

3.3 INSTRUMENTATION

3.3.8.1 Loss of Power (LOP) Instrumentation

LCO 3.3.8.1 The LOP instrumentation for each Function in Table 3.3.8.1-1 shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and
When the associated diesel generator is required to be
OPERABLE by LCO 3.8.2, "AC Sources—Shutdown."

ACTIONS

-----NOTE-----
Separate Condition entry is allowed for each channel.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more required channels inoperable for reasons other than Condition B.	A.1 Enter the Condition referenced in Table 3.3.8.1-1 for the channel.	Immediately
B. One or more required channels associated with Unit 1 4.16 kV ESS Buses in one Division inoperable for the performance of Unit 1 SR 3.8.1.19	B.1 Restore the inoperable channels	8 hours
C. As required by Required Action A.1 and referenced in Table 3.3.8.1-1.	C.1 Place channel In trip.	1 hour

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. As required by Required Action A.1 and referenced in Table 3.3.8.1-1.	D.1 Restore the inoperable Channel.	1 hour
E. Required Action and associated Completion Time of Condition B, C, or D not met.	E.1 Declare associated diesel generator (DG) inoperable.	Immediately

SURVEILLANCE REQUIREMENTS

NOTES

1. Refer to Table 3.3.8.1-1 to determine which SRs apply for each LOP Function.
2. When a channel is placed in an inoperable status solely for performance of required Surveillances, entry into associated Conditions and Required Actions may be delayed for up to 6 hours provided the associated Function maintains DG initiation capability.

SURVEILLANCE	FREQUENCY
SR 3.3.8.1.1 Perform CHANNEL CHECK.	12 hours
SR 3.3.8.1.2 Perform CHANNEL FUNCTIONAL TEST.	31 days
SR 3.3.8.1.3 Perform CHANNEL CALIBRATION.	24 months
SR 3.3.8.1.4 Perform LOGIC SYSTEM FUNCTIONAL TEST.	24 months

Table 3.3.8.1-1 (page 1 of 1)
 Loss of Power Instrumentation

FUNCTION	REQUIRED CHANNELS PER BUS	CONDITIONS REFERENCED FROM REQUIRED ACTION A.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
1. 4.16 kV Emergency Bus Undervoltage (Loss of Voltage < 20%)				
a. Bus Undervoltage	1	D	SR 3.3.8.1.3 SR 3.3.8.1.4	≥ 780.4V and ≤ 899.6V
b. Time Delay	1	D	SR 3.3.8.1.3 SR 3.3.8.1.4	≥ 0.4sec and ≤ 0.6 sec
2. 4.16 kV Emergency Bus Undervoltage Low Setting (Degraded Voltage 65%)				
a. Bus Undervoltage	2	C	SR 3.3.8.1.1 SR 3.3.8.1.2 SR 3.3.8.1.3 SR 3.3.8.1.4	≥ 2503V and ≤ 2886V
b. Time Delay	1	D	SR 3.3.8.1.2 SR 3.3.8.1.3 SR 3.3.8.1.4	≥ 2.7sec and ≤ 3.3sec
3. 4.16 kV Emergency Bus Undervoltage LOCA (Degraded Voltage 93%)				
a. Bus Undervoltage	2	C	SR 3.3.8.1.1 SR 3.3.8.1.2 SR 3.3.8.1.3 SR 3.3.8.1.4	≥ 3801V and ≤ 3935V
b. Time Delay (LOCA)	1	D	SR 3.3.8.1.3 SR 3.3.8.1.4	≥ 9 sec and ≤ 11 sec
c. Time Delay (Non LOCA)	1	D	SR 3.3.8.1.2 SR 3.3.8.1.3 SR 3.3.8.1.4	≥ 4 min 30 sec and ≤ 5 min 30 sec

3.8 ELECTRICAL POWER SYSTEMS

3.8.7 Distribution Systems—Operating

LCO 3.8.7 The electrical power distribution subsystems in Table 3.8.7-1 shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. -----NOTE----- Not applicable to DG E DC Bus 0D597 -----</p> <p>One or more Unit 2 AC electrical power distribution subsystems inoperable.</p>	<p>-----Note----- Enter applicable Conditions and Required Actions of LCO 3.8.4, "DC Sources - Operating," for DC source(s) made inoperable by inoperable power distribution subsystem(s). -----</p> <p>A.1 Restore Unit 2 AC electrical power distribution subsystem(s) to OPERABLE status.</p>	<p>8 hours</p> <p><u>AND</u></p> <p>16 hours from discovery of failure to meet LCO 3.8.7 except for Condition F or G</p>
<p>B. -----NOTE----- Not applicable to DG E DC Bus 0D597 -----</p> <p>One or more Unit 2 DC electrical power distribution subsystems inoperable.</p>	<p>B.1 Restore Unit 2 DC electrical power distribution subsystem(s) to OPERABLE status.</p>	<p>2 hours</p> <p><u>AND</u></p> <p>16 hours from discovery of failure to meet LCO 3.8.7 except for Condition F or G</p>
<p>C. One Unit 1 AC electrical power distribution subsystem inoperable.</p>	<p>C.1 Restore Unit 1 AC electrical power distribution subsystem to OPERABLE status.</p>	<p>72 hours</p>

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. Two Unit 1 AC electrical power distribution subsystems on one Division inoperable for performance of Unit 1 SR 3.8.1.19.	D.1 Restore at least one Unit 1 AC electrical power distribution subsystems to OPERABLE status.	8 hours
E. Required Action and Associated Completion Time of Condition A, B or C not met.	E.1 Be in MODE 3. <u>AND</u>	12 hours
	E.2 Be in MODE 4.	36 hours
F. Diesel Generator E DC electrical power subsystem inoperable, while not aligned to the Class 1E distribution system.	F.1 Verify that all ESW valves associated with Diesel Generator E are closed.	2 hours
G. Diesel Generator E DC electrical power subsystem inoperable, while aligned to the Class 1E distribution system.	G.1 Declare Diesel Generator E inoperable.	2 hours
H. Two or more electrical power distribution subsystems inoperable that result in a loss of safety function.	H.1 Enter LCO 3.0.3.	Immediately

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