# Chairman's Remarks on Integrated Safety Management (ISM)
## DOE ISM Champion Workshop
## January 10, 2006
## Forrestal Building

I welcome this opportunity to address those who have been selected to be the Integrated Safety Management (ISM) Champions. In this role you are at the heart of improving the existing ISM systems in the Department of Energy (DOE) by promoting continuous learning and improvement throughout the DOE Complex. Because of the broad sweep of your membership, you can be a powerful force for achieving consistent implementation of ISM and for driving ISM to achieve a new and higher level of safety.

ISM was developed in response to the Defense Nuclear Facilities Safety Board's (Board) Recommendation 95-2. It provided a simple approach to integrating work and safety within DOE. It promoted line management ownership of safety and upgraded formality of operations through the use of a formal process to plan and control work. ISM has improved formality of operations. It has been one of the primary success stories of the DOE defense nuclear complex. However, the potential for this practical safety system to achieve operational excellence and instill a sustainable safety culture has not been fully realized. In the broadest sense, expectations and mechanisms to implement ISM have been established, but execution varies in quality from site to site.

From the Board's point of view there are two types of activities at Defense Nuclear Facilities. One type is associated with work at the laboratories and the other type is work associated with production-related facilities. What this means is the laboratories are different from the rest of the complex.

This was recognized by Dr. Kouts and myself in our early assessment of implementation of modern safety culture in the complex. This, in our opinion, required a general, simple and powerful system of integrating work and safety. The results, as we all know, are the core functions of ISM:

- Define the Scope of Work
- Analyze the Hazards
- Develop Hazard Controls
- Perform Work with These Controls
- Provide Feedback and Improvement on the Process

**No more, no less, absolute simplicity that apply to integration of work and safety!**

The Board stated in its Recommendation 2004-1, *Oversight of Complex, High-Hazard Nuclear Operations*:

> Failures leading to high-consequence, low probability accidents would likely have their roots in interactions between engineering failures and improper human actions. Because the consequences of large nuclear accidents would be unacceptable, the nuclear weapons complex cannot permit them to occur. While the potential for such accidents cannot be completely eliminated, their likelihood can be held to an insignificant level by rigorous attention to Integrated Safety Management with technical and operational excellence based on nuclear safety standards subject to rigorous oversight.

The DOE implementation plan for Recommendation 2004-1 responded by committing to more and better federal oversight of the safety-related work of contractors, to establish the Central Technical Authorities and technical support teams, to build a robust nuclear safety research program, and to strive for technical excellence. DOE also committed to a set of actions for "Revitalizing Integrated Safety Management Implementation" to re-confirm ISM as the foundation of the DOE's safety management approach and to address identified weaknesses in implementation.

One of the identified weaknesses was the failure of DOE elements to implement ISM both at DOE Headquarters and the Field Offices. DOE has taken steps to issue an ISM Manual which clearly defines expectations and guidance for federal ISM system descriptions. While much of the ISM Manual is a good first step toward improving the federal ISM process, the Board has taken some exceptions to this manual and has stated that further work is needed to ensure that this manual results in a viable ISM system for the federal work force. The Board is concerned about efforts to expand the ISM guiding principles instead of clarifying the application of the current proven system for the federal work force—the fundamental goal of the manual. The Board and its staff will continue to work with you to ensure that the necessary improvements are made rapidly.

During the last year, Board Member, Dr. R. Bruce Matthews, conducted a review of the National Nuclear Security Administration (NNSA) sites to determine the status of ISM implementation. He found a number of good practices that contributed to effective ISM.

Unfortunately, these good practices are not implemented at most sites. Based upon his reviews, Dr. Matthews concluded that the following actions, if successfully implemented, would ensure the effectiveness of ISM across the DOE Complex:

1. Establish ISM as the foundation for modernizing safety culture at DOE and NNSA sites, and build an improved culture that engages workers and enables them to work safely and effectively.

2. Clearly define a hierarchy of the roles, responsibilities, authorities, and accountabilities of each person in the workforce (both federal and contractor), from researchers/workers to senior management.

3. Define ownership boundaries and authorities at the institutional, facility, and activity levels, and focus on managing interface issues.

4. Assign fully qualified ISM champions at key organizational levels. (NOTE – ISM Champion assignments and attendance at this workshop are excellent examples of this suggestion.)

5. Require managers from line, program, and support organizations to spend time on the floor.

6. Develop a process for evaluating the effectiveness of ISM.

7. Incorporate safety culture changes, such as the Human Performance Improvement initiative, as an integral part of ISM.

I'll add two more practices to Dr. Matthews' list:

8. Emphasize feedback and improvement, including a robust lessons learned program. While the Board acknowledges that DOE is making progress in this area, I wish to again emphasize its importance.

9. More effectively exercise ISM in design and construction as required by DOE Order 413.3, *Program and Project Management for the Acquisition of Capital Assets.*

The implementation of Recommendation 2004-1 will help drive the above actions. The ISM Champions Council can also help drive these actions and assist in further change if it operates effectively.

Let me close with a challenge. During the Board's public meeting of December 7, 2005 on "*Safety into Design and Construction,*" Deputy Secretary Sell stated in his testimony that it was his goal:

> To continue to strengthen the safety culture of the Department, fully establish the technical competence and expertise of our staff, continue to institutionalize oversight, and establish a system of continuous improvement and other necessary changes so that the underlying reasons that led to the Board's creation no longer exist.

This is a good goal and if your efforts to revitalize ISM help achieve operational excellence and instill a sustainable safety culture, then maybe the Board can work on other issues.

Thank you.