

ENCLOSURE 5

SHEARON HARRIS NUCLEAR POWER PLANT
NRC DOCKET NO. 50-400/LICENSE NO. NPF-63
REQUEST FOR LICENSE AMENDMENT
DC POWER SOURCES

TECHNICAL SPECIFICATION PAGES

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ELECTRICAL POWER SYSTEMS

3/4.8.2 D.C. SOURCES

OPERATING

- b. With both associated full capacity battery chargers inoperable, demonstrate the OPERABILITY of their associated battery bank by performing Surveillance Requirement 4.8.2.1.a.1 within one hour, and at least once per two hours thereafter. If any Category A limit in Table 4.8-2 is not met, declare the battery inoperable.

LIMITING CONDITION FOR OPERATION

3.8.2.1 As a minimum, the following D.C. electrical sources shall be OPERABLE:

- a. 125-volt Emergency Battery Bank 1A-SA and either full capacity charger, 1A-SA or 1B-SA, and,
- b. 125-volt Emergency Battery Bank 1B-SB and either full capacity charger, 1A-SB or 1B-SB.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

- a. With one of the required ~~D.C. electrical sources~~ ^{battery banks} inoperable, restore the inoperable ~~D.C. electrical source~~ to OPERABLE status within 2 hours or be in at least HOT STANDBY within ^{battery bank} the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

INSERT

SURVEILLANCE REQUIREMENTS

4.8.2.1 Each 125-volt Emergency Battery and charger shall be demonstrated OPERABLE:

- a. At least once per 7 days by verifying that:
 1. The parameters in Table 4.8-2 meet the Category A limits, and;
 2. The total battery terminal voltage is greater than or equal to 129 volts on float charge.
- b. At least once per 92 days and within 7 days after a battery discharge with battery terminal voltage below 110 volts, or battery overcharge with battery terminal voltage above 150 volts, by verifying that:
 1. The parameters in Table 4.8-2 meet the Category B limits;
 2. There is no visible corrosion at either terminals or connectors, or the connection resistance of these items is less than 150×10^{-6} ohm, and
 3. The average electrolyte temperature of 10 connected cells is above 70° F.

ELECTRICAL POWER SYSTEMS

D.C. SOURCES

SHUTDOWN

LIMITING CONDITION FOR OPERATION

- 3.8.2.2 As a minimum, one 125-volt Emergency Battery (either 1A-SA or 1B-SB) and at least one associated full-capacity charger shall be OPERABLE.

APPLICABILITY: MODES 5 and 6.

ACTION:

- a. With the required ^{battery bank} ~~Emergency Battery or full capacity charger~~ inoperable, immediately suspend all operations involving CORE ALTERATIONS, positive reactivity changes, or movement of irradiated fuel; initiate corrective action to restore the required ~~Emergency Battery and full capacity charger~~ to OPERABLE status as soon as possible, and within 8 hours, depressurize and vent the Reactor Coolant System through a vent of ≥ 2.9 square inches.

INSERT

SURVEILLANCE REQUIREMENTS

4.8.2.2 The above required 125-volt Emergency Battery and full-capacity charger shall be demonstrated OPERABLE in accordance with Specification 4.8.2.1.

- b. With both associated full capacity battery chargers inoperable, demonstrate the OPERABILITY of their associated battery bank by performing Surveillance Requirement 4.8.2.1.a.1 within one hour, and at least once per two hours thereafter. If any Category A limit in Table 4.8-2 is not met, declare the battery inoperable.

ELECTRICAL POWER SYSTEMS

3/4.8.3 ONSITE POWER DISTRIBUTION

OPERATING

LIMITING CONDITION FOR OPERATION

3.8.3.1 The following electrical buses shall be energized in the specified manner with tie breakers open between redundant buses within the unit:

- a. Division A ESF A.C. Buses consisting of:
 1. 6900-volt Bus 1A-SA.
 2. 480-volt Bus 1A2-SA.
 3. 480-volt Bus 1A3-SA.
- b. Division B ESF A.C. Buses consisting of:
 1. 6900-volt Bus 1B-SB.
 2. 480-volt Bus 1B2-SB.
 3. 480-volt Bus 1B3-SB.
- c. 118-volt A.C. Vital Bus 1DP-1A-SI energized from its associated inverter connected to 125-volt D.C. Bus DP-1A-SA*,
- d. 118-volt A.C. Vital Bus 1DP-1A-SIII energized from its associated inverter connected to 125-volt D.C. Bus DP-1A-SA*,
- e. 118-volt A.C. Vital Bus 1DP-1B-SII energized from its associated inverter connected to 125-volt D.C. Bus DP-1B-SB*,
- f. 118-volt A.C. Vital Bus 1DP-1B-SIV energized from its associated inverter connected to 125-volt D.C. Bus DP-1B-SB*,
- g. 125-volt D.C. Bus DP-1A-SA energized from Emergency Battery 1A-SA, and ~~charger 1A-SA or 1B-SA, and~~ and
- h. 125-volt D.C. Bus DP-1B-SB energized from Emergency Battery 1B-SB, and ~~charger 1B-SB or 1A-SB.~~

APPLICABILITY: MODES 1, 2, 3, and 4.

