 hours.
- b. With one diesel generator of 3.8.1.1.b inoperable, demonstrate the OPERABILITY of the A.C. offsite sources by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter; and if the EDG became inoperable due to any cause other than preplanned preventative maintenance or testing, demonstrate the OPERABILITY of the remaining OPERABLE EDG by performing Surveillance Requirement 4.8.1.1.2.a.4 within 24 hours\*; restore the diesel generator to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

\*This test is required to be completed regardless of when the inoperable EDG is restored to OPERABILITY.

## ELECTRICAL POWER SYSTEMS

### LIMITING CONDITION FOR OPERATION

#### ACTION (Continued):

- c. With one offsite circuit and one diesel generator inoperable, demonstrate the OPERABILITY of the remaining A. C. sources by performing Surveillance Requirements 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter; and if the EDG became inoperable due to any cause other than preplanned preventative maintenance or testing, demonstrate the OPERABILITY of the remaining OPERABLE EDG by performing Surveillance Requirement 4.8.1.1.2.a.4 within 8 hours\*; restore one of the inoperable sources to OPERABLE status within 12 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. Restore the other A.C. power source (offsite circuit or diesel generator) to OPERABLE status in accordance with the provisions of Section 3.8.1.1 Action Statement a or b, as appropriate with the time requirement of that Action Statement based on the time of initial loss of the remaining inoperable A.C. power source. A successful test of diesel OPERABILITY per Surveillance Requirement 4.8.1.1.2.a.4 performed under this Action Statement for an OPERABLE diesel or a restored to OPERABLE diesel satisfies the EDG test requirement of Action Statement a or b.
- d. With two of the required offsite A.C. circuits inoperable, demonstrate the OPERABILITY of two diesel generators by sequentially performing Surveillance Requirement 4.8.1.1.2.a.4 on both diesels within 8 hours unless the diesel generators are already operating; restore one of the inoperable offsite sources to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours. Following restoration of one offsite source, follow Action Statement a with the time requirement of that Action Statement based on the time of initial loss of the remaining inoperable offsite A.C. circuit. A successful test(s) of diesel OPERABILITY per Surveillance Requirement 4.8.1.1.2.a.4 performed under this Action Statement for the OPERABLE diesels satisfies the EDG test requirement of Action Statement a.
- e. With two of the above required diesel generators inoperable, demonstrate the OPERABILITY of two offsite A.C. circuits by performing Surveillance Requirement 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter; restore one of the inoperable diesel generators to OPERABLE status within 2 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. Following restoration of one diesel generator unit, follow Action Statement b with the time requirement of that Action Statement based on the time of initial loss of the remaining inoperable diesel generator. A successful test of diesel OPERABILITY per Surveillance Requirement 4.8.1.1.2.a.4 performed under this Action Statement for a restored to OPERABLE diesel satisfies the EDG test requirement of Action Statement b.

\*This test is required to be completed regardless of when the inoperable EDG is restored to OPERABILITY.

## ELECTRICAL POWER SYSTEMS

### SURVEILLANCE REQUIREMENTS

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4.8.1.1.1 Each of the above required physically independent circuits between the offsite transmission network and the onsite Class 1E distribution system shall be:

- a. Determined OPERABLE at least once per 7 days by verifying correct breaker alignment indicating power availability.
- b. Demonstrated OPERABLE at least once per 18 months during shutdown by manually transferring the onsite Class 1E power supply from the normal circuit to the alternate circuit.

4.8.1.1.2 Each diesel generator shall be demonstrated OPERABLE:

- a. In accordance with the frequency specified in Table 4.8.2 on a STAGGERED TEST BASIS by:
  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 generator can start\*\* and gradually accelerate to synchronous speed (900 rpm) with generator voltage and frequency at  $4160 \pm 420$  volts and  $60 \pm 1.2$  Hz. Subsequently, verifying the generator is synchronized, gradually loaded\*\* to an indicated 2500-2600 KW\*\*\* and operates for at least 60 minutes.
  5. 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 is within the acceptable limits specified in Table 1 of ASTM D975-74 when checked for viscosity, water and sediment.

