

ATTACHMENT A

MARKED-UP TSUP PAGES

<u>Plant</u>	<u>Pages</u>
Dresden/Quad Cities	3/4.9-5

3.9 - LIMITING CONDITIONS FOR OPERATION4.9 - SURVEILLANCE REQUIREMENTS

5. With two of the above required offsite circuit power sources inoperable:

- a. Restore at least one of the inoperable offsite circuits to OPERABLE status within 24 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours, and
- b. Restore at least two offsite circuits to OPERABLE status within 7 days from the time of initial loss or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

frequency
 $\leq 66.73 \text{ Hz}$

6. With both of the above required diesel generator power sources inoperable:

- a. Demonstrate the OPERABILITY of the offsite circuit power sources by performing Surveillance Requirement 4.9.A.1.a within 1 hour and at least once per 8 hours thereafter.

b. Verifying the diesel generator capability to reject its largest single emergency load ($\geq 642 \text{ kW}$) while maintaining ~~speed $\leq 1001 \text{ rpm}$~~ and voltage at $4160 \pm 420 \text{ volts}$.

c. Verifying the diesel generator capability to reject a load between 2470 and $2600 \text{ kW}^{(d)}$, without tripping on overspeed. The generator voltage shall not exceed $5000 \text{ volts}^{(g)}$ during or following the load rejection.

d. Simulating a loss of offsite power by itself, and:

- 1) Verifying de-energization of the emergency buses, and load shedding from the emergency buses.

- 2) Verifying the diesel starts on the auto-start signal, energizes the emergency buses with permanently connected loads in ≤ 13 seconds, energizes the auto-connected shutdown loads, and operates with this load for ≥ 5 minutes. After energization, the steady-state voltage and frequency of the emergency busses shall be maintained at $4160 \pm 420 \text{ volts}$ and $60 \pm 1.2 \text{ Hz}$, respectively, during this test.

d Momentary transients outside of the load range do not invalidate this test. Diesel generator loadings may include gradual loading as recommended by the manufacturer/vendor. This surveillance shall be conducted on only one diesel generator at a time.

g Momentary transients outside of the voltage limit do not invalidate this test.

3.9 - LIMITING CONDITIONS FOR OPERATION4.9 - SURVEILLANCE REQUIREMENTS

5. With two of the above required offsite circuit power sources inoperable:

- a. Restore at least one of the inoperable offsite circuits to OPERABLE status within 24 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- b. Restore at least two offsite circuits to OPERABLE status within 7 days from the time of initial loss or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

frequency
 $\leq 66.73 \text{ Hz}$

6. With both of the above required diesel generator power sources inoperable:

- a. Demonstrate the OPERABILITY of the offsite circuit power sources by performing Surveillance Requirement 4.9.A.1.a within 1 hour and at least once per 8 hours thereafter.

b. Verifying the diesel generator capability to reject its largest single emergency load ($\geq 725 \text{ kW}$) while maintaining ~~speed $\leq 1001 \text{ rpm}$~~ and voltage at $4160 \pm 420 \text{ volts}$.

c. Verifying the diesel generator capability to reject a load between 2375 and 2500 kW^(d), without tripping on overspeed. The generator voltage shall not exceed 5000 volts^(g) during or following the load rejection.

d. Simulating a loss of offsite power by itself, and:

1) Verifying de-energization of the emergency buses, and load shedding from the emergency buses.

2) Verifying the diesel starts on the auto-start signal, energizes the emergency buses with permanently connected loads in ≤ 10 seconds, energizes the auto-connected shutdown loads, and operates with this load for ≥ 5 minutes. After energization, the steady-state voltage and frequency of the emergency busses shall be maintained at $4160 \pm 420 \text{ volts}$ and $60 \pm 1.2 \text{ Hz}$, respectively, during this test.

d Momentary transients outside of the load range do not invalidate this test. Diesel generator loadings may include gradual loading as recommended by the manufacturer/vendor. This surveillance shall be conducted on only one diesel generator at a time.

g Momentary transients outside of the voltage limit do not invalidate this test.

