PHA: Fundamentals and Facilitation

Audience: Process safety specialists, risk analysts and process engineers; Designed for future facilitators, who have participated as a team member in previous PHA's.

Duration:
1st Day: 08:30 am to 04:30 pm
2nd Day: 08:30 am to 04:30 pm

CEUs: 1.50

Prerequisites: None

Overview

This course introduces the fundamentals of facilitating a Process Hazard Analysis (PHA), with a strong emphasis on HAZOP methodology, facilitation skills, and practical application in process industries. It walks participants through the key elements of a PHA study, including defining scope, organizing nodes, establishing design intent, identifying deviations, evaluating causes and consequences, and assessing risk using qualitative ranking methods. The course highlights the role of the facilitator in guiding discussions, building team consensus, managing time, setting ground rules, and addressing dysfunctional team behavior to keep the study productive and focused. The training also covers how to identify safeguards, recommendations, and how to document findings in a PHA report. This course covers the fundamentals of how to facilitate a PHA during process design and execution, on operating units, and as part of a management of change review. The course includes hands on workshops to practice and reinforce key concepts.

1st Day	2nd Day

• Facilitation Guidance
• Process Hazard Analysis (PHA) Overview
  o OSHA/EPA Requirements
  o PHA Methodologies/Techniques
• Identifying Resources
• Gathering Process Safety Information
• Basic Assumptions
• Understanding Noding
• Deviations (Guidewords and Parameters For HAZOP)
• Developing Design Intent
• Understanding and Evaluating Risk
	• Identifying Causes
	• Consequences and Severity
	• Unmitigated Risk
	• Safeguards vs Protection Layers
	• Mitigated Risk
	• Writing Recommendations
	• Developing Reports

Instructor: Kedar Kottawar, Senior Consultant at SIS-TECH Solutions, LP is a P.E. (Texas), TÜV Rheinland Functional Safety Engineer and a CCPS Certified Process Safety Professional with over 9 yrs experience in the chemical process industry focused on safe automation and operations. He has facilitated numerous PHA studies, support ranging from small-scale to billion-dollar capital projects, as well as revalidations for existing operating facilities.

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