CONCEPT

SIMOPS Simultaneous Operations Offshore: Interaction Matrix, MOPO and Bridging Documents



SIMOPS Simultaneous Operations Offshore: Interaction Matrix, MOPO and Bridging Documents

Introduction:

SIMOPS simultaneous operations on an offshore installation bring drilling, production, construction, marine, lifting and diving crews into the same space at the same time, and major accidents tend to start where their hazards meet rather than inside any single task. Separate permits, contractor procedures and plans often fail to show those interactions. This Core Concept course trains installation, drilling, operations, HSE and planning leads to identify concurrent activities, score interactions, set limits in a manual of permitted operations and run one command structure across operator and contractors. Participants produce a SIMOPS Plan with Interaction Matrix and MOPO Extract.

Course Objectives:

- Define the SIMOPS boundary for an installation and list every concurrent drilling, production, construction, marine, lifting and diving activity that falls inside it
- Build a SIMOPS interaction matrix that scores each activity pair and records the controls, holds and prohibitions that apply
- Write a manual of permitted operations that states which activities may continue, stop or need extra approval as plant, well and weather conditions change
- Align permit-to-work cross-referencing and contractor bridging documents so that one person holds authority over each interaction
- Lead SIMOPS coordination meetings, look-ahead schedules and emergency response when several crews and vessels share the installation
- Audit SIMOPS arrangements and turn incident and near-miss learning into revised matrices and MOPO limits

Target Audience:

- Installation leaders accountable for overall authority and safe concurrent working on an offshore facility
- Drilling and well operations supervisors who run rig activities next to live production
- Production and process operations supervisors responsible for plant status during concurrent work
- HSE advisers who assess interaction risk and verify SIMOPS controls in the field
- Marine, lifting and diving coordinators who plan vessel, crane and subsea activities near the installation
- Planning and scheduling leads who build integrated activity plans and look-ahead schedules

Course Outline:

Day 1: SIMOPS Foundations and Interaction Hazards

- SIMOPS Definition, Boundary and Activity Zones on an Offshore Installation
- Major Accident Escalation Paths Created by Interacting Operations
- Concurrent Activity Inventory: Drilling, Production, Construction, Marine, Lifting and Diving
- Offshore Incident Case Review: Where Separate Controls Failed Together
- Current SIMOPS Arrangement Health Check Using a Gap Checklist

Day 2: Interaction Matrix, MOPO and Bridging Document Architecture

- SIMOPS Interaction Matrix Structure and Scoring Rules
- Qualitative Risk Ranking of Activity Pairs Using a Risk Matrix
- Manual of Permitted Operations: Condition Triggers and Stop, Continue or Approve Rules
- Operator and Contractor Bridging Document Content and Precedence
- Bow-Tie Barrier Mapping for Shared Hazards Across Crews

Day 3: Running Combined Operations Day to Day

- Permit-to-Work Cross-Referencing for Combined Operations
- Command, Control and Communication Roles Under a Single Point of Authority
- Integrated Activity Plan and Three-Day Look-Ahead Schedule Build
- Daily SIMOPS Coordination Meeting Agenda and Decision Log
- Vessel, Crane and Diving Interfaces: Exclusion Zones and Hold Points

Day 4: Emergency Response, Change and Assurance Under SIMOPS

- Emergency Response Plan Adjustments for Extra Personnel, Vessels and Rig Activities
- Muster, Escape and Shutdown Sequencing When Several Crews Are Active
- Management of Change Triggers for MOPO and Matrix Revisions
- SIMOPS Audit Protocol and Field Verification Indicators
- Lessons Learned Capture and Feedback into SIMOPS Procedures

Day 5: SIMOPS Simulations and the SIMOPS Plan

- Simultaneous Drilling and Production Simulation: Well Control Event During Live Production
- Heavy Lift and Supply Vessel Simulation: Changing Weather and MOPO Limits
- Hook-Up Construction Campaign Simulation: Permit Conflict and Stop-Work Decision
- SIMOPS Plan with Interaction Matrix and MOPO Extract Drafting
- Simulation Debrief and Peer Challenge of Each SIMOPS Plan

Skills You Will Gain:

- SIMOPS Boundary Definition
- Interaction Risk Scoring
- MOPO Development
- Bridging Document Alignment
- Combined Operations Command
- Integrated Activity Scheduling
- SIMOPS Emergency Planning
- SIMOPS Assurance Auditing

Why Attend This Course:

- Return with a SIMOPS Plan with Interaction Matrix and MOPO Extract for a real campaign on your installation
- Decide with confidence when a concurrent activity must stop, continue or wait for extra approval
- Practise holding one line of authority over rig, production, vessel and construction crews under time pressure
- Compare SIMOPS practice with operators, drilling contractors and service companies from different offshore basins

Conclusion:

Simultaneous operations stay safe when every interaction between crews is known in advance, scored, limited in the MOPO and owned by one authority. The one week move from SIMOPS boundaries and interaction hazards, through the interaction matrix, MOPO and bridging documents, to permit cross-referencing, command roles and look-ahead scheduling, then emergency response, change and audit. The final day tests this material in drilling, lifting and construction simulations and produces a SIMOPS Plan with Interaction Matrix and MOPO Extract ready for use offshore.