



Dow Lab Safety Academy

Lessons Learned & Future Opportunities

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Safety is a Journey – Then & Now









Working Safely is Core to Dow's Culture

PROTECT PEOPLE AND ENVIRONMENT

Part of everything we do and every decision we make.

VISION OF ZERO

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.

RESPONSIBLE BEHAVIOR

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.

Bottom-line

"Dow Expects Workers to Go Home Healthy and Safe....Everyday"



Common Lab Safety Challenges & Opportunities

- •Organizational design
- •Researcher Experience
- •Safety perceived as an "extra"
- •Compliance vs. Commitment



New Employee Observations

"The striking difference [between University and Dow safety] was in the training & awareness"



Working safely is a priority at Dow



"Dow makes safety a priority and a worker will not be penalized for a delay caused by being safe"

Inspection before use

"It was very common to see people in (University) labs wearing sandals, even while working with strong organic solvents and acids"

Safety shoes (PPE)



"The culture of actively writing procedures BEFORE experiments is something I've never seen before Dow"



"In Graduate School, pretty much every reaction was run wearing only safety glasses, thin nitrile gloves and maybe a lab coat. Having access to the appropriate PPE has been a major change."





Safety Shower

"I was not aware of the importance of safety showers, eye stations until I started working in a company"

Safe Operating Procedure







Key Attributes of Dow's Laboratory Safety Culture





- Leadership engagement
- Individual accountability
- Training
- Pre-task planning
- Emergency planning
- Well defined protocols
- Lab-focused hazard awareness tools & programs
- Effective Communication Networks



Dow – University Lab Safety Workshops

Over 80 students, post-docs, faculty and safety officers attended workshops



Topics included:

- Reactive chemicals handling
- Hazard Assessment
- Glassware handling under vacuum or pressure
- Personal protective equipment
- Chemical labeling
- Nanoparticle safety
- Working with pressure reactors
- Risk Mitigation

Plus:

- Making Safety Personal Coaching & Intervention
- Near Miss and Learning Experiences
- Leadership Engagement



Key Learnings from Workshops

- Set expectations Have an owners mindset
- Leadership engagement is critical for success use a dual approach
- Find change agents to lead the way
- Empowerment of EHS safety officers and students / post docs in lab is critical
- Protocols for safety procedures help establish
 expectations
- Positive reinforcement for safe behaviors is more effective than punitive measures
- Continual engagement and communication are key to sustaining culture







Dow Lab Safety Academy Website



Since Launch...

- 25,000+ enrolled viewers
 - >250,000 views
 - >60 universities
- >40 Govt Agencies/National Labs
- >100 companies
- 10 countries
- > dozen media stories

http://safety.dow.com

Dow Laboratory Safety Academy - Modules

Safety Orientation & Training	Specialized Topics	Plan, Evaluate, & Execute	Sustainable Safety Culture
Ergonomics	Fume hood	Management of Change	Making Safety Personal
Fall Prevention	Gas cylinders	Hazard Assessment	Inspections
PPE	Glassware Handling	Safe Operation Cards	Interventions
Waste handling	Mechanical Integrity	Reactive Chemicals	Recognition
Secondary containment	Vacuum Equipment	Energy Calculations	Mentoring
Housekeeping	Biological Hazards	Interpreting Safety Data Sheets	Near Miss Reporting
Electrical Safety	Nanoparticles	Chemical Labeling	Learning Experiences
Fire Extinguisher	Cryogenics	Sample Transportation & Shipping	Effective Safety Communications
Lone Worker	Pyrophorics	Line of Fire Hazards	Sustainability
			Leadership Engagement



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Sustaining the Momentum...





- ✓ Dow Lab Safety Academy Website
- Safety expectations for Dow Principal Investigators leading sponsored university research programs
- Safety engagement included as part of new-hire recruiting
 - Strategic partnerships across industry, academia, professional societies, etc.



