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ELECTRICAL POWER SYSTEMS

3/4.8.3 ONSITE POWER DISTRIBUTION SYSTEMS

DISTRIBUTION - OPERATING

LIMITING CONDITION FOR OPERATION

3.8.3.1 The following power distribution system divisions shall be energized:

a. AC power distribution:

1. Division I, consisting of:

- a) 4160-volt AC Bus 1A1
- b) 480-volt Unit Substations A and 1A
- c) 480-volt AC MCCs
  - 1) Aux. Bldg. MCCs 1A1, 1A2, 1A3, 1A4
  - 2) SSW MCC 1A
  - 3) DG MCC 1A
  - 4) Control Bldg. MCCs E1, E2, and G
  - 5) Damper MCC A
- d) 120-volt AC distribution panels in 480-volt Auxiliary Building MCC 1A1 and Control Building MCC E2.
- e) 120-volt AC uninterruptible distribution panels energized from 1C71-S001A, which is fed from Control Building MCC E2 and from Auxiliary Building 480-volt MCC 1A1 through 125-volt DC MCC 1DC13E.

2. Division II, consisting of:

- a) 4160-volt AC Bus 1B1
- b) 480-volt Unit Substations B and 1B
- c) 480-volt AC MCCs
  - 1) Aux. Bldg. MCCs 1B1, 1B2, 1B3, 1B4
  - 2) SSW MCC 1B
  - 3) DG MCC 1B
  - 4) Control Bldg. MCCs F1, F2, and H
  - 5) Damper MCC B
- d) 120-volt AC distribution panels in Auxiliary Building 480 volt MCC 1B1 and Control Building MCC F2.
- e) 120-volt AC uninterruptible distribution panels energized from 1C71-S001B, which is fed from Control Building MCC F2 and from Auxiliary Building 480-volt MCC 1B1 through 125-volt DC MCC 1DC14E.

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ELECTRICAL POWER SYSTEMS

DISTRIBUTION - OPERATING

LIMITING CONDITION FOR OPERATION (Continued)

3.8.3.1 (Continued)

3. Division III, consisting of:

- a) 4160-volt AC Bus 1C1
- b) Auxiliary Building, 480-volt AC MCC 1C and 480-volt AC MCC 1C1 and SSW MCC 1C
- c) 120-volt AC distribution panels in Auxiliary Building 480-volt MCC 1C and 1C1.
- d) 120-volt AC uninterruptible distribution panels energized from 1C71-S001C, which is fed from Auxiliary Building 480-volt MCC 1C and 125-volt DC distribution panel 1E22-S001C.

4. Division IV consisting of 120-volt AC uninterruptible distribution panels energized from 1C71-S001D which is fed from Auxiliary Building 480-volt MCC 1B1 and 125-volt DC MCC 1DC15E.

5. Reactor Protection System (RPS) 120-volt AC Solenoid Buses A and B from their associated inverters.

b. DC power distribution

1. Division I, consisting of 125-volt DC Battery 1A, 125-volt Battery Charger 1A, 125-volt DC MCC 1A and Distribution Panel.
2. Division II, consisting of 125-volt DC Battery 1B, 125-volt Battery Charger 1B, 125-volt DC MCC 1B, and Distribution Panel.
3. Division III, consisting of 125-volt DC Battery 1C, 125-volt Battery Charger 1C and Distribution Panel.
4. Division IV consisting of 125-volt DC Battery 1D, 125-volt Battery Charger 1D, 125-volt DC MCC 1D, and Distribution Panel.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

ACTION:

a. For AC power distribution:

1. With either Division I or Division II of the above required AC distribution system not energized, re-energize the division within 8 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
2. With Division III or Division IV of the above required AC distribution system not energized, declare the HPCS system inoperable and take the ACTION required by Specification 3.5.1.

## ELECTRICAL POWER SYSTEMS

### DISTRIBUTION - OPERATING

#### LIMITING CONDITION FOR OPERATION (Continued)

##### 3.8.3.1 ACTION (Continued):

3. a) With one of the above required inverters associated with 1C71-S001A or B inoperable, energize the associated distribution panel within 8 hours; restore the inoperable inverter to OPERABLE and energized 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) With one of the above required inverters associated with 1C71-S001C or D inoperable, declare the HPCS system inoperable and take the ACTION required by Specification 3.5.1.

