

April 15, 1997

MEMORANDUM TO: L. Joseph Callan
Executive Director for Operations
Karen D. Cyr
General Counsel

FROM: Annette L. Vietti-Cook, Acting Secretary /s/

SUBJECT: STAFF REQUIREMENTS - COMSECY-96-061 - RISK-INFORMED, PERFORMANCE-BASED REGULATION (DSI 12)

The Commission recognizes that, in order to accomplish the principal mission of the NRC in an efficient and cost-effective manner, it will in the future have a regulatory focus on those licensee activities that pose the greatest risk to the public. This can be accomplished by building upon probabilistic risk assessment (PRA) concepts, where applicable, or other approaches that would allow a risk-graded approach for determining high- and low-risk activities. In general, those activities that are of a higher risk should be the primary focus of the agency's efforts and resources. The level of staff activity associated with lower risk activities should be determined based on a consideration of the cumulative impacts on safety, stakeholder initiatives and burden reduction, and the effect on agency and licensee efficiency. The Commission continues to believe that the use of PRA technology should be increased in all regulatory matters to the extent supported by the state-of-the-art in PRA methods and data and in a manner that complements the NRC's deterministic approach and supports the NRC's traditional defense-in-depth philosophy. The risk insights could be used to reduce unnecessary regulatory burdens as well as to identify areas where requirements should be increased.

The staff should continue with the current efforts, in cooperation with the industry (Option 1), including pilot programs. The objective of this initiative is to obtain additional information regarding the appropriateness of a risk-informed, performance-based approach for the subject activities. These activities and their schedule, are presently captured in the agency's PRA Implementation Plan. As data from performance monitoring of structures, systems and components are accumulated, the staff should evaluate the performance data to determine the effectiveness of the approach on the subject activity. The staff should evaluate and clarify any technical and/or administrative issues associated with performance-based approaches to regulation (e.g., inspection activities, enforcement, etc.). Also, OGC's analysis of litigative risks requested in the [Staff Requirements Memorandum on SECY-96-218](#) should be factored into future determinations and guidance on the extent to which the NRC implements risk-informed performance-based regulation.

(EDO/OGC)

(SECY Suspense: 8/29/97)

The staff should proceed in the direction of enhancing the PRA Implementation Plan (i.e., moving towards implementation of elements of option 3) by building on the Regulatory Review Group's (RRG) results, which were initially focused on reducing the regulatory burden, with a more focused assessment of those regulations which are amenable to a risk-informed, performance-based or a risk-informed less prescriptive approach. In determining the priority and scope of regulatory activities to be included in moving in the direction of partial implementation of Option 3, the staff should consider the cumulative impacts on safety, stakeholder initiatives and burden reduction, and the effect on NRC and licensee efficiency. To minimize use of resources in any fresh look at the RRG results, such a review should be simply incorporated into the semiannual updates of the Commission's Rulemaking Activity Plan.

(EDO)

(SECY Suspense: 8/1/97)

The staff should also reexamine the applicability of its risk-informed, performance-based or risk-informed less prescriptive approaches with regard to nuclear material licensees and to high level waste issues, to ensure that the needs of those licensees and those areas receive adequate consideration. The staff should perform a review of the basis for nuclear materials regulations and processes, and should identify and prioritize those areas that are either now, or could be made, amenable to risk-informed, performance-based or risk-informed less prescriptive approaches with minimal additional staff effort/resources. This assessment should eventually lead to the development of a framework for applying PRA to nuclear material uses, similar to the one developed for reactor regulation (SECY-95-280), where appropriate.

(EDO)

(SECY Suspense: 10/1/97)

The staff should develop objective standard(s) for the application of risk-informed, performance-based and risk-informed less prescriptive approaches to regulations on an expedited basis. Such standard(s) could be in the form of individual plant safety goals and subsidiary objective performance criteria as discussed in the issue paper. The staff should also describe how any relevant knowledge developed in the implementation of the maintenance rule will be utilized in the development of risk-informed, performance-based regulation.

(EDO)

(SECY Suspense: 8/29/97)

This Direction Setting Issue is closely related to DSI-11, Operating Reactor Program Oversight, and DSI-13, Role of Industry. The staff should ensure that implementation plans developed for these issues are mutually compatible and do not create duplicate activities.

cc: Chairman Jackson
Commissioner Rogers
Commissioner Dicus
Commissioner Diaz
Commissioner McGaffigan
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