

REMARKS

PRESENTED AT THE
ENERGY FACILITIES CONTRACTORS GROUP
DEPARTMENT OF ENERGY'S
2002 CHEMICAL MANAGEMENT WORKSHOP
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I am pleased to be here, and to be asked to address this group. Mr Joe DiNunno has retired, this time for good, he says. He spoke to you on three previous occasions of this workshop. He will be difficult to follow, as his long service in government gave him the experience and insight to safety and safety oversight, which served him well in his position as Defense Nuclear Facilities Safety Board (Board) Member and as a mentor to this group. Even if he didn't speak for the Board officially, you could be sure that his remarks and advice were well thought out and reasonable. I, of course, also do not speak for the Board, but will continue the tradition and speak my mind on what I believe is good advice.

Since he traveled to Albuquerque for the first meeting, Joe DiNunno touched on several persistent themes: Department of Energy (DOE)/industry cooperation, Integrated Safety Management (ISM), the application of innovative thinking to chemical safety problems, and the participation of line managers in these meetings. DOE has everything to gain by fostering cooperation with industry groups and corporations, many of whom have experienced the problems DOE faces. ISM should be the framework upon which to apply chemical safety principles. Chemical safety should not be stove-piped since it crosses many lines of responsibility. One of Joe's most far-reaching achievements was his involvement with the Defense Nuclear Facilities Safety Board Recommendation 95-2

Progress has been made in a number of problem areas in chemical management discussed at these meetings in the last four years, since that first meeting in Albuquerque. This workshop and its follow-on projects have certainly led the way to some significant improvements in safety. I will highlight just a few, which Mr. DiNunno touched upon in the past.

- ! Key government groups are now participating in these meetings, resulting in opportunities to borrow ideas and techniques to monitor DOE's progress, oversee chemical safety, and develop safe chemical procedures for the storage, use, and disposal of hazardous chemicals. The Chemical Safety Board's (CSB) work is particularly relevant. Their representatives are now regular participants, and I understand we will hear from a CSB Member, John Bresland, a little later this morning. The Center for Chemical Process Safety (CCPS) is a major industry group. The Board has always advocated that DOE take advantage of the CCPS and their industry-wide initiatives in chemical safety. DOE is a CCPS Sponsor, and the Board has participated in some meetings with CCPS and DOE in attendance in order to explore ways to increase cooperation with CCPS.
- ! I am pleased to see independent chemical companies as well as DOE contractors sending participants to share their wealth of experience with this group.
- ! The Chemical Safety Technical Committee through this workshop has produced useful products for chemical safety. These products have the potential to fill particular gaps in information, allowing contractors to do their jobs more safely. The *Integration of Multiple Hazard Analysis Requirements and Activities Handbook* (The Handbook has been reviewed by the Board's staff. The Board would like to see an effective tool

for use in the preparation of hazards analyses for various DOE and other federal directives. As a result, significant comments were passed on to DOE to improve the Handbook and make it a more useful tool, and the Board has sent a letter to the Secretary of Energy. We believe the Handbook should eventually become a Guide for preparation of various hazard analyses.), the *Roadmap to Safety and Health Requirements*, and the *Hazards Identification Tool Box* are just a few. I would urge, and I'm sure the Board would urge, DOE to do everything possible to encourage and assist development of these consensus projects developed by contractors and DOE working together.

In addition to your accomplishments, more work, of course, needs to be done. As well as continuing the various on-going projects and efforts, new applications of innovative thinking needs to be applied to chemical problems. As you can see from this agenda, the organizers, including Energy Facilities Contractors Group (EFCOG), Bill McArthur and Gail Kleiner, have again assembled a meaty agenda, touching on many of the issues of current interest. The dialog with industry and various government agencies, your work in bringing together this group of people, and facilitating the various Chemical Safety Technical Committee (CSTC) project group activities throughout the year must continue. Of course, all this would be for naught if a way were not found to quickly implement mature ideas and projects in the field, the production site, and the chemical laboratory. I believe, this is where line management comes in (and this was another of Joe DiNunno's persistent themes): if they don't know about it, they can't support it at their sites and facilities. Or if they have not heard of it before from a group of experts such as this group, when it comes time to draw the "funding line," the particular innovation will not have the same chance as other solutions to some problems.

