THE PROCESS HAZARDS MANAGEMENT PROGRAM AT DUPONT

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ABSTRACT

Continual change is constant in risk management in large company that manufactures and handles hazardous materials. Unless one considers all factors in the real world of plant management, risk analysis may fail to take into account the risk of someone -- an employee, a contractor, a supplier -- making a change. Risk analysis accuracy is limited by the risk of the unknown -- those things that we haven't anticipated or given thought to. It is the challenge of the manager to manage change to reduce risk. In Du Pont operations, the process hazards management program includes: training to prevent unwanted change; process hazards reviews to detect change from original design; operating and emergency procedures and preventative maintenance to prevent change; audits and critical equipment inspections to detect change; and incident investigations to identify causes of change. Du Pont's 10 principles of safety will be presented and discussed.

KEY WORDS: Risk Management; Hazardous Materials; Process Changes; Principles of Safety

In learned forums of this type, there's always a risk of misjudging the quality of a message by measuring its quantity. That risk of miscalculation is greater, I'm sure, on the part of the speaker than on the part of the audience.

The urge to quantify has always been strong, as many of you know, across the river in official Washington. And I understand from a recent squib in the New York Times that the following list of calculations is informally circulating in government circles:

- The Lord's Prayer is stated in just 56 words.
- The 23rd Psalm consumes 118 words.
- Lincoln's Gettysburg Address -- 226.
- The Ten Commandments -- 297.
- And the U.S. Department of Agriculture's order on the price of cabbage -- 15,629 words.
I promise you that my talk today will be shorter than the USDA price order for cabbage, and at least as interesting.

The topic of today's presentations -- practical risk management of large operations in aerospace, chemicals, dams and nuclear power -- is probably more timely today than when the program was first put together. It is a topic, also, much on the mind of the general public and the subject of widespread news coverage of tragic air crashes and toxic chemical releases.

One new columnist has speculated that perhaps this highly publicized rash of tragedies points to an inability on the part of industry to manage safety in today's high technology society.

Nonsense. I'm here today to refute any notion that safety and technology are not compatible. In fact, as we know, new technology is in many cases enabling us to improve the margin of safety for our employees and for citizens living in the vicinity of our operations.

A more likely explanation, I submit, is that in most of these incidents something changed. And so safety management, to a large extent, is managing change. I want to leave you with just two thoughts today: the importance of change and the importance of management commitment in managing that change.

Before I elaborate, let me give you a little background on our safety culture in Du Pont.

We've been managing safety for nearly two hundred years and everything has changed except basic human nature of our employees. I'll return to that later.

Safety and safety management have been at the bedrock of Du Pont's operations since the company's founding in 1802. Our first business was the manufacture of black powder. In that business, safety was not an afterthought; it was a matter of economic and, more importantly, personal survival, and safety was integrated directly into the production process.

Du Pont's safety performance, by any measure, is considered very good. Since the early 1900's, our lost workday injury rate has been steadily improving. During the last five years, we experienced 171 lost workday injuries. If we had been typically of all industry, we would have had more than 12,000 injuries. Another way to look at that record is that the average Du Pont worker is 73 times safer than the average American at work and 43 times safer than the average American away from work.

In addition to the incentive of sparing employees from the pain and suffering of injury, we estimate that our safety performance saves the company about $150 million annually.

An absolutely crucial element in influencing employees in any direction, I believe is the degree to which the culture of the organization supports that direction. Fortunately, our founder, E. I. du Pont, established that strong safety tradition from the very beginning.

Closely related to the organization culture is the importance of clear, consistent and well understood policy. In Du Pont, our policy is that we will not produce any product unless it can be "made, used, handled and disposed of safely." This is not just the policy we follow; it is the philosophy which we live every day.