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\*\*This test shall be conducted in accordance with the manufacturer's recommendations regarding engine prelube and warmup procedures, and as applicable regarding loading recommendations.

\*\*\*This band is meant as guidance to avoid routine overloading of the engine. Loads in excess of this band for special testing under direct monitoring of the manufacturer or momentary variations due to changing bus loads shall not invalidate the test.

## ELECTRICAL POWER SYSTEMS

### SURVEILLANCE REQUIREMENTS

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#### 4.8.1.1.2 (continued)

c. At least once per 184 days the diesel generator shall be started\*\* and accelerated 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 generator shall be manually synchronized to its appropriate emergency bus, loaded to an indicated 2500 to 2600 kw\*\*\* in less than or equal to 60 seconds, and operate for at least 60 minutes. The diesel generator shall be started for this test by using one of the following signals on a rotating test basis:

- a) Simulated loss of offsite power by itself.
- b) Simulated loss of offsite power in conjunction with an ESF actuation test signal.
- c) An ESF actuation test signal by itself.

This test, if it is performed so it coincides with the testing required by Surveillance Requirement 4.8.1.1.2.a.4, may also serve to concurrently meet those requirements as well.

d. 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 with  $4160 \pm 420$  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.

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\*\*This test shall be conducted in accordance with the manufacturer's recommendations regarding engine prelube and warmup procedures, and as applicable regarding loading recommendations.

\*\*\*This band is meant as guidance to avoid routine overloading of the engine. Loads in excess of this band for special testing under direct monitoring of the manufacturer or momentary variations due to changing bus loads shall not invalidate the test.

## ELECTRICAL POWER SYSTEMS

### SURVEILLANCE REQUIREMENTS

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#### 4.8.1.1.2 (continued)

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\*\* 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 timers and operates for greater than or equal to 5 minutes 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 overcurrent are automatically bypassed upon loss of voltage on the emergency bus and/or a safety injection actuation signal.

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\*\*This test shall be conducted in accordance with the manufacturer's recommendations regarding engine prelube and warmup procedures, and as applicable regarding loading recommendations.



## ELECTRICAL POWER SYSTEMS

### SURVEILLANCE REQUIREMENTS

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#### 4.8.1.1.2 (continued)

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 an indicated target value of 2950 kw (between 2900-3000 kw)\*\*\* and during the remaining 22 hours of this test, the diesel generator shall be loaded to an indicated 2500 to 2600 kw.\*\*\* Within 5 minutes after completing this 24-hour test, perform Surveillance Requirement 4.8.1.1.2.d.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
- e. 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.

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\*\*This test shall be conducted in accordance with the manufacturer's recommendations regarding engine prelube and warmup procedures, and as applicable regarding loading recommendations.

\*\*\*This band is meant as guidance to avoid routine overloading of the engine. Loads in excess of this band for special testing under direct monitoring of the manufacturer or momentary variations due to changing bus loads shall not invalidate the test.

## ELECTRICAL POWER SYSTEMS

### SURVEILLANCE REQUIREMENTS

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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  $\geq 1.200$ ,
  3. The pilot cell voltage is  $\geq 2.08$  volts, and
  4. The overall battery voltage is  $\geq 125$  volts.
- b. At least once per 92 days by verifying that:
  1. The voltage of each connected cell is  $\geq 2.08$  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  $\geq 1.200$  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  $\leq 0.01$  ohms.
  4. The battery charger will supply at least 10 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.



ELECTRICAL POWER SYSTEMS

Table 4.8-2

DIESEL GENERATOR TEST SCHEDULE

<u>Number of Failures in Last 20 Valid Tests*</u>	<u>Number of Failures in last 100 Valid Tests*</u>	<u>Test Frequency</u>
≤1	≤4	Once per 31 days
≥2**	≥5	Once per 7 days

\*Criteria for determining number of failures and number of valid tests shall be in accordance with Regulatory Position C.2.e of Regulatory Guide 1.108, but determined on a per diesel generator basis.

