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Process Safety Management for Highly Dangerous Chemicals

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Course Author: Mathew Holstrom

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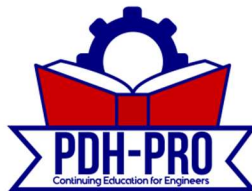
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After the course has been purchased, review the technical material and then complete the quiz at your convenience.

A Certificate of Completion is available once you pass the exam (70% or greater).

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If you have any questions or technical difficulties, please call (508) 298-4787 or email us at admin@PDH Pro.com.





ACRONYMS

ANSI	American National Standards Institute
API	American Petroleum Institute
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
CCPS	Center for Chemical Process Safety
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
DOE	U.S. Department of Energy
DOT	U.S. Department of Transportation
DCS	Distributed Control System
EMR	Experience Modification Rate
EPA	Environmental Protection Agency
ERPG	Emergency Response Planning Guideline
ES&H	Environment, Safety, and Health
EVC	Equilibrium Vapor Concentration
FMEA	Failure Mode and Effects Analysis
FTA	Fault Tree Analysis
GOCO	Government Owned Contractor Operated
HAZCOM	Hazard Communication (Standard)
HAZOP	Hazard and Operability Analysis
HDBK	Handbook
Hg	Mercury (Atomic Symbol)
HHC	Highly Hazardous Chemical
IDLH	Immediately Dangerous to Life or Health
IEEE	Institute of Electrical and Electronic Engineers
ISA	Instrument Society of America
JHA	Job Hazard Analysis
JSA	Job Safety Analysis
LPG	Liquid Petroleum Gas
M&O	Management and Operating
MOC	Management of Change
MSDS	Materials Safety Data Sheet
NDT	Nondestructive Testing
NFPA	National Fire Protection Association
ORC	Organization Resources Counselors
OSHA	Occupational Safety and Health Administration
P&ID	Piping and Instrumentation Diagram
PEL	Permissible Exposure Limit
PrHA	Process Hazard Analysis
PSI	Process Safety Information



PSM	Process Safety Management
PSR	Pre-Startup Safety Review
PSI	Process Safety Information
PSM	Process Safety Management
PSR	Prestartup Safety Review
QA	Quality Assurance
RCRA	Resource Conservation and Recovery Act
RMP	Risk Management Program
SAR	Safety Analysis Report
SASS	Safety Assurance System Summary
SCBA	Self-Contained Breathing Apparatus
SHI	Substance Hazard Index
SOP	Standard Operating Procedure
TLV	Threshold Limit Value
TQ	Threshold Quantity
TSD	Treatment, Storage, and Disposal



GLOSSARY

Accident, Accident Event Sequence

An unplanned event or sequence of events that has an undesirable consequence.

Aggregate Threshold Quantity

The total amount of a particular hazardous chemical contained in vessels that are interconnected, or contained in a process and nearby unconnected vessels that may be adversely affected by an incident at that process.

Atmospheric Tank

A storage tank that has been designed to operate at pressures from atmospheric pressure 1.01×10^6 dynes/cm² (14.7 psia) through 1.05×10^6 dynes/cm² (15.2 psia).

Audit (Process Safety Audit)

An inspection of a plant or process unit, drawings, procedures, emergency plan, and/or management systems by an independent team.

Battery Limits

That portion of a chemical plant in which the actual processes are carried out, as distinguished from storage buildings, offices, and other subordinate structures.

Boiling Point

The initial temperature at which a liquid begins to pass into the gaseous phase at a pressure of 1.01×10^6 dynes/cm² (14.7 psia). If an accurate boiling point is not available, see ASTM D-86-62.

Catastrophic Release

A major uncontrolled emission, fire, or explosion, involving one or more highly hazardous chemicals, that presents serious danger to employees in the workplace or to the public.

Consult

To exchange information and solicit input and participation from workers and their representatives in developing a written employee action plan and process hazard analyses; and to provide employees with access to information required under the Rule.

Contractor

For the purposes of this course, contractor in the PSM Rule refers to DOE subtier contractors, i.e., subcontractors of DOE contractors.



Employee

Under 29 CFR 1910.119, an hourly, salaried, or contract individual who works at a facility and comes in direct contact with a covered process [Q36].

Event

An occurrence involving process, equipment, or human performance either internal or external to a system that causes system upset. In terms of accidents, an event is either a cause or contributing cause of a near miss or accident, or a response to the accident-initiating event.

Facility

The buildings, containers, or equipment that contain a chemical process.

Flammable Gas

A gas that at ambient temperature and pressure forms a flammable mixture with air at a concentration of 13% by volume or less, or a gas that at ambient temperature and pressure forms a range of flammable mixtures with air wider than 12% by volume, regardless of the lower limit.

Flammable Liquid

A liquid with a flash point below 37.8 °C (100 °F), except mixtures where such liquids account for 1% or less of the total volume.

Hazard

A chemical property, energy source, or physical condition that has the potential to cause illness, injury, or death to personnel, or damage to property or to the environment, without regard for the likelihood or credibility of potential accidents or the mitigation of consequences.

Highly Hazardous Chemical (HHC)

Toxic, reactive, flammable, or explosive substances, such as those identified in the PSM Rule.

Hot Work

Work involving electric or gas welding, cutting, brazing, grinding, or similar flame- or spark-producing operations capable of igniting flammable vapors or gases.

Management Systems

Arrangements for guiding and controlling the work of complex organizations.

Near Miss

An event that did not result in an accidental release of a highly hazardous chemical, but which could have, given another “failure.” Near misses, sometimes called “precursors,” include:



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see the remainder of
the technical materials.