



# DIRECTOR'S CORNER



As horrific and tragic as the incident in BP's Texas City refinery was, the response and investigations that resulted from it very equally unparalleled. Never before in the process industry's history has a company been the subject of such numerous investigations – regulatory, internal, as well as recommended investigations. Apart from investigations and analysis launched as a result of lawsuits, four separate investigations worthy of mentioning are:

- BP's own internal investigation
- OSHA's investigation, citations, and record fines
- Baker Panel report
- CSB Investigation Report

Some of the issues that have been brought to our attention as a result of these investigations include Safety Culture, Metrics for Process Safety and Personnel Safety, Facility Siting, Risk awareness and risk management, Atmospheric Venting, Process Upset Management/Alarm Management, Incident Investigation, Human Factors, Procedures, Training, and Learning Organizations.

The Baker Panel report makes specific findings with respect to the following issues:

- Process Safety Leadership
- Integrated and Comprehensive PSM System
- Process Safety Knowledge and Expertise
- Process Safety Culture
- Clearly Defined Expectations and Accountability
- Leading and Lagging Indicators for Process Safety

- Process Safety Auditing
- Board Monitoring and Support for Line Management

And finally, the CSB report issued just recently makes recommendations and findings with regard to the following issues:

- Standards for Metrics and Fatigue
- OSHA Inspections
- MOC for Organizational Changes
- Board Members
- Ethics
- Incident Reporting and Investigation
- Staffing and Training

All of these issues are important and deserve the commitment and resources of all stakeholders for their solution. I could talk about all of them but for the sake of brevity, let me just address a few. First, it is clear that safety starts at the board room with the involvement of highest level people in the organization. Second, is the need for leading and trailing indicators and more importantly the rigorous use of these indicators in improving safety performance. Trailing indicators such as fatalities and injuries can only be reduced by an overall approach that includes collection, analysis, and application of leading indicators in managing safety programs. Third, the indicators and management of process safety should be conducted separately from personnel safety issues. Both process safety and personnel safety are important but they must have separate indicators and be managed separately.

**Incident investigation. Learning organizations. Ethics. Education and training.**

*M. Sam Mannan*