



Explosives Safety Management: Magazine Storage, Security and Compliance



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Introduction:

Explosives safety management fails quietly: a magazine holds incompatible items together, a key register goes unchecked, stock counts drift from the licence, or lightning protection lapses between inspections, and one event can then reach neighbouring stores, roads and workers. This Core Concept course equips HSE managers, magazine keepers and supervisors to run explosives storage, security and compliance as a managed system, from hazard division and compatibility group decisions to licensing, accountability, emergency planning and audit. Each participant produces an Explosives Storage Site Audit and Safety Management Plan.

Course Objectives:

- Define the scope, duty holders and licence conditions of an explosives safety management system covering storage, handling and distribution
- Apply UN hazard divisions, compatibility groups and quantity-distance principles to decide what may be stored together and where stores may sit
- Specify magazine construction, maintenance, security and access control arrangements that keep explosives stores intact and accounted for
- Run receipt, issue and reconciliation controls so that every item held can be traced against the licence and the register
- Assess lightning, static and fire risks and structure a storage risk assessment, safety case and emergency plan around them
- Audit an explosives storage site against defined criteria and set the KPIs that show whether controls are holding

Target Audience:

- Managers accountable for HSE performance and licence compliance at sites that store or distribute explosives
 - Supervisors responsible for day-to-day magazine operation, housekeeping and maintenance
 - Custodians responsible for explosives receipt, issue, stock registers and reconciliation
 - Leads responsible for security plans, key control and access authorisation at explosives stores
 - Coordinators responsible for emergency arrangements, incident reporting and investigation for explosives operations
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Course Outline:

Day 1: Explosives Safety Management Scope, Duty Holders and Licensing

- Explosives Safety Management System Scope Across Storage, Handling and Distribution
- Duty Holder Roles: Licence Holder, Magazine Keeper, Supervisor and Competent Person
- Storage Licence Conditions, Permitted Stock Limits and Register Duties
- Explosives Incident Archive Review: Causes and Consequences of Storage Events
- Current-State Gap Assessment of a Magazine Site Against Its Licence

Day 2: UN Hazard Divisions, Compatibility Groups and Quantity-Distance Principles

- UN Model Regulations Class 1 Hazard Divisions at Overview
- Compatibility Group Letters and the Mixed Storage Permission Matrix
- IATG Whole-of-Life Stockpile Management Approach at Overview
- Quantity-Distance Concept: Potential Explosion Sites, Exposed Sites and Separation Zones
- Site Layout Plan Review: Store Dispersal, Traffic Routes and Buffer Areas

Day 3: Magazine Design, Security, Inventory Accountability and Handling Controls

- Magazine Construction Features, Ventilation, Housekeeping and Maintenance Schedule
- Explosives Security Plan: Perimeter, Locks, Key Control and Intrusion Detection
- Access Authorisation Lists, Personnel Vetting Records and Visitor Escort Rules
- Receipt, Issue and Return Logs with Periodic Stock Reconciliation
- Handling and Transport Rules: Vehicle Loading, Load Segregation and Placard Checks

Day 4: Lightning, Static and Fire Precautions, Safety Cases and Emergency Response

- Lightning Protection System Inspection and Earthing Test Records
- Electrostatic Discharge Controls, Clothing Rules and Ignition Source Exclusion
- Fire Hazard Signage, Firefighting Arrangements and Withdrawal Rules
- Storage Risk Assessment Matrix and Safety Case Argument Structure
- Emergency Plan, Loss or Theft Reporting and Root Cause Investigation

Day 5: Site Audit Walkthrough, Safety KPIs and the Safety Management Plan

- Explosives Storage Audit Checklist from Licence, Security and Maintenance Criteria
 - Inspection Walkthrough of a Mine and Quarry Magazine Case Site
 - Inspection Walkthrough of an Oilfield Perforating Store and a Demolition Contractor Store
 - Leading and Lagging Explosives Safety KPIs and Management Review Dashboard
 - Explosives Storage Site Audit and Safety Management Plan Presentation and Peer Critique
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Skills You Will Gain:

- Explosives Licence Compliance
- Compatibility Group Segregation
- Quantity-Distance Interpretation
- Magazine Maintenance Planning
- Explosives Security Planning
- Stock Accountability Control
- Explosives Safety Case Preparation
- Storage Site Auditing

Why Attend This Course:

- Return with an Explosives Storage Site Audit and Safety Management Plan built around a magazine or store you are responsible for
- Close the gaps between licence conditions, registers and what is physically held before an inspector or an incident finds them
- Challenge site layout, security and lightning protection arrangements with a clear set of criteria rather than habit
- Compare storage, security and audit practice with peers from mining, quarrying, oilfield services, demolition and explosives distribution

Conclusion:

Explosives stores stay safe only when licensing, segregation, security, accountability and emergency arrangements are managed as one system and checked against evidence. The week moves from duty holders and licence conditions, through UN hazard divisions, compatibility groups and quantity-distance principles, to magazine design, security and stock control. It then covers lightning, static and fire precautions, safety cases and emergency response, and closes with inspection walkthroughs of case sites and each participant presenting an Explosives Storage Site Audit and Safety Management Plan.
