

3.8 ELECTRICAL POWER SYSTEMS

3.8.4 DC Sources - Operating

LCO 3.8.4 The following four DC electrical power subsystems shall be OPERABLE:

- Battery 31 and associated Battery Charger;
- Battery 32 and associated Battery Charger;
- Battery 33 and associated Battery Charger; and
- Battery 34.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. DC electrical power subsystem 34 inoperable.	A.1 Declare Inverter 34 inoperable and take Required Actions specified in LCO 3.8.7, Inverters-Operating.	2 hours
B. One DC electrical power subsystem (31 or 32 or 33) inoperable.	B.1 Restore DC electrical power subsystem to OPERABLE status.	2 hours*
C. Required Action and Associated Completion Time not met.	C.1 Be in MODE 3.	6 hours
	<u>AND</u> C.2 Be in MODE 5.	36 hours

*See next page for one-time allowed completion time

LCO 3.8.4 Action B. Completion Time (continued)

*On a one-time (per battery) only basis for Station batteries 31 and 32, the batteries may be inoperable for up to 10 days each, as necessary, to allow on-line replacement of the batteries. The time period during which this allowance may be exercised will end on May 31, 2002. The following additional requirement shall also be met to invoke this extended one-time allowed outage time: No risk significant planned maintenance or testing activities, which may impact AC or DC normal or emergency distribution sources or ESF systems, shall be performed during this replacement period.

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.8.4.1 Verify battery terminal voltage on float charge is within the following limits:</p> <p>a. ≥ 123.5 V for batteries 31 and 32; and</p> <p>b. ≥ 127.8 V for batteries 33 and 34.</p>	<p>31 days</p>
<p>SR 3.8.4.2 -----NOTE-----</p> <p>This Surveillance shall not be performed in MODE 1, 2, 3, or 4.</p> <p>-----</p> <p>Verify each battery charger supplies its associated battery at the voltage and current adequate to demonstrate battery charger capability requirements are met.</p>	<p>24 months</p>
<p>SR 3.8.4.3 -----NOTES-----</p> <p>This Surveillance shall not be performed in MODE 1, 2, 3, or 4.*</p> <p>-----</p> <p>Verify battery capacity is adequate to supply, and maintain in OPERABLE status, the required emergency loads for the design duty cycle when subjected to a battery service test or a modified performance discharge test.</p>	<p>24 months</p>

(continued)

*This battery surveillance may be performed on a one-time only basis during replacement of Station batteries 31 and 32 when the unit is in Mode 1, 2, 3, or 4 in order to support the one-time allowed outage time change of 10 days, as indicated in section 3.8.4.B. This testing shall be done when the battery is disconnected from the DC bus.

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.4.4 -----NOTE----- This Surveillance shall not be performed in MODE 1, 2, 3, or 4.* ----- Verify battery capacity is $\geq 80\%$ of the manufacturer's rating when subjected to a performance discharge test or a modified performance discharge test.</p>	<p>60 months <u>AND</u> 12 months when battery shows degradation or has reached 85% of expected life with capacity $< 100\%$ of manufacturer's rating <u>AND</u> 24 months when battery has reached 85% of the expected life with capacity $\geq 100\%$ of manufacturer's rating</p>
<p>SR 3.8.4.5 Verify battery cells, cell plates, and racks show no visual indication of physical damage or abnormal deterioration.</p>	<p>24 months</p>

*This battery surveillance may be performed on a one-time only basis during replacement of Station batteries 31 and 32 when the unit is in Mode 1, 2, 3, or 4 in order to support the one-time allowed outage time change of 10 days, as indicated in section 3.8.4.B. This testing shall be done when the battery is disconnected from the DC bus.