Attachment 2

Technical Specifications Changes

3/4.8 ELECTRICAL POWER SYSTEMS

3/4.8.1 A.C. SOURCES

OPERATING

LIMITING CONDITION FOR OPERATION

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 consisting of two underground storage tanks each containing a minimum of 45,000 gallons of fuel (This is a shared system with Unit 2), and

3. A separate fuel transfer system

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. 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 power sources by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter. If the EDG became inoperable due to any cause other than an inoperable support system, an independently testable component, or 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*, unless the absence of any potential common mode failure for the remaining diesel generator is demonstrated. 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 action is required to be completed regardless of when the inoperable EDG is restored to OPERABILITY.

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 Requirement 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 an inoperable support system, an independently testable component, or 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*, unless the absence of any potential common mode failure for the remaining diesel generator is demonstrated. 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.

d. With two of the required offsite A.C. circuits inoperable; 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.

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.

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

SURVEILLANCE REQUIREMENTS

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 ± 420 volts and 60 ± 1.2 Hz within 10 seconds after the start signal. The generator shall be manually synchronized to its appropriate emergency bus, gradually loaded ** to an indicated 2500 to 2600 kw***, and operated 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 ± 420 volts and 60 ± 1.2 Hz.

3. Verifying that the load sequencing timers are OPERABLE with times within the tolerances shown in Table 4.8-1.

** 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.

SURVEILLANCE REQUIREMENTS

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 2500-2600 kw***.

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 Selector Switch

    b) Emergency Stop Switch

11. Verifying the diesel generator's hot restart capability by:

    a) Operating the diesel generator** loaded to an indicated 2500 to 2600 kw*** for 2 hours or until operating temperatures have stabilized, and

    b) Within 5 minutes of shutdown verify the diesel generator can 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 ± 420 volts and 60 ± 1.2 Hz within 10 seconds after the start signal.

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.

** 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 test 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 this test.

3/4.8 ELECTRICAL POWER SYSTEMS

3/4.8.1 A.C. SOURCES

OPERATING

LIMITING CONDITION FOR OPERATION

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 consisting of two underground storage tanks each containing a minimum of 45,000 gallons of fuel (This is a shared system with Unit 2), and

3. A separate fuel transfer system.

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. 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 power sources by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter. If the EDG became inoperable due to any cause other than an inoperable support system, an independently testable component, or 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*, unless the absence of any potential common mode failure for the remaining diesel generator is demonstrated. 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.

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

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 Requirement 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 an inoperable support system, an independently testable component, or 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*, unless the absence of any potential common mode failure for the remaining diesel generator is demonstrated. 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.

d. With two of the required offsite A.C. circuits inoperable; 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.

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.

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

SURVEILLANCE REQUIREMENTS

4.8.1.1.2 (continued)

The generator shall be manually synchronized to its appropriate emergency bus, gradually loaded** to an indicated 2500 to 2600 kw***, and operated 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 ± 420 volts and 60 ± 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 ± 420 volts and 60 ± 1.2 Hz.

** 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.

SURVEILLANCE REQUIREMENTS

4.8.1.1.2 (Continued)

5. Verifying that on an ESF actuation test signal (without loss of 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.

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 2500-2600 kW***.

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 or actual restoration of offsite power.

   b) Transfer its loads to the offsite power source, and

   c) Proceed through its shutdown sequence.

** 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 test 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 this test.

SURVEILLANCE REQUIREMENTS

4.8.1.1.2 (Continued)

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

11. Verifying the diesel generator's hot restart capability by:

    a) Operating the diesel generator** loaded to an indicated 2500 to 2600 kW*** for 2 hours or until operating temperatures have stabilized, and

    b) Within 5 minutes of shutdown verify the diesel generator can 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 ± 420 volts and 60 ± 1.2 Hz within 10 seconds after the start signal.

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.

