



NRC NEWS

U.S. NUCLEAR REGULATORY COMMISSION

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NRC PUBLISHES CLARIFICATION OF FIRE PROTECTION REQUIREMENTS FOR ELECTRICAL CIRCUITS IN NUCLEAR POWER PLANTS

The NRC has issued a Regulatory Issue Summary (RIS) to clarify requirements for assuring reactors can be safely shut down following a fire.

NRC regulations require nuclear power plants to analyze how their systems could be affected by a fire. Plants must protect any electrical circuit whose fire-induced failure would prevent a safety system from operating, or cause a safety system to function inappropriately. Over the past five years, the NRC and industry representatives have worked together in meetings and public workshops to better understand cable fire tests that help clarify how the NRC's regulations should be applied.

The NRC's RIS on this topic addresses the variety of interpretations for existing regulations on fire-induced electric circuit failures, and sets out clear regulatory expectations for ensuring plants maintain safe shutdown-related circuits. These include:

- Performing analyses to address any and all possible failures and combinations of multiple failures resulting from fire-induced circuit failures in redundant systems in fire areas where the failures could impact safe shutdown.
- Performing analyses of circuits whose failure could affect systems necessary for safe shutdown, including prior NRC approval before crediting the actions of plant personnel to protect against inappropriate operation of safety systems.
- Performing analyses of redundant safe-shutdown circuits that reside in the same fire area without taking credit for plant personnel use of an emergency control station on those circuits, unless alternative or dedicated shutdown capability is provided elsewhere.

The RIS discusses these matters in more detail, and is available on the agency's web site, by entering accession number ML053360069 at this address:

<http://www.nrc.gov/reading-rm/adams/web-based.html> . The RIS requires no action or written response. Questions should be directed to Bob Radlinski, (phone 301-415-3174 or rfr1@nrc.gov) or Chandu Patel (phone 301-415-3025 or cpr@nrc.gov).

The NRC has issued several guidance documents on complying with fire protection requirements. In addition, several public meetings were held between October 2004 and August 2005 to discuss clarification of the issues included in the RIS.

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