

## Process Safety Management—Fundamentals 2-Day Course

### **Program Content:**

This short course is designed to teach and apply the fundamentals of chemical process safety. The content is comprehensive and provides extensive analysis, worked out examples, and case histories. Regulatory requirements in the US covering the process safety management regulation and risk management program regulation are also covered extensively.

This course is designed to give attendees an in-depth training on the implementation issues for process safety management programs. For each element of the program, the course provides specific guidelines for developing written programs to meet PSM regulations, integrating PSM requirements into other corporate programs, and evaluating program compliance. Attendees will take with them an understanding of actual or generic programs for individual elements which they can adapt for use at their respective facilities. Exercises and workshops are used throughout the course to illustrate interpretations of the requirements and demonstrate ways to develop an effective PSM program.

### **Day 1:**

- Introduction and background
- Management systems
- Accountability and employee participation
- Process safety information
- Hot work permit
- Contractors
- Operating procedures
- Training and certification
- Process Hazards Analysis
- Management of Change
- Pre-startup safety review
- Mechanical integrity program
- Emergency planning and response
- Emergency preparedness and training
- Incident investigation
- Compliance audits
- EPA's Risk Management Program requirements
- Industrial hygiene and toxicology
- What-If? Analysis/ checklist

## Process Safety Management—Fundamentals (Cont.) 2-Day Course

- Hazard and Operability (HAZOP) study
- Failure Mode and Effects Analysis (FMEA)
- Fault Tree Analysis (FTA).

### Day 2:

- Details of the HAZOP study methodology
- The HAZOP study method from start to finish
- Consequence analysis
- Inherently safer design concepts
- Multiple layers of protection concepts
- Facility siting
- Human factors
- Worst-case scenario
- Alternative release scenarios
- Modeling of worst-case and alternative release scenarios (use of EPA tables versus the use of dense gas models)
- Coordination of emergency response plans with LEPCs
- Risk management plan submittal
- Public participation
- Risk communication.

### Who Should Attend?

The course content is diverse enough for use by anyone involved in improving process safety; including chemical engineers, mechanical engineers, safety and health personnel, industrial hygiene personnel, and operations and maintenance supervisors.

### Dates:

October 11-12, 2011

February 21-22, 2012

April 17-18, 2012

### Location:

Phoenix Contact Customer Technology Center; Houston, TX

1.4 CEUs	14 PDHs
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