For the purposes of determining required test frequency, the previous test failure count may be reduced to zero if a complete diesel overhaul to like-new conditions is completed, provided that the overhaul including appropriate post-maintenance operation and testing, is specifically approved by the manufacturer and if acceptable reliability has been demonstrated. The reliability criterion shall be the successful completion of 14 consecutive tests in a single series. Ten of these tests shall be in accordance with Surveillance Requirement 4.8.1.1.2.a.4; four tests, in accordance with Surveillance Requirement 4.8.1.1.2.c. If this criterion is not satisfied during the first series of tests, any alternate criterion to be used to transvalue the failure counts to zero requires NRC approval.

\*\*The associated test frequency shall be maintained until seven consecutive failure free demands have been performed and the number of failures in the last 20 valid demands has been reduced to one.

## ELECTRICAL POWER SYSTEMS

### SHUTDOWN

#### LIMITED CONDITION FOR OPERATION

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3.8.1.2 As a minimum, the following A.C. electrical power sources shall be OPERABLE:

- a. One circuit between the offsite transmission network and the onsite Class 1E distribution system, and
- b. One diesel generator with:
  1. A day tank containing a minimum volume of 750 gallons of fuel,
  2. A fuel storage system containing a minimum volume of 45,000 gallons of fuel, and
  3. A fuel transfer pump.

APPLICABILITY: MODES 5 and 6

#### ACTION:

With less than the above minimum required A.C. electrical power sources OPERABLE, suspend all operations involving CORE ALTERATIONS or positive reactivity changes until the minimum required A.C. electrical power sources are restored to OPERABLE status.

#### SURVEILLANCE REQUIREMENTS

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4.8.1.2 The above required A.C. electrical power sources shall be demonstrated OPERABLE by the performance of each of the Surveillance Requirements of 4.8.1.1.1, 4.8.1.1.2 and 4.8.1.1.3.

## 3/4.8 ELECTRICAL POWER SYSTEMS

### BASES

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#### 3/4.8.1 and 3/4.8.2 A.C. and D.C. POWER SOURCES AND DISTRIBUTION

The OPERABILITY of the A.C. and D.C. power sources and associated distribution systems during operation ensures that sufficient power will be available to supply the safety related equipment required for 1) the safe shutdown of the facility and 2) the mitigation and control of accident conditions within the facility. The minimum specified independent and redundant A.C. and D.C. power sources and distribution systems satisfy the requirements of General Design Criteria 17 of Appendix "A" to 10 CFR 50.

The ACTION requirements specified for the levels of degradation of the power sources provide restriction upon continued facility operation commensurate with the level of degradation. The OPERABILITY of the power sources are consistent with the initial condition assumptions of the accident analyses and are based upon maintaining at least one of each of the onsite A.C. and D.C. power sources and associated distribution systems OPERABLE during accident conditions coincident with an assumed loss of offsite power and single failure of the other onsite A.C. source.

The OPERABILITY of the minimum specified A.C. and D.C. power sources and associated distribution systems during shutdown and refueling ensures that 1) the facility can be maintained in the shutdown or refueling condition for extended time periods and 2) sufficient instrumentation and control capability is available for monitoring and maintaining the facility status.

The Surveillance Requirements for demonstrating the OPERABILITY of the diesel generators are in accordance with the recommendations of Regulatory Guides 1.9 "Selection of Diesel Generator Set Capacity for Standby Power Supplies", March 10, 1971, and 1.108 "Periodic Testing of Diesel Generator Units Used as Onsite Electric Power Systems at Nuclear Power Plants", Revision 1, August 1977 as modified by Amendment No. issued

ATTACHMENT 2

Discussion Of Proposed Changes

Unit 1

## DISCUSSION OF PROPOSED CHANGES

The proposed changes to North Anna Unit 1 Technical Specifications (TS) have been made considering recommendations by the diesel generator manufacturer and are compatible with the recommendations of Generic Letter 84-15. These changes are meant to address diesel reliability concerns that were identified in the recent Unit 2 EDG Technical Specification change.

