

10 CFR 50 Appendix R

Union Electric

III.G Fire Protection of Safe Shutdown Capability

1. Fire protection features shall be provided for structures, systems, and components important to safe shutdown. These features shall be capable of limiting fire damage so that:
 - a. One train of systems necessary to achieve and maintain hot shutdown conditions from either the control room or emergency control station(s) is free of fire damage; and
 - b. Systems necessary to achieve and maintain cold shutdown from either the control room or emergency control station(s) can be repaired within 72 hours.
2. Except as provided for in paragraph G.3 of this section, where cables or equipment, including associated non-safety circuits that could prevent operation or cause maloperation due to hot shorts, open circuits, or shorts to ground, of redundant trains of systems necessary to achieve and maintain hot shutdown conditions are located within the same fire area outside of primary containment, one of the following means of ensuring that one of the redundant trains is free of fire damage shall be provided:
 - a. Separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating. Structural steel forming a part of or supporting such fire barriers shall be protected to provide fire resistance equivalent to that required of the barrier;

FSAR Appendix 9.5B provides an area-by-area analysis of the SNUPPS power block that demonstrates that no single fire can prevent safe shutdown.

Redundant trains of systems required to achieve and maintain hot standby are separated by 3-hour-rated fire barriers, or the equivalent provided by III.G.2, or else a diverse means of providing the safe shutdown capability exists and is unaffected by the fire.

For redundant trains of systems required to achieve and maintain cold shutdown that could potentially be affected by a single fire, repairs or local operator actions can be performed within 72 hours.

As described in Appendix 9.5B and Section 7.4, an auxiliary shutdown panel is provided as a dedicated means of achieving and maintaining hot standby in the event that the main control room is uninhabitable due to a fire.

Refer to the Site Addendum for site-related structures.

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