

## **Branch Technical Position HICB-8**

### **Guidance for Application of Regulatory Guide 1.22**

#### **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 Reg. Guide 1.22, "Periodic Testing of Protection System Actuation Functions." Reg. Guide 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 paragraphs 4.9 and 4.10 of ANSI/IEEE Std 279, "Criteria for Protection Systems for Nuclear Power Generating Stations."

#### **B. Branch Technical Position**

All portions of the protection systems should be designed in accordance with ANSI/IEEE Std 279, as required by 10 CFR Part 50, 50.55a(h). 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 Reg. Guide 1.22 should be submitted. In addition to compliance with the Reg. Guide, 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.

Note that IEEE Std 603, "IEEE Standard Criteria for Safety Systems for Nuclear Power Generating Stations," incorporates the guidance of this branch technical position; therefore, reviews conducted against Reg. Guide 1.153, "Criteria for Power, Instrumentation, and Control Portions of Safety Systems," do not need separate consideration of this branch technical position.

#### **C. References**

ANSI/IEEE Std 279-1971. "Criteria for Protection Systems for Nuclear Power Generating Stations."

IEEE Std 603-1991. "IEEE Standard Criteria for Safety Systems for Nuclear Power Generating Stations."

Regulatory Guide 1.153. "Criteria for Power, Instrumentation, and Control Portions of Safety Systems."  
Office of Nuclear Regulatory Research, U.S. Nuclear Regulatory Commission, 1996.

Regulatory Guide 1.22. "Periodic Testing of Protection System Actuation Functions." Office of Nuclear  
Regulatory Research, U.S. Nuclear Regulatory Commission, 1972.