The proposed changes for Unit 1 are consistent with the recently NRC approved (SER dated April 25, 1985) TS change for Unit 2. The proposed Unit 1 TS clarifies the inconsistent usage of a defined term that currently appears in the Unit 2 TS in Surveillance Requirement (SR) 4.8.1.1.2.c (Attachment 4 and 5 addresses this change for the Unit 2 TS). Specifically, we are substituting the words "rotating test basis" for the words "STAGGERED TEST BASIS". The original intent of the SR is to require the fast starting and loading of the EDG's once every six months and to sequentially utilize one of the three initiating signals for each of these test. This proposed change does not alter the original intent of the SR, but provides additional clarification of the requirement.

The proposed changes do not represent a final optimization of testing requirements, however, these proposals will provide positive improvements to diesel generator reliability. Following sufficient experience with our reliability improvement program, we intend to reassess the related specifications for both units and if necessary propose specifications which programatically address diesel reliability.

### 10CFR50.59 Safety Review

Pursuant to 10CFR50.59, we have reviewed the proposed Technical Specification changes and have concluded that no unreviewed safety question exists; (i) the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased. Reducing the operability testing frequency and modifying starting and loading requirements consistent with the diesel manufacturer's recommendations and Generic Letter 84-15 are intended to enhance diesel reliability by minimizing severe test conditions which can lead to premature failures. In this respect, the proposed changes should serve to enhance overall safety; (ii) the possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created. The proposed change affects testing frequency, starting and loading practices only and has no actual impact on any accident analysis; (iii) the margin of safety as defined in the basis for any Technical Specification is not reduced. The changes in the testing requirements do not affect the capability of the diesels to perform their function. Rather, the purpose of the changes are to increase overall diesel reliability.

#### 10CFR50.92 Significant Hazards Review

For the same reasons given above in the 50.59 Safety Review, the proposed changes do not pose a significant hazards consideration as defined in 10CFR50.92. The Commission has provided examples (48FR14870) of changes that constitute no significant hazards consideration. Example (i) consists of purely administrative changes and example (vii) includes changes made to "conform to changes in the regulations, where the license change results in very minor changes to facility operations clearly in keeping with the regulations." As stated previously, the proposed changes are similar to example (i) in that clarifications are made to correct typographical errors and one inconsistent use of terms (STAGGERED TEST BASIS) found in the present Unit 2 Technical Specifications. Likewise, the proposed changes are similar to example (vii) in that the changes are consistent with staff recommendations in Generic Letter 84-15, as well as, recently approved Technical Specifications changes for Unit 2. Hence, we conclude that the proposed change involves no significant hazards considerations.



ATTACHMENT 3

Significant Testing and Maintenance Events

Unit 1

NORTH ANNA POWER STATION UNIT 1  
EMERGENCY DIESEL GENERATOR  
SIGNIFICANT TESTING AND MAINTENANCE EVENTS

<u>EDG</u>	<u>DATE</u>	<u>PROBLEM</u>	<u>CORRECTIVE ACTION</u>
1H	2-16-79	Failure to reach 900 RPM in 10 sec.	Check out-second successful
1H	7-2-79	Spurious trip	Check out-cause unknown
1H	9-26-79	Trip after 30 sec.	Check out-air accumulation in fuel filter due to prior maintenance-second attempt successful
1H	2-2-80	Trip due to high crankcase pressure	Pressure Switch Setpoint Change
1H	2-15-80	Overspeed Trip	Check out-oil booster servomotor not bleeding off fast enough
1H	2-23-80	Overspeed Trip	Check out-reset speed control
1H	3-2-80	Overspeed Trip	Check out
1H	3-6-80	Overspeed Trip	Replace oil booster servomotor and reset governor settings
1H	3-10-80	Trip due to high crankcase pressure	Check out
1H	3-11-80	Trip due to high crankcase pressure	Pressure setpoint change (air ejector) orifice size changed 4/3/80)
1H	4-3-80	Overspeed Trip	Replaced governor booster servomotor, hydraulic assembly and EGA Controller
1H	4-29-84	Voltage regulation problems	Replaced regulator card - diode overheating

