

Global or
Isolated?

What does HAB want
DOE to do?

DOE
input

Draft HAB Advice on Integrated Safety Management

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Background:

Integrated Safety Management (ISM) is the foundational approach that defines all U.S. Department of Energy (DOE) safety programs. Conceptually it is very simple: Define and then mitigate the risks to the employees and the public. To systematically integrate safety into management and work practices at all levels in the planning and execution of work. (DOE Policy statement) Recently, U.S. Energy Secretary Steven Chu (reference memo) enhanced expanded the concept of ISM definition to by including safety behavior culture and further emphasized the safety culture concept through the inclusion of safety culture expectations within the ISM guidance document.

ISM has been part of DOE for over two decades. Hanford has done a commendable job in emphasizing ISM, yet gaps remain in its implementation. Recent issues, such as the beryllium problem and vitrification plant safety concerns could have been largely avoided with proper ISM implementation. ISM has evolved to a degree of complexity that, in some cases, actually creates a less safe environment.

One clear area for improvement is to recognize that ISM is hierarchical. For example, ISM applies to the site-wide or facility level (e.g. is the facility operating within its safety envelope?), to the enhanced work planning level (e.g. have the lessons learned been reviewed in planning the work?), and to the worker level (e.g. have the workers been trained to deal with the risks?). Mixing these levels in describing ISM is creating unnecessary complexity in training and implementation.

ISM applies to ongoing activities, to planned activities, and to the design of new facilities. The functional criteria for a new facility must ensure that the risks are defined and mitigated in the future operation and maintenance of the facility (HAB Advice #258 - Safety Culture at the Waste Treatment and Immobilization Plant).

A comparison between the DOE and Naval Reactors safety approaches reveals that the Navy has a limited number of facility representatives oversight personnel and relies heavily on a rigorous contractor self-assessment program. Strengthening this feature at Hanford would improve its ISM program.

The key to improving the ISM behavior safety culture of an organization is to align the motivations of employees with that of the management/leadership. Behaviors that demonstrate integrity, fairness, caring for the welfare of the employees, and actively listening to all employee concerns and issues will go a long way towards improving ISM behavior.

This advice:

1. Asks DOE to examine the DOE-contractor interface to determine the root causes of slow implementation and gaps in ISM performance by its contractors;
2. Suggests improvements in the ISM approach; and
3. Suggests additions to DOE's newly defined principles of behavior.

DRAFT

Advice:

Interface

1. The Board advises DOE to assess the DOE-contractor interface to determine the root causes that led to ISM execution issues. (What execution issues? This statement is unclear to either RL or ORP.) In particular, the following areas should be included:
 - a. Examine the contract vehicle and performance incentives to determine if these were a contributing factor (to what?);
 - b. Examine the contractual process used to establish the functional requirements of new facilities;
 - ~~c. Determine if the facility representatives are sufficient in number, located properly and adequately trained to recognize ISM deficiencies; Neither RL nor ORP understand how the subcommittee came to the conclusion that this is an issue. The FRs are trained on a continuous basis on ISM and do report issues in the context of ISM guiding principles and/or core functions. The FRs are federal employees, and are therefore not part of any proposed improvements to contractual language. In addition, FRs are only a part of Federal oversight responsible for the identification of ISM deficiencies. They FR program also follows a DOE standard (1066) that is used to determine appropriate FR staffing across the DOE complex.~~
 - d. ~~Examine each contractor's management structure for compatibility with ISM; and This is done initially as part of the ISM verification process and the effectiveness of the ISM implementation is evaluated on a continuous basis, including management involvement.~~
 - e.c. Determine the strength of the contractual language requiring a strong contractor self-assessment program.

Process

2. The Board advises DOE that the functional requirements of all future facilities include a rigorous risk identification and mitigation analysis of future operation and maintenance activities. Done as part of the capitalization process already. All formal projects require a risk identification and mitigation analysis plan. Need specific examples of what this issue is.
3. The Board advises DOE that ISM training should be focused on the level that is appropriate to the personnel being trained. It should include the strong message that each person is responsible for safety within their sphere of influence. Where is this not happening? Current training conducted by the contractors has been focused, but introduces the overall concept to provide insight to the overall scheme of ISM from their company's perspective.

4. The Board advises DOE that the Enhanced Work Planning process should be included as an integral part of ISM for all contractors. The EWP pilot programs that were performed at Rocky Flats and Hanford proved highly successful and were wrapped into the initial ISM concept back in the early days of ISM concept development. The enhanced work planning concept has moved forward within the ISM framework and has been incorporated into our work control programs.
5. The Board advises DOE to place a stronger emphasis on rigorous contractor self-assessment to augment the facility representatives. Note: Contractor safety programs do not augment the facility representative program. All DOE contractors are expected to adequately implement ESH&Q requirements without any dependence on DOE oversight.

Behavior

6. The Board advises DOE that future requests for proposals (RFPs) and the selection of new senior contractor leadership should emphasize the expectation principles of a strong safety culture behavior. (Suggest moving to Interface section.)
7. The Board advises DOE to encourage the contractors to conduct an assessment of evaluate management behavior using an employee/peer feedback process, such a 360 review, to focus corrective actions on the behavioral improvement of on the small number of managers that individuals that are out of alignment with the expectations of a strong safety culture may have issues. 360 reviews are a tool for understanding and solving a subset of safety culture issues. We disagree that they should be used in all cases.
8. The Board advises DOE to augment the recent DOE list of Safety Culture Associated Attributes, adding integrity, caring for employee welfare, listening and feedback on all issues, and continuous improvement. This advice is not clear to either RL or ORP. The current attributes that define DOE expectations of a strong safety culture are in alignment with EFCOG, IAEA, INPO, NRC and other organizations. As DOE matures into this concept, a reevaluation of these attributes may occur, but initial stability in this fresh concept is important for success. The DOE list is for attributes, not values.