ATTACHMENT B

REVISED TSUP PAGES

<u>Plant</u>	<u>Pages</u>
Dresden/Quad Cities	3/4.9-2
Dresden/Quad Cities	3/4.9-3
Dresden/Quad Cities	3/4.9-5

3.9 - LIMITING CONDITIONS FOR OPERATION

- b. Restore the inoperable offsite circuit to OPERABLE status within 7 days or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
2. With one of the above required diesel generator power sources inoperable:
- a. Demonstrate the OPERABILITY of the offsite circuit power sources by performing Surveillance Requirement 4.9.A.1.a within 1 hour and at least once per 8 hours thereafter.
 - b. If the diesel generator is inoperable due to any cause other than an inoperable support system, an independently testable component, or preplanned preventive maintenance or testing, demonstrate the OPERABILITY of the remaining OPERABLE diesel generator by performing Surveillance Requirement 4.9.A.2.c^(b) within 24 hours unless the absence of any potential common mode failure for the remaining diesel generator is demonstrated (if it has not been successfully tested within the past 24 hours) and within the subsequent 72 hours, and

4.9 - SURVEILLANCE REQUIREMENTS

- c. Verifying^(c) the diesel starts and accelerates to synchronous speed with generator voltage and frequency at 4160 ± 420 volts and 60 ± 1.2 Hz, respectively.
 - d. Verifying the diesel generator is synchronized, loaded to between 2470 and 2600 kW^(d) in accordance with the manufacturer's/vendor's recommendations, and operates with this load for ≥ 60 minutes.
 - e. Verifying the diesel generator is aligned to provide standby power to the associated emergency busses.
 - f. Verifying the pressure in required starting air receiver tanks to be ≥ 220 psig.
3. Each of the required diesel generators shall be demonstrated OPERABLE at least once per 31 days and after each operation of the diesel where the period of operation was ≥ 1 hour by removing any accumulated water from the day tank.
4. Each of the required diesel generators shall be demonstrated OPERABLE at least once per 92 days by checking for and removing accumulated water from the fuel oil bulk storage tanks.

-
- b. Contrary to the provisions of Specification 3.0.B, this test is required to be completed regardless of when the inoperable diesel generator is restored to OPERABILITY for failures that are potentially generic to the remaining diesel generator and for which appropriate alternative testing cannot be designed.
 - c. Surveillance Requirement 4.9.A.7 may be substituted for Surveillance Requirement 4.9.A.2.c.
 - d. Momentary transients outside of the load range do not invalidate this test. Diesel generator loadings may include gradual loading as recommended by the manufacturer/vendor. This surveillance shall be conducted on only one diesel generator at a time.

3.9 - LIMITING CONDITIONS FOR OPERATION

- c. Restore the diesel generator to OPERABLE status within 7 days or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
3. With one of the above offsite circuit power sources and one of the above required diesel generator power sources inoperable:
- a. Demonstrate the OPERABILITY of the remaining offsite circuit power source by performing Surveillance Requirement 4.9.A.1.a within 1 hour and at least once per 8 hours thereafter.
 - b. If the diesel generator is inoperable due to any cause other than preplanned preventive maintenance or testing, demonstrate the OPERABILITY^(e) of the remaining OPERABLE diesel generator by performing Surveillance Requirement 4.9.A.2.c^(b) within 8 hours unless the absence of any potential common mode failure for the remaining diesel generator is demonstrated (if it has not been successfully tested within the past 24 hours) and within the subsequent 72 hours for each OPERABLE diesel generator.

4.9 - SURVEILLANCE REQUIREMENTS

5. Each of the required diesel generators shall be demonstrated OPERABLE by:
- a. Sampling new fuel oil prior to addition to the storage tanks in accordance with applicable ASTM standards, and
 - b. Verifying prior to addition to the storage tanks that the sample meets the applicable ASTM standards for API gravity, water and sediment, and the visual test for free water and particulate contamination, and
 - c. Verifying within 31 days of obtaining the sample that the kinematic viscosity is within applicable ASTM limits.
6. Each of the required diesel generators shall be demonstrated OPERABLE by:
- a. Sampling and analyzing the bulk fuel storage tanks at least once per 31 days in accordance with applicable ASTM standards, and
 - b. Verifying that the sample meets the applicable ASTM standards for water and sediment, kinematic viscosity, and ASTM particulate contaminant is < 10 mg/liter.

e A successful test of OPERABILITY per Surveillance Requirement 4.9.A.2.c under this ACTION statement satisfies the diesel generator test requirements of ACTION(s) 1 or 2 above.

b Contrary to the provisions of Specification 3.0.B, this test is required to be completed regardless of when the inoperable diesel generator is restored to OPERABILITY for failures that are potentially generic to the remaining diesel generator and for which appropriate alternative testing cannot be designed.

