Improving Safety in the Chemical Enterprise Through Transparent Sharing of Best Safety Practices: The Dow Laboratory Safety Academy delivers safety information to all

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Word Usage Is Telling

Frequency of Occurrence (%)

Google NGrams

Safe
Safety
Catalysis Research
Our goal is to eliminate all injuries, prevent adverse environmental and health impacts, reduce wastes and emissions and promote resource conservation at every stage of the life cycle of our products.
Each employee has a responsibility in ensuring that our products and operations meet applicable government or Dow standards, whichever is more stringent.

All employees, contractors, and visitors are expected to exhibit appropriate and responsible behavior during their presence within a Dow facility.
EH&S Expectations @ Dow

Protect People and Environment

Vision of Zero

Responsible behavior

Bottom Line:
Dow Expects Employees to Go Home Healthy and Safe….Everyday
Personalization
Culture
Metrics
Organization, Work Processes, Operating Discipline
Universities and Industry: Common Challenges & Opportunities

- Mindset of Incident Prevention
  Not Inevitable Incidents
- Organizational Design
- Need and Ability to Share
  Researcher Experience
- Safety Is Core Not an “Extra”
- Commit to Safety Not
  Compliance

Researcher Injured in University of Hawaii Lab Explosion

Mon, Mar 21, 2016
AUDREY McAVOY, Associated Press
Victims of the explosion, which killed a graduate student, were
said to have been notified.
Safety Culture

- Leadership Engagement
- Employee involvement

- Safety Goals & Metrics
- Training
- Procedures
- Chemical Hygiene Plan

- Hazard
- Assessment
- Managing Change
- Inspections
- Audits
- Incident Investigations

- Industrial Hygiene
- Personal Safety
- Engineering Design
- Emergency Response
- Environmental
- Process Safety
- Product Sustainability
Key Elements of a Sustainable Safety Culture

- Set Expectations
  - Visible in the Field
  - Show commitment
  - Ensure compliance

- Leadership Engagement
- Hazard Awareness
- Change Culture
- Effective Communication

- Make safety personal
- Intervention culture
- Positive reinforcement

- Near miss events
- Share best practices
- Safety moments

- Hazard recognition
- “Fresh eyes” approach
- Change management
R&D Management of Change

• All experiments evaluated for hazard mitigation
• Compliance with both internal and external regulations are maintained
• Changes have appropriate reviews and approval
• Documentation related to the change is created or updated
• Documentation centrally located to ensure accessibility
• Appropriate training is conducted
• Notification to affected personnel is completed
Transparent Communication
Make it **Personal**

Ask **open-ended questions**

Create **an environment where people are free to ask questions**

Escalate **issues**

4 key **principles** that help us institute safety culture
**PACE Scenario**

**Task:**
- Make up a standard solution in a volumetric flask consisting of copper sulfate, sulfuric acid and water.

**Apply PACE principles to have a safety discussion**
- Share Experiences
- Discuss the tasks associated with making the solution
- Ask Open Ended Questions - Consider Hazards
Dow Lab Safety Academy

Since 2013 Launch...

- 25,000+ enrolled viewers
- >250,000 views
- >60 universities
- >40 Government Agencies & National Labs
- >100 companies
- 10 countries
- 1 external award
- More than a dozen media stories

http://safety.dow.com
# Dow Lab Safety Academy – Modules

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**Sustainable Safety Culture**
- Making Safety
- Personal Inspections
- Interventions
- Recognition
- Mentoring
- Near Miss Reporting
- Learning
- Experiences
- Effective Safety
- Communications
- Sustainability
- Leadership
- Engagement
Fume Hood Basics