Safety Culture: Lessons from Investigation of Major Accidents

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Summary:

• Some observations and lessons about “safety culture” from investigations of major accidents by U.S. Chemical Safety Board

• Legal/regulatory developments and directions related to safety culture.
Chemical Safety Board Role

• Government Agency. Does not have enforcement or standards-setting authority.
• Purpose: to thoroughly investigate major chemical accidents, issue a public report on the causes, and make appropriate recommendations for changes to prevent future accidents.
• Focus is on industrial chemical accidents that involve deaths, serious injuries, major property damage or harm to the public from fires, explosions, and releases of toxic materials.
Lessons Learned

• BP Refinery Explosion and Fire
  – Procedures
  – Maintenance
  – Organization Commitment and Culture
Lessons Learned

• Imperial Sugar Company
  – Management of Change
  – Hazard awareness

• T2
  – Training and Education in Process Safety
  – Well understood safe operating parameters
Regulation of safety culture and safety management

• European (UK, Norway) requirements for safety culture assessments in off shore drilling and other industries.

• NRC report and Safety Culture Policy Statement
Proposed changes coming to mining.

- Both MSHA and OSHA currently list “safety and health programs” regulation on their regulatory agenda.
• Expectations for a regulation

• A/S Michaels: “This regulation [I2P2] represents a fundamental change in how employers think about worker safety. Instead of waiting for a government inspection or a workplace tragedy to address workplace hazards, employers would be required to develop a plan to find all of the safety and health hazards in their facilities that might injure or kill workers – and then fix those hazards.”

• A/S Main: “Despite requirements of the Mine Act, statistics on health and safety violations indicate that more mine operators are not being proactive….More than 102,000 citations and orders were issued in coal mines in 2009, 35,500 for 2005. Similarly in metal mines more than 72,000 citations and orders were issued in metal mines in 2009, up from 13,500 from 2005, and we believe this trend is going in the wrong direction which tells us that some companies are failing to implement the systems that are necessary to comply with the Mine Act. Mine operators must implement effective safety and health management programs.”
A safety and health program rule – is it

• A long overdue improvement in safety practices?

• An enforcement tool to “jack up” the number of citations and increase liability under the Mine Act?

• A fundamental shift in regulatory policy?
Some examples

• MSHA cited
  – OSHA’s Voluntary Protection Program and 1989 Safety and Health Management Guidelines
A Safety and Health Program requirement – what are we talking about?

• In Sept 9, 2010 Fed Reg announcement, MSHA stated that the components of “effective” programs generally include

  – Management Commitment
  – Worker Involvement
  – Hazard Identification, including workplace inspections for violations of mandatory health and safety standards.
  – Hazard Prevention and Control
  – Safety and Health Training
  – Program Evaluation
• Issues
  – Flexibility vs. certainty
    • Grandfathering?
    • Incentive programs?
  – Regulate hazards for which no standard exists? (e.g. ergonomics, chemical exposures)

• Enforcement
  • How equipped will inspectors be evaluate effectiveness of programs and management?
  • Will it result in double counting violations
  • Will it lead to more “unwarrantable failure” and individual citations?
• 2 questions:

• Is there room for meaningful efforts to promote “safety culture” in mining, when the current focus in mine safety is so much on rule compliance and enforcement?

• Will promotion of “safety culture” in mining become just another avenue for conflict between mine operators and MSHA?