



DIRECTOR'S CORNER



It has been twenty years since the terrible events of December 2/3, 1984 in Bhopal, India forever changed the chemical industry landscape and how the industry and others viewed the significance of process safety. During that fateful night, a runaway reaction led to the release of approximately 40 tons of methyl isocyanate from a Union Carbide pesticide plant. Estimates of fatalities resulting from the effects of the chemicals released range from 2,000 to 20,000 and the number of people injured is close to 500,000. Irrespective of the accuracy of the casualty estimates, there is no doubt that the Bhopal incident was a watershed event in the chemical industry.

Chemical process safety was not a major public concern prior to 1984. As far as chemical hazards were concerned, public fears focused on disease (cancer) and environmental degradation. Even a series of major process incident tragedies did not translate into widespread public concerns about major incidents in chemical plants that might disastrously affect the public. This situation changed completely after the December 1984 disaster at the Union Carbide plant in Bhopal. Not only was the public's confidence in the chemical industry shaken; the chemical industry itself questioned whether its provisions for protection against major incidents were adequate.

The recognition of the need for technical advances and implementation of management systems led to a number of initiatives by various stakeholders throughout the world. Governments and local authorities throughout the world initiated regulatory regimes. Industry associations and trade organizations responded with recommended practices and guidelines for safer process design and operations.

Process facilities started compliance programs and many adopted voluntary engineering practices aimed at reducing or eliminating process incidents and reducing the consequences of any potential incidents. Over the next several years many Centers such as, the Center for Chemical Process Safety (CCPS), National Institute for Chemical Safety, the National Environmental Law Center, and the Mary Kay O'Connor Process Safety Center also came into existence. Finally, public interest groups, environmental groups, community right-to-know organizations, and local emergency planning committees have becoming increasingly involved in understanding the hazards from process plants, emergency planning, and demanding that the process industry improve its safety performance. While the Bhopal tragedy has led to many positive developments, there are two specific issues that must be tackled. One is the cleanup and remediation of the plant site. The second is continuation of health studies related to secondary and tertiary effects of exposure to methyl isocyanate and other chemicals released during the tragic incident.

Has all that has resulted from the legacy of Bhopal reduced the frequency and severity of incidents? How can we answer this question? As we move into more and more globalization and other complexities what are the challenges we must address? Some of these challenges are widespread dissemination and sharing of lessons learned, risk migration because of globalization, changing workforce, and breakthroughs in emerging areas in process safety.

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