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 parameters in Table 4.8-3 meet Category A limits and

    2. The total battery terminal voltage is ≥ 129 volts on a float change.

b. At least once per 92 days and within 7 days after a battery discharge where the battery terminal voltage decreased below 110 volts or battery overcharge above 150 volts, by verifying that:

    1. The parameters in Table 4.8-3 meet Category B limits and

    2. There is no visible corrosion at either terminals or connectors, or the connection resistance of these items is less than 150 X 10 to the minus 6 ohms.

** 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 test 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 this test.

Attachment 3

Significant Hazards Consideration

Significant Hazards Considerations

The NRC has completed a comprehensive examination of surveillance requirements in Technical Specifications that require testing at power. The evaluation is documented in NUREG-1366, "Improvements to Technical Specification Surveillance Requirements," dated December 1992. The NRC staff found, that while the majority of testing at power is important, safety can be improved, equipment degradation decreased, and an unnecessary burden on personnel resources eliminated by reducing the amount of testing at power that is required by Technical Specifications. Based on the results of the evaluations documented in NUREG-1366, the NRC issued Generic Letter 93-05, "Line-Item Technical Specifications Improvements to Reduce Surveillance Requirements for Testing During Power Operation," dated September 27, 1993.

The safety function of the Emergency Diesel Generators (EDG's) is to supply AC electrical power to plant safety systems whenever the preferred AC power supply is unavailable. Consistent with Generic Letter 93-05, Item 10.1 and NUREG-1366, we are requesting a change to the testing requirements of an operable EDG when the alternate safety buses' EDG is inoperable or an offsite circuit is inoperable, the separation of the hot restart test of an EDG from the 24 hour loaded run, and the elimination of fast loading of EDG's except for the 18 month surveillance test of the Loss of Offsite Power (LOOP) capability.

Virginia Electric and Power Company has reviewed the proposed changes against the criteria of 10 CFR 50.92 and has concluded that the changes as proposed do not pose a significant hazards consideration. Specifically, operation of North Anna Power Station in accordance with the proposed Technical Specifications changes will not:

1. Involve a significant increase in the probability of occurrence or consequences of an accident previously evaluated.

   Modifying the operability testing requirements for an inoperable EDG or inoperable offsite AC source(s), gradual loading of EDGs during surveillance testing, and separating the hot restart test of an EDG from the 24 hour load run test of EDGs does not affect the probability of occurrence or consequences of any previously evaluated accidents. Surveillance testing of the EDG in accordance with Revision 2 of Regulatory Guide 1.9 (December 1979) will continue to ensure that the EDGs will be capable of performing their intended safety functions. Therefore, modifying the operability testing requirements for an inoperable EDG or inoperable offsite AC source(s), gradual loading of EDGs during surveillance testing, and separating the hot restart test of an EDG from the 24 hour load run test of EDGs does not affect the probability or consequences of any previously analyzed accident.

2. Create the possibility of a new or different kind of accident from any accident previously evaluated.

Modifying the operability testing requirements for an inoperable EDG or inoperable offsite AC source(s), gradual loading of EDGs during surveillance testing, and separating the hot restart test of an EDG from the 24 hour load run test of EDGs does not involve any physical modifications of the plant or result in a change in a method of operation. Surveillance testing of the EDG in accordance with Revision 2 of Regulatory Guide 1.9 (December 1979) will continue to ensure that the EDGs will be capable of performing their intended safety functions. Therefore, a new or different type of accident is not made possible.

3. Involve a significant reduction in a margin of safety.

   Modifying the operability testing requirements for an inoperable EDG or inoperable offsite AC source(s), gradual loading of EDGs during surveillance testing, and separating the hot restart test of an EDG from the 24 hour load run test of EDGs does not affect any safety limits or limiting safety system settings. System operating parameters are unaffected. The availability of equipment required to mitigate or assess the consequence of an accident is not reduced. Surveillance testing of the EDG in accordance with Revision 2 of Regulatory Guide 1.9 (December 1979) will continue to assure that the EDGs will be capable of performing their intended safety functions. Safety margins are, therefore, not decreased.