

associated with each primary containment electrical penetration circuit shall be OPERABLE. The scope of these protective devices excludes those circuits for which credible fault currents would not exceed the electrical penetrations' design ratings.

ELECTRICAL POWER SYSTEMS

3/4.8.4 ELECTRICAL EQUIPMENT PROTECTIVE DEVICES

PRIMARY CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

LIMITING CONDITION FOR OPERATION

Each of the and backup
3.8.4.1 All primary containment penetration conductor overcurrent protective devices shown in Table 3.8.4.1-1 shall be OPERABLE.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

ACTION:

With one or more of the primary containment penetration conductor overcurrent protective devices shown in Table 3.8.4.1-1 inoperable, declare the affected system or component inoperable and apply the appropriate ACTION statement for the affected system and:

- For 4.16 kV circuit breakers, de-energize the 4.16 kV circuit(s) by tripping the associated redundant circuit breaker(s) within 72 hours and verifying, at least once per 7 days thereafter, the redundant circuit breaker to be tripped.
- For 480 volt circuit breakers, remove the inoperable circuit breaker(s) from service by racking out the breaker within 72 hours and verifying, at least once per 7 days thereafter, the inoperable breaker(s) to be racked out.
- For 480 volt MCC circuit breaker/fuse combination starters, remove the inoperable starter(s) from service by locking the breakers open and removing the control power fuse within 72 hours and verifying, at least once per 7 days thereafter, the inoperable starter(s) circuit breaker to be locked open with the control power fuse removed.
- For 120/140 volt molded case circuit breakers, remove the inoperable circuit breaker(s) from service by tripping both 120/140 volt breakers open and locking the upstream 480 volt MCC breaker open within 72 hours and verifying, at least once per 7 days thereafter, the 480 volt MCC breaker(s) to be locked open.

Otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS

4.8.4.1 Each of the ~~primary containment penetration conductor~~ overcurrent protective devices ~~shown in Table 4.8.4.1~~ shall be demonstrated OPERABLE:

a. At least once per 18 months:

1. By verifying that the medium voltage 4.16 kv circuit breakers are OPERABLE by selecting, on a rotating basis, at least one of the four circuit breakers and performing:
 - a) A CHANNEL CALIBRATION of the associated protective relays, and
 - b) An integrated system functional test which includes simulated automatic actuation of the system and verifying that each relay and associated circuit breakers and overcurrent control circuits function as designed.
 - c) For each circuit breaker found inoperable during these functional tests, an additional representative sample of at least one of the four circuit breakers of the inoperable type shall also be functionally tested until no more failures are found or all circuit breakers of that type have been functionally tested.
2. By selecting and functionally testing a representative sample of at least 10% of each type of lower voltage circuit breakers. Circuit breakers selected for functional testing shall be selected on a rotating basis. Testing of these circuit breakers shall consist of injecting currents in excess of the breaker's nominal setpoint and measuring the response time of the long time and short time delay elements and the setpoint of the instantaneous element, as appropriate. The measured data shall be compared to the manufacturer's data to ensure that it is less than or equal to a value specified by the manufacturer. Circuit breakers found inoperable during functional testing shall be restored to OPERABLE status prior to resuming operation. For each circuit breaker found inoperable during these functional tests, an additional representative sample of at least 10% of all the circuit breakers of the inoperable type shall also be functionally tested until no more failures are found or all circuit breakers of that type have been functionally tested.

ELECTRICAL POWER SYSTEMS

OTHER OVERCURRENT PROTECTIVE DEVICES

for the Main Control Room safety-related lighting and the primary and secondary RPS Alternate Source of Power

LIMITING CONDITION FOR OPERATION

3.8.4.2 ~~The~~ ^{Each required primary} overcurrent protection devices ~~shown in Table 3.8.4.2~~ shall be OPERABLE.

APPLICABILITY: At all times.

ACTION:

With one or more of the overcurrent protective devices ~~shown in Table 3.8.4.2~~ inoperable, remove the circuit breaker(s) feeding the control room lighting and/or alternate RPS supply as appropriate from service by opening the breaker(s) within 72 hours and return the overcurrent protection devices to OPERABLE status within 7 days, or verify the appropriate breakers open at least once per 24 hours.*

SURVEILLANCE REQUIREMENTS

4.8.4.2 The overcurrent protective devices shall be demonstrated OPERABLE at least once per 18 months by selecting and testing one-half of each type of circuit breaker on a rotating basis. Testing of these circuit breakers shall consist of injecting currents in excess of the breaker's nominal setpoint and measuring the response time of the long time and short time delay elements and the setpoint of the instantaneous element, as appropriate. The measured data shall be compared to the manufacturer's data to ensure that it is less than or equal to a value specified by the manufacturer.

*Except at least once per 31 days if locked, sealed, or otherwise secured in the open position.

ELECTRICAL POWER SYSTEMS

A.C. CIRCUITS INSIDE CONTAINMENT

480 V and 240/120V

LIMITING CONDITION FOR OPERATION

3.8.4.4 ~~Each of the following~~ ^{Each required} A.C. circuits inside containment shall be de-energized ~~to~~.

<u>Equipment ID</u>	<u>Location</u>	<u>Device</u>
1MHR*CRN1	1EJS*LOC2A	ACB022
1F42-PNL003	1SCA-PNL8C1	Circuit Breaker 1
1F42-D002H	1SCA-PNL8C1	Circuit Breaker 15
1SFT-PNL106	1SCA-PNL8B2	Circuit Breaker 2
1SFT-PNL106	1SCA-PNL8B2	Circuit Breaker 10
1HVR*UC1AH	1SCV*PNL2A2	Circuit Breaker 5
1HVR*UC1BH	1SCV*PNL2B2	Circuit Breaker 12
1HVR-UC1CH	1SCA-PNL2C1	Circuit Breaker 9
1HVR-FN1AH	1SCA-PNL2A2	Circuit Breaker 3
1HVR-FN1BH	1SCA-PNL2F1	Circuit Breaker 6
1HVR-FN1CH	1SCA-PNL2E1	Circuit Breaker 1
1HVR-FN1DH	1SCA-PNL2B1	Circuit Breaker 6
1DRS-UC1AH	1SCA-PNL2E1	Circuit Breaker 2
1DRS-UC1BH	1SCA-PNL2F1	Circuit Breaker 3
1DRS-UC1CH	1SCA-PNL2E1	Circuit Breaker 2
1DRS-UC1DH	1SCA-PNL2F1	Circuit Breaker 2
1DRS-UC1EH	1SCA-PNL2E1	Circuit Breaker 2
1DRS-UC1FH	1SCA-PNL2F1	Circuit Breaker 3
1WCS-P5AH	1SCA-PNL2E1	Circuit Breaker 4
1WCS-P5BH	1SCA-PNL2F1	Circuit Breaker 2

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2 and 3.

ACTION:

With any ^{A.C.} ~~of the~~ ~~required~~ circuit(s) energized, trip the associated circuit breaker(s) in the specified location within 1 hour.

SURVEILLANCE REQUIREMENTS

4.8.4.4 Each ~~of the~~ ~~required~~ A.C. circuit(s) shall be determined to be de-energized by verifying at least once per 24 hours** that the associated circuit breakers are in the tripped condition.

*Except during entry into the containment.

**Except at least once per 31 days if locked, sealed or otherwise secured in the tripped condition.