



# **Certification and Listing Process and Procedures Workshop**

**Sandia National Laboratories  
Combustion Research Facility**

**Livermore, CA**

**November 4, 2010**

# Outline

- **FM Global - overview**
- **FM Approvals - overview**
- **Listing H2 Components and Systems**

# FM Global - Overview

- **Property Insurer**
- **Mutual company**
- **Highly Protected Risks (HPR)**

# **FM Global - Overview**

## **Business Model**

- **Underwriting & Engineering**
- **No actuaries**
- **Site based loss prevention**

# **FM Global - Overview**

## **Engineering Model**

- **Field engineer works with clients**
- **Understand hazards at each site**
- **Risk Report - recommendations**

# **FM Global - Overview**

## **Support for Field Engineering**

- **Engineering Standards**
- **FM Approvals**
- **Research**

# FM Approvals - overview



# **FM Approvals - Overview**

- **Listing and certification body**
- **Owned by FM Global**
- **Independent business operation**
- **Part of the HPR business model**

# **FM Approvals - Overview**

## **Listing and Certification**

- **Property loss prevention products and services**
- **Very wide array of products**

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## Welcome to the Approval Guide

When you need the right materials to address exposures and protect your facilities, only FM Approved products will do. The Approval Guide, an innovative product of FM Approvals, contains "real-time" information about tens of thousands of products and services tested and FM Approved, as well as essential engineering data and technical information on the application and use of listed products.

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# FM Approvals - Overview

- **Building products**
- **Electrical**
- **Fire protection**

# FM Approvals - overview



## Approval Standard for Combustible Gas Detectors

# **H2 Components and Systems**

## **Need for Approved Product**

- **New hazard for HPR warehouses**
- **Fuel cell lift truck refueling inside main buildings**

# **H2 Components and Systems**

**Feasibility study in progress**

- **FM Approval Standard for Indoor H2 Dispensing Systems**
- **Initiated by request of FM Global**

# **H2 Components and Systems Research in Progress**

- **Understand dispenser safeguards**
- **Estimate H2 release potential**
- **Determine exposures to clients**

# **H2 Components and Systems**

## **Approved Dispensers - features**

- **Certified Emergency Shutdown System**
- **Maximum allowable release rate/amount?**

# **H2 Components and Systems**

## **Other Approval candidates**

- **H2 Emergency shut-off valves**
- **H2 Detection systems**

**Thank you**

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