



# U.S. NUCLEAR REGULATORY COMMISSION

## STANDARD REVIEW PLAN

### BRANCH TECHNICAL POSITION 7-8

### GUIDANCE FOR APPLICATION OF REGULATORY GUIDE 1.22

### REVIEW RESPONSIBILITIES

**Primary** - Organization responsible for the review of instrumentation and controls

**Secondary** - None

#### A. Background

A recent application listed eight functions that are not tested while the reactor is operating at power. The applicant claimed that the periodic testing complied with Regulatory Guide (RG) 1.22, "Periodic Testing of Protection System Actuation Functions." RG 1.22 does make provisions for actuated equipment that is not tested during reactor operation, but it does not have provisions for excluding any portion of the protection system from the requirements of clauses 4.9 and 4.10 of IEEE Std 279-1971, "Criteria for Protection Systems for Nuclear Power Generating Stations," or the safety system from the requirements of clauses 5.7 and 6.5 of IEEE Std 603-1991, "IEEE Standard Criteria for Safety Systems for Nuclear Power Generating Stations."

Revision 5 - March 2007

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### USNRC STANDARD REVIEW PLAN

This Standard Review Plan, NUREG-0800, has been prepared to establish criteria that the U.S. Nuclear Regulatory Commission staff responsible for the review of applications to construct and operate nuclear power plants intends to use in evaluating whether an applicant/licensee meets the NRC's regulations. The Standard Review Plan is not a substitute for the NRC's regulations, and compliance with it is not required. However, an applicant is required to identify differences between the design features, analytical techniques, and procedural measures proposed for its facility and the SRP acceptance criteria and evaluate how the proposed alternatives to the SRP acceptance criteria provide an acceptable method of complying with the NRC regulations.

The standard review plan sections are numbered in accordance with corresponding sections in Regulatory Guide 1.70, "Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants (LWR Edition)." Not all sections of Regulatory Guide 1.70 have a corresponding review plan section. The SRP sections applicable to a combined license application for a new light-water reactor (LWR) are based on Regulatory Guide 1.206, "Combined License Applications for Nuclear Power Plants (LWR Edition)."

These documents are made available to the public as part of the NRC's policy to inform the nuclear industry and the general public of regulatory procedures and policies. Individual sections of NUREG-0800 will be revised periodically, as appropriate, to accommodate comments and to reflect new information and experience. Comments may be submitted electronically by email to [NRR\\_SRP@nrc.gov](mailto:NRR_SRP@nrc.gov).

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## **B. Branch Technical Position**

All portions of the protection and safety systems should be designed in accordance with IEEE Std 279-1971 or IEEE Std 603-1991, as required by 10 CFR 50.55a(h), "Protection and Safety Systems." All actuated equipment that is not tested during reactor operation should be identified, and a discussion of how each conforms to the provisions of paragraph D.4 of RG 1.22 should be submitted. In addition to compliance with RG 1.22, the review of this topic should also confirm that the proposed design and the justification for test intervals are consistent with the surveillance testing proposed as part of the plant technical specifications.

1. The protection system should satisfy the requirements of the General Design Criteria and Section 50.55a(h) of 10 CFR Part 50. 10 CFR 50.55a(h) requires compliance with IEEE Std 603-1991, and the correction sheet dated January 30, 1995. For nuclear power plants with construction permits issued before January 1, 1971, the applicant/licensee may elect to comply instead with their plant-specific licensing basis. For nuclear power plants with construction permits issued between January 1, 1971 and May 13, 1999, the applicant/licensee may elect to comply instead with the requirements stated in IEEE Std 279-1971. SRP Appendix 7.1-B provides guidance for reviewing systems against IEEE Std 279-1971. SRP Appendix 7.1-C provides guidance for reviewing systems against IEEE Std 603-1991.

## **C. References**

1. IEEE Std 279-1971, "Criteria for Protection Systems for Nuclear Power Generating Stations."
2. IEEE Std 603-1991, "IEEE Standard Criteria for Safety Systems for Nuclear Power Generating Stations."
3. Regulatory Guide 1.22, "Periodic Testing of Protection System Actuation Functions." Office of Nuclear Regulatory Research, U.S. Nuclear Regulatory Commission, 1972.

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### **PAPERWORK REDUCTION ACT STATEMENT**

The information collections contained in the Standard Review Plan are covered by the requirements of 10 CFR Part 50 and 10 CFR Part 52, and were approved by the Office of Management and Budget, approval number 3150-0011 and 3150-0151.

### **PUBLIC PROTECTION NOTIFICATION**

The NRC may not conduct or sponsor, and a person is not required to respond to, a request for information or an information collection requirement unless the requesting document displays a currently valid OMB control number.

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