Increasing Process Hazard Awareness and Reducing Risk through Observation
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HAZARD VS. RISK

HAZARD a situation that has the potential to cause harm to people, assets or the environment

RISK the potential for loss, quantified by estimating potential consequences of an event with the likelihood of its occurrence
PERSONNEL SAFETY

HAZARDS

• More visible, more personal/individual
• Consequences are generally easier to appreciate
• Lends well for experiential learning
REDUCING PERSONNEL SAFETY RISKS

- Safety Observation
- Safety Awareness
- Encourage Interdependency
CAN YOU SPOT THE HAZARDS?
PROCESS SAFETY HAZARDS

• Less visible, less personal – perceived as organizational
• Consequences are generally understood, but more difficult to appreciate
• Learnings from past incidents are generally viewed as more theoretical
MANAGING PROCESS RISKS

Govern Risk ▶ Recognize Risks

Manage Operations ▶ Cultivate Risks
Manage Maintenance ▶ Manage Emergencies

Manage People ▶ Manage Change
Manage Incidents

Manage Compliance ▶ Manage Improvement

- Appropriately sized, i.e. risk-based:
  - Highly Toxic Materials
  - High Hazard Processes
  - Low Hazard Operations
  - Laboratory Works
  ...

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BUT... DESPITE EFFORTS, INCIDENTS STILL HAPPEN!

- Designed to work = work as designed?
- Shift happens: Normalization of deviation
- Variability in Risk Perceptions
- Auditing... of management system
- “I just followed the procedure!”
- Complacency
- ...
POINT OF VIEW

MANAGING PROCESSES: PERFORMANCE & TALENT

TECHNICAL MODEL: THE BEST PRACTICES

CAPABILITIES ENGINE: THE RIGHT SKILLS

MINDSETS & BEHAVIORS: ALIGNED WORK ENVIRONMENT

BUSINESS OBJECTIVE

We hire the right people to do a well defined process...

⇔

... The results will speak for themselves
POINT OF VIEW

If we engage, develop, and focus on our people... = ...the culture will enable the process to be self-improving and self-sUSTAINING.
RECOGNIZING PROCESS

HAZARDS

• Train / make aware
• Learn from past incidents / near-misses
• Experience

Probably Least Effective, Most Desirable

Most Effective, Least Desirable

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(PROCESS) SAFETY OBSERVATION

1. Engage workers
2. Raise hazard awareness – it’s everyone’s responsibility
3. Identify deviations of controls from design intent – in a structured way (condition-based observation)
4. Track and analyze
REDUCE VARIABILITY IN RISK PERCEPTION
BRINGING IT ALL TOGETHER

• What keeps you awake at night?
• What should be keeping you awake at night but are not?
• Start seeing hazards: all kind, all the time
• “Just because you’re paranoid doesn’t mean they aren’t after you”
“Everything that we see is a shadow cast by that which we do not see.”

Dr. Martin Luther King, Jr.