*Two inverters may be disconnected from their 125-volt D.C. bus for up to 24 hours as necessary, for the purpose of performing an equalizing charge on their associated Emergency Battery provided: (1) their vital buses are energized and (2) the vital buses associated with the other Emergency Battery are energized from their associated inverters and connected to their associated 125-volt D.C. bus.

ELECTRICAL POWER SYSTEMSONSITE POWER DISTRIBUTIONSHUTDOWNLIMITING CONDITION FOR OPERATION

3.8.3.2. As a minimum, one of the following divisions of electrical buses shall be energized in the specified manner:

- a. Division A, consisting of:
 1. 6900-volt Bus 1A-SA and
 2. 480 volt Buses 1A2-SA and 1A3-SA, and
 3. 118-volt A.C. Vital Buses 1DP-1A-SI and 1DP-1A-SIII energized from their associated inverter connected to 125-volt D.C. Bus 0P-1A-SA, and
 4. 125-volt D.C. Bus 0P-1A-SA energized from Emergency Battery 1A-SA and chargers 1A-SA or 1B-SA, or , or
- b. Division B, consisting of:
 1. 6900-volt Bus 1B-SB and
 2. 480-volt Buses 1B2-SB and 1B3-SB, and
 3. 118-volt AC Vital Buses 1DP-1B-SII and 1DP-1B-SIV energized from their associated inverter connected to 125-volt D.C. Bus 0P-1B-SB, and
 4. 125-volt D.C. Bus 0P-1B-SB energized from Emergency Battery 1B-SB and chargers 1B-SB or 1A-SB.

APPLICABILITY MODES 5 and 6.ACTION:

With any of the above required electrical buses not energized in the required manner, immediately suspend all operations involving CORE ALTERATIONS, positive reactivity changes, or movement of irradiated fuel; initiate corrective action to energize the required electrical buses in the specified manner as soon as possible; and within 8 hours, depressurize and vent the RCS through a vent of ≥ 2.9 square inches.

SURVEILLANCE REQUIREMENTS

4.8.3.2 The specified buses shall be determined energized in the required manner at least once per 7 days by verifying correct breaker alignment and indicated voltage on the buses.

ELECTRICAL POWER SYSTEMS

3/4.8.2 D.C. SOURCES

OPERATING

LIMITING CONDITION FOR OPERATION

3.8.2.1 As a minimum, the following D.C. electrical sources shall be OPERABLE:

- a. 125-volt Emergency Battery Bank 1A-SA and either full capacity charger, 1A-SA or 1B-SA, and,
- b. 125-volt Emergency Battery Bank 1B-SB and either full capacity charger, 1A-SB or 1B-SB.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

- a. With one of the required battery banks inoperable, restore the inoperable battery bank 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.
- b. With both associated full capacity battery chargers inoperable, demonstrate the OPERABILITY of their associated battery bank by performing Surveillance Requirement 4.8.2.1.a.1 within one hour, and at least once per two hours thereafter. If any Category A limit in Table 4.8-2 is not met, declare the battery inoperable.

SURVEILLANCE REQUIREMENTS

4.8.2.1 Each 125-volt Emergency Battery and charger shall be demonstrated OPERABLE:

- a. At least once per 7 days by verifying that:
 1. The parameters in Table 4.8-2 meet the Category A limits, and
 2. The total battery terminal voltage is greater than or equal to 129 volts on float charge.
- b. At least once per 92 days and within 7 days after a battery discharge with battery terminal voltage below 110 volts, or battery overcharge with battery terminal voltage above 150 volts, by verifying that:
 1. The parameters in Table 4.8-2 meet the Category B limits,
 2. There is no visible corrosion at either terminals or connectors, or the connection resistance of these items is less than 150×10^{-6} ohm, and
 3. The average electrolyte temperature of 10 connected cells is above 70° F.

ELECTRICAL POWER SYSTEMS

D.C. SOURCES

SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.8.2.2 As a minimum, one 125-volt Emergency Battery (either 1A-SA or 1B-SB) and at least one associated full-capacity charger shall be OPERABLE.

