**Implementation of Part 70 revision**

On September 18, 2000 (65 FR 56211), the Commission published a final rule (Part 70) amending its regulations governing the domestic licensing of special nuclear material (SNM) for certain licensees authorized to possess a critical mass of SNM. The Commission's action was in response to a "Petition for Rulemaking," PRM-70-7, submitted by the Nuclear Energy Institute, which was published on November 26, 1996 (61 FR 60057). The majority of the modifications to Part 70 are included in a new Subpart H, "Additional Requirements for Certain Licensees Authorized To Possess a Critical Mass of Special Nuclear Material." These modifications were made to increase confidence in the margin of safety at the facilities affected by the rule, while reducing unnecessary regulatory burden, where appropriate.

In developing the rule, the Commission sought to achieve its objectives through a risk-informed and performance-based regulatory approach by requiring licensees to; (1) perform an integrated safety analysis (ISA) to identify significant potential accidents at the facility and the items relied on for safety (IROFS); and (2) implement measures to ensure that the IROFS are reliable and available to perform their functions when needed.

In December 2001, NMSS/Fuel Cycle Safety and Safeguards (FCSS) staff, along with the Risk Task Group and Part 70 stakeholders, finalized a standard review plan to implement the requirements of Subpart H. NUREG-1520, "Standard Review Plan for the Review of a License Application for a Fuel Cycle Facility," complements 10 CFR Part 70 by identifying the specific information to be submitted by an applicant and evaluated by the staff. This guidance document, which was published in March 2002, will assist the licensees in conducting ISAs and the staff in reviewing ISA documentation. In September 2003, July 2004, and February 2005, FCSS held ISA workshops with industry and the public to discuss implementation of the Part 70 Subpart H requirements, obtain industry comments and feedback, and identify areas that needed additional study and/or guidance. From March to June 2004, FCSS also held six internal staff workshops to discuss ISA requirements, implementation, and issues. As issues have been raised and addressed, the Nuclear Regulatory Commission (NRC) has developed draft Interim Staff Guidance (ISG) documents to further guide its approach to these issues. Interim staff guidance is being prepared for nine areas. NRC provided the nine ISGs to industry since the summer of 2004. Seven of these have been issued in final form (ISGs 1, 3, 4, 5, 8, and 9); two (ISGs 6 and 7) – dealing with meeting the October 1, 2004 deadline -- have been cancelled due to a lack of need. ISG 2 remains incomplete and possibly may be cancelled due to the current lack of need for the guidance. The staff held an additional workshop in August 2005, to discuss issues related to inspection of the ISA implementation. The staff discussed other implementation issues with stakeholders as part of the Fuel Cycle Information Exchange, held on August 30-31, 2006, June 12-13, 2007, and June 17-19, 2008. A revision to the fuel cycle standard review plan, NUREG 1520, was published in May 2010, which incorporated lessons learned during the initial ISA summary reviews and previously documented in the ISGs.

The staff began conducting ISA summary reviews in fiscal year (FY) 2004 for individual amendment requests, for certain existing and new processes, and for a new centrifuge enrichment license application in FY 2004. To date, all licensees required to submit an ISA summary have done so. All ISA Summaries were submitted by the regulatory due date of October 18, 2004 or as part of a new license application. The staff reviews of these ISA summaries have shown that each licensee has used varying approaches to satisfy the requirements of 10 CFR 70.61. The submittals were accepted based on the acceptance criteria identified in NUREG-1520; however, all of the ISA submittals have required formal Requests for Additional Information as well as site visits and verbal communication with the licensees to clarify the ISA methodologies used and means of implementation. The staff issued the final

Technical Evaluation Report approving the ISA summary on September 19, 2008.

The following important issues remain for completing the transition of ISAs to a more risk-informed approach: the treatment of dependent failures, human reliability, the treatment of uncertainty, the aggregation or assembly of the scenarios into overall facility or system measures of risk, and the chemical toxicity of soluble uranium.

The Division of Fuel Cycle Safety and Safeguards has been placed within the scope of the Sub-Committee on Nuclear Waste and Materials (ACNW&M) of the Advisory Committee on Reactor Safeguards (ACRS). The Sub-Committee will continue to provide advice to the Director of FCSS on risk-informing regulation under 10 CFR Part 70. Work Groups on various topics; including facility changes, reportable events, and soluble uranium intake criteria; have been established under the aegis of the Committee.

Additionally, efforts have been made to risk-inform the inspection guidance for Part 70 licensees. Inspection Manual Chapter (IMC) 2600 has been revised to consolidate and streamline the fuel cycle inspection program primarily by incorporating revised inspection procedures, eliminating canceled procedures and clarifying guidance for resident inspectors. Inspection procedures for Category I and III facilities have been upgraded to minimize duplication of inspection effort, to risk inform individual inspection procedures, and to allocate inspection effort based on risk significance. Revised inspection procedures provide inspection guidance for headquarters and regional inspectors that is focused on evaluation of risk-significant activities. Revision and upgrade of the IMC and inspection procedures continues.

| **Selected Major Milestones and Schedules** | | | | |
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| **Major Milestones** | **Original Target Date** | **Revised Date** | **Completion Date** | **NRC Responsibility** |
| Finalize standard review plan for 10 CFR Part 70, Subpart H | | | December 2001 | NMSS/FCSS/TSB |
| Publish standard review plan for 10 CFR Part 70, Subpart H | | | March 2002 | NMSS/FCSS/TSB |
| Initiate technical reviews of fuel cycle licensees' ISA summaries | as received from licensees | | September 2005 | NMSS/FCSS/TSB |
| Revise standard review plan, NUREG 1520 to incorporate lessons learned and documented in Interim Staff Guidances | | | May 2010 | NMSS/FCSS/TSB |