JUPITER PRIME

Consulting • Training • Advisory

جوبيتر برايم للاستشارات والتدريب

COURSE BROCHURE

Liquefied Natural Gas Supply Chain Operational Risk Training Course

21 – 25 March 2027
Muscat

jupiterprime.uk

info@jupiterprime.uk

Registered in the United Kingdom and Saudi Arabia

Liquefied Natural Gas Supply Chain Operational Risk Training Course

Ref: 2802_107404 **Date:** 21 – 25 March 2027 **Location:** Muscat **Fees:** 6500 GBP

Liquefied Natural Gas Supply Chain Operational Risk is a 1-week training course for operations, risk and asset integrity staff across liquefaction, shipping and regasification, who leave with a chain-wide operational risk register. One failure at a train, tank, jetty or vaporiser can stop deliveries to buyers far downstream, so hazards must be seen as a connected chain. This course from Jupiter Prime Training links each link's barriers to supply continuity.

Why Liquefied Natural Gas Supply Chain Operational Risk Matters Now

Three pressures shape chain risk today. Buyers depend on a steady flow of cargoes for power and industry, so a single outage quickly becomes a supply crisis. Fleets, terminals and trains are run by different companies, which leaves gaps where one party's safeguard assumes another's. Ageing plants and new floating units sit side by side, each with its own failure history. Organisations that see the chain whole protect people, assets and contracts; those that treat each site alone discover hidden dependencies during an incident. The course rests on bow-tie barrier thinking, layers of protection and business continuity practice.

Who Gains Most from Liquefied Natural Gas Supply Chain Operational Risk

- Operations staff who run trains, tanks, jetties or vaporisers day to day
- Risk specialists who keep hazard registers and rank scenarios
- Asset integrity engineers who track barrier condition and inspection findings
- Marine and cargo staff who plan transfers and port calls
- Supply planners who cover missed cargoes and customer interruptions

A joint group from a liquefaction plant, its shipping arm and a receiving terminal gains most when members attend together and test each other's assumptions.

Liquefied Natural Gas Supply Chain Operational Risk Capabilities

Participants trace how a release, rollover or transfer failure at one link travels to customers at the end of the chain.

- Build bow-tie diagrams for each chain link — barrier ownership
- Assess rollover, cryogenic release and overfill scenarios — storage safeguards
- Specify ship-shore shutdown and disconnect arrangements — cargo transfer safety
- Calculate send-out shortfall from vaporiser and intake failures — continuity planning
- Weigh cargo diversion and spare capacity options — customer supply decisions
- Communicate ranked risks and actions across companies — management sign-off

Key Liquefied Natural Gas Supply Chain Operational Risk Terms

- Rollover — a sudden mixing of stratified liquid layers in a tank that releases a large volume of vapour.
- Bow-tie diagram — a picture linking threats and consequences of one top event through preventive and recovery barriers.
- Emergency release coupling — a fitting that lets a loading arm separate quickly with minimal spill if a ship drifts.
- Rapid phase transition — an explosive boiling that can occur when cold liquid spills onto water.
- Send-out shortfall — the gap between contracted gas delivery and what the terminal can actually supply.
- Barrier health — the measured condition of a safeguard, such as test results, overdue maintenance or bypasses.

Liquefied Natural Gas Supply Chain Operational Risk Day by Day

Day 1: Mapping the Chain and Its Weak Links

- Feed Gas to Send-Out Chain Map — Single Points of Failure
- Upstream Feed Gas Quality and Contaminants — Pretreatment Upsets and Trips
- Bow-Tie Diagrams per Chain Link — Threats, Top Events and Consequences
- Historical Incident and Near-Miss Databases — Recurring Failure Patterns
- Risk Matrix Calibration Across Companies — Shared Severity Language

Day 2: Liquefaction and Storage Hazards

- Cryogenic Release and Pool Spread Scenarios — Spill Containment Sizing
- Tank Rollover From Density Stratification — Mixing and Monitoring Routines
- Brittle Fracture of Carbon Steel — Cold Splash Protection Choices
- Refrigerant Compressor Trips — Train Shutdown and Flaring Load
- Tank Overfill and Pressure Relief Layers — Safety Instrumented Function Targets

Day 3: Shipping and Cargo Transfer Risks

- Ship-Shore Compatibility and Mooring Studies — Berth Acceptance
- Loading Arm Envelope and Emergency Release Couplings — Disconnect Readiness
- Emergency Shutdown Links Between Ship and Terminal — Surge Pressure Limits
- Weather Windows and Port Closure Rules — Cargo Delay Exposure
- Ship-to-Ship Transfer Procedures — Offshore Transfer Hazards

Day 4: Regasification and Supply Continuity

- Vaporiser Failure Modes and Spare Capacity — Send-Out Shortfall
- Seawater Intake and Cold Discharge Issues — Unplanned Throughput Cuts
- Cargo Diversion and Swap Options — Covering a Missed Delivery
- Customer Interruption Priorities — Power Plant and Industrial Load Shedding
- Business Continuity Exercises Across Partners — Recovery Time Targets

Day 5: Practising the Chain-Wide Risk Register

- Link-by-Link Hazard Ranking — Applying Bow-Tie and Matrix Results
- Barrier Health Indicators — Applying Storage and Transfer Safeguards
- Continuity Measure Selection — Applying Diversion and Spare Capacity Options
- Risk Owner and Review Cycle Set-Up — Accountability Across Companies
- Chain-Wide Operational Risk Register — Management Sign-Off and Action Plan

Applying Liquefied Natural Gas Supply Chain Operational Risk After the Course

- Facilitate a bow-tie session for one chain link, such as tank storage or cargo transfer, and record barrier owners.
- Run a tabletop continuity exercise for a missed cargo with shipping, terminal and customer supply staff.

Liquefied Natural Gas Supply Chain Operational Risk Questions FAQ

What is Liquefied Natural Gas Supply Chain Operational Risk and why does it matter now?

It is the practice of managing hazards and interruptions across every link from feed gas to send-out. It matters now because buyers rely on steady cargoes and one failure can halt supply far downstream.

Which roles gain most from Liquefied Natural Gas Supply Chain Operational Risk?

Operations staff, risk specialists, integrity engineers, marine cargo staff and supply planners gain most, especially those whose decisions affect other companies in the chain.

How does Liquefied Natural Gas Supply Chain Operational Risk differ from a single-site process safety course?

It looks across companies and links rather than inside one plant. A site course studies one facility's hazards in depth; this one connects storage, transfer and regasification risks to supply continuity.

What do you bring back from Liquefied Natural Gas Supply Chain Operational Risk?

You bring back a chain-wide operational risk register with ranked hazards, barrier health indicators, continuity measures and named risk owners ready for management review.

Liquefied Natural Gas Supply Chain Operational Risk: The Way Forward

The chain-wide operational risk register first informs which barriers receive inspection and testing priority. Operations managers, marine superintendents and supply planners use it to agree shared actions and recovery targets. After the first continuity exercise or real interruption, the assumed recovery times deserve another look, since actual responses often reveal dependencies the register missed.