APPLICABILITY: MODES 5 and 6.

ACTION:

- a. With the required battery bank inoperable, immediately suspend all operations involving CORE ALTERATIONS, positive reactivity changes, or movement of irradiated fuel; initiate corrective action to restore the required battery bank to OPERABLE status as soon as possible, and within 8 hours, depressurize and vent the Reactor Coolant System through a vent of ≥ 2.9 square inches.
- b. With both associated full capacity battery chargers inoperable, demonstrate the OPERABILITY of their associated battery bank by performing Surveillance Requirement 4.8.2.1.a.1 within one hour, and at least once per two hours thereafter. If any Category A limit in Table 4.8-2 is not met, declare the battery inoperable.

SURVEILLANCE REQUIREMENTS

4.8.2.2 The above required 125-volt Emergency Battery and full-capacity charger shall be demonstrated OPERABLE in accordance with Specification 4.8.2.1.

ELECTRICAL POWER SYSTEMS

3/4.8.3 ONSITE POWER DISTRIBUTION

OPERATING

LIMITING CONDITION FOR OPERATION

3.8.3.1 The following electrical buses shall be energized in the specified manner with tie breakers open between redundant buses within the unit:

- a. Division A ESF A.C. Buses consisting of:
 - 1. 6900-volt Bus 1A-SA.
 - 2. 480-volt Bus 1A2-SA.
 - 3. 480-volt Bus 1A3-SA.

- b. Division B ESF A.C. Buses consisting of:
 - 1. 6900-volt Bus 1B-SB.
 - 2. 480-volt Bus 1B2-SB.
 - 3. 480-volt Bus 1B3-SB.

- c. 118-volt A.C. Vital Bus 1DP-1A-SI energized from its associated inverter connected to 125-volt D.C. Bus DP-1A-SA*,

- d. 118-volt A.C. Vital Bus 1DP-1A-SIII energized from its associated inverter connected to 125-volt D.C. Bus DP-1A-SA*,

- e. 118-volt A.C. Vital Bus 1DP-1B-SII energized from its associated inverter connected to 125-volt D.C. Bus DP-1B-SB*,

- f. 118-volt A.C. Vital Bus 1DP-1B-SIV energized from its associated inverter connected to 125-volt D.C. Bus DP-1B-SB*,

- g. 125-volt D.C. Bus DP-1A-SA energized from Emergency Battery 1A-SA, and

- h. 125-volt D.C. Bus DP-1B-SB energized from Emergency Battery 1B-SB.

APPLICABILITY: MODES 1, 2, 3, and 4.

* Two inverters may be disconnected from their 125-volt D.C. bus for up to 24 hours as necessary, for the purpose of performing an equalizing charge on their associated Emergency Battery provided: (1) their vital buses are energized and (2) the vital buses associated with the other Emergency Battery are energized from their associated inverters and connected to their associated 125-volt D.C. bus.

ELECTRICAL POWER SYSTEMS

ONSITE POWER DISTRIBUTION

SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.8.3.2 As a minimum, one of the following divisions of electrical buses shall be energized in the specified manner:

- a. Division A, consisting of:
 1. 6900-volt Bus 1A-SA and
 2. 480 volt Buses 1A2-SA and 1A3-SA, and
 3. 118-volt A.C. Vital Buses 1DP-1A-SI and 1DP-1A-SIII energized from their associated inverter connected to 125-volt D.C. Bus DP-1A-SA, and
 4. 125-volt D.C. Bus DP-1A-SA energized from Emergency Battery 1A-SA, or

- b. Division B, consisting of:
 1. 6900-volt Bus 1B-SB and
 2. 480-volt Buses 1B2-SB and 1B3-SB, and
 3. 118-volt A.C. Vital Buses 1DP-1B-SII and 1DP-1B-SIV energized from their associated inverter connected to 125-volt D.C. Bus DP-1B-SB, and
 4. 125-volt D.C. Bus DP-1B-SB energized from Emergency Battery 1B-SB.

APPLICABILITY: MODES 5 and 6.

ACTION:

With any of the above required electrical buses not energized in the required manner, immediately suspend all operations involving CORE ALTERATIONS, positive reactivity changes, or movement of irradiated fuel; initiate corrective action to energize the required electrical buses in the specified manner as soon as possible; and within 8 hours, depressurize and vent the RCS through a vent of ≥ 2.9 square inches.

SURVEILLANCE REQUIREMENTS

4.8.3.2 The specified buses shall be determined energized in the required manner at least once per 7 days by verifying correct breaker alignment and indicated voltage on the buses.