3.9 - LIMITING CONDITIONS FOR OPERATION

5. With two of the above required offsite circuit power sources inoperable:
 - a. Restore at least one of the inoperable offsite circuits to OPERABLE status within 24 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours, and
 - b. Restore at least two offsite circuits to OPERABLE status within 7 days from the time of initial loss or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
6. With both of the above required diesel generator power sources inoperable:
 - a. Demonstrate the OPERABILITY of the offsite circuit power sources by performing Surveillance Requirement 4.9.A.1.a within 1 hour and at least once per 8 hours thereafter.

4.9 - SURVEILLANCE REQUIREMENTS

- b. Verifying the diesel generator capability to reject its largest single emergency load (≥ 642 kW) while maintaining frequency ≤ 66.73 Hz and voltage at 4160 ± 420 volts.
- c. Verifying the diesel generator capability to reject a load between 2470 and 2600 kw^(d), without tripping on overspeed. The generator voltage shall not exceed 5000 volts^(g) during or following the load rejection.
- d. Simulating a loss of offsite power by itself, and:
 - 1) Verifying de-energization of the emergency buses, and load shedding from the emergency buses.
 - 2) Verifying the diesel starts on the auto-start signal, energizes the emergency buses with permanently connected loads in ≤ 13 seconds, energizes the auto-connected shutdown loads, and operates with this load for ≥ 5 minutes. After energization, the steady-state voltage and frequency of the emergency busses shall be maintained at 4160 ± 420 volts and 60 ± 1.2 Hz, respectively, during this test.

d Momentary transients outside of the load range do not invalidate this test. Diesel generator loadings may include gradual loading as recommended by the manufacturer/vendor. This surveillance shall be conducted on only one diesel generator at a time.

g Momentary transients outside of the voltage limit do not invalidate this test.

3.9 - LIMITING CONDITIONS FOR OPERATION

- b. Restore the inoperable offsite circuit to OPERABLE status within 7 days or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
2. With one of the above required diesel generator power sources inoperable:
- a. Demonstrate the OPERABILITY of the offsite circuit power sources by performing Surveillance Requirement 4.9.A.1.a within 1 hour and at least once per 8 hours thereafter.
 - b. If the diesel generator is inoperable due to any cause other than an inoperable support system, an independently testable component, or preplanned preventive maintenance or testing, demonstrate the OPERABILITY of the remaining OPERABLE diesel generator by performing Surveillance Requirement 4.9.A.2.c^(b) within 24 hours unless the absence of any potential common mode failure for the remaining diesel generator is demonstrated (if it has not been successfully tested within the past 24 hours) and within the subsequent 72 hours, and

4.9 - SURVEILLANCE REQUIREMENTS

- c. Verifying^(c) the diesel starts and accelerates to synchronous speed with generator voltage and frequency at 4160 ± 420 volts and 60 ± 1.2 Hz, respectively.
 - d. Verifying the diesel generator is synchronized, loaded to between 2375 and 2500 kW^(d) in accordance with the manufacturer's/vendor's recommendations, and operates with this load for ≥ 60 minutes.
 - e. Verifying the diesel generator is aligned to provide standby power to the associated emergency busses.
 - f. Verifying the pressure in required starting air receiver tanks to be ≥ 230 psig.
3. Each of the required diesel generators shall be demonstrated OPERABLE at least once per 31 days and after each operation of the diesel where the period of operation was ≥ 1 hour by removing any accumulated water from the day tank.
4. Each of the required diesel generators shall be demonstrated OPERABLE at least once per 92 days by checking for and removing accumulated water from the fuel oil bulk storage tanks.

-
- b. Contrary to the provisions of Specification 3.0.B, this test is required to be completed regardless of when the inoperable diesel generator is restored to OPERABILITY for failures that are potentially generic to the remaining diesel generator and for which appropriate alternative testing cannot be designed.
 - c. Surveillance Requirement 4.9.A.7 may be substituted for Surveillance Requirement 4.9.A.2.c.
 - d. Momentary transients outside of the load range do not invalidate this test. Diesel generator loadings may include gradual loading as recommended by the manufacturer/vendor. This surveillance shall be conducted on only one diesel generator at a time.