ISM is now established as a way of doing business in DOE and with its contractors. As Mr. DiNunno has advised on several past occasions, application of chemical management and chemical safety practices must be done within ISM. If ISM is not part of the fabric of operations, up and down the chain of command, problems may lead to accidents. No serious injury, chemical accidents, have occurred in DOE since you last met, but you must be constantly vigilant and cannot rest on your laurels.

Mr. Bresland of the U.S. Chemical Safety Board will describe in detail some recent activities of the CSB, which were recently broadcast live on the World Wide Web. I believe that the recent Chemical Safety Board study and recommendations on reactive chemicals could affect the way DOE does business. The CSB has found that the Occupational Safety and Health Administration (OSHA) Process Safety Management (PSM) and Environmental Protection Agency (EPA) Risk Management Program rules are inadequate to prevent most of the chemical accidents which occur. (For example, only 50% of the 167 chemical accidents investigated by the CSB involved chemicals covered by the OSHA PSM rule. The CSB also concluded that reactive chemical combinations are not being considered. Many of these accidents could have been prevented had the companies followed the rules designed to protect the workers and the public, if, for example, had they done an adequate process hazards analysis, according to the CSB.) I'm sure we will hear more on this from the CSB participants later in the meeting.

Any changes in the OSHA or EPA rules obviously could change the regulatory environment for DOE and its contractors in the future, depending on the responses of OSHA and EPA to the CSB's Recommendations. In the meantime, DOE should make the results of the findings available to its contractors. Perhaps DOE contractors should follow the current OSHA and EPA Rules even if they have less than threshold quantities of the listed compounds, and reactive chemical hazards must be adequately identified and controlled in the DOE plants and laboratories. In the future, there may be some additional requirements for reactive chemical hazards to protect the workers and the public. Jeff Woody talked at the last meeting about his "Benchmarking Study" in which he found that most of the companies he interviewed followed the requirements of the OSHA PSM rule, even with less than the threshold quantities of materials. DOE might carefully consider how to (1) begin to comply with the current PSM and Risk Management Program (RMP) rules in a graded approach, depending on maximum allowable quantities of material at the contractor sites, and (2) become more aware of reactive chemicals hazards. The Board is only by law responsible for safety oversight of nuclear facilities, but the staff has been concerned that DOE has no orders or guides for chemical hazards analysis for the public and co-located workers where the quantities of materials do not exceed the threshold quantities. True integration of hazard analyses should take into account chemical hazards and identify Technical Safety Review (TSR) type controls, if necessary, at defense nuclear facilities.

The Board has questioned from time to time the safety of work practices in the DOE laboratories. A case in point is the ClO₂ accident at Los Alamos National Laboratory (LANL) recently. Although not in a nuclear facility, the Board is interested in the accident and in the effectiveness of the corrective actions subsequently implemented. Work at all facilities, including nuclear, is affected by contractor safe work practices, operational safety procedures, and job hazards analyses. A difficult and recurrent problem for principle investigators is whether or not to bring in experts and what sort of formal analysis should be provided for laboratory work and one-of-a-kind experiments. This issue may be a good one for this group to examine in detail and bring to bear your considerable expertise (this was the topic of an earlier CSTC project). No one wants to burden the experimenter with onerous paperwork; yet, as has been shown, some serious accidents could be traced back to lack of adequate review of work procedures.

In summary, you are encouraged to continue your work for the chemical safety of workers and the public. This group's activities, with the proper backing of DOE, has the potential to make a difference. Good luck and thank you.