Process Safety Management Training for Oil & Gas

Service Objectives

- Build practical competence to prevent loss of containment and control major accident hazards.
- Use P&IDs, PFDs, cause-and-effect charts, and shutdown keys to verify isolations and maintain safe operating envelopes.
- Differentiate process safety from occupational safety; link decisions to barrier health and escalation prevention.
- Strengthen safe systems of work in hydrocarbon environments: PTW, isolations/LOTO, gas testing, line-breaking.
- Execute robust MOC and PSSR; plan SIMOPS effectively during shutdowns/turnarounds.
- Apply bowties and leading indicators; confirm safeguard effectiveness and escalate deviations early.

> Designed for UAE oil and gas operations. Aligns with OSHAD, Dubai Civil Defence, and operator requirements, using CCPS, API, and IEC 61511 references.

Who This Service Is For

- HSE managers, process engineers, maintenance leads, control room operators, PTW authorities.
- UAE oilfields, gas plants, pipelines, storage terminals, and refineries (onshore and offshore).
- Roles such as OIMs, PTW coordinators, mechanical/instrument supervisors, shutdown planners, integrity engineers, operations foremen, HSSE advisors.
- EPC contractors and service companies needing alignment on SIMOPS, hot work, confined space, line-breaking, bypass management, and interfaces.
- Leadership (area/asset managers) who sanction deviations, approve MOCs, and set maintenance priorities.
- Multilingual, 24/7 operations managing H2S, HP/HT systems, hydrocarbon inventories, and complex utilities.

Duration & Process Overview

2-day core: PTW, isolations, gas testing, P&ID/C&E essentials, barrier checks.

3-day extended: adds MOC/PSSR depth, SIMOPS planning, and shutdown drills.

Blended option: 4–6 hours of self-paced eLearning + 1–2 days of applied workshops.

On-site or hybrid delivery; split sessions across shifts; Arabic/English facilitation; cohorts capped at 16–18 with pre-course scoping for site-specific scenarios.

Methodology

PSM Foundations

- Barrier models, indicators, and LOPC prevention across assets.

Safe Systems of Work

- PTW, isolations/LOTO, gas testing, line-breaking in live hydrocarbon environments.

Reading the Plant

- P&IDs, C&E, alarm/trip philosophy to verify protections pre-startup.

MOC & PSSR

- Change control, risk assessment, approvals, and readiness to start up.

SIMOPS & Turnarounds

- Conflict mapping, ignition control, and barrier assurance.

Assurance & Learning

- Audits, KPIs, incident learning, and continual improvement routines.

Phase	Objective	Deliverable
Pre-course Scoping & Document Collection	Align scenarios to asset conditions; collect PTW, isolation, alarm/trip philosophies, typical P&IDs.	Scoping brief; site-specific scenarios and materials.
PSM Foundations	Understand major hazards and barrier models; set leading/lagging metrics context.	Applied case analyses; barrier health framing.
Safe Systems of Work	Strengthen PTW, isolations/LOTO, gas testing, and line-breaking controls.	Permit critiques; field-simulated checks.
Reading the Plant	Use P&IDs and C&E to verify protections and safe operating envelopes pre-startup.	Document walkthroughs; isolation mapping exercises.
MOC & PSSR	Execute changes within safe limits; confirm readiness before startup.	Scenario-based workshop; PSSR readiness actions.
SIMOPS & Turnarounds	Identify conflicts; control ignition sources; sustain barriers during shutdowns.	SIMOPS mapping; shutdown coordination drills.
Assurance & Learning	Embed audits, KPIs, and learning loops to maintain barrier integrity.	Checklist design; leading indicator workshop.
Applied Scenarios & Simulations	Practice hot work near live lines, manage bypasses, and prepare for high-risk startups.	Role-played permit interviews; bowtie/C&E application.
Assessment & Certification	Assess job-pack critiques, P&ID isolation mapping, gas testing plans; short knowledge checks.	Completion certificate from NPM with outcomes and contact hours.