Maintaining Fire Safety with Changing Contents

Lou Gritzo, Ph.D.
VP, Research
The "Good" Old Days
FM Global: A Unique Company

Commercial and Industrial Property Insurance - A Specialty Company

“Majority of Loss is Preventable” - Through Research/Engineering

Mutual Ownership
FM Global Research Campus

- Natural Hazards Lab
  - 70,000 ft²
  - EQ Lab
- Water Treatment
- Electrical Lab
- Hydraulics Lab
  - 2012 Expansion
- Test Staging Building
- Large Burn Lab
  - 2 Movable Ceilings
  - Humidity Control
- Fire Technology Lab
- Multimedia Center
- Materials Lab
- Explosion Test Site

Research Product Certification Education
Center for Property Risk Solutions – Norwood, MA

Forensics
- 14 Scientific Laboratories

Scientific Computing
- 10 Teraflop ($10^{12}$) Capacity
The Big Changes in Industry Today

More

- Taller
- Fuller
- Hazard Volumes
The Big Changes in Industry Today

Less

- People
- Water
Taller
Fewer People
Increased Hazard Volumes

- Hydrogen
- Silane
Addressing the Challenges

- Taller
- Fuller
- Greater Hazard Vol.
- Fewer People
- Less Water
Smarter Use of Technology

How we:

- Develop Solutions
- Protect Well Being
- Maintain Systems
Developing Solutions

- Model-Informed Protection
  - Design better tests
  - Generalize results

- www.fmglobal.com/modeling
Developing Solutions

- Model-Informed Protection
  - Design better tests
  - Generalize results

- www.fmglobal.com/modeling
Protect Well Being

- Optimized Protection
  - Early detection and activation
  - Directed delivery

Approval Standard for Water Mist Systems
Monitor and Maintain Systems

- Ensure System Reliability
  - Digital Monitoring
  - Integrated Systems
The Next Five Years - Takeaways

Challenges
- Taller
- Fuller
- Greater Hazard Vol.
- Fewer People
- Less Water

Smarter Use of Technology
- Develop Solutions
- Protect Well Being
- Maintain Systems

1. More Coordination
2. Innovative Manufacturers
3. Progressive Standards
Beyond the Next Five Years

Industrial Parks?
Maintaining Fire Safety with Changing Contents

Lou Gritzo, Ph.D.
VP, Research