1H	5-29-84	Trip on high jacket coolant temperature	Temperature switch recalibrated
1H	8-7-84	EDG inadvertently overloaded to 3600 kw	Check out in accordance with vendor recommendations
1H	2-1-85	Trip on high crankcase pressure and overspeed; coolant leaks	Engine repair #3 cylinder liner cracked and upper piston scored; three main bearings and one connecting rod bearing worn
1J	10-30-79	Upper crankshaft thrust bearing found "flashed" during refueling PM	Replaced thrust bearing
1J	7-14-82	Main bearing #6 and connecting rod bearing #6 found "flashed" during outage PM	Replaced bearings
1J	11-14-84	Spurious trip of output breaker. EDG did not trip	Checkout
1J	9-18-85	Trip on high crankcase pressure	Replaced #10 cylinder liner, all upper and lower piston assemblies, connecting rods, and rod bearings

ATTACHMENT 4

Proposed Technical Specification Changes

Unit 2

## ELECTRICAL POWER SYSTEMS

### LIMITING CONDITION FOR OPERATION

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#### ACTION (Continued):

- c. With one offsite circuit and one diesel generator inoperable, demonstrate the OPERABILITY of the remaining A. C. sources by performing Surveillance Requirements 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter; and if the EDG became inoperable due to any cause other than preplanned preventative maintenance or testing, demonstrate the OPERABILITY of the remaining OPERABLE EDG by performing Surveillance Requirement 4.8.1.1.2.a.4 within 8 hours\*; restore one of the inoperable sources to OPERABLE status within 12 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. Restore the other A.C. power source (offsite circuit or diesel generator) to OPERABLE status in accordance with the provisions of Section 3.8.1.1 Action Statement a or b, as appropriate with the time requirement of that Action Statement based on the time of initial loss of the remaining inoperable A.C. power source. A successful test of diesel OPERABILITY per Surveillance Requirement 4.8.1.1.2.a.4 performed under this Action Statement for an OPERABLE diesel or a restored to OPERABLE diesel satisfies the EDG test requirement of Action Statement a or b.
- d. With two of the required offsite A.C. circuits inoperable, demonstrate the OPERABILITY of two diesel generators by sequentially performing Surveillance Requirement 4.8.1.1.2.a.4 on both diesels within 8 hours unless the diesel generators are already operating; restore one of the inoperable offsite sources to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours. Following restoration of one offsite source, follow Action Statement a with the time requirement of that Action Statement based on the time of initial loss of the remaining inoperable offsite A.C. circuit. A successful test(s) of diesel OPERABILITY per Surveillance Requirement 4.8.1.1.2.a.4 performed under this Action Statement for the OPERABLE diesels satisfies the EDG test requirement of Action Statement a.
- e. With two of the above required diesel generators inoperable, demonstrate the OPERABILITY of two offsite A.C. circuits by performing Surveillance Requirement 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter; restore one of the inoperable diesel generators to OPERABLE status within 2 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. Following restoration of one diesel generator unit, follow Action Statement b with the time requirement of that Action Statement based on the time of initial loss of the remaining inoperable diesel generator. A successful test of diesel OPERABILITY per Surveillance Requirement 4.8.1.1.2.a.4 performed under this Action Statement for a restored to OPERABLE diesel satisfies the EDG test requirement of Action Statement b.

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\*This test is required to be completed regardless of when the inoperable EDG is restored to OPERABILITY.

## ELECTRICAL POWER SYSTEMS

### SURVEILLANCE REQUIREMENTS

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#### 4.8.1.1.2 (Continued)

The generator shall be manually synchronized to its appropriate emergency bus, loaded to an indicated 2500 - 2600\*\*\* kw in less than or equal to 60 seconds, and operate for at least 60 minutes. The diesel generator shall be started for this test by using one of the following signals on a rotating test basis:

- a) Simulated loss of offsite power by itself.
- b) Simulated loss of offsite power in conjunction with an ESF actuation test signal.
- c) An ESF actuation test signal by itself.

