FIVE-DAY TRAINING PROGRAMME

Mine Rescue and Emergency Response for Opencast Mining Personnel

Format: Four days of live online learning, theoretical exercises and role plays, followed by one day of supervised simulation at the mine.

Duration: 35 learning hours: seven hours per day, excluding breaks.

Participants: Operators, supervisors, maintenance personnel, control-room staff, safety representatives, first aiders and emergency response personnel.

The programme develops emergency awareness, decision-making and coordination. Online activities assess knowledge and role performance; practical rescue and first aid competence require supervised hands-on assessment.

Suggested online daily schedule

Time	Activity
08:00-08:30	Recap, learning objectives and short diagnostic quiz
08:30-10:00	Facilitated theory using site examples
10:00-10:15	Break
10:15-12:00	Guided case study and group exercise
12:00-12:45	Lunch
12:45-14:15	Breakout-room role plays and scenario decisions
14:15-14:30	Break
14:30-15:30	Scenario continuation and group feedback
15:30-16:15	Assessment, reflection and preparation for the next day

Schedule note: Days finish at 16:15 to provide seven learning hours daily, excluding breaks.

Days 1-4 | Live online learning

Use video conferencing with breakout rooms, shared mine maps, scenario cards, quizzes and an electronic incident log. Divide participants into teams of four to six and rotate roles.

Day 1 - Emergency awareness, reporting and evacuation

Theory: Opencast mining emergencies; site emergency plan; alarms; individual responsibilities; evacuation routes; assembly points; accountability of employees, contractors and visitors.

Exercises and role plays: Map exercise: Identify emergency facilities and alternative escape routes. Reporting role play: A witness reports an incident to the control room. Tabletop: Evacuation following a slope instability warning, with one route unavailable and a contractor unaccounted for.

Learning evidence: Accurate incident report, completed accountability record and justified evacuation decisions.

Day 2 - Medical emergencies and casualty coordination

Theory: Scene safety; requesting medical assistance; first aid responsibilities and limitations; casualty information; ambulance access; handover to medical responders.

Exercises and role plays: Case study: Prioritise response actions after a vehicle incident. Role play: Witness, control-room operator, first aider and ambulance coordinator exchange information. Decision exercise: Respond to changing casualty information without exceeding individual competence.

Learning evidence: Clear medical assistance request, appropriate role boundaries and structured casualty handover.

Days 3-4 | Live online learning

Day 3 - Fire, hazardous substances and equipment emergencies

Theory: Fire recognition and escalation; evacuation decisions; fuel and chemical releases; safety data sheets; electrical and stored-energy hazards; isolation responsibilities; specialist assistance.

Exercises and role plays: Document exercise: Locate relevant emergency information in a safety data sheet. Role play: Report smoke from mobile equipment and a possible fuel leak. Tabletop: Manage access, personnel accountability and escalation as conditions change.

Learning evidence: Safe initial response decisions, correct escalation and a completed incident log.

Day 4 - Incident command and integrated response planning

Theory: Command structure; role allocation; resource requests; communication failures; external responder liaison; recovery authorisation; debriefing and incident learning.

Exercises and role plays: Command role play: Manage a reported highwall collapse with a missing operator. Integrated tabletop: Coordinate a vehicle incident with casualties, blocked access and incomplete information. Planning workshop: Prepare for the mine simulation.

Learning evidence: Team response plan, situation board, responder briefing and individual knowledge assessment.

Online role rotation: Incident controller, control-room communicator, witness, accountability officer, access coordinator and response-team leader. Participants only practise specialist decisions appropriate to their assigned role and qualifications.

Day 5 | Mine simulation exercise

Purpose: Apply the online learning in a controlled mine environment and evaluate the mine's emergency arrangements.

Scenario: A simulated collision between a haul truck and a light vehicle near a pit access road. Two simulated casualties require assistance, smoke is reported and the normal emergency access route is unavailable.

Use stationary, secured equipment or marked representations in an area isolated from production traffic.

Time	Activity	Expected outcome
08:00-08:45	Site induction, exercise safety briefing, boundaries, stop signal and real-emergency procedure	Everyone understands the exercise controls and their role
08:45-09:30	Familiarisation with radios, equipment, assembly points, maps and emergency access	Teams confirm readiness and identify limitations
09:30-10:00	Supervised practice of reporting, accountability and responder handover	Participants demonstrate the basic processes before the main exercise
10:00-10:15	Break	
10:15-12:00	Simulation phase 1: Incident discovery, alarm, command activation, scene control and initial accountability	A coordinated initial response is established
12:00-12:45	Lunch and controlled exercise pause	
12:45-14:15	Simulation phase 2: Casualty assistance, blocked access, missing-person information, communication failure and external responder handover	Teams adapt safely as information changes
14:15-14:30	Break	
14:30-15:15	Facilitated debrief using participant and observer evidence	Strengths, gaps and causes are identified
15:15-16:15	Targeted reassessment, feedback and corrective-action planning	Assessment records and an improvement plan are completed

Simulation injects

The exercise controller releases these developments progressively; participants receive only the information relevant to their roles.

Inject	What it tests
Initial incident location is incomplete	Clarifying questions and accurate reporting
Smoke and a possible fuel leak are reported	Hazard recognition, withdrawal and escalation
A contractor appears missing from the register	Accountability and reconciliation of information
Normal ambulance access is blocked	Alternative access and rendezvous coordination
Primary exercise communication channel fails	Use of the agreed backup method
External responders arrive	Clear handover of hazards, casualties, access and actions taken

The medical response should use manikins or casualty actors. First aiders demonstrate only skills within their existing competence; technical extrication is represented through discussion unless a separately qualified team and approved training arrangement are available.

Assessment and delivery controls

Component	Method	Proposed completion requirement
Online knowledge	Daily quizzes and Day 4 assessment	At least 80%, with review and reassessment where needed
Theoretical exercises	Maps, incident logs and response plans	Complete and explain the required decisions
Role plays	Facilitator observation	Communicate clearly, follow assigned responsibilities and escalate appropriately
Mine simulation	Individual and team observation checklists	Demonstrate all safety-critical actions relevant to the assigned role

Assess safe decisions, reporting accuracy, accountability, command coordination and handover. Record response times against site-approved objectives without rewarding speed at the expense of safety.

Preparation and controls

Before Day 1, provide participants with the mine's emergency plan, relevant maps, role descriptions and communication procedures. Test online access and provide downloadable exercise materials.

Before Day 5, the mine must approve the exercise risk assessment, training location, personnel and equipment. Appoint an exercise controller, dedicated safety officer, competent instructors and observers. Notify affected departments and relevant external responders.

Simulate fire, hazardous releases, unstable ground and entrapment. Clearly mark exercise messages and establish an immediate stop procedure if a real emergency occurs.

Final outputs: Attendance records, online assessment results, role-play feedback, individual simulation assessments, an exercise report and a corrective-action register with owners and completion dates. The completion record should specify the training scope and assessed role.