REGULATORY ANALYSIS

DRAFT REGULATORY GUIDE (DG) – 1217
"PROTECTION AGAINST TURBINE MISSILES"

Proposed Revision 2 of Regulatory Guide 1.115

Statement of the Problem

The U.S. Nuclear Regulatory Commission (NRC) issued Regulatory Guide 1.115, "Protection against Low-Trajectory Turbine Missiles," Revision 1, in July 1977. In July 1986, the NRC revised its guidance on turbine missiles again in Appendix U to NUREG-1048,[1] which has been used to date by the industry in its owners group and plant-specific applications related to turbine missiles and by the NRC in its safety evaluation of these applications. However, the revised guidance did not appear in another revision of Regulatory Guide 1.115, which makes identification of the current NRC guidance on this issue difficult, if not impossible.

Therefore, revision of this regulatory guidance is necessary to accomplish the following four objectives:

1. incorporate NRC guidance on the turbine missile issue, which is currently documented in several documents, into one document—the proposed Regulatory Guide 1.115, Revision 1;
2. expand the scope of guidance to include concerns about high-trajectory missiles;
3. assess the failure data from the past 15 years to determine whether a risk-informed approach is ready for implementation; and
4. present a better organization of the regulatory guide by removing contradictory statements and adding new information and technical discussions throughout the guide.

Objective

The objective of this revision is to provide clear and up-to-date guidance for protecting safety-related structures, systems, and components against turbine missiles.

Alternative Approaches

The NRC staff considered the following alternative approaches:

Do not revise Regulatory Guide 1.115.
Revise Regulatory Guide 1.115.

Alternative 1: Do Not Revise Regulatory Guide 1.115

Under this alternative, the staff would not revise this guidance, and the current guidance would be retained. If the NRC does not take action, there would not be any changes in costs or benefit to the public, licensees, or the NRC. However, the "no-action" alternative would not address identified concerns with the current version of the regulatory guide. The NRC would continue to review each application on a case-by-case basis. This alternative provides a baseline condition from which any other alternatives will be assessed.

[1] NUREG-1048, "Safety Evaluation Report Related to the Operation of Hope Creek Generating Station," Supplement 6, issued July 1986, U.S. Nuclear Regulatory Commission, Washington, DC.

Alternative 2: Revise Regulatory Guide 1.115

Under this alternative, the NRC would revise Regulatory Guide 1.115, taking into consideration the operating experience and failure data from the last 15 years and combining guidance for low-trajectory and high-trajectory turbine missiles.

The impact to the NRC would be the costs associated with preparing and issuing the revised regulatory guide. The impact to the public would be the voluntary costs associated with reviewing and providing comments to the NRC during the public comment period. The value to the NRC staff and its applicants would be the benefits associated with enhanced efficiency and effectiveness in using a common guidance document as the technical basis for license applications and other interactions between the NRC and its regulated entities.

Conclusion

Based on this regulatory analysis, the NRC staff recommends revision of Regulatory Guide 1.115.