



Process Hazards Analysis (PHA)

Course Description

Course Overview

The goal of this course is to develop a basic understanding of the requirements for a Process Hazards Analysis (PHA) and the techniques used to conduct such an analysis. Participants will collaborate in small groups to analyze scenarios using incident videos and case studies. They will use critical thinking skills to predict potential problems.

Length:

3-day course

Pre-requisites:

- PSM 101: PSM Overview
- PSM 201: Process Technology
- Prior exposure to operations, maintenance, projects



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Audience

The Process Hazards Analysis course is designed for operations, technology, engineering, maintenance and safety managers; technical, operations and maintenance engineers; frontline supervisors with prior exposure to operational risks; PHA element/committee leader and team members; and site process safety management committee members. The content is highly technical, requiring the facilitator and participants to be familiar with operating technology risks and have prior experience in operations, maintenance and/or projects. They should also have prior knowledge of material hazards, process design and equipment design.

Learning Objectives

In order to accelerate skill development, this course features a problem-based learning approach that provides a collaborative job-focused experience. Participants will practice completing parts of the PHA including hazard identification, consequence analysis and hazard evaluation, risk analysis, and development of recommendations; identify and apply procedural requirements to potential job-related safety hazards; and use critical thinking to compare requirements to actual documented hazards. They will collaboratively build a personal compilation of recommendations to apply back at work; transfer diagnostic strategies to job-related decisions; and demonstrate an understanding of the material in order to participate as a member of the PHA team.

Module 1:

Planning and Preparing for a PHA

This module covers how to select team members, train them, and develop a charter.



Module 2:

Hazard Identification

Participants will identify toxic, flammable, explosive, reactive, and mechanical hazards.

Module 3:

Consequence Analysis

In this module participants will practice toxic and flammable modeling. They will also uncover the direct impact of potentially hazardous events.

Module 4a:

Process Hazards Evaluation

Participants will explore the ways hazardous events can occur.

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Module 4b:

Determine Consequences with Loss of Engineering and Administrative Controls

Participants will determine consequences based on the consequence analysis they performed in module 3.

Module 4c:

Identify Independent Layers of Protection

In this module participants will review the results of the hazard analysis and determine the level of protection required.

Module 4d:

Determine Frequency

This module will focus on determining the frequency at which an event could occur.

Module 5a:

Determine Risk

Using consequence and frequency, the risk of an event will be estimated during this module.

Module 5b:

Identify Risk Mitigation Needs

In this module participants will determine events that require risk mitigation.

Module 6a:

Develop and Prioritize Recommendations

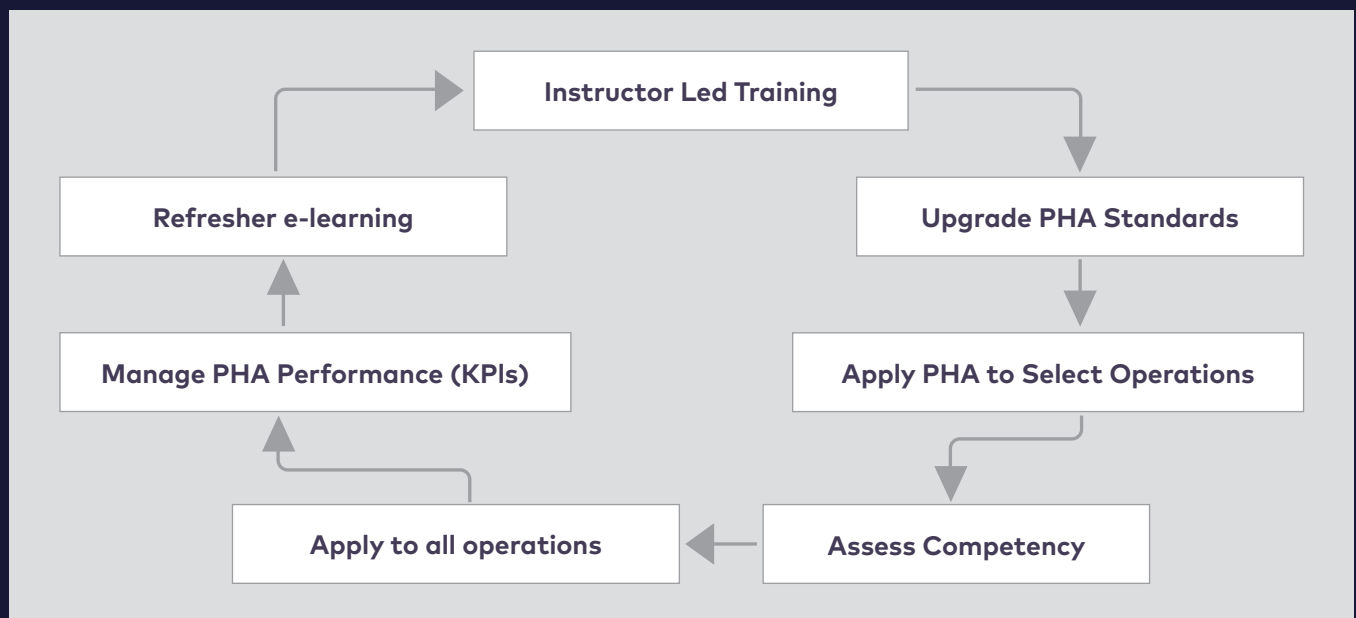
Participants will develop recommendations to maximize efficacy of the PHA.

Module 6b:

Prepare Report

This module will cover how the PHA team should document the review team's work and prepare a report.

Based on our experience, we recommend that companies do the following on an organizational level:



Results and Path Forward

After completing this course, participants should compile a list of action items based on their learning to apply back on the job. This starts with writing new or upgrading existing PSM procedures. To build competency at the individual level, the participant should identify a coach, develop skills in applying PSM governance framework, develop a PSM dashboard, test the governance framework and dashboard in their department and then roll it out

across the company. Also, an overall road map for implementing PSM across the company should be established.

It is recommended that participants go through an e-learning refresher course once a year and instructor-led refresher training once every three years.

Call 1-800-828-8190 to speak
with an account representative.

Email: info@training.consultdss.com



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