

Implementation Activity: **Develop a regulatory guide and accompanying SRP chapter providing an approach for assessing the appropriateness of PRA results used in support of regulatory applications.**

Primary Performance Goal: Make NRC activities and decisions more effective, efficient, and realistic.

Strategy 1: *We will use risk information to improve the effectiveness and efficiency of our activities and decisions.*

The NRC is extensively using information from probabilistic risk assessments (PRAs) in its regulatory decision-making. To streamline staff review of licensee applications using risk insights, professional societies and the industry undertook the following initiatives for establishing consensus standards and guidance on the use of PRA in regulatory decision-making:

- The American Society of Mechanical Engineers (ASME) has developed a standard for a Level 1 analyses (i.e., estimation of core damage frequency (CDF)) and a simplified Level 2 analysis (i.e., estimation of large early release (LERF)) covering internal events (transients, loss of coolant accidents, and internal flood) at full power.
- The Nuclear Energy Institute (NEI) has developed a "PSA Peer Review Guidance," (NEI-00-02) covering internal events at full power--Level 1 and simplified Level 2.
- The American Nuclear Society (ANS) is developing PRA standards for:
 - external hazards with a tentative publication date of December 2002
 - low power and shutdown with a tentative publication date of December 2003
 - internal fires (with no date available at this time because ANS is in initial stages)

It is expected that licensees will use the PRA standards and industry guidance to help demonstrate and document the adequacy of their PRAs for a variety of risk-informed regulatory applications. Therefore, the staff should document its position on the appropriateness of the standards and industry guidance to support regulatory applications. Such documentation will indicate in which areas staff review can be minimized and where additional review may be expected. In order to accomplish this, the staff will publish a new regulatory guide (RG) providing an approach for assessing the adequacy of PRA results used in support of regulatory applications and an accompanying Standard Review Plan (SRP) chapter. The development of the RG will include consideration of recent guidance provided the staff by ACRS (March 19, 2002, memo to EDO) concerning the importance of late containment failure and inadvertent release of radioactive material.

The Regulatory Guide and associated SRP chapter are intended to support all risk informed activities. The main body of the RG will: (1) summarize Attachment 1 of the SECY-00-0162 and (2) provide advice on the use of PRA standards and industry guidance by licensees to determine the level of confidence that can be afforded PRA insights/results in support of decision-making. The staff's position on each PRA standard and industry guidance will be given in the appendices. For example, Appendix A will include the staff's position on the ASME standard and Appendix B on NEI-00-02. As noted in SECY-00-0162, the staff "may take exception to or include additional specific criteria to address any identified weaknesses in the standards to ensure that PRAs used in regulatory decision-making will have an adequate technical basis."

RES Priority: TBD
NRR Priority: TBD

