ABSTRACT

The process industry has over 20 years experience in using a formal management systems approach to managing process safety. Yet, data and experience reveal that few companies have mastered it, to achieve and sustain high levels of HSE performance over long periods. Some companies/facilities have tried to implement PSM but have had either cyclic performance or ineffective implementation. Many other companies/facilities that have tried to implement PSM and have had reasonably good performance, but they have plateaued and have been unable to really continuously improve.

Benchmarking of companies in a variety of industries has revealed numerous PSM implementation failure modes and success practices. One of the reasons that companies have had inconsistent Process Safety performance is because they have not embedded an effective learning process into their PSM/HSE system, including systematic diagnosis of performance problems from ALL sources of learning and employ tangible, practical ways to pursue continuous improvement.

This paper will describe a systematic approach for Process Safety Performance Management that addresses the following issues:

- Methods and information sources for early recognition of PS performance degradation
- Ways to diagnose the technical, management practice, behavioral, and cultural causal factors for the performance issues
- Ways to monitor long-term slow degradation of organizational HSE performance

Determining Process Safety Performance Status involves regularly evaluating the following information sources and INTEGRATING the resulting lessons to understand connected root causes and creating effective, sustainable performance improvement solutions.

- Lagging metrics
- Leading indicators
- Incident root causes
- Audit results
- Other performance characteristics

This paper will illustrate the importance of integrating PSM/HSE with the business management system and will also highlight the importance of securing management commitment and establishing a culture for process safety performance change.

Case studies will be given that summarize three company efforts to ensure a robust PSM system, avoid past PSM system failure modes and monitor organizational warning signs for future potential process safety performance.