This test, if it is performed so it coincides with the testing required by Surveillance Requirement 4.8.1.1.2.a.4, may also serve to concurrently meet those requirements as well.

- d. 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 with  $4160 \pm 420$  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.
  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.

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\*\*This test shall be conducted in accordance with the manufacturer's recommendations regarding engine prelube and warmup procedures, and as applicable regarding loading recommendations.

\*\*\*This band is meant as guidance to avoid routine overloading of the engine. Loads in excess of this band for special testing under direct monitoring of the manufacturer or momentary variations due to changing bus loads shall not invalidate the test.



## ELECTRICAL POWER SYSTEMS

### SHUTDOWN

#### LIMITING CONDITION FOR OPERATION

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3.8.1.2 As a minimum, the following A.C. electrical power sources shall be OPERABLE:

- a. One circuit between the offsite transmission network and the onsite Class 1E distribution system, and
- b. One diesel generator with:
  1. A day tank containing a minimum volume of 750 gallons of fuel,
  2. A fuel storage system containing a minimum volume of 45,000 gallons of fuel, and
  3. A fuel transfer pump.

APPLICABILITY:        MODES 5 and 6

#### ACTION:

With less than the above minimum required A.C. electrical power sources OPERABLE suspend all operations involving CORE ALTERATIONS or positive reactivity changes until the minimum required A.C. electrical power sources are restored to OPERABLE status.

#### SURVEILLANCE REQUIREMENTS

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4.8.1.2 The above required A.C. electrical power sources shall be demonstrated OPERABLE by the performance of each of the Surveillance Requirements of 4.8.1.1.1, 4.8.1.1.2 and 4.8.1.1.3.

ATTACHMENT 5

Discussion of Proposed Changes

Unit 2

## DISCUSSION OF PROPOSED CHANGES

The proposed changes to North Anna Unit 2 Technical Specifications are purely administrative in nature to correct three typographical errors and one inconsistent usage of a defined term.

### 10CFR50.59 Safety Review

Pursuant to 10 CFR 50.59, we have reviewed the proposed Technical Specification changes and have concluded that no unreviewed safety question exists; (i) the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased. The proposed changes will correct three typographical errors and one inconsistent usage of a defined term, and do not alter the the intent of the Technical Specifications. In this respect, the proposed changes are purely administrative in nature; (ii) the possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created. Therefore, the proposed changes have no impact on any accident analysis; (iii) the margin of safety as defined in the basis for any Technical Specification is not reduced.

### 10CFR50.92 Significant Hazards Review

For the same reasons given above in the 50.59 Safety Review, the proposed changes do not pose a significant hazards consideration as defined in 10CFR50.92. The Commission has provided examples (48FR14870) of changes that constitute no significant hazards consideration. Example (i) consists of "a purely administrative change to Technical Specifications; for example, a change to achieve consistency throughout the Technical Specifications, correction of an error, or a change in nomenclature." As stated previously, the proposed changes are to correct three typographical errors and one inconsistent usage of a defined term and are purely administrative.

LINE	DATE	INVOICE NO /OR DESCRIPTION	GROSS AMOUNT	DISCOUNT	NET AMOUNT
01	11/16/85	111615000 APPLICATION FEE	150.00		150.00
			150.00		150.00

ATTACHED CHECK ISSUED AS PAYMENT OF ITEMS LISTED ABOVE - PLEASE DETACH STUB AND CASH CHECK PROMPTLY

**Vepco**WACHOVIA BANK & TRUST COMPANY N.A.  
ASHEVILLE, N.C.**VIRGINIA ELECTRIC AND POWER COMPANY**  
RICHMOND, VIRGINIA66-36  
531

VOID IF NOT CASHED IN 90 DAYS

PAY EXACTLY ONE HUNDRED FIFTY AND NO/100\*\*\*\*\*

TO  
THE  
ORDER  
OF  
UNITED STATES NUCLEAR  
REGULATORY COMMISSION  
WASHINGTON DC

20555

BK	CHECK NO	DATE	VENDOR NO	AMOUNT
01	018853	11/26/85	018804	\$150.00

*L.R. Hartman*