

EF-11 Effectiveness Strategic Plan Goal

Implementation Activity: **Developing a framework for incorporating risk information in the Nuclear Material Safety and Safeguards (NMSS) regulatory process**

Primary Fiscal Year (FY) 04-09 Strategic Plan Goal: Ensure that the Nuclear Regulatory Commission (NRC) actions are effective, efficient, realistic, and timely.

Strategy 1: Use state-of-the-art methods and risk insights to improve the effectiveness and realism of NRC actions.

Secondary FY-04-09 Strategic Plan Goal: Ensure protection of public health and safety and the environment.

Strategy 3: Use sound science and state-of-the-art methods to establish risk-informed and, where appropriate, performance-based regulations.

Primary Priority: Medium

Secondary Priority: Low

In the staff requirements memorandum (SRM) for SECY-99-100, dated June 28, 1999, the Commission approved the staff's proposed framework for risk-informed regulation in NMSS. The NMSS Risk Task Group (RTG) implemented this framework in three phases. Phase 1, established a systematic method to identify and prioritize candidate regulatory applications that are amenable to expanded use of risk assessment information. In Phase 2, RTG applied this systematic approach to identify regulatory applications amenable to being risk-informed.

Also as part of Phase 2, NMSS in cooperation with RES/DRAA and its contractor, Brookhaven National Laboratory, developed material and waste risk guidelines and a decision-making process for risk-informing regulatory activities in NMSS. The risk guidelines are one factor considered in this systematic decision-making process, which also addresses other factors, including defense-in-depth and value-impact analysis. An initial version of a guidance document describing this systematic process, and the risk guidelines, was completed in September 2004.

In FY 2005, NMSS initiated Phase 3, the implementation and trial use phase, where the applicability of proposed risk-informed decision-making guidance will be tested in the course of selected ongoing NMSS activities. Due to resource limitations, the RTG has been disbanded, and no funding specifically for risk-informing is budgeted. Instead risk-informing will be carried out as a part of normal budgeted activities and as part of the NMSS continuous improvement process.

The guidance document on risk-informed decision-making was modified during 2005 to reflect direction in the SRM to SECY-04-0182, and to remove sensitive information. This completed document was then made available for trial use by staff. In January 2006, a presentation was made to the Advisory Committee on Nuclear Waste and Materials (ACNWM) on this document. On May 2, 2006, the ACNWM provided a letter to the Commission recommending use of the

guidance. A workshop on the guidance was held for NMSS staff in June 2006. A synopsis of this guidance document will be produced during 2007 to facilitate staff use and training.

Further revision of the guidance will be completed in 2007, based on comments by the ACNWM and experience from trial applications.

Selected Major Milestones and Schedules				
Major Milestones	Original Target Date	Revised Date	Completion Date	NRC Responsibility
Develop revised draft Risk Guidelines Report	June 2004		September 2004	NMSS/RTG
Develop revised draft systematic decision-making process guidance document	June 2004		September 2004	NMSS/RTG
Present revised risk-informed decision-making guidance to ACNWM	January 2006		January 2006	NMSS/SFPO/TRD
Hold workshop for NMSS staff on risk-informed decision-making	June 2006		June 2006	NMSS/SFPO/TRD
Produce Synopsis of Risk-Informed Decision-Making guidance document	June 2007	February 2008		NMSS/FCSS/SPTSD
Revise guidance document based on comments and experience	December 2007			NMSS/FCSS/SPTSD