3.9 - LIMITING CONDITIONS FOR OPERATION

- c. Restore the diesel generator to OPERABLE status within 7 days or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- 3. With one of the above offsite circuit power sources and one of the above required diesel generator power sources inoperable:
 - a. Demonstrate the OPERABILITY of the remaining offsite circuit power source by performing Surveillance Requirement 4.9.A.1.a within 1 hour and at least once per 8 hours thereafter.
 - b. If the diesel generator is inoperable due to any cause other than preplanned preventive maintenance or testing, demonstrate the OPERABILITY^(e) of the remaining OPERABLE diesel generator by performing Surveillance Requirement 4.9.A.2.c^(b) within 8 hours unless the absence of any potential common mode failure for the remaining diesel generator is demonstrated (if it has not been successfully tested within the past 24 hours) and within the subsequent 72 hours for each OPERABLE diesel generator.

4.9 - SURVEILLANCE REQUIREMENTS

- 5. Each of the required diesel generators shall be demonstrated OPERABLE by:
 - a. Sampling new fuel oil prior to addition to the storage tanks in accordance with applicable ASTM standards, and
 - b. Verifying prior to addition to the storage tanks that the sample meets the applicable ASTM standards for API gravity, water and sediment, and the visual test for free water and particulate contamination^(h), and
 - c. Verifying within 31 days of obtaining the sample that the kinematic viscosity is within applicable ASTM limits.
- 6. Each of the required diesel generators shall be demonstrated OPERABLE by:
 - a. Sampling and analyzing the bulk fuel storage tanks at least once per 31 days in accordance with applicable ASTM standards, and
 - b. Verifying that the sample meets the applicable ASTM standards for water and sediment, kinematic viscosity, and ASTM particulate contaminant^(h) is < 10 mg/liter.

-
- e A successful test of OPERABILITY per Surveillance Requirement 4.9.A.2.c under this ACTION statement satisfies the diesel generator test requirements of ACTION(s) 1 or 2 above.
 - b Contrary to the provisions of Specification 3.0.B, this test is required to be completed regardless of when the inoperable diesel generator is restored to OPERABILITY for failures that are potentially generic to the remaining diesel generator and for which appropriate alternative testing cannot be designed.
 - h The particulate contamination surveillance is not required for No. 1 fuel oil. It is required for No. 2 fuel oil and for blends.

3.9 - LIMITING CONDITIONS FOR OPERATION

5. With two of the above required offsite circuit power sources inoperable:
 - a. Restore at least one of the inoperable offsite circuits to OPERABLE status within 24 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
 - b. Restore at least two offsite circuits to OPERABLE status within 7 days from the time of initial loss or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
6. With both of the above required diesel generator power sources inoperable:
 - a. Demonstrate the OPERABILITY of the offsite circuit power sources by performing Surveillance Requirement 4.9.A.1.a within 1 hour and at least once per 8 hours thereafter.

4.9 - SURVEILLANCE REQUIREMENTS

- b. Verifying the diesel generator capability to reject its largest single emergency load (≥ 725 kW) while maintaining frequency ≤ 66.73 Hz and voltage at 4160 ± 420 volts.
- c. Verifying the diesel generator capability to reject a load between 2375 and 2500 kW^(d), without tripping on overspeed. The generator voltage shall not exceed 5000 volts^(g) during or following the load rejection.
- d. Simulating a loss of offsite power by itself, and:
 - 1) Verifying de-energization of the emergency buses, and load shedding from the emergency buses.
 - 2) Verifying the diesel starts on the auto-start signal, energizes the emergency buses with permanently connected loads in ≤ 10 seconds, energizes the auto-connected shutdown loads, and operates with this load for ≥ 5 minutes. After energization, the steady-state voltage and frequency of the emergency busses shall be maintained at 4160 ± 420 volts and 60 ± 1.2 Hz, respectively, during this test.

d Momentary transients outside of the load range do not invalidate this test. Diesel generator loadings may include gradual loading as recommended by the manufacturer/vendor. This surveillance shall be conducted on only one diesel generator at a time.

g Momentary transients outside of the voltage limit do not invalidate this test.