4. For inoperable RPS Solenoid Bus inverters: Buses:

- a) With one RPS Solenoid Bus not energized, operation may continue.

- b) With an RPS Solenoid Bus inverter inoperable, transfer the bus to the alternate power source, provided the other RPS Solenoid Bus is not being supplied from <sup>its</sup> the alternate source, or de-energize ~~the~~ bus.

- c) With both RPS Solenoid Bus inverters inoperable, de-energize one RPS Solenoid Bus.

- d) With the frequency of the 120V AC supply to the RPS Solenoid buses A or B  $\leq 57$  Hz, demonstrate the OPERABILITY of all equipment which could have been subjected to the abnormal frequency for all Class 1E loads connected to the associated buses, by performance of a CHANNEL FUNCTIONAL TEST or CHANNEL CALIBRATION, as required, within 24 hours.

b. For DC power distribution:

1. With either Division I or Division II of the above required DC distribution system not energized, re-energize the division within 2 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
2. With Division III or Division IV of the above required DC distribution system not energized, declare the HPCS system inoperable and take the ACTION required by Specifications 3.5.1 and 3.8.4.1.

#### SURVEILLANCE REQUIREMENTS

4.8.3.1.1 Each of the above required power distribution system divisions shall be determined energized at least once per 7 days by verifying correct breaker alignment and voltage on the buses/MCCs.

ELECTRICAL POWER SYSTEMS

DISTRIBUTION - OPERATING

SURVEILLANCE REQUIREMENTS (Continued)

4.8.3.1.2 Whenever an RPS Solenoid Bus is energized from the alternate source ~~or a Bus Power Monitor is inoperable~~, verification shall be made once per 8 hours that the supply frequency is  $> 57$  Hz.

~~4.8.3.1.3 A CHANNEL FUNCTIONAL TEST shall be performed on each RPS Solenoid Bus Power Monitor at the frequency required by Specification 4.8.4.3.a.~~

4.8.3.1.4 At least once per 18 months a CHANNEL CALIBRATION shall be performed on each RPS Solenoid Bus ~~Power Monitor of Specification 4.8.4.3.b and associated~~ power supply Regulating Transformer.

## ELECTRICAL POWER SYSTEMS

### REACTOR PROTECTION SYSTEM ELECTRIC POWER MONITORING

#### LIMITING CONDITION FOR OPERATION

3.8.4.3 One RPS electric power monitoring channel for each inservice RPS special solenoid power supply or alternate power supply shall be OPERABLE.

APPLICABILITY: At all times.

#### ACTION:

With the RPS special solenoid electric power monitoring channel for an inservice RPS special solenoid power supply or alternate power supply inoperable, restore the power monitoring channel to OPERABLE status within 30 minutes or remove the associated RPS special solenoid power supply or alternate power supply from service.

#### SURVEILLANCE REQUIREMENTS

4.8.4.3 The above specified RPS special solenoid electric power monitoring channels shall be determined OPERABLE:

- a. ~~At least once per six months by performance of a CHANNEL FUNCTIONAL TEST, and~~
- b. At least once per 18 months by demonstrating the OPERABILITY of over-voltage, undervoltage and underfrequency protective instrumentation by performance of a CHANNEL CALIBRATION including simulated automatic actuation of the protective relays, tripping logic and output circuit breakers and verifying the following setpoints.

	<u>EPA-INVERTER A</u>	<u>EPA-INVERTER B</u>
1. Overvoltage	$< 134.2 + 0, -3 \text{ VAC}$	$< 133.6 + 0, - 3 \text{ VAC}$
2. Undervoltage	$\geq 114.2 - 0, + 3 \text{ VAC}$	$\geq 113.2 - 0, + 3 \text{ VAC}$
3. Underfrequency	$> 57 - 0 + 1.2 \text{ Hz}$	$> 57 - 0 + 1.2 \text{ Hz}$

By performance of a CHANNEL FUNCTIONAL TEST each time the plant is in COLD SHUTDOWN for a period of more than 24 hours, unless performed in the previous six months, and